Estimation of Consumer Demand System

Isra Sarntisart

Peter G. Warr

1. Introduction

In this paper we study the behaviour of Thai household consumption expenditure using cross-sectional consumer expenditure data. Private (household) consumption expenditure represents approximately 80 per cent of total consumption expenditure in Thailand and more than 60 per cent of Gross Domestic Product. The behaviour of consumer demand therefore has important implications for the functioning of our general equilibrium system. Our principal purpose in this paper is to derive the elasticity and share parameters required for incorporation into PARA.

Our principal data sources will be household expenditure data from the 1988 household Socio-economic Survey (SES) conducted by Thailand's National Statistical Office and 1988 regional commodity price data collected by the Department of Business Economics, Ministry of Commerce. Our analysis of these data will be disaggregated by urban and rural locations, each with five expenditure classes, defined in terms of per capita household expenditure. The resulting data set is analysed using the well-known Linear Expenditure System (LES), developed by Stone (1954).

The model produces estimates that satisfy two important economic properties, adding-up and homogeneity, which are required for the analysis of household behaviour in a general equilibrium framework. The adding-up property requires that the expenditure share-weighted sum of expenditure elasticities, summed across all consumer goods, be equal to unity. The homogeneity property means homogeneity of degree zero in prices and expenditure, implying that there is no change in demand if all money prices and the money value of consumption expenditure change by the same

proportion. This requires that for each commodity demand function, the unweighted sum of the expenditure elasticity and all own and cross-price elasticities be equal to zero.

2. The Data

The characteristics of our two principal data sources are as follows.

(a) Household expenditure

The SES provides detailed information on household incomes, expenditure, savings and various demographic variables. It contains 11,045 observations from a stratified two-stage sampling procedure.[1] The observations entering this data set represent strata of unequal population size. These observations therefore cannot be treated as the outcome of a random sampling procedure with each household in the population having equal probability of being included in the sample. Past studies on consumption behaviour in Thailand have not utilised the data within the SES which make it possible to compute population weight information associated with each observation. Thus, the well-known heteroscedasticity problem, common in cross sectional data is potentially severe, implying that the results may be based upon inefficient estimators.[2] In this study, we deal with this problem by weighting each observation by the population weight information provided in the SES.

A household is defined as a person or group of persons who, together, make provision for food and other essentials of living. They are divided into ten classes, classified by per capita expenditure and urban/rural settings. Urban households mean

---

[1] As explained in the report of the 1988 household Socio-economic Survey, groups of provinces in each region, and the greater Bangkok area, constitute strata. Each stratum was divided into three parts, according to municipal areas, sanitary districts and villages. The sample selection of blocks and villages were performed separately and independently in each part by using weights proportional to the total number of households in the categories concerned.

[2] The proof of a similar case (the case of grouped data in ordinary least square or OLS) is provided in Kmenta (1971), and Stewart and Wallis (1981).

households situated in municipal areas and sanitary districts. The remaining households are rural. The economic characteristics, and the upper and lower limits of per capita expenditure of each quintile are summarised in Tables 1 and 2. In these tables, U_k and R_k mean urban and rural households in the k^{th} quintile. U_1 is the poorest urban quintile, U_5 is the richest urban quintile, and so forth.

In this study, household expenditure, as reported in the 1988 SES, is divided into twenty commodities - eight food commodities and twelve non-food commodities, as listed in Table 3. For convenience, the term 'commodity' will henceforth be used in this paper interchangeably with 'consumer good', but these twenty consumer goods must not be confused with the set of sixty produced goods also appearing in PARA. In the SES, household expenditures are reported without any information about prices. In the present study, price information from the Department of Business Economics is therefore used to augment the SES data set.

(b) Regional price indices

The price data consists of nine data sets: one for the major Bangkok area; four for urban areas in central, northern, northeastern and southern regions; and the other four for rural areas in each of the above four regions. Thus, there are nine prices for each commodity. The resulting data set allows different consumer prices across regions and communities (urban and rural). However, it still assumes a single commodity price within each regional urban or rural area. In absolute terms, these price data sets may not be the actual prices faced by the sampling households. In relative terms, they are expected to reflect the regional price differences which are, at least, preferable to assuming a single price faced by the households.

Two previous studies investigate the significance of regional price differences in Thailand - Oey (1976) and Duangkamon (1989). The level of commodity aggregation, year, and the focus of these studies are not compatible with the present study and re-estimation was therefore required. We adopt a procedure similar to that

used by the Department of Business Economics, and Oey (1976). The regional price data set is constructed in four steps.

First, Bangkok prices are chosen as base prices for all commodities. This is equivalent to choosing the unit of measurement of every commodity such that its Bangkok price is unity.[3] Second, prices of other regions are then normalised by Bangkok prices. Third, commodity relative prices are aggregated by weights provided by the Department of Business Economics, so that the grouped relative prices are comparable with the SES commodity classification. Fourth, the expenditure share weighted sum of the grouped relative prices give the relative prices of the twenty commodities as previously classified. The general formula is presented by equation 1, below. The aggregated regional relative prices are reported in Table 4.

$$P^r = \sum_i S_{ir}(P_{ir} / P_{io}) \qquad (1)$$

where P^r = the weighted average relative price of region r;

P_{ir} = the price of commodity i in region r;

P_{io} = the price of commodity i in Bangkok; and

S_{ir} = the weight reported by the Department of Business Economics for the average household budget share for commodity i in region r.

3. Previous Studies of Consumer Demand

Previous studies on consumption behaviour in Thailand include Direk and Amnat (1988), and Suchart (1989). These studies have three crucial features in

---

[3] To determine whether the use of Bangkok prices as base prices for all commodities affects the resulting estimates a sensitivity analysis was done by, first, excluding Bangkok from the estimation of consumer demand, and second, by estimating consumer demand for Bangkok separately. Comparing the estimates in both cases with the estimates reported in this paper, differences in the estimates were found to be insignificant.

common. First, they employ either the Linear Expenditure System (LES) or the Extended Linear Expenditure System (ELES), both of which are based on utility maximizing behaviour of consumers subject to budget constraints. Second, they use data from the household Socio-economic Survey (SES) of the National Statistical Office, which contain no price information. Therefore, in these studies, each commodity is assumed to have the same price across regions. Third, food is aggregated into only one commodity.

There are also some differences between these two studies. Direk and Amnat analyse the demand for twelve commodities (of which only one is food) by three households (municipal, sanitary district and rural). By using single equation estimation, they face an over-identification problem. The need to satisfy household budget constraints is not considered, and the additivity and homogeneity properties of LES are not guaranteed. Consequently, the elasticities of demand required for our study cannot be drawn from the Direk and Amnat study.

Suchart provides more detailed analysis of consumers by the disaggregation of households into eight classes, four classes for both urban and rural households. Household demand for food and seven non-food commodities is analysed. The savings decision is endogenised by the model (ELES). The results are weakened by the lack of price information. Suchart argues that the single price assumption is supported by Oey (1976), who concluded that regional price differences in Thailand were minor when compared with the experience of other developing countries.[4] However, Oey also concluded that these price differences, while smaller than those found elsewhere, were still significant. Thus, it would seem that the role of price information cannot be overlooked.

Two other studies of consumer demand in Thailand, Prasarn (1983) and Mason et al. (1987 quoted in Direk, 1989), use linear and/or log-linear models, neither

---

[4] Suchart, 1989, p. 48.

of which satisfy the set of economic properties required of a general equilibrium system, as described above. The attractiveness of these studies is their inclusion of demographic variables such as sex and age group, and, in the case of Prasarn, price information and quality. Prasarn's results have considerably lower explanatory power and, therefore, are questionable on these grounds. Moreover, Prasarn analyses the demand for food commodities alone and ignores the cross price effect of non-food commodities. The results of these studies are summarised in Table 5.

Given the objectives of the present study, three important factors should be included in the estimation of consumer demand: (i) the disaggregation of households by income/expenditure class, and by urban and rural setting, (ii) utilisation of price information, and (iii) a higher degree of commodity disaggregation than earlier studies, especially concerning food. The implementation of the results from previous empirical studies is not possible because none of them possess all these features. Estimation of a consumer demand that incorporates each of these features was therefore necessary.

4. Consumer Demand System

Models for the estimation of consumer demand can be divided into two broad categories, dual models and primal models. The most widely used model in the first category is the AIDS (Almost Ideal Demand System) developed by Deaton and Muellbauer (1980). This model is said to contain many desirable properties not possessed simultaneously by any of its competitors, such as the Rotterdam and Translog models. It is also said to be unrestricted to any form of utility function, but to be restricted to the Piglog cost function. Moreover, homogeneity and symmetry restrictions can in principal be rejected by the data (Blanciforti and Green, 1983).

The well-known primal models are Stone's LES and Lluch's ELES, of which the quadratic expenditure system or QES developed by Howe, Pollak and Wales

(1979) is a general form. The weakness of the QES is its high degree of non-linearity, which causes estimation difficulties and is time consuming. LES and ELES are more flexible, because of the lower degree of non-linearity. With single equation estimation, they can be estimated linearly by OLS.

A common criticism of LES is that it is based on the linear Geary-Stone utility function. It follows that the model assumes a linear Engel function and rules out inferior goods. Its strength lies in the utility maximizing behaviour of the consumer in the model. Thus, its estimates have the two desired properties of consumer demand, additivity and homogeneity, which is a major requirement for the results of this study. In order to satisfy the symmetry and semi-definiteness of the substitution matrix, inferiority and complementarity are ruled out (Stone, 1954).

Savings is treated differently between LES and ELES: It is exogenously determined in LES, while it is endogenised in ELES. Thus, LES provides information on the expenditure elasticity of demand and ELES the income elasticity of demand. The choice of consumption / savings function is more flexible in LES than in ELES. Any functional form can be applied. The saving function in ELES is not supported by any macro-economic consumption / savings theory. Though the Keynesian function comes close, it has been shown that ELES tends to produce a biased and inconsistent estimator of Keynesian marginal propensity to consume (MPC).[5]

A preliminary analysis of the Thai data set was carried out by Ordinary Least Squares (OLS). The results showed that consumer demand is better explained by LES than ELES. The number of significant t-statistics of household expenditure (LES) in the demand equation of each of the ten commodities was greater than those of household income (ELES). LES assumes that the consumer has utility maximizing behaviour and total expenditure is exogenously determined. The total expenditure is allocated in two steps, as described by LES. First, at a given set of prices, the

---

[5]The proof of a similar case (the case of nominal variables) is in Wallis (1979, p. 3).

consumer demands each commodity to a level called the committed level. Second, the consumer distributes the remaining expenditure in such a way that utility will be maximized. Thus, the consumer's behaviour can be explained by

$$\underset{Q_i}{Max} \quad U = \sum_i \beta_i \ln(Q_i - \gamma_i), \tag{2}$$

$$\textit{subject to} \qquad E = \sum_i P_i Q_i,.$$

The solution to this problem leads to first order conditions which are suitable for the estimation of consumer demand behaviour:

$$E_i = P_i\gamma_i + b_i(E - \sum_i P_i\gamma_i) + u_i, \tag{3}$$

when E = consumer's total expenditure,

E_i = consumer's expenditure on commodity i,

P_i = the price of commodity i faced by the consumer,

γ_i = the consumer's committed consumption level of commodity i ($\gamma_i \geq 0$),

Q_i = total consumption level on commodity i ($Q_i > \gamma_i$),

β_i = the marginal expenditure of commodity i out of total expenditure, where $\beta_i \geq 0$ and $\sum_i \beta_i = 1$, and

u_i = the disturbance term, and $\sum_i u_i = 0$.

In the case of n commodities, the system consists of n-1 non-linear equations. There are $2n$-1 parameters to be estimated, n committed levels (γ_i) and n-1

independent marginal budget shares (β_i).[6] The estimation of various elasticities depends on β_i and γ_i. A supernumerary ratio is defined as

$$-\phi = 1-(1/E).\sum_i P_i\gamma_i . \tag{4}$$

Now, writing $\alpha_i = E_i / E$ for the expenditure share of commodity *i*, the expenditure (ε_i),Marshallian price (ε_{ij}), and Hicksian price (η_{ij}) elasticities of demand can be calculated from the following relationships:

$$\varepsilon_i = \beta_i / \alpha_i , \tag{5}$$

$$\varepsilon_{ii} = \varepsilon_i[\phi - \alpha_i(1+\phi\varepsilon_i)], \tag{6}$$

$$\varepsilon_{ij} = -\varepsilon_i\alpha_j(1+\phi\varepsilon_j), \tag{7}$$

$$\eta_{ii} = \varepsilon_i(1-\alpha_i)\phi \text{ and} \tag{8}$$

$$\eta_{ij} = -\varepsilon_i\alpha_j\phi . \tag{9}$$

In this study, a demand system is estimated from equation (3), using the household as the unit of consumption. Although the choice of unit is debatable, whether on a household or a per capita basis, the use of a household has many advantages over the per capita approach. It implicitly allows economies of scale. It would seem that decision making is normally undertaken at the household level. However, the choice of the household as the unit of consumption can be criticised on the ground that households have different composition and size. In particular, rural and/or poor households are larger, on average, than urban and/or rich households.

---

[6] The total committed expenditure ($\sum_i P_i\gamma_i$) should not be interpreted as a basic need or a poverty line. By definition, γ_i is less than Q_i and, therefore, the use of the total committed expenditures as a measure of the poverty line would potentially under-estimate poverty incidence.

Despite the higher degree of non-linearity than equation (3), the model can be estimated provided computation time is not a binding constraint.

5. Results

Estimation of a system of 19 non-linear demand equations was performed separately for each of the ten households. The technique is a maximum likelihood non linear estimation. Each observation is weighted by the population weight information from SES. Three sets of parameters are required for the estimation of various elasticities as shown by Equations (4) to (9). These are average commodity expenditure, commodity committed consumption levels, and marginal budget shares. Our estimates of these parameters, along with the implied elasticity parameters, computed from equations (4) to (9) above, are reported in the Appendix to this paper.

A zero committed expenditure for a particular commodity indicates that there is welfare gain from every baht spent on that commodity. A non zero committed expenditure indicates that, unless expenditure on the commodity exceeds the committed level, there is no welfare gain from purchasing the commodity. Our results show that committed expenditure for the first eight commodities, i.e., foods, is significantly higher than zero in every quintile. This reflects the fact that foods are basic needs for every household.

Committed expenditure for non-alcoholic beverages and clothing is very low for urban households, and is close to zero for poor urban households. Except for the top rural households, it is also close to zero for rural households. Except for the top rural households, committed expenditure for housing differs significantly from zero. Committed expenditure for fuel and light is very low for middle and poor households about 75 and 60 baht, respectively. For the highest income households in both urban and rural areas, committed expenditures for fuel and light are approximately three times

these amounts. Committed expenditure for transport and communication is close to zero for every quintile, including urban households for which transport and communication occupies much of their daily life. Except for the highest income households in urban and rural areas, committed expenditures for medical supplies and medical services, education and entertainment, and other non-foods are very low or close to zero. The total committed per capita expenditure (TCE) for households in every quintile in urban areas is higher than equivalent quintiles in rural areas. For example, the TCEs of the lowest income quintiles in urban and rural areas are 828 and 604 baht, respectively.

The expenditure elasticity of demand (ε_i) can be used to determine whether the commodity is a necessity ($\varepsilon_i < 1$) or a luxury good ($\varepsilon_i > 1$). There are few common patterns among households as to which commodities are necessities or luxuries. In general, food is less responsive to changes in disposable income (expenditures) than non-food commodities. For the highest income urban households, all commodities are shown to be necessities except housing, vehicle operation and purchase, and other transport and communication. Similarly, for the highest income rural households, all commodities are shown to be necessities except housing, and vehicle operation and purchase. As expected, the expenditure elasticity of demand for alcoholic beverages and tobacco are very low, and lower for urban than rural households. On average, the estimates are close to those reported by Mason et al. (1987, quoted in Direk, 1989) (Table 5). For example, the Mason et al. ε_i are 0.72 for food, and 1.29 for clothing, while the simple average ε_i from this study are also 0.72 for rice and cereals, and 1.14 for clothing.

There is a notable contrast between the richest quintile in urban and rural areas, and the remaining poorer households. Except for the richest quintile in urban and rural areas, expenditure elasticities of every commodity are quite uniform across households. In the case of the first thirteen commodities, the expenditure elasticities of the two richest quintiles are much lower than those of other quintiles. While in the

case of housing and housing expenditure, vehicle operation and purchase, and other transport and communication, their expenditure elasticities are generally higher. Thus, demand for these commodities will increase more if there is a one per cent increase in income of households in the eight lower quintiles in urban and rural areas, rather than households in the two top quintiles. Alternatively, increases in demand for house and housing expenditure, vehicle operation and purchase, and other transport and communication is less if there is a one per cent increase in income of households in the eight lower quintiles, rather than households in the two top quintiles.

The own price elasticities (ε_{ii}) display significant differences among commodities, between urban and rural households, and between the highest income quintiles and other quintiles. Demand for education and entertainment, and other non-foods are generally more sensitive to changes in price than demand for other commodities. Also, rural households' demand for clothing and footwear is generally price elastic. Households in the top quintile of urban and rural areas behave differently from other households. Their own price elasticity is generally lower that those of the other quintiles. The main reason is presumably that households in the two top quintiles can afford to buy, whatever the change in price. An example is the own price elasticity of demand for rice, which is between -0.44 and -0.85 for the lowest income quintiles while those of the highest income quintile in urban and rural areas are as low as -0.19 and -0.09, respectively.

A comparison between the results from this study with those from past studies shows some differences. As already mentioned, Suchart's (1989) estimates are restricted by the assumption of one price, and are considerably lower than the estimates of this study. Prasarn's (1983) own price elasticity[7] of rice and meat is -0.636 and -4.698, while this study's elasticities[8] are -0.53 and -0.60, respectively. Prasarn

---

7) A simple average of Prasarn (1983)'s most significant results.
8) A simple average of the own price elasticity of (a) rice and cereals and (b) meat and poultry aggregated across the ten households.

analyses beef, pork and chicken separately, while this study aggregates all types of meat, including fish and seafood. Therefore, the lower result for meat could be caused by the level of aggregation and substitution among different types of meat.

In terms of cross price effects (ε_{ij}), almost every pair of commodities have complementarities. Since these commodities, especially foods, are important in terms of consumption, a rise in price will reduce real income and, thus, reduce demand for other commodities. There are some exceptions, such as the effects of the price of clothing and footwear on the demand for other commodities, which are substitutes for many rural households. However, the degree of substitution is very low and unlikely to be important.

6. Conclusions

This paper reports the estimation of a consumer demand system for policy simulations in a general equilibrium framework by using cross section data. The model applied in this study, the Linear Expenditure System, is used to estimate consumer demand elasticities that satisfy specific desirable economic properties, such as homogeneity and additivity, and which are therefore suitable for incorporation a general equilibrium framework.

Three points make this estimation different from those of previous studies. First, the disaggregation of households into ten expenditure classes is motivated by our desire to investigate the income distributional impact of exogenous economic shocks affecting the Thai economy. Second, price information is incorporated into the SES data set. Third, food commodities are analysed at a more disaggregated level than in previous studies and this feature enhances the analytical capabilities of the resulting model.

The estimates from the LES produce expenditure elasticities of demand for food commodities which are generally lower than those for non-food commodities. Likewise, the own price elasticities of demand for food are generally lower than those for non-foods. The results on cross price effects between commodities illustrate weak complementarities between most pairs of commodities, especially foods. Finally, the results show significant differences in expenditure behaviour among households, especially between the richest quintiles in urban and rural areas and all other expenditure groups.

References

Blanciforti, l. and R. Green (1983), 'An Almost Ideal Demand System Incorporating Habits: An Analysis of Expenditures on Food and Aggregate Commodity Groups', *Review of Economics and Statistics* 65, 511-515.

Deaton, A. and J. Meullbauer (1980), 'An almost Ideal Demand System', *American Economic Review* 7(3), 312-326.

Direk Patamasiriwat and Amnat Wetmanat (1988), 'The Analysis of the Consumption Pattern of Thai Households in 1986'. in Kraiyudht Dhiratayakinant (ed.), *The Knowledge of Thai Economists*, The Economics Association of Thailand, 117-145. [in Thai]

Duangkamon Chotikapanich (1989), 'Measurement of Poverty and Inequality in Thailand, 9175/76-1981: Some Analytical and Empirical Results', unpublished PhD Thesis, University of New England, Armidale.

Howe, H. , A. P. Pollak and T. J. Wales (1979), 'Theory and Time Series Estimation of the Quadratic Expenditure System', *Econometrica* 47 (5), 1231-1247.

Kmenta, J. (1971), *Elements of Econometrics,* New York, Macmillan,.

Oey Astra Meesook,(1976), 'Regional Consumer Price Indices for Thailand', *Discussion Papers* No. 49, Faculty of Economics, Thammasat University, Bangkok (mimeo). [in Thai]

Prasarn Trairatvorakul (1983), 'Income and Price Changes and Food Consumption of the Poor in Thailand', *Thammasat Economic Journal*, 1(4), 139-187. [in Thai]

Stewart, M.B. and K.F. Wallis, (1981), *Introductory Econometrics*, 2nd ed., Oxford, Basil Blackwell.

Stone, R. (1954), 'Linear Expenditure Systems and Demand Analysis: An Application to the Pattern of British Demand', *The Economic Journal* 64, 511-527.

Wallis, K.F. (1979), *Topics in Applied Econometrics*, 2nd ed., Oxford, Basil Blackwell.

Table 1 Urban and Rural Household Characteristics, 1988.

Characteristics	Urban Quintile				
	U_1	U_2	U_3	U_4	U_5
Income	2750	4459	5969	7387	12141
Expenditure	2405	3797	5109	6369	11886
Per capita Expenditure					
Minimum	189	709	1101	1546	2371
Maximum	708	1100	1545	2370	42380
Number of Observations	1256	1259	1252	1254	1255
Weight					
Mean	570.04	622.81	681.74	736.41	774.52
S.D.	149.85	201.84	240.63	240.15	233.95

Table 1 (Continued).

Characteristics	Rural Quintile				
	R_1	R_2	R_3	R_4	R_5
Income	1732	2313	2735	3688	5557
Expenditure	1545	2123	2616	3308	6313
Per Capita Expenditure					
Minimum	97	385	533	728	1058
Maximum	384	532	727	1057	52218
Number of Observations	954	955	960	947	953
Weight					
Mean	2151.8	2039.3	1944.5	1882.8	1842.7
S.D.	311.59	320.98	311.06	281.40	258.17

Source: Calculated from the *SES* 1988.

Table 2 Weighted Average Characteristics, by Household Category:

Household	A.P.C.	Size	Adult	Children
Urban 1	0.8745	4.6	3.4	1.2
Urban 2	0.8515	4.1	3.2	0.9
Urban 3	0.8559	3.8	3.1	0.7
Urban 4	0.8622	3.3	2.8	0.5
Urban 5	0.9790	2.7	2.5	0.2
Rural 1	0.8920	5.2	3.6	1.6
Rural 2	0.9179	4.6	3.5	1.1
Rural 3	0.9565	4.1	3.2	0.9
Rural 4	0.8970	3.7	3.0	0.7
Rural 5	1.1360	3.3	2.7	0.6

Note: A.P.C. = Average propensity to consume.

Source: Calculated from the *SES* 1988.

Table 3 Thailand: The Set of PARA Consumer Goods

Good 1	Rice, grain, and cereal
Good 2	Meat and poultry
Good 3	Fish and seafood
Good 4	Fruit and nut
Good 5	Vegetables
Good 6	Milk, cheese, egg, oil, and fat
Good 7	Sugar and sweets
Good 8	Other foods, including spice and meals eaten away from home
Good 9	Non-alcoholic beverages
Good 10	Alcoholic beverages and tobacco
Good 11	Clothing
Good 12	Footwear
Good 13	Fuel and light (household uses)
Good 14	House, shelter, and other housing expenditures
Good 15	Vehicle operation and purchase
Good 16	Other transport and communication
Good 17	Medical supplies and medical services
Good 18	Personal supplies and services
Good 19	Education and entertainment
Good 20	Other non-food expenditures

Table 4 Regional Consumer Price Indices: 1970 and 1988.

Community	Region				
	South	North -east	North	Central & East	Bangkok Area
1970					
Urban	110	107	101	96	100
Rural	116	104	101	99	n.a.
1988	94.13	93.72	94.90	93.53	100

Sources: 1) 1970 indices from Oey (1976), Table 2.

2) 1988 indices calculated by this study.

Note: n.a indicates not available.

Table 5 Thailand: Selected Consumer Demand Elasticities From Previous Studies

Elasticity	Income	Own Price
1) Prasarn estimates for low income group: 1975/76		
Rice	0.401	-0.736
Meat		
Beef	0.422	-7.181
Chicken	0.295	0.252
Pork	0.704	-2.215
2) Suchart estimates for food and non-alcoholic beverages: 1981		
Urban	0.149	-0.079
Rural	0.313	-0.157
3) Mason estimates: 1981		
Food	0.722	-
Beverages and Tobacco	0.979	-
Clothes	1.290	-
House	1.085	-
Health	1.299	-
Personal	0.884	-
Transport	1.708	-
Entertainment	1.655	-
Education	1.242	-
Others	1.762	-

Sources: 1) Table 14, Prasarn (1983). 2) Tables 4.10 and 4.11, Suchart (1989). 3) Mason et al. (1987, quoted in Table 7, Direk, 1989)

APPENDIX: ESTIMATION RESULTS

URBAN HOUSEHOLDS: QUINTILE 1

PHE	Super-numerary ratio
-0.6555	

*Average Budget Shares

Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13	Good 14
0.1534	0.0672	0.0550	0.0250	0.0399	0.0436	0.0183	0.1014	0.0055	0.0414	0.0341	0.0074	0.0665	0.1832

*Marginal Budget Shares

Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13	Good 14
0.1163	0.0610	0.0444	0.0288	0.0251	0.0448	0.0215	0.1162	0.0081	0.0487	0.0477	0.0073	0.0569	0.1468

*Committed Expenditure

Total	Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13
828.5707	173.3313	60.7365	54.1847	13.3516	53.2370	35.0192	10.1036	81.1716	0.5281	19.1433	0.0000	5.0697	71.3599

*Expenditure, Own Price, and Cross Price Elasticities

	Expenditure	Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12
Good 1	0.7584	-0.5556	-0.0206	-0.0197	-0.0046	-0.0178	-0.0108	-0.0032	-0.0191	-0.0001	-0.0072	-0.0021	-0.0020
Good 2	0.9086	-0.0701	-0.6203	-0.0236	-0.0056	-0.0214	-0.0130	-0.0039	-0.0229	-0.0002	-0.0086	-0.0026	-0.0024
Good 3	0.8069	-0.0622	-0.0219	-0.5498	-0.0049	-0.0190	-0.0115	-0.0034	-0.0203	-0.0001	-0.0076	-0.0023	-0.0021
Good 4	1.1513	-0.0888	-0.0313	-0.0298	-0.7617	-0.0271	-0.0164	-0.0049	-0.0290	-0.0002	-0.0109	-0.0033	-0.0031
Good 5	0.6274	-0.0484	-0.0170	-0.0163	-0.0038	-0.4260	-0.0090	-0.0027	-0.0158	-0.0001	-0.0059	-0.0018	-0.0017
Good 6	1.0264	-0.0792	-0.0279	-0.0266	-0.0063	-0.0241	-0.6875	-0.0044	-0.0259	-0.0002	-0.0097	-0.0029	-0.0027
Good 7	1.1713	-0.0903	-0.0318	-0.0304	-0.0072	-0.0275	-0.0167	-0.7728	-0.0295	-0.0002	-0.0111	-0.0033	-0.0031
Good 8	1.1464	-0.0884	-0.0311	-0.0297	-0.0070	-0.0269	-0.0164	-0.0049	-0.7803	-0.0002	-0.0108	-0.0032	-0.0031
Good 9	1.4782	-0.1140	-0.0402	-0.0383	-0.0091	-0.0347	-0.0211	-0.0063	-0.0373	-0.9692	-0.0140	-0.0042	-0.0039
Good 10	1.1771	-0.0908	-0.0320	-0.0305	-0.0072	-0.0277	-0.0168	-0.0050	-0.0297	-0.0002	-0.7827	-0.0033	-0.0031
Good 11	1.3991	-0.1079	-0.0380	-0.0363	-0.0086	-0.0329	-0.0200	-0.0060	-0.0353	-0.0002	-0.0132	-0.9210	-0.0037
Good 12	0.9782	-0.0754	-0.0266	-0.0254	-0.0060	-0.0230	-0.0140	-0.0042	-0.0247	-0.0002	-0.0093	-0.0028	-0.6438
Good 13	0.8555	-0.0660	-0.0232	-0.0222	-0.0052	-0.0201	-0.0122	-0.0036	-0.0216	-0.0001	-0.0081	-0.0024	-0.0023
Good 14	0.8010	-0.0618	-0.0218	-0.0208	-0.0049	-0.0188	-0.0114	-0.0034	-0.0202	-0.0001	-0.0076	-0.0023	-0.0021
Good 15	1.5727	-0.1213	-0.0427	-0.0408	-0.0096	-0.0370	-0.0225	-0.0067	-0.0396	-0.0003	-0.0149	-0.0044	-0.0042
Good 16	1.5968	-0.1231	-0.0434	-0.0414	-0.0098	-0.0375	-0.0228	-0.0068	-0.0402	-0.0003	-0.0151	-0.0045	-0.0042
Good 17	1.3606	-0.1049	-0.0370	-0.0353	-0.0083	-0.0320	-0.0194	-0.0058	-0.0343	-0.0002	-0.0129	-0.0038	-0.0036
Good 18	0.9913	-0.0764	-0.0269	-0.0257	-0.0061	-0.0233	-0.0142	-0.0042	-0.0250	-0.0002	-0.0094	-0.0028	-0.0026
Good 19	1.6579	-0.1278	-0.0450	-0.0430	-0.0102	-0.0390	-0.0237	-0.0071	-0.0418	-0.0003	-0.0157	-0.0047	-0.0044
Good 20	1.5400	-0.1188	-0.0418	-0.0399	-0.0094	-0.0362	-0.0220	-0.0066	-0.0388	-0.0003	-0.0146	-0.0043	-0.0041

Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
0.0203	0.0197	0.0257	0.0355	0.0463	0.0105

Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
0.0319	0.0315	0.0350	0.0352	0.0767	0.0162

Good 14	Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
217.6592	0.0000	4.0762	0.0000	29.5987	0.0000	0.0000

Good 13	Good 14	Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
-0.0222	-0.0660	0.0005	0.0007	-0.0021	-0.0094	0.0030	0.0001
-0.0266	-0.0791	0.0006	0.0008	-0.0025	-0.0113	0.0036	0.0001
-0.0236	-0.0702	0.0005	0.0007	-0.0022	-0.0100	0.0032	0.0001
-0.0336	-0.1002	0.0007	0.0011	-0.0032	-0.0143	0.0046	0.0001
-0.0183	-0.0546	0.0004	0.0006	-0.0017	-0.0078	0.0025	0.0001
-0.0300	-0.0893	0.0006	0.0009	-0.0029	-0.0128	0.0041	0.0001
-0.0342	-0.1019	0.0007	0.0011	-0.0033	-0.0146	0.0047	0.0001
-0.0335	-0.0998	0.0007	0.0011	-0.0032	-0.0143	0.0046	0.0001
-0.0432	-0.1286	0.0009	0.0014	-0.0041	-0.0184	0.0059	0.0001
-0.0344	-0.1024	0.0007	0.0011	-0.0033	-0.0146	0.0047	0.0001
-0.0409	-0.1218	0.0009	0.0013	-0.0039	-0.0174	0.0056	0.0001
-0.0286	-0.0851	0.0006	0.0009	-0.0027	-0.0122	0.0039	0.0001
-0.5858	-0.0744	0.0005	0.0008	-0.0024	-0.0106	0.0034	0.0001
-0.0234	-0.5947	0.0005	0.0007	-0.0022	-0.0100	0.0032	0.0001
-0.0460	-0.1369	-1.0299	0.0014	-0.0044	-0.0196	0.0063	0.0002
-0.0467	-0.1390	0.0010	-1.0452	-0.0044	-0.0199	0.0064	0.0002
-0.0398	-0.1184	0.0009	0.0013	-0.8957	-0.0169	0.0055	0.0001
-0.0290	-0.0863	0.0006	0.0009	-0.0028	-0.6621	0.0040	0.0001
-0.0485	-0.1443	0.0010	0.0015	-0.0046	-0.0206	-1.0801	0.0002
-0.0450	-0.1340	0.0010	0.0014	-0.0043	-0.0192	0.0062	-1.0093

URBAN HOUSEHOLD: QUINTILE 2

PHE	Super-numerary ratio
-0.599884	

*Average Budget Shares

Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13	Good 14
0.089708	0.056695	0.038717	0.025336	0.027411	0.039926	0.017526	0.146409	0.008625	0.049116	0.037195	0.008594	0.062721	0.192046

*Marginal Budget Shares

Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13	Good 14
0.061108	0.053632	0.036117	0.019128	0.022713	0.035466	0.011205	0.17604	0.010369	0.038244	0.035864	0.007421	0.068662	0.13271

*Committed Expenditures

Total	Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13
1519.367	182.1053	83.18047	52.06767	48.88069	48.34715	69.00436	40.18025	212.315	8.990312	96.35285	39.25995	11.87701	86.88436

*Expenditure, Own Price, and Cross Price Elasticities

	Expenditure	Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12
Good 1	0.681187	-0.44477	-0.016704	-0.011615	-0.009442	-0.009391	-0.012704	-0.00736	-0.027796	-0.001638	-0.01783	-0.010681	-0.002822
Good 2	0.945968	-0.050184	-0.590669	-0.01613	-0.013112	-0.013041	-0.017642	-0.010221	-0.0386	-0.002275	-0.02476	-0.014833	-0.003919
Good 3	0.93285	-0.049488	-0.022876	-0.575508	-0.01293	-0.012861	-0.017398	-0.010079	-0.038065	-0.002243	-0.024417	-0.014628	-0.003865
Good 4	0.754979	-0.040052	-0.018514	-0.012873	-0.463365	-0.010408	-0.01408	-0.008157	-0.030807	-0.001816	-0.019761	-0.011838	-0.003128
Good 5	0.828594	-0.043957	-0.020319	-0.014128	-0.011485	-0.508484	-0.015453	-0.008953	-0.033811	-0.001993	-0.021688	-0.012993	-0.003433
Good 6	0.888303	-0.047125	-0.021783	-0.015146	-0.012313	-0.012246	-0.549445	-0.009598	-0.036247	-0.002136	-0.023251	-0.013929	-0.00368
Good 7	0.639324	-0.033916	-0.015678	-0.010901	-0.008862	-0.008814	-0.011923	-0.390428	-0.026088	-0.001537	-0.016734	-0.010025	-0.002649
Good 8	1.202387	-0.063787	-0.029485	-0.020502	-0.016667	-0.016576	-0.022425	-0.012991	-0.770356	-0.002892	-0.031472	-0.018854	-0.004981
Good 9	1.202197	-0.063777	-0.029481	-0.020498	-0.016664	-0.016574	-0.022421	-0.012989	-0.049056	-0.72407	-0.031467	-0.018851	-0.004981
Good 10	0.778642	-0.041307	-0.019094	-0.013276	-0.010793	-0.010735	-0.014522	-0.008413	-0.031773	-0.001873	-0.487475	-0.012209	-0.003226
Good 11	0.964223	-0.051152	-0.023645	-0.016441	-0.013365	-0.013293	-0.017983	-0.010418	-0.039345	-0.002319	-0.025238	-0.593541	-0.003995
Good 12	0.863436	-0.045806	-0.021174	-0.014722	-0.011968	-0.011904	-0.016103	-0.009329	-0.035233	-0.002076	-0.0226	-0.013539	-0.521539
Good 13	1.094727	-0.058076	-0.026845	-0.018666	-0.015174	-0.015092	-0.020417	-0.011828	-0.044671	-0.002633	-0.028654	-0.017166	-0.004535
Good 14	0.691031	-0.03666	-0.016946	-0.011783	-0.009579	-0.009527	-0.012888	-0.007466	-0.028198	-0.001662	-0.018087	-0.010836	-0.002863
Good 15	1.097029	-0.058198	-0.026902	-0.018705	-0.015206	-0.015124	-0.02046	-0.011853	-0.044764	-0.002638	-0.028714	-0.017202	-0.004545
Good 16	1.55681	-0.082589	-0.038177	-0.026545	-0.021579	-0.021463	-0.029035	-0.016821	-0.063526	-0.003744	-0.040748	-0.024412	-0.00645
Good 17	1.510314	-0.080123	-0.037036	-0.025752	-0.020935	-0.020822	-0.028168	-0.016318	-0.061629	-0.003632	-0.039531	-0.023682	-0.006257
Good 18	0.814256	-0.043197	-0.019967	-0.013884	-0.011287	-0.011226	-0.015186	-0.008798	-0.033226	-0.001958	-0.021313	-0.012768	-0.003373
Good 19	1.897964	-0.100688	-0.046543	-0.032362	-0.026308	-0.026166	-0.035397	-0.020507	-0.077447	-0.004564	-0.049678	-0.029761	-0.007863
Good 20	1.282472	-0.068036	-0.031449	-0.021867	-0.017777	-0.017681	-0.023918	-0.013857	-0.052332	-0.003084	-0.033568	-0.02011	-0.005313

Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
0.028341	0.031701	0.028565	0.032175	0.064949	0.014243

Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
0.031091	0.049353	0.043142	0.026199	0.12327	0.018266

Good 14	Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
431.8512	23.71047	16.63144	9.49E-17	60.7214	4.12E-19	7.006681

Good 13	Good 14	Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
-0.014667	-0.07659	-0.006601	-0.001427	-0.001829	-0.011212	0.00613	-0.002238
-0.020368	-0.106361	-0.009167	-0.001982	-0.00254	-0.01557	0.008513	-0.003108
-0.020086	-0.104886	-0.009039	-0.001955	-0.002504	-0.015354	0.008395	-0.003065
-0.016256	-0.084887	-0.007316	-0.001582	-0.002027	-0.012426	0.006794	-0.00248
-0.017841	-0.093164	-0.008029	-0.001736	-0.002225	-0.013638	0.007457	-0.002722
-0.019126	-0.099877	-0.008608	-0.001861	-0.002385	-0.014621	0.007994	-0.002918
-0.013766	-0.071883	-0.006195	-0.00134	-0.001716	-0.010523	0.005753	-0.0021
-0.025889	-0.135191	-0.011651	-0.002519	-0.003228	-0.01979	0.01082	-0.00395
-0.025885	-0.13517	-0.011649	-0.002519	-0.003228	-0.019787	0.010819	-0.00395
-0.016765	-0.087547	-0.007545	-0.001631	-0.00209	-0.012816	0.007007	-0.002558
-0.020761	-0.108413	-0.009343	-0.00202	-0.002589	-0.01587	0.008677	-0.003168
-0.018591	-0.097081	-0.008367	-0.001809	-0.002318	-0.014211	0.00777	-0.002837
-0.68028	-0.123086	-0.010608	-0.002294	-0.002939	-0.018018	0.009852	-0.003597
-0.014879	-0.492235	-0.006696	-0.001448	-0.001855	-0.011374	0.006219	-0.00227
-0.023621	-0.123345	-0.668721	-0.002299	-0.002945	-0.018056	0.009872	-0.003604
-0.03352	-0.175041	-0.015086	-0.937167	-0.00418	-0.025624	0.01401	-0.005115
-0.032519	-0.169813	-0.014635	-0.003165	-0.910068	-0.024858	0.013592	-0.004962
-0.017532	-0.091551	-0.00789	-0.001706	-0.002186	-0.501861	0.007328	-0.002675
-0.040866	-0.213399	-0.018391	-0.003977	-0.005096	-0.031239	-1.121478	-0.006236
-0.027613	-0.144196	-0.012427	-0.002687	-0.003443	-0.021108	0.011541	-0.773548

URBAN HOUSEHOLDS: QUINTILE 3

PHE	Super-numerary ratio
-0.680474	

*Average Budget Shares

Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13	Good 14
0.056977	0.048917	0.032006	0.028197	0.022933	0.03729	0.015089	0.177181	0.013518	0.049471	0.040676	0.008131	0.060093	0.190222

*Marginal Budget Shares

Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13	Good 14
0.042659	0.050985	0.030857	0.022453	0.021684	0.038867	0.011859	0.16368	0.01944	0.040946	0.044357	0.007925	0.068893	0.14943

*Committed Expenditures

Total	Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13
1632.269	129.3367	64.99805	44.12692	63.29187	39.06293	54.32147	35.00538	402.1895	1.32408	103.0787	32.42774	10.43078	74.39421

*Expenditure, Own Price, and Cross Price Elasticities

	Expenditure	Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12
Good 1	0.74871	-0.530402	-0.010649	-0.008242	-0.009672	-0.006123	-0.008117	-0.005255	-0.049266	-0.000217	-0.016179	-0.007856	-0.00205
Good 2	1.042267	-0.02913	-0.72406	-0.011474	-0.013464	-0.008523	-0.0113	-0.007316	-0.068582	-0.000302	-0.022522	-0.010936	-0.002853
Good 3	0.964098	-0.026945	-0.013713	-0.666657	-0.012454	-0.007884	-0.010452	-0.006767	-0.063438	-0.000279	-0.020833	-0.010116	-0.002639
Good 4	0.7963	-0.022255	-0.011326	-0.008766	-0.552148	-0.006512	-0.008633	-0.005589	-0.052397	-0.00023	-0.017207	-0.008355	-0.00218
Good 5	0.945545	-0.026426	-0.013449	-0.010409	-0.012215	-0.651151	-0.010251	-0.006637	-0.062218	-0.000274	-0.020432	-0.009921	-0.002589
Good 6	1.042303	-0.029131	-0.014825	-0.011474	-0.013464	-0.008523	-0.72056	-0.007316	-0.068584	-0.000302	-0.022523	-0.010936	-0.002853
Good 7	0.785954	-0.021966	-0.011179	-0.008652	-0.010153	-0.006427	-0.008521	-0.540338	-0.051716	-0.000227	-0.016983	-0.008246	-0.002152
Good 8	0.923803	-0.025819	-0.01314	-0.01017	-0.011934	-0.007554	-0.010015	-0.006484	-0.689411	-0.000267	-0.019962	-0.009693	-0.002529
Good 9	1.438112	-0.040193	-0.020455	-0.015832	-0.018578	-0.01176	-0.015591	-0.010094	-0.094629	-0.979013	-0.031076	-0.015089	-0.003937
Good 10	0.82767	-0.023132	-0.011772	-0.009112	-0.010692	-0.006768	-0.008973	-0.005809	-0.054461	-0.000239	-0.581092	-0.008684	-0.002266
Good 11	1.090493	-0.030478	-0.015511	-0.012005	-0.014087	-0.008917	-0.011823	-0.007654	-0.071755	-0.000315	-0.023564	-0.753493	-0.002985
Good 12	0.974747	-0.027243	-0.013864	-0.010731	-0.012592	-0.007971	-0.010568	-0.006842	-0.064139	-0.000282	-0.021063	-0.010227	-0.665958
Good 13	1.146437	-0.032041	-0.016306	-0.012621	-0.01481	-0.009375	-0.012429	-0.008047	-0.075436	-0.000332	-0.024773	-0.012029	-0.003139
Good 14	0.785557	-0.021955	-0.011173	-0.008648	-0.010148	-0.006424	-0.008517	-0.005514	-0.05169	-0.000227	-0.016975	-0.008242	-0.002151
Good 15	1.210142	-0.033822	-0.017212	-0.013322	-0.015633	-0.009896	-0.01312	-0.008494	-0.079628	-0.00035	-0.02615	-0.012697	-0.003313
Good 16	1.41614	-0.039579	-0.020142	-0.01559	-0.018294	-0.01158	-0.015353	-0.00994	-0.093183	-0.00041	-0.030601	-0.014859	-0.003877
Good 17	1.146266	-0.032036	-0.016304	-0.012619	-0.014807	-0.009373	-0.012427	-0.008046	-0.075425	-0.000332	-0.024769	-0.012027	-0.003138
Good 18	0.789847	-0.022075	-0.011234	-0.008695	-0.010203	-0.006459	-0.008563	-0.005544	-0.051972	-0.000229	-0.017068	-0.008287	-0.002162
Good 19	1.618903	-0.045246	-0.023026	-0.017822	-0.020913	-0.013238	-0.017551	-0.011363	-0.106525	-0.000468	-0.034982	-0.016986	-0.004432
Good 20	0.910083	-0.025435	-0.012945	-0.010019	-0.011756	-0.007442	-0.009867	-0.006388	-0.059884	-0.000263	-0.019666	-0.009549	-0.002491

Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
0.033991	0.043031	0.024	0.030526	0.073939	0.013814

Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
0.041134	0.060938	0.02751	0.024111	0.1197	0.012572

Good 14	Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
464.1222	5.79E-12	10.81792	12.49365	69.64221	2.85E-16	21.20525

Good 13	Good 14	Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
-0.009893	-0.06629	-0.004493	-0.001171	-0.003953	-0.010571	0.005626	-0.003938
-0.013772	-0.092281	-0.006254	-0.00163	-0.005503	-0.014716	0.007831	-0.005481
-0.012739	-0.08536	-0.005785	-0.001508	-0.00509	-0.013612	0.007244	-0.00507
-0.010522	-0.070503	-0.004778	-0.001246	-0.004204	-0.011243	0.005983	-0.004188
-0.012494	-0.083717	-0.005674	-0.001479	-0.004992	-0.01335	0.007105	-0.004973
-0.013772	-0.092284	-0.006254	-0.001631	-0.005503	-0.014717	0.007832	-0.005482
-0.010385	-0.069587	-0.004716	-0.00123	-0.00415	-0.011097	0.005905	-0.004133
-0.012206	-0.081792	-0.005543	-0.001445	-0.004878	-0.013043	0.006941	-0.004858
-0.019002	-0.127329	-0.008629	-0.00225	-0.007593	-0.020305	0.010806	-0.007563
-0.010936	-0.073281	-0.004966	-0.001295	-0.00437	-0.011686	0.006219	-0.004353
-0.014409	-0.096551	-0.006543	-0.001706	-0.005758	-0.015397	0.008194	-0.005735
-0.01288	-0.086303	-0.005849	-0.001525	-0.005147	-0.013763	0.007324	-0.005126
-0.795269	-0.101504	-0.006879	-0.001793	-0.006053	-0.016187	0.008614	-0.006029
-0.01038	-0.604103	-0.004714	-0.001229	-0.004148	-0.011091	0.005902	-0.004131
-0.01599	-0.107144	-0.830731	-0.001893	-0.006389	-0.017086	0.009093	-0.006364
-0.018712	-0.125383	-0.008497	-0.965861	-0.007477	-0.019995	0.010641	-0.007448
-0.015146	-0.101489	-0.006878	-0.001793	-0.786056	-0.016184	0.008613	-0.006028
-0.010436	-0.069932	-0.004739	-0.001236	-0.00417	-0.548622	0.005935	-0.004154
-0.021391	-0.143336	-0.009714	-0.002533	-0.008548	-0.022858	-1.089457	-0.008514
-0.012025	-0.080578	-0.005461	-0.001424	-0.004805	-0.01285	0.006838	-0.624074

URBAN HOUSEHOLDS: QUINTILE 4

PHE	Super-numerary ratio
-0.675297	

*Average Budget Shares

Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13	Good 14
0.039994	0.040143	0.02511	0.026936	0.01929	0.031812	0.013778	0.177636	0.012182	0.047058	0.045775	0.010015	0.053862	0.21381

*Marginal Budget Shares

Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13	Good 14
0.030556	0.047301	0.028286	0.024333	0.020231	0.031324	0.011599	0.12993	0.010475	0.036657	0.047245	0.009062	0.06387	0.18355

*Committed Expenditures

Total	Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13
2068.103	114.5653	47.07684	32.42051	63.99784	35.06494	66.64442	39.26158	622.2212	33.64963	130.1022	66.6067	21.52864	75.88093

*Expenditure, Own Price, and Cross Price Elasticities

	Expenditure	Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12
Good 1	0.764014	-0.530727	-0.006266	-0.004591	-0.008025	-0.0043	-0.008144	-0.004543	-0.068681	-0.003903	-0.01704	-0.010597	-0.002976
Good 2	1.178308	-0.022812	-0.80537	-0.00708	-0.012377	-0.006631	-0.01256	-0.007006	-0.105924	-0.006019	-0.02628	-0.016344	-0.00459
Good 3	1.126488	-0.021808	-0.009238	-0.767482	-0.011833	-0.00634	-0.012008	-0.006698	-0.101265	-0.005754	-0.025124	-0.015625	-0.004388
Good 4	0.903368	-0.017489	-0.007408	-0.005428	-0.61953	-0.005084	-0.009629	-0.005371	-0.081208	-0.004615	-0.020148	-0.01253	-0.003519
Good 5	1.048798	-0.020304	-0.008601	-0.006302	-0.011016	-0.714152	-0.01118	-0.006236	-0.094281	-0.005357	-0.023392	-0.014547	-0.004085
Good 6	0.984646	-0.019062	-0.008075	-0.005916	-0.010343	-0.005541	-0.675424	-0.005854	-0.088515	-0.00503	-0.021961	-0.013658	-0.003835
Good 7	0.841819	-0.016297	-0.006904	-0.005058	-0.008842	-0.004738	-0.008973	-0.573483	-0.075675	-0.0043	-0.018775	-0.011677	-0.003279
Good 8	0.731439	-0.01416	-0.005999	-0.004395	-0.007683	-0.004116	-0.007797	-0.004349	-0.559691	-0.003736	-0.016314	-0.010145	-0.002849
Good 9	0.859882	-0.016647	-0.007052	-0.005167	-0.009032	-0.004839	-0.009166	-0.005113	-0.077299	-0.585068	-0.019178	-0.011927	-0.003349
Good 10	0.77898	-0.015081	-0.006388	-0.00468	-0.008182	-0.004384	-0.008304	-0.004632	-0.070026	-0.003979	-0.543416	-0.010805	-0.003034
Good 11	1.032115	-0.019981	-0.008464	-0.006201	-0.010841	-0.005809	-0.011002	-0.006137	-0.092782	-0.005272	-0.02302	-0.711299	-0.00402
Good 12	0.904875	-0.017518	-0.007421	-0.005437	-0.009505	-0.005092	-0.009645	-0.00538	-0.081344	-0.004622	-0.020182	-0.012551	-0.614584
Good 13	1.185801	-0.022957	-0.009725	-0.007125	-0.012456	-0.006673	-0.01264	-0.00705	-0.106597	-0.006057	-0.026447	-0.016448	-0.004619
Good 14	0.858472	-0.01662	-0.00704	-0.005158	-0.009017	-0.004831	-0.009151	-0.005104	-0.077172	-0.004385	-0.019147	-0.011908	-0.003344
Good 15	1.415685	-0.027407	-0.01161	-0.008506	-0.01487	-0.007967	-0.01509	-0.008417	-0.127263	-0.007232	-0.031575	-0.019636	-0.005514
Good 16	1.309552	-0.025352	-0.01074	-0.007868	-0.013755	-0.00737	-0.013959	-0.007786	-0.117722	-0.006689	-0.029207	-0.018164	-0.005101
Good 17	1.277056	-0.024723	-0.010473	-0.007673	-0.013414	-0.007187	-0.013613	-0.007593	-0.114801	-0.006523	-0.028483	-0.017714	-0.004974
Good 18	0.835332	-0.016172	-0.006851	-0.005019	-0.008774	-0.004701	-0.008904	-0.004967	-0.075092	-0.004267	-0.018631	-0.011587	-0.003254
Good 19	1.582774	-0.030642	-0.01298	-0.00951	-0.016625	-0.008907	-0.016872	-0.009411	-0.142283	-0.008085	-0.035301	-0.021954	-0.006165
Good 20	1.228869	-0.02379	-0.010078	-0.007384	-0.012908	-0.006916	-0.013099	-0.007307	-0.110469	-0.006277	-0.027408	-0.017045	-0.004787

Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
0.049681	0.050292	0.027364	0.029771	0.069277	0.016212

Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
0.070333	0.06586	0.034946	0.024869	0.10965	0.019923

Good 14	Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
590.8358	3.12E-10	37.43059	2.45E-12	79.68913	3.41E-15	11.12653

Good 13	Good 14	Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
-0.008199	-0.068654	-0.00167	-0.004444	-0.002877	-0.009915	0.003644	-0.002108
-0.012645	-0.105882	-0.002575	-0.006854	-0.004437	-0.015291	0.00562	-0.00325
-0.012088	-0.101226	-0.002462	-0.006553	-0.004242	-0.014619	0.005372	-0.003107
-0.009694	-0.081176	-0.001974	-0.005255	-0.003402	-0.011723	0.004308	-0.002492
-0.011255	-0.094244	-0.002292	-0.006101	-0.003949	-0.013611	0.005002	-0.002893
-0.010566	-0.08848	-0.002152	-0.005728	-0.003708	-0.012778	0.004696	-0.002716
-0.009034	-0.075645	-0.00184	-0.004897	-0.00317	-0.010925	0.004015	-0.002322
-0.007849	-0.065727	-0.001599	-0.004255	-0.002754	-0.009492	0.003488	-0.002018
-0.009228	-0.077269	-0.001879	-0.005002	-0.003238	-0.011159	0.004101	-0.002372
-0.008359	-0.069999	-0.001703	-0.004531	-0.002933	-0.010109	0.003715	-0.002149
-0.011076	-0.092745	-0.002256	-0.006004	-0.003887	-0.013394	0.004922	-0.002847
-0.00971	-0.081312	-0.001978	-0.005264	-0.003407	-0.011743	0.004315	-0.002496
-0.813492	-0.106555	-0.002592	-0.006898	-0.004465	-0.015389	0.005655	-0.003271
-0.009212	-0.656865	-0.001876	-0.004994	-0.003233	-0.011141	0.004094	-0.002368
-0.015192	-0.127213	-0.959101	-0.008235	-0.005331	-0.018372	0.006752	-0.003905
-0.014053	-0.117676	-0.002862	-0.891954	-0.004931	-0.016995	0.006245	-0.003612
-0.013704	-0.114756	-0.002791	-0.007429	-0.867201	-0.016573	0.00609	-0.003523
-0.008964	-0.075063	-0.001826	-0.004859	-0.003146	-0.574937	0.003984	-0.002304
-0.016985	-0.142227	-0.003459	-0.009207	-0.00596	-0.02054	-1.061293	-0.004366
-0.013187	-0.110426	-0.002686	-0.007148	-0.004627	-0.015948	0.005861	-0.833241

URBAN HOUSEHOLDS: QUINTILE 5

PHE	Super-numerary ratio
-0.585063	

*Average Budget Shares

Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13	Good 14
0.01754	0.022613	0.014063	0.019481	0.01024	0.018037	0.00758	0.136773	0.008062	0.034473	0.056771	0.009639	0.040009	0.258418

*Marginal Budget Shares

Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13	Good 14
0.005421	0.015016	0.007914	0.008632	0.005534	0.00938	0.00153	0.038113	0.00247	0.006032	0.042443	0.007275	0.027652	0.34044

*Committed Exoenditures

Total	Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13
4931.694	164.7594	157.1087	105.4022	170.2644	79.56157	149.042	79.45927	1419.439	77.32203	368.3988	372.1692	63.22024	286.3454

*Expenditure, Own Price, and Cross Price Elasticities

	Expenditure	Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12
Good 1	0.309088	-0.185277	-0.004274	-0.002916	-0.00446	-0.002164	-0.003879	-0.002066	-0.035383	-0.002045	-0.009565	-0.009872	-0.001664
Good 2	0.664055	-0.009541	-0.397696	-0.006264	-0.009583	-0.00465	-0.008333	-0.004439	-0.076017	-0.004394	-0.020549	-0.02121	-0.003574
Good 3	0.562749	-0.008086	-0.007781	-0.334552	-0.008121	-0.003941	-0.007062	-0.003762	-0.06442	-0.003724	-0.017414	-0.017974	-0.003029
Good 4	0.443082	-0.006366	-0.006127	-0.00418	-0.265625	-0.003103	-0.00556	-0.002962	-0.050722	-0.002932	-0.013711	-0.014152	-0.002385
Good 5	0.540434	-0.007765	-0.007473	-0.005098	-0.007799	-0.319973	-0.006782	-0.003613	-0.061866	-0.003576	-0.016723	-0.017261	-0.002909
Good 6	0.520046	-0.007472	-0.007191	-0.004906	-0.007505	-0.003642	-0.310786	-0.003476	-0.059532	-0.003441	-0.016093	-0.01661	-0.002799
Good 7	0.201881	-0.002901	-0.002791	-0.001904	-0.002913	-0.001414	-0.002533	-0.119463	-0.02311	-0.001336	-0.006247	-0.006448	-0.001087
Good 8	0.278659	-0.004004	-0.003853	-0.002629	-0.004021	-0.001951	-0.003497	-0.001863	-0.194933	-0.001844	-0.008623	-0.0089	-0.0015
Good 9	0.306407	-0.004402	-0.004237	-0.00289	-0.004422	-0.002146	-0.003845	-0.002048	-0.035076	-0.181295	-0.009482	-0.009786	-0.001649
Good 10	0.17497	-0.002514	-0.002419	-0.001651	-0.002525	-0.001225	-0.002196	-0.00117	-0.02003	-0.001158	-0.107783	-0.005588	-0.000942
Good 11	0.747614	-0.010742	-0.010337	-0.007052	-0.010789	-0.005235	-0.009382	-0.004997	-0.085583	-0.004947	-0.023134	-0.46128	-0.004024
Good 12	0.754717	-0.010844	-0.010436	-0.007119	-0.010891	-0.005285	-0.009471	-0.005045	-0.086396	-0.004994	-0.023354	-0.024105	-0.44562
Good 13	0.691149	-0.009931	-0.009557	-0.00652	-0.009974	-0.00484	-0.008673	-0.00462	-0.079119	-0.004573	-0.021387	-0.022075	-0.00372
Good 14	1.317402	-0.018929	-0.018216	-0.012427	-0.019011	-0.009225	-0.016532	-0.008806	-0.150809	-0.008717	-0.040766	-0.042077	-0.007091
Good 15	1.752239	-0.025176	-0.024229	-0.016529	-0.025286	-0.01227	-0.021989	-0.011713	-0.200586	-0.011594	-0.054222	-0.055966	-0.009432
Good 16	1.988346	-0.028569	-0.027493	-0.018756	-0.028694	-0.013923	-0.024952	-0.013291	-0.227614	-0.013157	-0.061528	-0.063507	-0.010703
Good 17	0.86189	-0.012384	-0.011918	-0.00813	-0.012438	-0.006035	-0.010816	-0.005761	-0.098664	-0.005703	-0.026671	-0.027528	-0.004639
Good 18	0.496459	-0.007133	-0.006865	-0.004683	-0.007164	-0.003476	-0.00623	-0.003319	-0.056832	-0.003285	-0.015363	-0.015857	-0.002672
Good 19	0.864925	-0.012427	-0.01196	-0.008159	-0.012482	-0.006057	-0.010854	-0.005782	-0.099012	-0.005723	-0.026765	-0.027625	-0.004656
Good 20	0.775619	-0.011144	-0.010725	-0.007317	-0.011193	-0.005431	-0.009733	-0.005185	-0.088788	-0.005132	-0.024001	-0.024773	-0.004175

Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
0.141796	0.060221	0.040774	0.024189	0.059042	0.020279

Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
0.24846	0.11974	0.035143	0.012009	0.051067	0.015729

Good 14	Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
607.5413	1.9E-12	4.22E-12	168.3433	203.6269	342.0202	117.6701

Good 13	Good 14	Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
-0.007366	-0.01831	0.001103	0.00304	-0.006248	-0.005305	-0.009014	-0.003424
-0.015825	-0.039338	0.00237	0.006531	-0.013423	-0.011397	-0.019367	-0.007355
-0.013411	-0.033337	0.002009	0.005534	-0.011375	-0.009659	-0.016412	-0.006233
-0.010559	-0.026248	0.001581	0.004358	-0.008956	-0.007605	-0.012922	-0.004908
-0.012879	-0.032015	0.001929	0.005315	-0.010924	-0.009276	-0.015762	-0.005986
-0.012393	-0.030807	0.001856	0.005114	-0.010512	-0.008926	-0.015167	-0.00576
-0.004811	-0.011959	0.000721	0.001985	-0.004081	-0.003465	-0.005888	-0.002236
-0.006641	-0.016507	0.000995	0.00274	-0.005633	-0.004783	-0.008127	-0.003087
-0.007302	-0.018151	0.001094	0.003013	-0.006194	-0.005259	-0.008936	-0.003394
-0.00417	-0.010365	0.000624	0.001721	-0.003537	-0.003003	-0.005103	-0.001938
-0.017816	-0.044288	0.002668	0.007352	-0.015112	-0.012832	-0.021804	-0.008281
-0.017985	-0.044709	0.002694	0.007422	-0.015255	-0.012953	-0.022011	-0.00836
-0.420837	-0.040943	0.002467	0.006797	-0.013971	-0.011862	-0.020157	-0.007656
-0.031394	-0.848805	0.004702	0.012956	-0.026629	-0.022611	-0.038422	-0.014592
-0.041757	-0.103801	-1.018917	0.017233	-0.035419	-0.030074	-0.051104	-0.019409
-0.047383	-0.117787	0.007097	-1.143754	-0.040191	-0.034127	-0.05799	-0.022024
-0.020539	-0.051057	0.003076	0.008476	-0.521682	-0.014793	-0.025137	-0.009547
-0.011831	-0.02941	0.001772	0.004882	-0.010035	-0.298981	-0.014479	-0.005499
-0.020612	-0.051237	0.003087	0.008506	-0.017483	-0.014845	-0.531261	-0.00958
-0.018483	-0.045947	0.002768	0.007628	-0.015678	-0.013312	-0.022621	-0.462377

RURAL HOUSEHOLDS: QUITILE 1

PHE	Super-numerary ratio
-0.608626	

*Average Budget Shares

Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13	Good 14
0.262561	0.058247	0.086638	0.024216	0.050449	0.034279	0.015611	0.049457	0.001285	0.030784	0.042123	0.008295	0.059068	0.152458

*Marginal Budget Shares

Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13	Good 14
0.23389	0.054135	0.086221	0.028368	0.035309	0.027829	0.01287	0.054418	0.001852	0.038025	0.071325	0.007944	0.04584	0.1162

*Committed Expenditures

Total	Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13
604.7808	188.6168	37.46859	52.16074	9.768856	42.38188	23.45896	10.21497	26.82821	1.77E-13	10.53449	9.15E-13	5.280409	47.37123

*Expenditure, Own Price, and Cross Price Expenditures

	Expenditure	Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12
Good 1	0.890801	-0.649248	-0.022536	-0.030431	-0.006191	-0.025796	-0.015448	-0.006929	-0.014553	-0.000141	-0.006807	0.001147	-0.003082
Good 2	0.929412	-0.111724	-0.589177	-0.03175	-0.00646	-0.026914	-0.016118	-0.007229	-0.015184	-0.000147	-0.007102	0.001197	-0.003216
Good 3	0.995185	-0.119631	-0.025177	-0.639693	-0.006917	-0.028819	-0.017258	-0.007741	-0.016258	-0.000157	-0.007604	0.001282	-0.003443
Good 4	1.17147	-0.140822	-0.029636	-0.04002	-0.72113	-0.033924	-0.020315	-0.009112	-0.019138	-0.000185	-0.008951	0.001509	-0.004053
Good 5	0.699901	-0.084135	-0.017706	-0.02391	-0.004864	-0.446246	-0.012138	-0.005444	-0.011434	-0.000111	-0.005348	0.000901	-0.002422
Good 6	0.811831	-0.09759	-0.020538	-0.027734	-0.005642	-0.023509	-0.508181	-0.006315	-0.013263	-0.000128	-0.006203	0.001045	-0.002809
Good 7	0.824395	-0.0991	-0.020856	-0.028163	-0.00573	-0.023873	-0.014297	-0.508161	-0.013468	-0.00013	-0.006299	0.001062	-0.002853
Good 8	1.100306	-0.132268	-0.027836	-0.037588	-0.007647	-0.031863	-0.019081	-0.008559	-0.687651	-0.000174	-0.008408	0.001417	-0.003807
Good 9	1.440858	-0.173205	-0.036452	-0.049222	-0.010014	-0.041725	-0.024987	-0.011208	-0.023539	-0.877172	-0.01101	0.001855	-0.004986
Good 10	1.235215	-0.148485	-0.031249	-0.042197	-0.008585	-0.03577	-0.021421	-0.009608	-0.02018	-0.000195	-0.761223	0.001591	-0.004274
Good 11	1.693274	-0.203548	-0.042837	-0.057845	-0.011769	-0.049035	-0.029364	-0.013171	-0.027663	-0.000268	-0.012938	-1.02839	-0.005859
Good 12	0.957667	-0.115121	-0.024228	-0.032716	-0.006656	-0.027733	-0.016608	-0.007449	-0.015645	-0.000151	-0.007318	0.001233	-0.586175
Good 13	0.776058	-0.09329	-0.019633	-0.026512	-0.005394	-0.022474	-0.013458	-0.006037	-0.012678	-0.000123	-0.00593	0.000999	-0.002685
Good 14	0.762177	-0.091621	-0.019282	-0.026037	-0.005297	-0.022072	-0.013218	-0.005929	-0.012452	-0.000121	-0.005824	0.000981	-0.002637
Good 15	1.887868	-0.22694	-0.04776	-0.064493	-0.013121	-0.05467	-0.032739	-0.014685	-0.030842	-0.000299	-0.014425	0.002431	-0.006532
Good 16	1.406399	-0.169063	-0.03558	-0.048045	-0.009775	-0.040727	-0.02439	-0.01094	-0.022976	-0.000222	-0.010746	0.001811	-0.004866
Good 17	1.494788	-0.179688	-0.037816	-0.051065	-0.010389	-0.043287	-0.025922	-0.011627	-0.02442	-0.000236	-0.011422	0.001925	-0.005172
Good 18	1.016199	-0.122157	-0.025708	-0.034715	-0.007063	-0.029428	-0.017623	-0.007904	-0.016602	-0.000161	-0.007765	0.001309	-0.003516
Good 19	1.662357	-0.199832	-0.042055	-0.056789	-0.011554	-0.048139	-0.028828	-0.012931	-0.027158	-0.000263	-0.012702	0.002141	-0.005752
Good 20	2.288613	-0.275114	-0.057899	-0.078183	-0.015906	-0.066275	-0.039689	-0.017802	-0.037389	-0.000362	-0.017488	0.002947	-0.007919

Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
0.008296	0.018275	0.026461	0.033439	0.025905	0.012153

Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
0.015661	0.025702	0.039554	0.033981	0.043064	0.027812

Good 14	Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
125.6582	1.43E-13	5.712673	4.35E-12	19.32479	3.42E-15	5.44E-15

Good 13	Good 14	Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
-0.027765	-0.07281	0.001101	-0.002345	-0.002127	-0.011364	0.000271	0.004253
-0.028968	-0.075966	0.001149	-0.002446	-0.002219	-0.011857	0.000283	0.004438
-0.031018	-0.081342	0.00123	-0.002619	-0.002376	-0.012696	0.000303	0.004752
-0.036513	-0.095751	0.001448	-0.003083	-0.002797	-0.014945	0.000357	0.005594
-0.021815	-0.057207	0.000865	-0.001842	-0.001671	-0.008929	0.000213	0.003342
-0.025303	-0.066356	0.001004	-0.002137	-0.001938	-0.010357	0.000247	0.003876
-0.025695	-0.067383	0.001019	-0.00217	-0.001968	-0.010517	0.000251	0.003936
-0.034295	-0.089934	0.00136	-0.002896	-0.002627	-0.014037	0.000335	0.005254
-0.044909	-0.11777	0.001781	-0.003793	-0.00344	-0.018382	0.000439	0.00688
-0.0385	-0.100961	0.001527	-0.003251	-0.002949	-0.015758	0.000376	0.005898
-0.052776	-0.138401	0.002093	-0.004457	-0.004043	-0.021602	0.000516	0.008085
-0.029849	-0.078276	0.001184	-0.002521	-0.002287	-0.012218	0.000292	0.004573
-0.496518	-0.063432	0.000959	-0.002043	-0.001853	-0.009901	0.000236	0.003706
-0.023756	-0.526178	0.000942	-0.002006	-0.00182	-0.009724	0.000232	0.003639
-0.058842	-0.154306	-1.146673	-0.004969	-0.004508	-0.024085	0.000575	0.009014
-0.043835	-0.114953	0.001738	-0.859673	-0.003358	-0.017942	0.000428	0.006715
-0.04659	-0.122178	0.001848	-0.003934	-0.913336	-0.01907	0.000455	0.007137
-0.031673	-0.08306	0.001256	-0.002675	-0.002426	-0.63145	0.000309	0.004852
-0.051813	-0.135874	0.002055	-0.004376	-0.003969	-0.021208	-1.011248	0.007937
-0.071332	-0.187061	0.002829	-0.006024	-0.005464	-0.029197	0.000697	-1.381982

RURAL HOUSEHOLDS: QUINTILE 2

PHE	Super-numerary ratio
-0.683768	

*Average Budget Shares

Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13	Good 14
0.20695	0.066239	0.082422	0.025614	0.046825	0.03911	0.015649	0.050325	0.0025	0.036335	0.059043	0.010652	0.055072	0.157059

*Marginal Budget Shares

Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13	Good 14
0.20036	0.068387	0.082576	0.020957	0.029172	0.033915	0.010019	0.037512	0.003491	0.047041	0.085199	0.016277	0.039007	0.12805

*Committed Expenditures

Total	Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13
671.4281	151.913	38.87772	54.05902	22.55618	54.7035	28.81271	16.70294	57.5547	1.61E-14	5.853745	4.929129	1.25E-12	60.51925

*Expenditure, Own Price, and Cross Price Expenditures

	Expenditure	Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12
Good 1	0.968156	-0.729717	-0.018858	-0.025133	-0.010925	-0.026022	-0.015414	-0.008519	-0.023889	-0.00011	-0.004038	-0.000761	0.000463
Good 2	1.032426	-0.072219	-0.72605	-0.026801	-0.01165	-0.027749	-0.016437	-0.009084	-0.025475	-0.000117	-0.004306	-0.000812	0.000493
Good 3	1.001867	-0.070081	-0.019515	-0.711052	-0.011305	-0.026928	-0.01595	-0.008815	-0.024721	-0.000114	-0.004178	-0.000788	0.000479
Good 4	0.818186	-0.057232	-0.015937	-0.02124	-0.568682	-0.021991	-0.013026	-0.007199	-0.020189	-9.3E-05	-0.003412	-0.000643	0.000391
Good 5	0.623004	-0.043579	-0.012135	-0.016173	-0.00703	-0.442736	-0.009919	-0.005482	-0.015373	-7.08E-05	-0.002598	-0.00049	0.000298
Good 6	0.867159	-0.060658	-0.016891	-0.022511	-0.009785	-0.023307	-0.606741	-0.00763	-0.021397	-9.86E-05	-0.003616	-0.000682	0.000414
Good 7	0.640217	-0.044783	-0.01247	-0.01662	-0.007224	-0.017208	-0.010193	-0.443393	-0.015797	-7.28E-05	-0.00267	-0.000503	0.000306
Good 8	0.745401	-0.052141	-0.014519	-0.01935	-0.008411	-0.020035	-0.011867	-0.006559	-0.528074	-8.47E-05	-0.003109	-0.000586	0.000356
Good 9	1.396	-0.097651	-0.027192	-0.036239	-0.015753	-0.037521	-0.022225	-0.012283	-0.034446	-0.954699	-0.005822	-0.001097	0.000667
Good 10	1.294631	-0.09056	-0.025217	-0.033608	-0.014609	-0.034797	-0.020611	-0.011391	-0.031945	-0.000147	-0.890627	-0.001018	0.000619
Good 11	1.443011	-0.100939	-0.028107	-0.03746	-0.016283	-0.038785	-0.022973	-0.012697	-0.035606	-0.000164	-0.006018	-0.98782	0.00069
Good 12	1.528103	-0.106892	-0.029765	-0.039668	-0.017243	-0.041072	-0.024328	-0.013445	-0.037706	-0.000174	-0.006373	-0.001201	-1.044138
Good 13	0.708289	-0.049545	-0.013796	-0.018387	-0.007993	-0.019037	-0.011276	-0.006232	-0.017477	-8.05E-05	-0.002954	-0.000557	0.000339
Good 14	0.815299	-0.057031	-0.015881	-0.021165	-0.0092	-0.021913	-0.01298	-0.007174	-0.020118	-9.27E-05	-0.0034	-0.000641	0.00039
Good 15	1.54992	-0.108418	-0.03019	-0.040235	-0.01749	-0.041659	-0.024675	-0.013637	-0.038244	-0.000176	-0.006464	-0.001218	0.000741
Good 16	1.292378	-0.090402	-0.025173	-0.033549	-0.014584	-0.034736	-0.020575	-0.011371	-0.03189	-0.000147	-0.00539	-0.001016	0.000618
Good 17	1.398827	-0.097849	-0.027247	-0.036313	-0.015785	-0.037597	-0.02227	-0.012308	-0.034516	-0.000159	-0.005834	-0.0011	0.000669
Good 18	0.93693	-0.065539	-0.01825	-0.024322	-0.010573	-0.025183	-0.014916	-0.008244	-0.023119	-0.000106	-0.003907	-0.000737	0.000448
Good 19	1.515364	-0.106	-0.029517	-0.039338	-0.0171	-0.04073	-0.024125	-0.013333	-0.037392	-0.000172	-0.00632	-0.001191	0.000724
Good 20	1.75055	-0.122452	-0.034098	-0.045443	-0.019754	-0.047051	-0.02787	-0.015403	-0.043195	-0.000199	-0.0073	-0.001376	0.000837

Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
0.017256	0.021779	0.034014	0.032351	0.026253	0.014551

Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
0.026746	0.028147	0.047579	0.030311	0.039783	0.025472

Good 14	Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
145.427	3.65E-11	5.398807	5.45E-13	24.12048	1.8E-14	3.98E-17

Good 13	Good 14	Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
-0.027496	-0.067289	0.000999	-0.002453	-0.001433	-0.011255	0.000919	0.002775
-0.029321	-0.071756	0.001065	-0.002615	-0.001528	-0.012003	0.00098	0.002959
-0.028453	-0.069632	0.001034	-0.002538	-0.001483	-0.011647	0.000951	0.002871
-0.023237	-0.056866	0.000844	-0.002073	-0.001211	-0.009512	0.000777	0.002345
-0.017694	-0.0433	0.000643	-0.001578	-0.000922	-0.007243	0.000591	0.001786
-0.024628	-0.06027	0.000895	-0.002197	-0.001284	-0.010081	0.000823	0.002485
-0.018182	-0.044497	0.000661	-0.001622	-0.000948	-0.007443	0.000608	0.001835
-0.02117	-0.051807	0.000769	-0.001888	-0.001104	-0.008666	0.000708	0.002136
-0.039647	-0.097025	0.00144	-0.003536	-0.002067	-0.016229	0.001325	0.004001
-0.036768	-0.08998	0.001336	-0.00328	-0.001917	-0.015051	0.001229	0.00371
-0.040982	-0.100293	0.001489	-0.003655	-0.002136	-0.016776	0.00137	0.004136
-0.043399	-0.106207	0.001577	-0.003871	-0.002262	-0.017765	0.001451	0.00438
-0.504422	-0.049228	0.000731	-0.001794	-0.001049	-0.008234	0.000672	0.00203
-0.023155	-0.614141	0.000841	-0.002065	-0.001207	-0.009478	0.000774	0.002337
-0.044018	-0.107723	-1.058187	-0.003926	-0.002295	-0.018019	0.001471	0.004442
-0.036704	-0.089823	0.001333	-0.886961	-0.001913	-0.015025	0.001227	0.003704
-0.039727	-0.097222	0.001443	-0.003544	-0.958545	-0.016262	0.001328	0.004009
-0.026609	-0.065119	0.000967	-0.002373	-0.001387	-0.651536	0.000889	0.002685
-0.043037	-0.105321	0.001563	-0.003839	-0.002243	-0.017617	-1.034719	0.004343
-0.049716	-0.121667	0.001806	-0.004434	-0.002592	-0.020351	0.001662	-1.191953

RURAL HOUSEHOLDS: QUINTILE 3

PHE	Super-numerary ratio
-0.773861	

*Average Budget Shares

Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13	Good 14
0.165807	0.0646	0.071097	0.026386	0.04273	0.040043	0.017977	0.059937	0.004033	0.039948	0.064875	0.011757	0.051196	0.164955

*Marginal Budget Shares

Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13	Good 14
0.17599	0.06103	0.065158	0.021579	0.028422	0.031506	0.017161	0.050412	0.004863	0.04848	0.085684	0.015789	0.035597	0.14334

*Committed Expenditures

Total	Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13
591.6737	81.77691	42.61373	49.39431	22.90495	50.85283	35.23029	8.884575	59.20098	6.29E-14	3.13E-15	7.3E-12	0.20495	61.50176

*Expenditure, Own Price, and Cross Price Expenditures

	Expenditure	Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12
Good 1	1.061413	-0.85282	-0.018438	-0.021944	-0.010282	-0.022009	-0.016624	-0.004985	-0.02221	-0.000286	-0.00258	0.00152	0.00049
Good 2	0.944737	-0.027979	-0.747506	-0.019532	-0.009151	-0.01959	-0.014797	-0.004437	-0.019769	-0.000255	-0.002297	0.001353	0.000436
Good 3	0.916461	-0.027142	-0.01592	-0.72816	-0.008877	-0.019003	-0.014354	-0.004304	-0.019177	-0.000247	-0.002228	0.001313	0.000423
Good 4	0.817827	-0.02422	-0.014207	-0.016908	-0.640806	-0.016958	-0.012809	-0.003841	-0.017113	-0.00022	-0.001988	0.001171	0.000377
Good 5	0.665149	-0.019699	-0.011554	-0.013751	-0.006443	-0.528525	-0.010418	-0.003124	-0.013918	-0.000179	-0.001617	0.000953	0.000307
Good 6	0.786796	-0.023301	-0.013668	-0.016266	-0.007621	-0.016315	-0.621193	-0.003695	-0.016464	-0.000212	-0.001913	0.001127	0.000363
Good 7	0.954613	-0.028271	-0.016583	-0.019736	-0.009247	-0.019795	-0.014951	-0.743221	-0.019976	-0.000257	-0.002321	0.001367	0.000441
Good 8	0.841082	-0.024909	-0.014611	-0.017389	-0.008147	-0.01744	-0.013173	-0.00395	-0.66848	-0.000227	-0.002045	0.001205	0.000388
Good 9	1.205899	-0.035713	-0.020948	-0.024931	-0.011681	-0.025005	-0.018887	-0.005664	-0.025234	-0.933523	-0.002932	0.001727	0.000557
Good 10	1.213582	-0.035941	-0.021081	-0.02509	-0.011756	-0.025164	-0.019007	-0.0057	-0.025394	-0.000327	-0.942093	0.001738	0.00056
Good 11	1.320752	-0.039115	-0.022943	-0.027306	-0.012794	-0.027387	-0.020686	-0.006203	-0.027637	-0.000356	-0.003211	-1.020186	0.00061
Good 12	1.34295	-0.039772	-0.023329	-0.027764	-0.013009	-0.027847	-0.021034	-0.006307	-0.028102	-0.000362	-0.003265	0.001924	-1.038636
Good 13	0.695307	-0.020592	-0.012078	-0.014375	-0.006735	-0.014418	-0.01089	-0.003266	-0.014549	-0.000187	-0.00169	0.000996	0.000321
Good 14	0.868964	-0.025735	-0.015095	-0.017965	-0.008417	-0.018019	-0.01361	-0.004081	-0.018183	-0.000234	-0.002113	0.001245	0.000401
Good 15	1.306264	-0.038686	-0.022691	-0.027006	-0.012653	-0.027086	-0.020459	-0.006135	-0.027334	-0.000352	-0.003176	0.001871	0.000603
Good 16	1.101096	-0.03261	-0.019127	-0.022764	-0.010666	-0.022832	-0.017246	-0.005172	-0.023041	-0.000297	-0.002677	0.001577	0.000508
Good 17	1.274544	-0.037746	-0.02214	-0.02635	-0.012346	-0.026429	-0.019962	-0.005986	-0.02667	-0.000343	-0.003099	0.001826	0.000588
Good 18	0.855039	-0.025323	-0.014853	-0.017677	-0.008282	-0.01773	-0.013392	-0.004016	-0.017892	-0.00023	-0.002079	0.001225	0.000395
Good 19	1.395317	-0.041323	-0.024238	-0.028847	-0.013516	-0.028933	-0.021854	-0.006553	-0.029197	-0.000376	-0.003392	0.001999	0.000644
Good 20	1.446176	-0.042829	-0.025122	-0.029899	-0.014009	-0.029987	-0.02265	-0.006792	-0.030262	-0.00039	-0.003516	0.002071	0.000667

Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
0.028856	0.021609	0.036215	0.030589	0.035489	0.0219

Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
0.037693	0.023794	0.046157	0.026155	0.049518	0.031672

Good 14	Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
141.4996	1.97E-12	10.87588	6.54E-17	26.73294	7.59E-17	2.36E-14

Good 13	Good 14	Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
-0.025101	-0.057348	0.000333	-0.003392	-0.000526	-0.010984	0.003005	0.002769
-0.022342	-0.051044	0.000296	-0.00302	-0.000468	-0.009777	0.002675	0.002465
-0.021673	-0.049516	0.000287	-0.002929	-0.000454	-0.009484	0.002595	0.002391
-0.019341	-0.044187	0.000256	-0.002614	-0.000405	-0.008464	0.002316	0.002134
-0.01573	-0.035938	0.000209	-0.002126	-0.00033	-0.006884	0.001883	0.001735
-0.018607	-0.04251	0.000247	-0.002515	-0.00039	-0.008142	0.002228	0.002053
-0.022576	-0.051578	0.000299	-0.003051	-0.000473	-0.009879	0.002703	0.002491
-0.019891	-0.045444	0.000264	-0.002688	-0.000417	-0.008704	0.002381	0.002195
-0.028518	-0.065155	0.000378	-0.003854	-0.000597	-0.01248	0.003414	0.003146
-0.0287	-0.06557	0.000381	-0.003879	-0.000601	-0.012559	0.003436	0.003166
-0.031234	-0.07136	0.000414	-0.004221	-0.000654	-0.013668	0.003739	0.003446
-0.031759	-0.072559	0.000421	-0.004292	-0.000665	-0.013898	0.003802	0.003504
-0.554514	-0.037567	0.000218	-0.002222	-0.000344	-0.007196	0.001969	0.001814
-0.02055	-0.719407	0.000272	-0.002777	-0.000431	-0.008993	0.00246	0.002267
-0.030892	-0.070577	-1.010457	-0.004175	-0.000647	-0.013518	0.003698	0.003408
-0.02604	-0.059492	0.000345	-0.855614	-0.000546	-0.011395	0.003118	0.002873
-0.030142	-0.068863	0.0004	-0.004074	-0.986951	-0.01319	0.003609	0.003325
-0.020221	-0.046198	0.000268	-0.002733	-0.000424	-0.67053	0.002421	0.002231
-0.032998	-0.075389	0.000438	-0.00446	-0.000691	-0.01444	-1.07583	0.003641
-0.034201	-0.078137	0.000453	-0.004622	-0.000716	-0.014966	0.004095	-1.115365

RURAL HOUSEHOLDS: QUINTILE 4

PHE	Super-numerary ratio
-0.725751	

*Average Budget Shares

Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13	Good 14
0.121279	0.06354	0.056611	0.026133	0.034252	0.039293	0.016787	0.076314	0.006089	0.044369	0.071764	0.012863	0.0521	0.168481

*Marginal Budget Shares

Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13	Good 14
0.11353	0.057659	0.053372	0.019761	0.021998	0.0324	0.012531	0.05793	0.008022	0.051041	0.097244	0.018572	0.04289	0.12636

*Committed Expenditures

Total	Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13
907.0782	129.4701	66.94566	49.86818	35.42142	56.06584	45.38227	21.9998	123.942	1.89E-12	12.54692	5.985043	2.99E-15	68.56303

*Expenditure, Own Price, and Cross Price Elasticities

	Expenditure	Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12
Good 1	0.936106	-0.71578	-0.020308	-0.016734	-0.011038	-0.017119	-0.01477	-0.007201	-0.032082	-0.00025	-0.006858	-0.001113	0.000576
Good 2	0.907437	-0.035285	-0.67826	-0.016221	-0.0107	-0.016595	-0.014318	-0.006981	-0.031099	-0.000243	-0.006648	-0.001079	0.000559
Good 3	0.942789	-0.03666	-0.020453	-0.701083	-0.011117	-0.017241	-0.014876	-0.007253	-0.032311	-0.000252	-0.006907	-0.001121	0.000581
Good 4	0.75616	-0.029403	-0.016404	-0.013517	-0.557701	-0.013828	-0.011931	-0.005817	-0.025915	-0.000202	-0.00554	-0.000899	0.000466
Good 5	0.642231	-0.024973	-0.013933	-0.011481	-0.007573	-0.477844	-0.010133	-0.00494	-0.02201	-0.000172	-0.004705	-0.000764	0.000395
Good 6	0.824584	-0.032064	-0.017889	-0.01474	-0.009723	-0.01508	-0.611453	-0.006343	-0.02826	-0.00022	-0.006041	-0.000981	0.000508
Good 7	0.74647	-0.029026	-0.016194	-0.013344	-0.008802	-0.013651	-0.011778	-0.547494	-0.025583	-0.0002	-0.005469	-0.000888	0.00046
Good 8	0.759096	-0.029517	-0.016468	-0.01357	-0.008951	-0.013882	-0.011977	-0.005839	-0.57693	-0.000203	-0.005561	-0.000903	0.000467
Good 9	1.317399	-0.051226	-0.02858	-0.02355	-0.015534	-0.024092	-0.020786	-0.010134	-0.04515	-0.956456	-0.009651	-0.001567	0.000811
Good 10	1.150378	-0.044732	-0.024957	-0.020564	-0.013565	-0.021037	-0.018151	-0.008849	-0.039425	-0.000308	-0.843316	-0.001368	0.000708
Good 11	1.355049	-0.05269	-0.029397	-0.024223	-0.015978	-0.02478	-0.02138	-0.010424	-0.04644	-0.000362	-0.009927	-0.985039	0.000834
Good 12	1.443843	-0.056143	-0.031323	-0.02581	-0.017025	-0.026404	-0.022781	-0.011107	-0.049483	-0.000386	-0.010577	-0.001717	-1.046981
Good 13	0.823228	-0.032011	-0.017859	-0.014716	-0.009707	-0.015055	-0.012989	-0.006333	-0.028213	-0.00022	-0.006031	-0.000979	0.000507
Good 14	0.749996	-0.029163	-0.016271	-0.013407	-0.008844	-0.013715	-0.011834	-0.005769	-0.025704	-0.0002	-0.005494	-0.000892	0.000462
Good 15	1.558051	-0.060584	-0.033801	-0.027852	-0.018372	-0.028493	-0.024583	-0.011986	-0.053397	-0.000416	-0.011414	-0.001853	0.000959
Good 16	1.210915	-0.047086	-0.02627	-0.021646	-0.014279	-0.022144	-0.019106	-0.009315	-0.0415	-0.000324	-0.008871	-0.00144	0.000746
Good 17	1.356409	-0.052743	-0.029426	-0.024247	-0.015994	-0.024805	-0.021402	-0.010434	-0.046486	-0.000363	-0.009937	-0.001613	0.000835
Good 18	0.965465	-0.037542	-0.020945	-0.017259	-0.011385	-0.017656	-0.015233	-0.007427	-0.033088	-0.000258	-0.007073	-0.001148	0.000594
Good 19	1.474495	-0.057335	-0.031988	-0.026358	-0.017387	-0.026965	-0.023265	-0.011343	-0.050534	-0.000394	-0.010802	-0.001754	0.000908
Good 20	1.433396	-0.055737	-0.031097	-0.025623	-0.016902	-0.026213	-0.022616	-0.011027	-0.049125	-0.000383	-0.010501	-0.001705	0.000883

Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
0.052822	0.027856	0.036157	0.029282	0.038872	0.025134

Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
0.0823	0.033731	0.049044	0.028271	0.057317	0.036027

Good 14	Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
252.9199	5.91E-13	9.707476	1.06E-19	28.26057	1.76E-12	6.2E-13

Good 13	Good 14	Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
-0.019632	-0.071869	0.006466	-0.00316	-0.000528	-0.008205	0.002551	0.000948
-0.019031	-0.069668	0.006268	-0.003063	-0.000511	-0.007953	0.002473	0.000919
-0.019772	-0.072383	0.006512	-0.003182	-0.000531	-0.008263	0.00257	0.000955
-0.015858	-0.058054	0.005223	-0.002552	-0.000426	-0.006627	0.002061	0.000766
-0.013469	-0.049307	0.004436	-0.002168	-0.000362	-0.005629	0.00175	0.00065
-0.017293	-0.063307	0.005695	-0.002783	-0.000465	-0.007227	0.002247	0.000835
-0.015655	-0.05731	0.005156	-0.00252	-0.000421	-0.006542	0.002035	0.000756
-0.01592	-0.05828	0.005243	-0.002562	-0.000428	-0.006653	0.002069	0.000769
-0.027629	-0.101143	0.009099	-0.004447	-0.000742	-0.011546	0.003591	0.001334
-0.024126	-0.08832	0.007946	-0.003883	-0.000648	-0.010083	0.003135	0.001165
-0.028419	-0.104034	0.009359	-0.004574	-0.000764	-0.011876	0.003693	0.001372
-0.030281	-0.110851	0.009972	-0.004874	-0.000814	-0.012655	0.003935	0.001462
-0.614723	-0.063203	0.005686	-0.002779	-0.000464	-0.007215	0.002244	0.000834
-0.015729	-0.601892	0.00518	-0.002532	-0.000423	-0.006573	0.002044	0.000759
-0.032676	-0.119619	-1.119996	-0.005259	-0.000878	-0.013656	0.004247	0.001578
-0.025396	-0.092968	0.008364	-0.88291	-0.000682	-0.010613	0.0033	0.001226
-0.028447	-0.104138	0.009369	-0.004579	-0.985179	-0.011888	0.003697	0.001374
-0.020248	-0.074124	0.006668	-0.003259	-0.000544	-0.709149	0.002631	0.000978
-0.030924	-0.113204	0.010184	-0.004977	-0.000831	-0.012923	-1.066098	0.001493
-0.030062	-0.110049	0.0099	-0.004838	-0.000808	-0.012563	0.003907	-1.038837

RURAL HOUSEHOLDS: QUINTILE 5

PHE	Super-numerary ratio
-0.585159	

*Average Budget Shares

Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13	Good 14
0.059771	0.040825	0.031702	0.020032	0.019304	0.027617	0.011763	0.07072	0.006328	0.037914	0.056736	0.010685	0.03323	0.275157

Marginal Budget Shares

Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13	Good 14
0.008188	0.007132	0.003942	0.003026	0.002474	0.005176	0.002427	0.01167	0.000946	0.008046	0.018564	0.003543	0.006075	0.6497

*Committed Expenditures

Total	Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12	Good 13
2618.793	331.9368	211.9669	163.9128	101.1601	102.9572	134.807	56.91979	347.8431	30.94581	174.4015	248.109	45.07156	172.8258

*Expenditure, Own Price, and Cross Price Elasticities

	Expenditure	Good 1	Good 2	Good 3	Good 4	Good 5	Good 6	Good 7	Good 8	Good 9	Good 10	Good 11	Good 12
Good 1	0.136981	-0.087687	-0.005021	-0.004027	-0.002502	-0.002446	-0.003368	-0.001417	-0.008752	-0.000791	-0.004549	-0.006284	-0.00118
Good 2	0.174694	-0.009605	-0.108626	-0.005135	-0.00319	-0.003119	-0.004295	-0.001807	-0.011161	-0.001009	-0.005801	-0.008014	-0.001504
Good 3	0.12435	-0.006837	-0.004558	-0.07642	-0.002271	-0.00222	-0.003058	-0.001286	-0.007945	-0.000718	-0.004129	-0.005704	-0.001071
Good 4	0.15103	-0.008304	-0.005536	-0.00444	-0.091135	-0.002697	-0.003714	-0.001562	-0.00965	-0.000872	-0.005015	-0.006928	-0.001301
Good 5	0.128146	-0.007045	-0.004697	-0.003767	-0.00234	-0.077274	-0.003151	-0.001325	-0.008187	-0.00074	-0.004255	-0.005878	-0.001103
Good 6	0.18741	-0.010304	-0.006869	-0.005509	-0.003422	-0.003346	-0.114273	-0.001938	-0.011974	-0.001082	-0.006223	-0.008597	-0.001614
Good 7	0.206319	-0.011343	-0.007562	-0.006065	-0.003768	-0.003684	-0.005073	-0.122864	-0.013182	-0.001191	-0.006851	-0.009464	-0.001777
Good 8	0.165017	-0.009073	-0.006048	-0.004851	-0.003014	-0.002947	-0.004058	-0.001707	-0.107104	-0.000953	-0.005479	-0.00757	-0.001421
Good 9	0.149511	-0.00822	-0.00548	-0.004395	-0.00273	-0.00267	-0.003676	-0.001546	-0.009552	-0.088351	-0.004965	-0.006859	-0.001287
Good 10	0.212216	-0.011668	-0.007778	-0.006238	-0.003876	-0.003789	-0.005218	-0.002195	-0.013559	-0.001225	-0.131227	-0.009735	-0.001827
Good 11	0.327201	-0.017989	-0.011993	-0.009618	-0.005975	-0.005843	-0.008045	-0.003384	-0.020905	-0.001889	-0.010865	-0.206474	-0.002818
Good 12	0.331633	-0.018233	-0.012155	-0.009749	-0.006056	-0.005922	-0.008154	-0.00343	-0.021189	-0.001915	-0.011012	-0.015213	-0.196914
Good 13	0.182823	-0.010052	-0.006701	-0.005374	-0.003339	-0.003265	-0.004495	-0.001891	-0.011681	-0.001056	-0.006071	-0.008387	-0.001574
Good 14	2.361199	-0.129819	-0.086542	-0.069409	-0.04312	-0.042162	-0.058058	-0.024421	-0.15086	-0.013635	-0.078405	-0.108315	-0.020333
Good 15	1.402819	-0.077127	-0.051416	-0.041237	-0.025618	-0.025049	-0.034493	-0.014509	-0.089628	-0.008101	-0.046581	-0.064351	-0.01208
Good 16	0.407715	-0.022416	-0.014944	-0.011985	-0.007446	-0.00728	-0.010025	-0.004217	-0.026049	-0.002354	-0.013538	-0.018703	-0.003511
Good 17	0.902848	-0.049639	-0.033091	-0.02654	-0.016488	-0.016121	-0.0222	-0.009338	-0.057684	-0.005214	-0.02998	-0.041416	-0.007775
Good 18	0.195575	-0.010753	-0.007168	-0.005749	-0.003572	-0.003492	-0.004809	-0.002023	-0.012496	-0.001129	-0.006494	-0.008972	-0.001684
Good 19	0.423593	-0.023289	-0.015526	-0.012452	-0.007736	-0.007564	-0.010415	-0.004381	-0.027064	-0.002446	-0.014066	-0.019431	-0.003648
Good 20	0.482354	-0.02652	-0.017679	-0.014179	-0.008809	-0.008613	-0.01186	-0.004989	-0.030818	-0.002785	-0.016017	-0.022127	-0.004154

Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
0.124449	0.027303	0.049527	0.020672	0.036835	0.03943

Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
0.17458	0.011132	0.044715	0.004043	0.015603	0.019019

Good 14	Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
1.09E-12	36.90275	69.98453	19.39626	102.8058	101.2823	165.5643

Good 13	Good 14	Good 15	Good 16	Good 17	Good 18	Good 19	Good 20
-0.004065	0.014386	-0.003054	-0.002848	-0.0032	-0.002508	-0.003795	-0.003877
-0.005184	0.018347	-0.003894	-0.003632	-0.004081	-0.003198	-0.00484	-0.004944
-0.00369	0.013059	-0.002772	-0.002585	-0.002905	-0.002276	-0.003445	-0.003519
-0.004482	0.015861	-0.003367	-0.00314	-0.003528	-0.002765	-0.004184	-0.004274
-0.003803	0.013458	-0.002857	-0.002664	-0.002994	-0.002346	-0.00355	-0.003627
-0.005561	0.019682	-0.004178	-0.003896	-0.004378	-0.003431	-0.005192	-0.005304
-0.006122	0.021668	-0.004599	-0.004289	-0.00482	-0.003777	-0.005716	-0.005839
-0.004897	0.01733	-0.003679	-0.003431	-0.003855	-0.003021	-0.004572	-0.00467
-0.004437	0.015702	-0.003333	-0.003108	-0.003493	-0.002737	-0.004142	-0.004231
-0.006297	0.022287	-0.004731	-0.004412	-0.004958	-0.003885	-0.005879	-0.006006
-0.00971	0.034363	-0.007294	-0.006802	-0.007644	-0.00599	-0.009065	-0.00926
-0.009841	0.034828	-0.007393	-0.006894	-0.007747	-0.006071	-0.009188	-0.009385
-0.112405	0.0192	-0.004076	-0.003801	-0.004271	-0.003347	-0.005065	-0.005174
-0.070068	-1.133702	-0.052637	-0.049088	-0.055161	-0.043226	-0.065416	-0.066823
-0.041628	0.147326	-0.852144	-0.029164	-0.032772	-0.025681	-0.038865	-0.0397
-0.012099	0.042819	-0.009089	-0.247054	-0.009525	-0.007464	-0.011296	-0.011539
-0.026792	0.094818	-0.020127	-0.01877	-0.549401	-0.016528	-0.025013	-0.025551
-0.005804	0.020539	-0.00436	-0.004066	-0.004569	-0.118023	-0.005418	-0.005535
-0.01257	0.044486	-0.009443	-0.008806	-0.009896	-0.007755	-0.259605	-0.011988
-0.014314	0.050657	-0.010753	-0.010028	-0.011268	-0.00883	-0.013363	-0.295905