AN ESTIMATION OF ENGEL CURVES BY REGIONS AND INCOME GROUPS IN TURKEY: 1987

A Master's Thesis

Presented by

H. Cem DOĞAN

to

the Graduate School of Social Sciences

of Middle East Technical University

In Partial Fulfillment for Degree of

MASTER OF SCIENCE

in

ECONOMICS

MIDDLE EAST TECHNICAL UNIVERSITY

ANKARA

February, 1995

Approval of the Graduate School of Social Sciences.

Prof. Dr. Bahattin Akşit
Director

I certify that this thesis satisfies all the requirements as a thesis for the degree of Master of Science.

Assoc. Prof. Dr. Nazım Ekinci
Chairman of the Department

We certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as thesis for the degree of Master of Science in Economics.

Prof. Dr. Aysıt Tansel
Supervisor

Prof. Dr. Zehra Kasnakoğlu
Supervisor

Examining Committee Members:

Prof. Dr. Zehra Kasnakoğlu

Prof. Dr. Aysıt Tansel

Assoc. Prof. Dr. Fikret Görün

ABSTRACT

AN ESTIMATION OF ENGEL CURVES
BY REGIONS AND INCOME GROUPS IN TURKEY: 1987

DOĞAN, Hünkar Cem
M.S. in Economics
Supervisor: Prof. Dr. Zehra KASNAKOĞLU
Co-Supervisor: Prof. Dr. Aysıt TANSEL
February 1995, 198 pages.

In this study, Engel curves are estimated for 11 main expenditure groups and 9 sub-groups of food expenditures by regions and income groups using 1987 Turkish household expenditure survey data. Within this scope, double-log and Working-Leser functional forms are compared using either household income or total expenditure separately as explanatory variables. Having selected double-log form as the functional form and total expenditure as the explanatory variable, total expenditure and size elasticities, estimated in this way, are analyzed with particular attention to differences among expenditure groups, regions and income groups. In addition, expenditure groups are classified with reference to total expenditure elasticities and the results of present study are compared with past studies in Turkey and with international studies.

Key words: Consumption patterns, Engel's Law, Engel curves, income elasticity, total expenditure elasticity, size elasticity, Turkey.

Science Code: 219.01.01.

ÖZ

BÖLGELERE VE GELİR GRUPLARINA GÖRE TÜRKİYE'DE ENGEL EĞRİLERİNİN BİR TAHMİNİ: 1987

DOĞAN, Hünkar Cem
M.S. in Economics
Tez Yöneticisi: Prof. Dr. Zehra KASNAKOĞLU
Ortak Tez Yöneticisi: Prof. Dr. Aysıt TANSEL
Şubat 1995, 198 sayfa.

Bu çalışmada, 1987 Türkiye hanehalkı harcama anketi kullanılarak, bölgelere ve gelir gruplarına göre 11 ana harcama grubu ve 9 gıda alt-grubu için Engel eğrileri tahmin edilmiştir. Bu amaçla, Engel eğrilerinin çifte-logaritmik ve Working-Leser fonksiyon biçimleri, hanehalkı geliri veya toplam harcama değeri ayrı ayrı açıklayıcı değişken olarak kullanılarak karşılaştırılmıştır. Fonksiyon biçimi olarak çifte-logaritmik biçimin, açıklayıcı değişken olarak ise toplam harcama değerinin seçilmesinden sonra, bu yolla tahmin edilen toplam harcama ve hanehalkı büyüklük esneklikleri, harcama grupları, bölgeler ve gelir grupları arasındaki farklılıklara da bakılarak incelenmiştir. Ayrıca, harcama grupları, toplam harcama esnekliklerine göre sınıflandırılmış ve mevcut çalışmanın sonuçları daha önce Türkiye'de yapılan çalışmalar ve uluslararası çalışmalarla karşılaştırılmıştır.

Anahtar kelimeler: Tüketim kalıpları, Engel kanunu, Engel eğrileri, gelir esnekliği, toplam harcama esnekliği, hanehalkı büyüklük esnekliği, Türkiye.

Bilim Kodu: 219.01.01.

ACKNOWLEDGMENTS

I would like to express my gratitude to Prof.Dr. Zehra Kasnakoğlu and Prof.Dr. Aysıt Tansel for their guidance and their invaluable contributions. Without their supervision this thesis would never see the light of day.

I would like to extend my special thanks to Assoc.Prof.Dr. Fikret Görün for his kind interest and helpful comments.

I am deeply grateful to Prof.Dr. Haluk Kasnakoğlu for his patient encouragement. He taught me a lot both in economics and life.

I would like to express my sincere thanks to Prof.Dr. Mehmet Kaytaz for his kind understanding and kind permission for the use of data.

I would also like to thank Sevim Baykan, Hülya Güneş and Münür Yayla, who have undertaken a great part of my professional duties.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

The response of a consumer to a change, either in his income or prices or both has been one of the central issues in economics since the first days it has emerged as a science. In conformity with this weight assigned, an enormous volume of both theoretical and empirical studies on the explanation and prediction of consumer's behavior has been accumulated in the literature of economics through the years. In 1857 Engel's[1] observations, so called Engel's Law (Hirshleifer, 1984), on the relation between income and consumption has made a path-breaking contribution to the issue. In the following years, with the development of the utility and demand analysis, a relation between total income (or expenditure) and the consumption of a specific commodity has been specified. Then, as an illustration of this relation, curves widely known as Engel curves (income-consumption curves more formally) have been utilized, which also incorporates the basic idea behind the Engel's Law with the theory.

An Engel curve is an appropriate form of statistical determination between the consumption of a particular commodity and income, given that all

---

[1] Ernst Engel (1821-1896), German statistician.

other factors affecting the consumption remain unchanged. Using the basic parameter of this determination, namely parameter specifying the relation between income and consumption of a specific commodity (or commodity group), the elasticity between income and a specific consumption (named income or expenditure elasticity) are obtained.

Estimation of Engel curves and income elasticities has various policy implications, especially for income, expenditure, price and tax policies. As Bewley (1982) states, Engel curves are important for income distribution models. Engel curves are also used in determination of "household equivalence scales which are constructed for the purpose of finding equivalent standards of living for families of different demographic and sociological characteristics for different policy purposes..." (Çınar, 1987:361-362).

This important role of Engel curves and income elasticities in economic literature have attracted many economists and econometricians, and in numerous countries Household Income and Expenditure Surveys have been analyzed for the estimation of Engel curves and income elasticities.

While at the beginning, the efforts for estimation have been concentrated on finding the best fitting functional form using separate functions for different groups, as Tansel argues (1986:239-240), in recent studies focus has

shifted to finding the best fitting functions for the whole system using the functional forms directly derived from the theory.

As an application of the Engel curves to the 1987 Turkish household income and expenditure survey, this study has three main objectives: (i) estimation of Engel curves and income (or expenditure) elasticities for eleven main expenditure groups, nine sub-groups of food expenditures and for eight different spatial levels (namely Turkey overall, rural areas, urban areas and five regions) using double-log and Working-Leser functional forms, (ii) analysis of the differences among regions and income groups (if any), and (iii) classification of expenditure groups as luxury, unitary elastic and necessity for different regions and income groups (if appropriate) using elasticities.

For the purpose of concentrating on the estimates and analyses of regional and income group variations, the functional forms in this study are limited with double-log and Working-Leser forms of Engel functions. The basic rationale behind the selection of these forms is their significant performance, statistically and theoretically, in different previous empirical studies in Turkey by Kasnakoğlu (1991a;1991b), Tansel (1986), Özmucur (1987) and Günlük-Şenesen (1994). The organization of the remaining parts of the study is as follows:

In Chapter II, some basic definitions about Engel curves and income elasticities are introduced. In addition, estimation methods and empirical

applications both in Turkey and other countries are reviewed. Chapter III is devoted to the methodology applied in this study. In Chapter IV, the data, flaws in the data, their possible consequences, and preliminary findings from the data are discussed. Estimation results and interpretation of the results are presented in Chapter V. Chapter VI concludes the study, where the findings are evaluated. Finally, the results of preliminary data analysis, estimation results, and the graphical presentations of these results are given in the Appendices.

CHAPTER II
ENGEL CURVES AND THEIR ESTIMATION

2.1 Engel Curves

In 1857, a German Statistician, Ernst Engel examined about 200 budgets of Belgian Laborers. He tried to derive a regularity from these budgets and using double-log approximation (it is interesting to see that this form is widely used still today) he made some observations on the relation between income and expenditure on food. According to Engel's observations, the proportion of income spent on food diminishes as income increases. With formulation of similar laws for other expenditure groups, an economic law, named Engel's Law, has been established in the theory of economics (Houthakker, 1957). Engel's Law asserts that as income increases: the proportion of income spent on food decreases, the proportions spent on housing and clothing remains almost the same, and the proportion spent on remaining goods and services increases (Hirshleifer, 1984).

An Engel curve is an appropriate statistical determination, showing the relation between income and expenditures on a certain expenditure group, provided that tastes and prices are constant. Generally, household size is added to

this relationship besides income to explain the variations in a specific expenditure due to variations in family size.

From Engel curves, it is possible to derive income (or total expenditure) and size elasticities. Income elasticity represents the percentage change in demand (in monetary terms, not real) for a certain expenditure group as a response to a percentage change in income. Similarly, size elasticity determines the percentage change in demand (again in monetary terms) for a certain expenditure group following a percentage change in household size. As a very important feature of the elasticities is that they are independent of the units of measurement employed. This makes comparison of elasticities, particularly income elasticities, possible, even though income and expenditures are measured in different monetary units.

In economics, classification of expenditure groups by their income or total expenditure elasticities is important as it is important to estimate a specific value for their elasticities. An expenditure group with income (or total expenditure) elasticity above unity is classified as "income elastic" or "luxury". Similarly, An expenditure group with income (or total expenditure) elasticity below unity is classified as "income inelastic" or "necessity". As the last category, an expenditure group with income (or total expenditure) elasticity around unity is classified as "unitary elastic".

2.2 Estimation of Engel Curves

To obtain appropriate estimates of income and size elasticities, it is imperative to use appropriate functional forms of Engel curves in estimation. Since the first day, that Engel looked for a regular relation between income and consumption, various functional forms have been suggested and used for estimation of Engel curves. Among these functional forms, the following five forms are very common.

(i) Linear:

$$q_{ij} = \alpha_0 + \alpha_1 y_i + \alpha_2 s_i + u_{ij}$$

(ii) Semi-log

$$q_{ij} = \alpha_0 + \alpha_1 \log y_i + \alpha_2 \log s_i + u_{ij}$$

(iii) Double-log

$$\log q_{ij} = \alpha_0 + \alpha_1 \log y_i + \alpha_2 \log s_i + u_{ij}$$

(iv) Working-Leser

$$w_{ij} = \alpha_0 + \alpha_1 \log y_i + \alpha_2 \log s_i + u_{ij}$$

(v) Hyperbolic

$$\log q_{ij} = \alpha_0 + \alpha_1 / y_i + \alpha_2 / s_i + u_{ij}$$

where:

q_{ij} = average expenditure of the i^{th} income group on the j^{th} commodity group.

x_i = average expenditure of the i^{th} income group.

w_{ij} = the share of the j^{th} commodity group in total budget of i^{th} income group.

s_i = average household size in the i^{th} income group

In functional forms i, ii, iv, and v, elasticities vary along the Engel curve. However, in the third functional form elasticities are constant throughout the respective Engel curve. For the third form, elasticities can be directly obtained without any further computation, since both dependent and independent variables are in logarithmic form and the resultant parameters are in percentage units. In other forms, however, elasticities should be evaluated at certain points on Engel curves.

Engel curves are derived from some direct and indirect utility functions developed by the consumer theory. The consumer theory imposes some conditions on Engel curves. The first of conditions is additivity, which makes necessary that sum of all income elasticities of expenditures weighted by budget shares, including savings to be equal to one. However, additivity can be a valid condition when a complete system of Engel curves are estimated. Since in the present study Engel curves are estimated individually, this condition is ignored. The second condition is non-negativity. According to this condition, estimates of income elasticities can not take negative values, since estimation is performed using grouped data (groups of commodities and services are used instead of a single commodity or service) and it is hardly reasonable to expect that all the commodities and/or services in the group

can be inferior. The last condition is saturation. This condition requires that consumers in high income groups reach a level of saturation after a certain consumption level. This condition, however, is ruled out in the third form, because income elasticity is constant throughout the Engel curve.

2.3 Application of Engel Curves

Having reached a theoretical maturation in demand analysis, a large volume of studies in literature have emerged on the empirical determination of Engel curves and estimation of Engel elasticities.

In earlier studies, efforts concentrated on finding the best-fitting functional forms for each expenditure group individually. Later on, however, attentions shifted to the issue of finding a most appropriate functional form for all expenditure groups as a complete system to be able to impose restrictions derived from the consumer theory empirically.

Examples of the first approach are Prais (1953), Prais and Houthakker (1955), and Houthakker (1952; 1957).

Somermeyer and Langhout (1972) applied the second approach to 1951 Dutch data and gave a rather technical presentation of the shapes of Engel curves obtained from that data. Kakwani (1977) estimated Engel curves and

elasticities for several expenditure groups for Indenosia using 1969 data using seven functional forms. In his study, he also suggested some solutions to estimation problems. Bewley (1982) compared the performance of different systems of Engel curves and imposed the additivity, non-negativity and saturation restrictions on these systems using 1975-76 Australian data. In their study, Aasness and Rodseth (1983) presented the underlying theoretical structure of the Engel curves in a detailed way besides an application to Norwegian data. They also compared individual and system estimations of Engel curves. Blundell and Ray (1984) applied different systems estimation of Engel curves to British data, using pooled cross-section and time series data. As another example of systems approach is by Giles and Hampton (1985) who performed an Engel curve analysis using 1981-82 New Zealand survey data with six different specifications.

Apart from these parametric studies, there are studies designed to determine functional specification of Engel curves without any a priori functional form using non-parametric regression. Bierens and Pott-Buter (1990) applied this non-parametric technique to 1980 Budget survey of Netherlands and after translating the results into parametric specification, they found that linear forms are more appropriate than other forms.

In Turkey, parallel to the availability of data, studies on household consumption patterns have increased and diversified in recent years. In 1988, Tansel (1988) analyzed household expenditure pattern in Ankara using 1965

Ankara survey within the Municipality boundaries with twelve functional forms for seven expenditure categories. In her study employing system estimation of Engel curves, Tansel found that food and tobacco were necessities, whereas for other categories elasticities varied depending on functional form (though in most forms the remaining categories had elasticities higher than one). Also in 1986, Tansel used 1978-79 survey data of Turkey and estimated system of Engel curves and elasticities using nine functional forms and eleven categories. The results of the study showed that Working-Leser performed marginally better. The study also indicated that food and housing categories were necessities; furniture and health categories had elasticities around unity; and the remaining categories were luxuries.

The study of Kasnakoğlu (1991b) is of particular interest since the present study has some similar dimensions with Kasnakoğlu's study. In her study, Kasnakoğlu estimated income elasticities for 11 main expenditure and 9 food sub-groups in Turkey overall and five geographical regions (in the present study rural and urban areas, and income groups are added) using data on 20 income groups from 1987 survey (in the present study 100 income groups are available for all levels). As estimation method Kasnakoğlu employed double-log form (this is one of the forms utilized in the present study) for each expenditure groups separately and used households' income as the explanatory variable instead total expenditures (both are tested in the present study). Kasnakoğlu found important variations between commodity groups and regions and concluded that for Turkey overall, food and house furnishing were in the lower elasticity range, while restaurant,

house operation and transportation and communication were in the upper range and the remaining categories were in the middle range.

In 1991, Özmucur tested nine functional forms for each of 17 expenditure categories separately. In his study, Özmucur used data on income and expenditures of 20 income groups from 1987 Turkish survey data and found that in Turkey overall food, house furnishing, health and housing were necessities, whereas expenditures in restaurants and similar places; house operations; transportation and communication; culture, education and entertainment and other expenditures were luxuries.

A most recent study by Günlük-Şenesen (1994) tested 9 functional forms for each of eleven expenditure categories separately; and for urban, rural and urban+rural sectors of Turkey, using 1987 survey data. Günlük-Şenesen found that different functional forms were appropriate for different categories, except housing expenditures for which no functional forms gave significant results. According to Günlük-Şenesen's findings only food was necessity, while furniture, house services, transportation and communication expenditures were luxuries. Günlük-Şenesen also reported that clothing, health, restaurant, personal care and other expenditures were around unitary elasticity.

CHAPTER III

METHODOLOGY

3.1 Pre-Selected Functional Forms

As observed from previous studies in Turkey, double-log and Working-Leser forms of Engel functions indicate a reasonable performance. In 1986, Tansel (1986) tested nine functional forms using the results of 1978-1979 Turkish household income and expenditure survey and showed Working-Leser have marginally performed better than the others. In 1991, Kasnakoğlu (1991a;1991b) obtained satisfactory results from application of double-log form to 1987 household data. In 1991 Özmucur (1991), in his study employing 1987 data found the double-log form better in comparison with other eight functional forms. Also, in 1994 Günlük-Şenesen (1994) showed that the performance of the double-log and the Working-Leser forms were superior to others.

The double-log and Working Leser forms of Engel curves are selected for this study, relying on the above cited results and the rationale of focusing on the estimates and the variations across regions and income groups.

3.2 Estimation Method

The inclusion of same regressors in each equation of each functional form makes the systems estimation equivalent to single-equation estimation (Tansel, 1986; Bewley, 1982). Due to the fact that data is adjusted for the number of households in each income group and the number of households in each group are equal in each region, the problem of heteroscedasticity, frequent in grouped data, is of no significant importance in present case. The adjustment of data renders OLS identical to Weighted Least Squares (WLS), since the adjustment factor equaled the number of households in each income group, making the same effects with weights[2]. In addition, the log transformations in the double-log form may provide a remedial measure for heteroscedasticity (Gujarati, 1986). Relying on the above points, single-equation OLS estimation is applied to each equation of each form.

3.3 Explanatory Variables

In most of the empirical studies, replacement of income by total expenditure as explanatory variable has been a popular practice. Bewley (1982), Kakwani (1977), Giles and Hampton (1985), as well as Tansel (1986) and Günlük-

[2] WLS requires the square root of the number of households in each income group be used as weights, as Bewley puts (1982).

Şenesen (1994) in Turkey preferred total expenditure in place of income in their models for the common thought that total expenditure is more convenient in measuring the permanent household income. Also, the problems in measurement of income due to intentional and unintentional mis-reporting make income less reliable compared to total expenditure of which reporting has several built-in checking measures.

In this study both income and total expenditure are used, at least at the beginning stages, to check their relative performances. Along with income (or total expenditure) average household size is used to allow variations in expenditure on a specific commodity stemming from household size.

3.4 Presentation of the Models

3.4.1 Simple Models

Models explained in the previous section, that will be named simple models hereafter, can be illustrated in a more formal way as follows:

Simple Model 1.1 Double-Log (Explanatory variable is income):

$$\log q_{ij} = \alpha_0 + \alpha_1 \log y_i + \alpha_2 \log s_i + u_{ij}$$

where:

q_{ij} = average expenditure of the i^{th} income group on the j^{th} commodity group.

y_i = average income of the i^{th} income group.

s_i = average household size in the i^{th} income group

Simple Model 1.2 Double-Log (Explanatory variable is total expenditure):

$$\log q_{ij} = \alpha_0 + \alpha_1 \log x_i + \alpha_2 \log s_i + u_{ij}$$

where:

q_{ij} = average expenditure of the i^{th} income group on the j^{th} commodity group.

x_i = average expenditure of the i^{th} income group.

s_i = average household size in the i^{th} income group

Simple Model 2.1 Working-Leser (Explanatory variable is income):

$$w_{ij} = \alpha_0 + \alpha_1 \log y_i + \alpha_2 \log s_i + u_{ij}$$

where:

w_{ij} = the share of the j^{th} commodity group in total budget of i^{th} income group.

y_i = average income of the i^{th} income group.

s_i = average household size in the i^{th} income group

Simple Model 2.2 Working-Leser (Explanatory variable is expenditure):

$$w_{ij} = \alpha_0 + \alpha_1 \log x_i + \alpha_2 \log s_i + u_{ij}$$

where:

w_{ij} = the share of the j^{th} commodity group in total budget of the i^{th} income group.

x_i = average expenditure of the i^{th} income group.

s_i = average household size in the i^{th} income group

3.4.2 Extended Models

To analyze the differences in income (or expenditure) elasticities across income groups as well as regions, the simple models defined in the previous section are extended by utilization of income dummies. These dummy variables are designed for two different disaggregation levels: the first uses the average income as the dividing line for income groups, and the latter takes the first 40%, the second 40% and the last 20% groups of income as the lines of separation. The rationale for the first disaggregation relies on the hypothesis that behavior of consumers in income groups below the average is different than that of above the average. The second level of disaggregation is chosen for the belief that further disaggregation into low (the first 40%), middle (the second 40%) and high (the last 20%) income classes could capture the differences more accurately.

In treatment of dummy variables, to avoid "dummy trap" one characteristics is taken as the base and the others is taken in the form of difference from the base characteristics (see Gujarati (1986) and Erlat (1986)). A more technical presentation of the extended models is as follows:

Extended Model 1.1 Double-Log (Explanatory variable is total expenditure and income dummies for the income groups below and above the average):

$$\log q_{ij} = \alpha_0 + \alpha_1 \log x_i + \alpha_2 \log s_i + \alpha_0' D_{3i} + \alpha_1' D_{3i} \log x_i + u_{ij}$$

where

q_{ij} = average expenditure of the i^{th} income group on the j^{th} commodity group.

x_i = average expenditure of the i^{th} income group.

s_i = average household size in the i^{th} income group

and,

D_{3i}= dummy variable takes the value of zero for the income groups below the average income and takes the value of one for the income groups above the average.

Extended Model 1.2 Double-Log (Explanatory variable is total expenditure and income dummies for the first 40%, the second 40% and the last 20% of income groups):

$$\log q_{ij} = \alpha_0 + \alpha_1 \log x_i + \alpha_2 \log s_i + \alpha_0' D_{1i} + \alpha_1' D_{1i} \log x_i + \alpha_0'' D_{2i} + \alpha_1'' D_{2i} \log x_i + u_{ij}$$

where:

q_{ij} = average expenditure of the i^{th} income group on the j^{th} commodity group.

x_i = average expenditure of the i^{th} income group.

s_i = average household size in the i^{th} income group

and,

D_{1i}= 1 for the second 40% income groups

= 0 otherwise

D_{2i}= 1 for the last 20% income groups

= 0 otherwise

Extended Model 2.1 Working-Leser (Explanatory variable is total expenditure and income dummies for the income groups below and above the average):

$$\log w_{ij} = \alpha_0 + \alpha_1 \log x_i + \alpha_2 \log s_i + \alpha_0' D_{3i} + \alpha_1' D_{3i} \log x_i + u_j$$

where

w_{ij} = the share of the j^{th} commodity group in total budget of the i^{th} income group.

x_i = average expenditure of the i^{th} income group.

s_i = average household size in the i^{th} income group

and,

D_{3i}= dummy variable takes the value of zero for the income groups below the average income and takes the value of one for the income groups above the average.

Extended Model 2.2 Working-Leser (Explanatory variable is total expenditure and income dummies for the first 40%, the second 40% and the last 20% of income groups):

$$\log w_{ij} = \alpha_0 + \alpha_1 \log x_i + \alpha_2 \log s_i + \alpha_0' D_{1i} + \alpha_1' D_{1i} \log x_i + \alpha_0'' D_{2i} + \alpha_1'' D_{2i} \log x_i + u_{ij}$$

where:

w_{ij} = the share of the j^{th} commodity group in total budget of the i^{th} income group.

x_i = average expenditure of the i^{th} income group.

s_i = average household size in the i^{th} income group

and,

D_{1i}= 1 for the second 40% income groups

= 0 otherwise

D_{2i}= 1 for the last 20% income groups

= 0 otherwise

The treatment of the dummy variables in the form of difference from the base characteristics also renders the testing of the parameters of these variables equivalent to testing the significance of the differences statistically. Accordingly, to test the significance of differences, t-test is performed for each coefficient of dummy variables.

Due to the fact that functional forms are in the double-log and the Working-Leser models, the use of R^2 as a choice criterion is meaningless. Consequently, in this study, the superiority of one functional form over the other is evaluated on the basis of the theoretical and statistical significance of its equations as a whole and individual significance of the vital parameters (parameters determining the relation between consumption of a specific commodity and income-or total expenditure). On the other hand, $\overline{R}^2$ can be employed in making a choice between different specifications (i.e., between the simple and the extended models) of the same functional form.

3.5 Estimation of Elasticities

In double-log functional forms both total expenditure (or income) (ε_j) and size elasticities (ν_j) are directly obtained from respective parameters of each equation, since they are defined in the following way (Kasnakoğlu, 1991b):

$$\varepsilon_j = (dq_j / q_j) / (dx / x) \quad \text{and}$$

$$\nu_j = (dq_j / q_j) / (ds / s)$$

Though this feature of double-log form makes estimation of elasticities very straigthforward, it also requires constant elasticity (both for total expenditure and size) along all the points of Engel curve, which, in turn, rules out saturation.

For the Working-Leser form, however, elasticity can only be estimated by evaluating the parameters at certain points on budget share and specific expenditure simultaneously, since elasticities vary along Engel curve. This, also, allows saturation in Working-Leser form.

More technically, Tansel (1986) formulates estimation of elasticities in Working-Leser form as follows:

$\varepsilon_j = 1 + \alpha_{1j} / w_j$ and

$\nu_j = \alpha_{2j} / w_j$

As imposed by the above presentation, in this study elasticities are evaluated at the sample means of total expenditure and household size.

In addition, in the extended models elasticities are calculated as the sum of respective elasticity with the base elasticity.

CHAPTER IV
DATA AND PRELIMINARY FINDINGS

4.1 Source of the Data

The data employed in this study are from unpublished results[3] of 1987 Turkish Household Income and Consumption Expenditure Survey conducted by the State Institute of Statistics of Turkey. The survey started in January 1, 1987, and continued throughout the year. It covered 1,202 households from 50 urban settlement areas and 998 households from 89 rural settlement areas. The survey areas with population of 20,001 and over were defined as urban, whereas areas with population of 20,000 and below were treated as rural. Throughout the survey three methods of data collection were employed. (i) Interview method: In this method, especially information about income and employment status of the household members were gathered through face-to-face interviews. (ii) Book-keeping method : In this method data on consumption expenditures of the households was obtained from the notebooks kept by households, to which households recorded their daily expenditures by item, kind, quantity, market unit price, method of purchase and type of sales outlet. In addition, to maintain

---

[3] I would like to express my sincere thanks to Prof.Dr. Mehmet Kaytaz, President of SIS and to Mrs. Nurgül Öğüt, Head of Labour, Services, Price Statistics and Indexes Deparment of SIS, for their kind permissions to use the data in this level of disaggregation.

reliability of the method households were visited frequently. The bookkeeping method was conducted differently in urban and rural areas. In rural areas the same households were surveyed throughout the year, whereas in urban areas all of 1202 households surveyed were changed each month. (iii) Observation method : The interviewers have provided rather a subjective information (their observations) on the socio-economic conditions of the household. The information gathered in this way was used to check the results of the former two methods (SIS, 1990).

The data set includes eleven expenditure categories and eight subgroups of food expenditure for Turkey overall, rural areas, urban areas and five regions. A detailed list of the expenditure groups is presented in Appendix A.

4.2 Characteristics of the Data

The data used in this study has three basic characteristics:

(i) **It is an inflated data set, not raw :** The data is blown up using the respective sampling factors to reach the overall Turkey and region totals for income, total and group-specific expenditures, number of households and size of households. (ii) **It is sorted by income:** The blown up data is sorted by income providing an ascending order from the lowest income group to the highest group. (iii) **It is divided into hundred sub-classes each having equal number of**

households: The sorted data divided into hundred sub-classes so that in each sub-group there are equal number of households.

The first feature provides a basis for country-wide and region-wide inferences. Second feature renders the analysis of variations in consumption patterns among the income groups possible. Finally, the last feature serves as a heteroscedasticity adjustment making WLS equivalent to OLS in this study. The third feature also provides a further disaggregation that makes data smoother and less abnormal compared to the published case where data is divided into 20 income groups.

4.3 Flaws in the Data

One of the basic flaws in the data stems from misreporting of income, which is frequent in most of the household expenditure surveys. As Çınar (1987) states "The incomes of the households are usually recorded as declared by the income earners and the declarations may contain errors due to various reasons, such as imperfect information about actual annual income." This especially true in the lowest income groups, where in the present data set total expenditure exceeds income up to two or three times. Although this fact can be attributed to a significant dissaving in these classes, a rate of dissaving at these levels seems implausible.

Another problem with the data is the existence of extreme values in some expenditure groups. Particularly, extreme values are frequent in the highest income groups; for example, the budget share of transportation and communication go extreme in the last three income groups in overall Turkey. Extreme values are also observed in some of the expenditure groups of the middle income classes, yet the case is rare and seems to be stemmed from random factors rather than a persisting bias.

The existence of extreme values in the data can mainly be explained by the weaknesses in sampling and surveying techniques particularly in the urban areas. The surveying technique applied in the urban areas produced significant inefficiencies in the data, because the sample of 1,202 households are replaced by a new sample each month and consequently rare cases in some income groups can be surveyed only for a month. As a result of this technique, extreme behaviors due to seasonal and extraordinary factors can not be averaged or smoothed. In a more explicit illustration: if the number of households within a specific income class (especially in the highest groups) is too few (such as one or two) and their expenditures are recorded only for a month, an extreme expenditure made by one of these households due to extraordinary developments just within a month (such as seasonal factors; an urgent health problem; buying of a car; or a need to spend more on clothing...) turns to a country or region-wide extreme value when data is blown up.

The fault in the higher income groups is rather in the form of a systematic bias due to the fact that the insufficient number of observations (households) is considerably frequent, while the fault in the middle income seems to be random, since the insufficiency of observations is random in these groups.

A possible consequence of the first problem could be usage of total expenditure instead of income for estimation, while the second kind of problem could require the omission of cases having extreme values.

4.4 Preliminary Data Findings

Ranking with respect to income indicates that Marmara and Aegean region has the highest income; then, Eastern and Southern Anatolia has the second highest income; and Central Anatolia, Black Sea and Mediterranean regions follow next respectively (see the table below).

The ranking by total expenditure is slightly different from the ranking with respect to income : Though Marmara and Aegean region still has the highest total expenditure, as a result of switch between Central Anatolia and Eastern and Southern Anatolia, the first takes the second row and the latter takes the third despite their third and second places in ranking by income, whereas Black Sea and Mediterranean regions keep their respective places (fourth and fifth).

Table 1: Ranking of Regions by Average Monthly Income and Expenditure, Average Propensity to Consume and Average Household Size for each Income Group

	ALL GROUPS	BELOW THE AVERAGE INCOME	ABOVE THE AVERAGE INCOME	THE FIRST 40%	THE SECOND 40%	THE THIRD 20%
TURKEY						
RURAL	2,2,2,1	2,2,2,1	2,2,2,1	2,2,2,1	2,2,2,1	2,2,2,1
URBAN	1,1,1,2	1,1,1,2	1,1,1,2	1,1,1,2	1,1,1,2	1,1,1,2
MARMARA AND AEGEAN	1,1,1,5	1,1,5,5	1,1,1,5	1,1,4,5	1,1,4,5	1,1,1,5
MEDITERRANEAN	5,5,3,3	5,5,4,3	4,4,3,3	5,5,5,3	5,5,2,3	4,3,2,3
CENTRAL ANATOLIA	3,2,4,4	4,4,3,4	3,2,4,4	4,4,2,4	4,3,3,4	3,2,3,4
BLACK SEA	4,4,2,2	3,3,2,2	5,5,2,2	2,3,3,2	2,2,1,2	5,5,4,2
EAST.&SOUTH. ANA.	2,3,5,1	2,2,1,1	2,3,5,1	3,2,1,1	3,4,5,1	2,4,5,1

Table Note: Ordering is in the form of (x_1,x_2,x_3,x_4) where x_1=monthly average income, x_2=monthly average expenditure, x_3=average propensity to consume, x_4=average household size. In addition, 1 shows the highest; 5 shows the lowest value.

In line with the difference between rankings by income and total expenditure, ranking by average propensity to consume (apc) also differs from income ranking: Among the regions again Marmara and Aegean has the highest propensity to consume in average terms, while Black Sea, Mediterranean, Central Anatolia and Eastern and Southern Anatolia follow next. This peculiar structure (peculiar since at higher income levels more saving but less consumption is expected relying on the premise of saturation from consumption after a certain level) can be explained by either: (i) Consumption patterns in Marmara and Aegean region is different from the other regions given the abundance and diversity of commodities and services available for consumption as a result of relatively strong economic development and rapid opening of the region, or (ii) Measured income is much lower than the actual income (measurement error), or both.

Another interesting observation is on the average household size. In regions other than Eastern and Southern Anatolia, the hypothesis on the existence of negative relation between income and household size seems plausible. In Marmara and Aegean region, where income and expenditure is the highest, the average number persons per household is the smallest, while the ordering by household size from the minimum to the maximum continues as follows: Central Anatolia, Mediterranean, Black Sea and Eastern and Southern Anatolia.

Disaggregation of income groups indicates that virtually in all regions, in lower income groups (especially in the first 40%) total expenditure is apt to exceed income, making average propensity to consume (apc) greater than 100% (see Tables 2 and 3, and Figures 7 and 8). This situation can be attributed partially to the existence of high dissaving in low income groups and partially to income declaration errors.

Inspection through disaggregated income groups reveals that income and expenditure in all income groups of Marmara and Aegean region is higher than the respective income groups of other regions. This means that the lowest income group in Marmara and Aegean is no poorer than that of other regions. Also, apc in middle and high income groups of Marmara and Aegean region is higher than apc in corresponding income groups of other regions. The ranking by income, expenditure and apc for each income group within the remaining regions varies in a narrow range without a significant pattern. On the other hand, household size

follows an unchanging order across regions, which indicates that household size in all groups of Marmara and Aegean region is the smallest compared to the other regions.

The group-wise analyses suggest that expenditure increases at a falling rate and apc falls as income rises in all regions as well as rural areas, urban areas and Turkey (see Table 3). On the other side, in all regions, but urban areas and Marmara and Aegean region, household size grows as income increases. This situation is particularly interesting for it contradicts, at least in appearance, with the belief that in high income groups, household size would be lower than the household size in low income groups. However, when the apparent difference between Marmara and Aegean region and other regions is taken into consideration and the strong effect of Marmara and Aegean region on rural areas is observed, the issue becomes a plausible relation valid for rural areas. In rural areas where having a big family is widely accepted as a celebrated feature and a high household budget is seen as a motivation for a big family, the contradiction is of little importance.

The difference between rural and urban areas with respect to all variables is evident. In urban areas income, expenditure and apc are higher than that of rural areas, whereas for the household size the ordering is just the reverse (see Tables 1-3; Figures 1-11).

Analysis of consumption expenditures with particular attention to regional and income group comparisons reveals several important points. The most

interesting one is the compliance of the data findings with some of the Engel's Law (see Chapter II). From the disaggregation of full budget shares (within expenditure) by income groups, it is observed that the budget share of food expenditures declines as income increases. On the contrary, the shares of transportation and communication expenditures rise steadily with income. Also, quite agreeably with Engel's Law, the proportion of budget spent on housing expenditure almost remains constant as income increases (Appendix B, Table B2; Appendix C. Figures C1-C6).

On the other hand, contrary to Engel's Law, budget shares of clothing and house operation and service expenditures increase slightly with income. In addition, the budget shares of culture, education and entertainment; personal care; restaurant and other expenditures rise following income, whereas budget shares of housing and health expenditures vary without a significant pattern that can be generalized for all regions. In some regions (Turkey, rural and urban areas, Central Anatolia and Eastern and Southern Anatolia) the proportion of health expenditures first falls, then rises as income rises, in some regions (Mediterranean and Black Sea) it is the other way around and in some regions (Marmara and Aegean) it continuously rises with income. The proportion of housing expenditures decreases following income, in rural areas and all regions except Marmara and Aegean region, while in urban areas and Turkey, it first goes up and then descends. Also, the share of budget devoted to house furnishings follows the same curvature

defined in the latter case of housing expenditures: first up and then down with income (Appendix B, Table B2; Appendix C. Figures C1-C6).

As another part of data analysis, the ranking of expenditure groups indicates that the largest part of the budget is devoted to food expenditures in all regions, which fluctuates around an average value of 32.02% (the average for Turkey overall). The proportion of housing expenditures takes the second row in all regions with proportions around the average of Turkey, 20.80%. Following these expenditure groups, clothing has the third; house furnishings has the fourth; transportation and communication has the fifth rankings in all regions except urban areas and Marmara and Aegean region. While proportions of culture, education and entertainment expenditures and other expenditures rotate between the sixth and seventh places, shares of restaurant, house operation and service and health expenditures move up and down within the sixth, eighth and ninth rows. Finally, it is observed that households in Turkey devote the smallest proportion of budget to expenditures on personal care (Appendix B,Table B2;Appendix C. figures C1-C6).

As a further level of analysis, defined within the scope of the study, food expenditures are broken down by food-sub-groups, by region and by income group (Appendix B, Table B4; Appendix C. Figures C7-C12). As expected, it is seen that the proportion of total budget spent on bread and cereals falls with income in all regions. This inverse relationship is generally valid also for other food

expenditures excluding the expenditures on meat, fish and poultry, which does not show any regular relationship with income.

Within food-sub-groups, expenditures on bread and cereals; meat, fish and poultry; and milk, milk products, eggs and fats have the highest shares (each around 6%), whereas the shares of fresh vegetables and fresh fruits similarly change around 2.3% and 3.3%. The budget share of processed food is lower in rural areas and Marmara and Aegean region compared to other regions and Turkey overall. This observation is also true for the expenditures on cigarette, alcoholic and non-alcoholic beverages. On the other hand, the proportion of budget spent on dried vegetables has the second, and the proportion of budget allotted for dried fruits has the first lowest rank among food expenditures. Budget shares of dried vegetables and fruits in urban areas and Marmara and Aegean are lower than proportion of budget devoted to these food groups in Turkey overall, rural areas and the remaining regions (Appendix B, Table B4; Appendix C. Figures C7-C12).

TABLE 2 : AVERAGE MONTHLY INCOME AND EXPENDITURE, BY REGION AND INCOME GROUP

		ALL GROUPS	BELOW THE AVERAGE INCOME	ABOVE THE AVERAGE INCOME	FIRST 40%	SECOND 40%	THIRD 20%
AVERAGE MONTHLY INCOME	TURKEY	306712.3	163425.2	611225.9	113862.4	270028.1	765826.3
	RURAL	263701.3	143272.1	497513.5	100442.9	243578.0	630529.2
	URBAN	345563.3	182812.5	707821.8	127543.6	296406.0	879927.7
	MARMARA AND AEGEAN	373360.4	204342.6	749607.9	142330.0	328261.5	925691.2
	MEDITERRANEAN	243240.7	133259.3	477027.9	93245.9	216350.2	597134.0
	CENTRAL ANATOLIA	271901.5	145609.0	540330.3	101565.9	240329.8	675807.8
	BLACK SEA	257950.1	149289.4	442808.0	112318.5	253387.7	558044.1
	EAST.&SOUTH. ANA.	289836.9	152794.1	625215.7	105656.8	241140.4	755387.5
AVERAGE MONTHLY EXPENDITURE	TURKEY	240566.2	160239.2	411274.8	125909.1	227897.0	495240.7
	RURAL	177042.4	136898.8	254975.2	110343.2	187954.6	288628.1
	URBAN	297945.7	187789.6	543135.8	145399.1	271948.3	655040.0
	MARMARA AND AEGEAN	313306.5	193838.6	579254.8	150268.6	279201.6	707647.6
	MEDITERRANEAN	184262.6	130155.3	299261.1	96530.4	189767.7	348749.6
	CENTRAL ANATOLIA	203611.3	146483.0	325017.8	114295.2	207900.5	373679.5
	BLACK SEA	199151.2	151774.2	279817.8	119620.1	224101.9	308307.8
	EAST.&SOUTH. ANA.	200093.2	158041.6	303041.0	130985.1	200737.2	337012.6

TABLE 3 : AVERAGE PROPENSITY TO CONSUME AND AVERAGE HOUSEHOLD SIZE BY REGION AND INCOME GROUP

		ALL GROUPS	BELOW THE AVERAGE INCOME	ABOVE THE AVERAGE INCOME	First 40%	Second 40%	Third 20%
AVERAGE PROPENSITY TO CONSUME	TURKEY	78.43	98.05	67.29	110.58	84.40	64.67
	RURAL	67.14	95.55	51.25	109.86	77.16	45.78
	URBAN	86.22	102.72	76.73	114.00	91.75	74.44
	MARMARA AND AEGEAN	83.92	94.86	77.27	105.58	85.05	76.45
	MEDITERRANEAN	75.75	97.67	62.73	103.52	87.71	58.40
	CENTRAL ANATOLIA	74.88	100.60	60.15	112.53	86.51	55.29
	BLACK SEA	77.21	101.66	63.19	106.50	88.44	55.25
	EAST.&SOUTH. ANA.	69.04	103.43	48.47	123.97	83.24	44.61
AVERAGE HOUSEHOLD SIZE	TURKEY	4.8	4.6	5.3	4.4	5.0	5.3
	RURAL	5.3	4.8	6.3	4.5	5.3	6.9
	URBAN	4.3	4.3	4.3	4.2	4.5	4.2
	MARMARA AND AEGEAN	4.1	4.0	4.2	3.8	4.3	4.2
	MEDITERRANEAN	4.8	4.5	5.4	4.3	4.9	5.5
	CENTRAL ANATOLIA	4.6	4.3	5.2	4.1	4.7	5.4
	BLACK SEA	5.1	4.6	6.1	4.3	5.3	6.4
	EAST.&SOUTH. ANA.	6.7	6.1	8.0	5.8	6.7	8.4

Figure 1 : Average Monthly Income and Expenditure by Region-All Income Groups

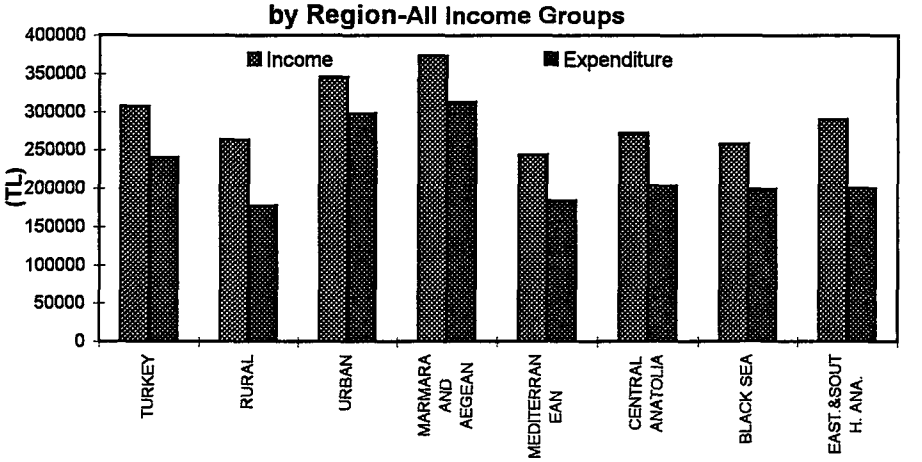


Figure 2: Average Monthly Income by Region and Income Group

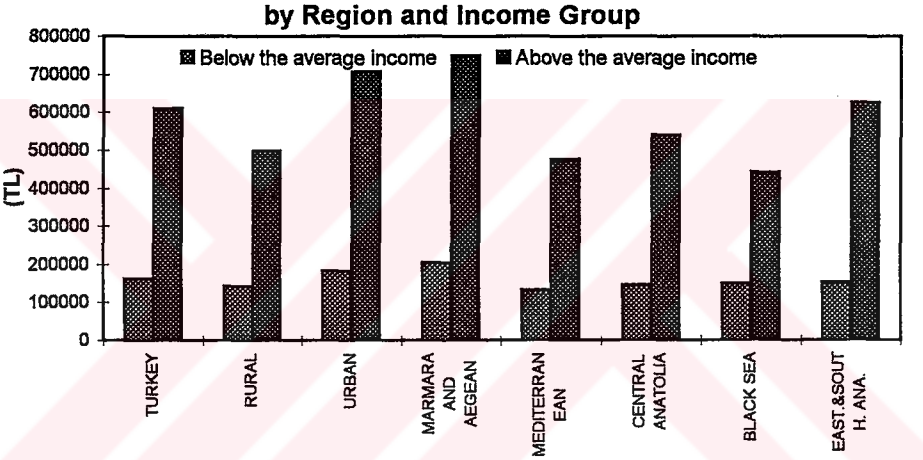


Figure 3: Average Monthly Expenditure by Region and Income Group

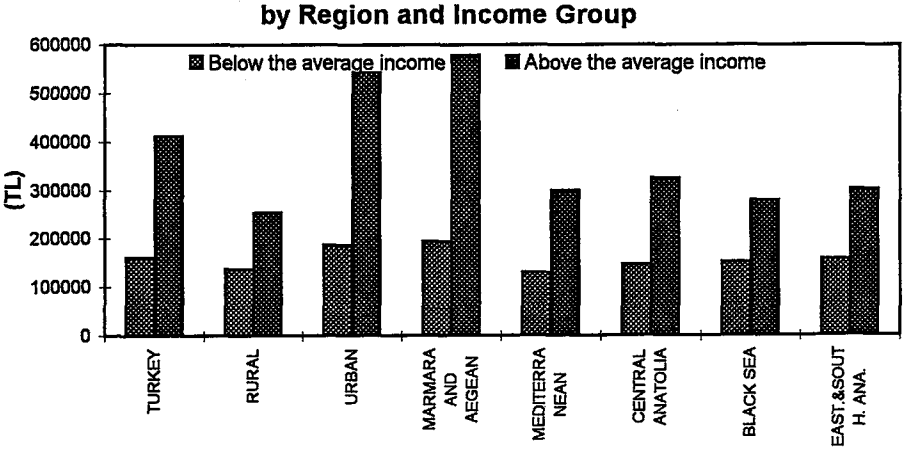


Figure 4: Average Monthly Income by Region and Income Group

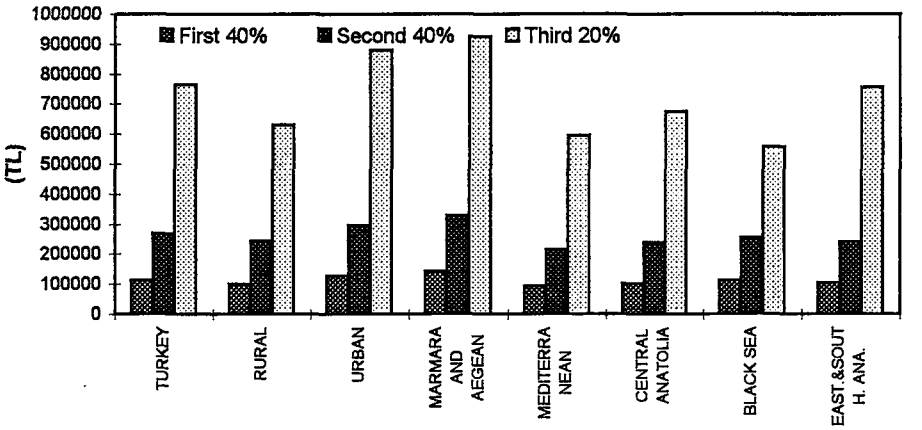


Figure 5: Average Monthly Expenditure by Region and Income Group

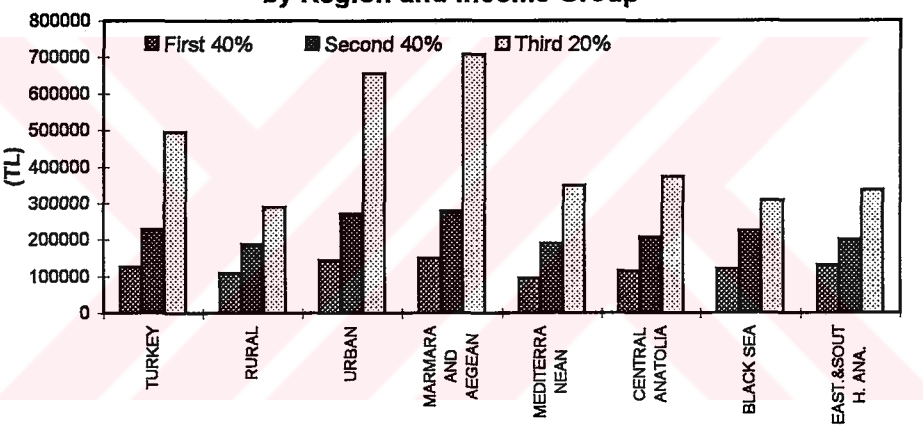


Figure 6 : Average Propensity to Consume by Region
All Income Groups

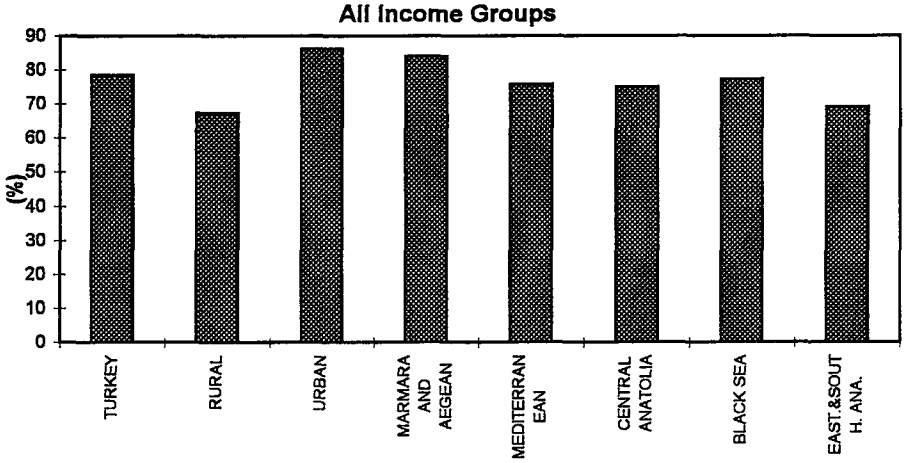


Figure 7: Average Propensity to Consume by Region and Income Group

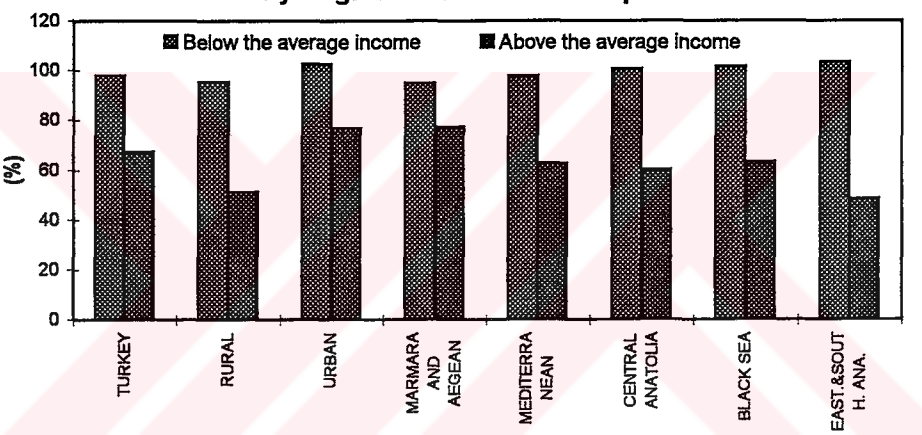


Figure 8: Average Propensity to Consume by Region and Income Group

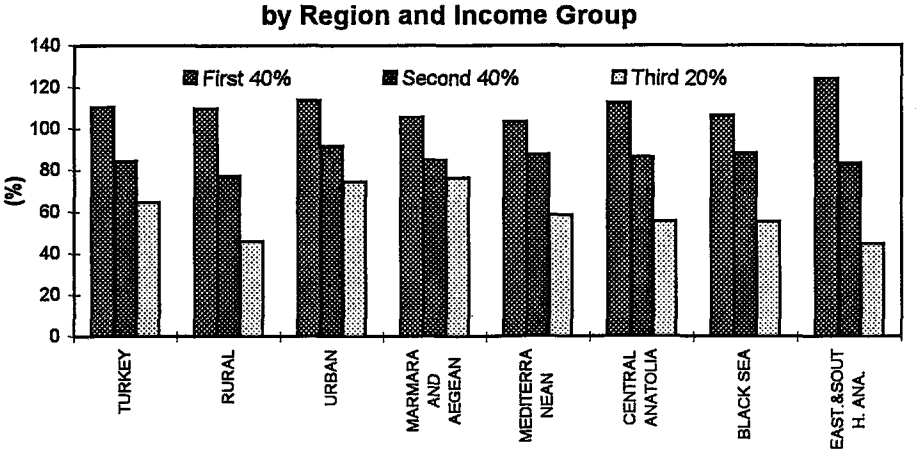


Figure 9 : Average Household Size by Region
All Income Groups

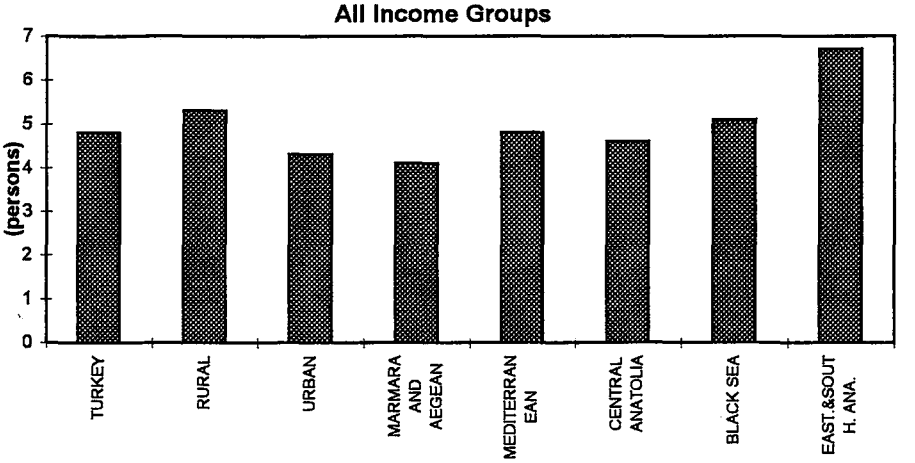


Figure 10 : Average Household Size by Region and Income Group

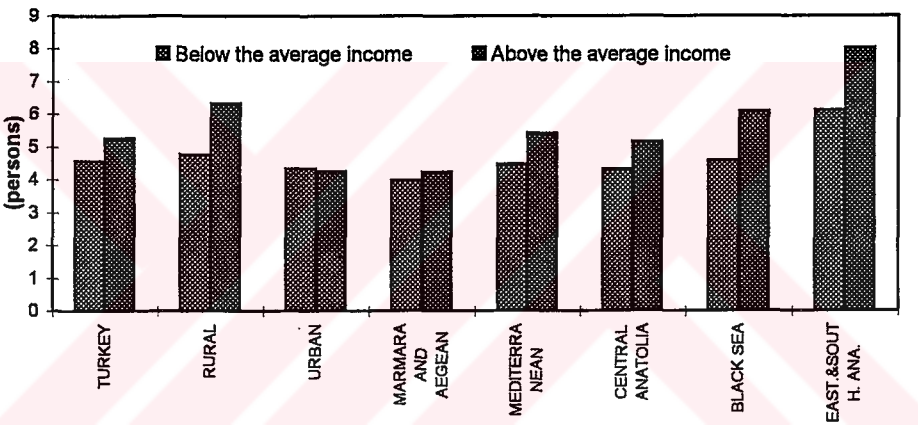
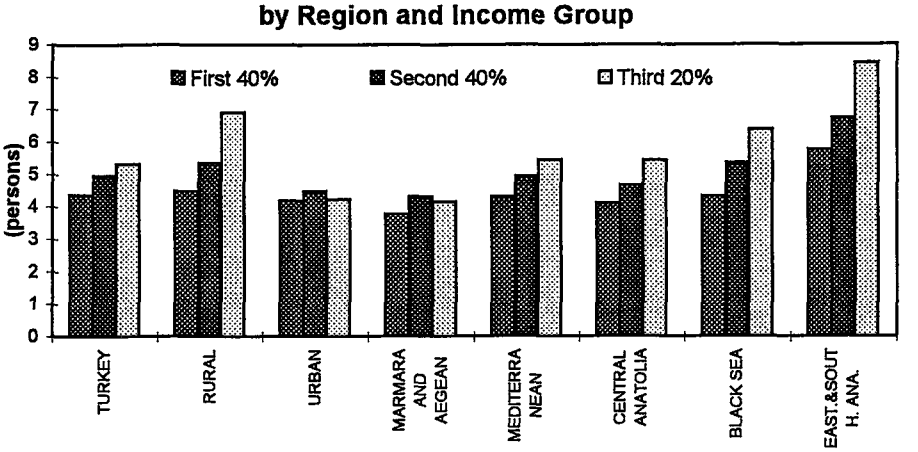


Figure 11 : Average Household Size by Region and Income Group



CHAPTER V
ESTIMATION RESULTS

Relying on the basic rationale presented in Chapter III, OLS is applied to each equation of both the simple and extended models for the estimation purposes. The results of these estimations and the interpretation of the results are presented in this chapter.

5.1 Estimation Issues: Functional Forms and Explanatory Variables

For all models it is important to judge the severity of extreme values. With this purpose in mind, for some expenditure groups having obvious extreme values, two regressions are run, one includes extreme values and the other excludes them. Then, the effects of extreme values on the parameters and on goodness of fit of the equation are analyzed.

From these analyses, it is observed that the effects of the extreme values on the estimation are not so severe. Moreover, even if the effects are severe, the solution to this problem is not so obvious. Since the solution requires total omission of an entire observation on a particular household and an extreme value in a certain expenditure group does not necessarily mean extreme values in other

groups (due to smoothing through spreading), the solution causes some valuable information on the household to be lost. Thus, in this study it is decided, as a solution to the second type of fault in the data, to keep the extreme values and to accept them as a part of the total information set.

Concerning the first type of flaw in the data (mis-reported income figures) each of the double-log and Working-Leser forms of the simple models (only for main expenditure groups) is estimated first using income and then using total expenditure, and the results are compared as a decision strategy.

For the simple double-log model, the equations estimated using total expenditure and household size give superior results, both in terms of theoretical and statistical significance, compared to the results obtained from the equations employing income as the explanatory variable besides average household size (see Appendix D, Table D1-D2). Also, for the simple Working-Leser model, utilization of income in the equations produces rather peculiar results violating the non-negativity property of Engel curves[4]. Moreover, usage of income as an explanatory variable leads to some statistical significance problems both for the whole of the equation and for the parameter of income individually. On the other hand,

[4] This problem may be explained (this statement is a proposition by the author only) by the intolerance of Working-Leser form to variations due to savings or dissavings and its imperative for an adding-up property in data.

estimation of the simple Working-Leser model with total expenditure and average household size as regressors gives quite satisfactory results with respect to theoretical and statistical significance (see Appendix E, Table E1-E2). In addition, the goodness-of-fit (R^2) in all equations of the simple Working-Leser model with total expenditure is superior to that of the simple Working-Leser with income. Thus, as convinced by these results and discussions in Chapter II, III and IV, total expenditure is selected as the basic explanatory variable in place of income.

As a further step, a comparison is made between the simple double-log and Working-Leser models to determine which model gives the most appropriate results. The comparison between models reveals that double-log form apparently performs better than Working-Leser form (Appendix D and E, Tables D2 and E2). Virtually all equations of double-log form are significant as a whole at 0.01 significance level, whereas a considerable number of Working-Leser equations fail to pass even 0.10 significance level for the whole. In addition, almost all of the expenditure parameters of double-log model are significant at 0.01, while in Working-Leser model only a few of the expenditure parameters could pass this level (Appendix D and E, Tables D2 and E2). Hence, the results of double-log form of Engel curves are found to be the most significant in this study and only these results are presented as the results of this study.

5.2 Simple Models

5.2.1 Main Expenditure Groups

As discussed in the previous section, the results of the simple double-log form are found better than Working-Leser form for both simple and extended models. Accordingly, total expenditure and size elasticities of main expenditure groups, which are estimated using simple double-log form of Engel curve are presented in Tables 4 and 6.

Table 4: Total Expenditure Elasticities by Expenditure Group and Region
(Results of the Simple Double-Log Model)

	TURKEY	RURAL	URBAN	MARMARA AND AEGEAN	MEDITERR.	CENTRAL ANATOLIA	BLACK SEA	EAST.&SOUT. ANATOLIA
FOOD	0.536 * (1)	0.597 * (1)	0.556 * (1)	0.508 * (1)	0.628 * (1)	0.609 * (1)	0.539 * (1)	0.666 * (1)
RESTAURANT	1.344 * (8)	1.016 * (6)	1.380 * (8)	1.205 * (6)	1.148 * (3)	1.185 * (5)	1.154 * (5)	1.055 * (5)
CLOTHING	1.087 * (5)	1.506 * (8)	1.078 * (5)	1.037 * (5)	1.463 * (5)	1.317 * (7)	1.342 * (6)	1.396 * (8)
HOUSE FURNISHINGS	0.943 * (2)	1.714 * (10)	0.998 * (3)	0.968 * (2)	1.638 * (8)	1.413 * (9)	1.746 * (10)	1.592 * (10)
HOUSE OPER. AND SERVICES	1.470 * (9)	0.970 * (5)	1.666 * (10)	1.455 * (10)	2.261 * (10)	1.402 * (8)	1.485 * (8)	1.356 * (6)
HEALTH	0.994 * (3)	0.638 * (3)	1.003 * (4)	0.983 * (3)	0.854 * (2)	0.764 * (2)	0.817 * (3)	0.557 * (2)
PERSONAL CARE	1.162 * (6)	0.759 * (4)	1.162 * (6)	1.151 * (7)	1.199 * (4)	1.122 * (4)	0.880 * (4)	0.747 * (4)
TRANSPOR. AND COMMUNICATION	1.739 * (10)	1.476 * (7)	1.736 * (11)	1.648 * (11)	1.631 * (7)	1.600 * (10)	1.412 * (7)	1.683 * (11)
CULTURE, EDUC. AND ENTERTAIN.	1.344 * (8)	1.899 * (11)	1.390 * (9)	1.363 * (9)	1.907 * (9)	1.923 * (11)	2.133 * (11)	1.536 * (9)
HOUSING	1.031 * (4)	0.468 * (2)	0.996 * (2)	1.030 * (4)	insig.	0.854 * (3)	0.581 * (2)	0.667 * (3)
OTHER	1.258 * (7)	1.710 * (9)	1.320 * (7)	1.168 * (8)	1.596 * (6)	1.290 * (6)	1.665 * (9)	1.389 * (7)

Table Note: *= significant at 0.01 level; ** =significant at 0.05 level; *** =significant at 0.10 level; insig.=not significant at even 0.10 level; (#) shows the rank of expenditure group within region.

From the Table 4, it is seen that, in Turkey (it is the highest level of spatial aggregation), the expenditure elasticity of food group is lower than unity and it is the lowest elasticity within all expenditure groups, meaning that food group is a necessity. Also, it is observed that, expenditure elasticities of clothing, house furnishings, health and housing groups are found around unity, indicating that all these groups have unitary expenditure elasticities in Turkey general. As a third group, restaurant; house operation and services; transportation and communication; culture, education and entertainment expenditures; personal care, and other expenditures are classified as luxuries for their expenditure elasticities are above the unity.

At the second level of regional aggregation (rural and urban areas), it is noticed that there are significant differences between respective expenditure groups of rural and urban areas. Food group still has the lowest expenditure elasticity and it is still a necessity for both areas. However, in urban areas the elasticity of food group is lower than that of rural areas, implying that the increase in food expenditures as a result of an increase in total budget is lower in urban areas relative to rural areas, as it is expected. Another striking difference between rural and urban areas is seen in restaurant group. The group covering expenditures in restaurants and similar places has a unitary elasticity in rural areas, whereas it becomes a luxury expenditure item in urban areas. This difference is not as expected, for the common belief that expenditures in restaurant, cafe and similar places should have relatively a lower elasticity in urban areas compared to rural

areas. One possible explanation for this contradiction would be the difference between what is meant by "restaurant, cafe and similar places" in urban areas and rural areas. It is certain that the goods and services available in "restaurant, cafe and similar places" in urban areas are different from those available in rural areas. In addition, in accord with the quality and diversity of commodities and services, their prices would naturally be different. Accordingly, expenditures in restaurant, cafe and similar places could be a luxurious expenditure item for the households in urban areas given the superiority of urban areas over rural in terms of quality, diversity and prices of these commodities and services. Indeed, this argument seems quite plausible for other expenditure groups as well, especially for the loosely specified (loose specification in the sense that each definition has quite different contents) ones.

House operation and services, health, personal care, transportation and communication, and housing expenditures can also be viewed within the above context. In urban areas, expenditure elasticities of all these groups are greater than respective elasticities in rural areas. Interestingly enough, health and housing groups, which are unitary elastic in urban areas, are classified as necessities in rural areas. On the other side, personal care group is a necessity in rural areas contrary to urban areas, where personal care is luxury. Also, house operation and services group has an elasticity around unity in rural areas, though its elasticity is well above unity in urban areas, meaning that this expenditure group can be categorized as unitary elastic for the former and as luxury for the latter. As another example of the

this unexpected difference between rural and urban areas, transportation and communication expenditures group has a higher elasticity in urban areas compared to rural areas, yet in both areas it falls into luxury category. However, thinking that in urban areas households have a broader range of goods and services concerning transportation and communication than households in rural areas, it seems plausible to find a broader response range in urban areas compared to rural areas.

Despite the expenditure groups discussed above, where rural areas have higher expenditure elasticities; elasticities of clothing, house furnishings, culture, education and entertainment, and other expenditures in urban areas are higher than rural areas as expected. In rural areas clothing is a luxury expenditure group, whereas it has unit elasticity in urban areas. House furnishings group takes place in unitary elasticity category in urban areas, as opposed to the fact that it is classified as luxury in rural areas. Both in rural and urban areas, culture, education and entertainment expenditures and other expenditure groups are luxuries with expenditure elasticities higher than unity. In addition, the difference between urban and rural areas in these groups as expected, since the elasticities are higher in rural areas in comparison with urban areas.

The analysis of the variations of expenditure elasticities across five geographical regions (it is the third regional aggregation level) reveals that there are important differences among regions, especially between Marmara and Aegean region, and others. In Marmara and Aegean region elasticity of food expenditures

is the lowest, 0.508, while in other regions it ranges between 0.539 and 0.666. This ordering is in accord with Engel's Law, which proposes that the richest, Marmara and Aegean region, should have the lowest elasticity for food.

In all regions, expenditure elasticity of restaurant group is greater than one, meaning that 1 percent increase (or decrease) in total budget causes restaurant expenditures to increase (or to decrease) by a rate higher than 1 percent. In Marmara and Aegean region, expenditure elasticity of restaurant group is the highest as opposed to Eastern and Southern Anatolia region that has the lowest elasticity.

Elasticity of clothing group is equal to unity in Marmara and Aegean region, while it can be classified as luxury in other regions within a range of 1.317 and 1.463. In Marmara and Aegean region, house furnishing and health groups are also unitary elastic, whereas in other regions the former is a luxury and the latter is a necessity.

House operations and services group has an elasticity above unity in all regions. In Mediterranean region elasticity of this group is quite higher, 2.261, than the other regions, where expenditure elasticity of house operations and services group range between 1.356 and 1.485. The expenditure elasticity of health group is lower than unity in all regions except Marmara and Aegean region, where elasticity of health group is approximately unity. Region-wise ordering of health group

elasticities indicates that Eastern and Southern Anatolia has the lowest expenditure elasticity, while Marmara and Aegean region has the highest.

In Marmara and Aegean, Mediterranean and Central Anatolia regions, elasticity of personal care expenditures is higher than unity, contrary to inelasticity of this group in Black Sea and Eastern and Southern Anatolia regions. In the former regions personal care group is a luxury expenditure item, whereas in the latter regions it is a necessity.

In all regions, transportation and communication; culture, education and entertainment expenditures; and other expenditures have elasticities well above unity, suggesting that these expenditure groups can be placed into the class of luxury expenditure items.

The region-wise ordering of expenditure elasticities of transportation and communication group shows that the lowest elasticity is estimated for Black Sea region, whereas other regions have elasticities ranging between 1.600 and 1.683. For culture, education and entertainment expenditures ranking of regions by elasticity is partially in conformity with ranking by average expenditure, despite Central Anatolia region, which ranks the second highest in both orderings. For other expenditures, expenditure elasticity is generally low in regions with high average expenditure and vice versa.

In Central Anatolia, Black Sea and Eastern and Southern Anatolia regions housing group is classified as necessity, for elasticity of this group is estimated to be lower than unity. On the other hand, in Marmara and Aegean region housing expenditures is unitary elastic. In addition, in Mediterranean region the parameter estimated is not found significant even at 0.1 significance level.

Table 5: Ranking and Classification of Expenditure Groups
by Total Expenditure Elasticity (Ranking is in ascending order)

RANK / REGIONS	1	2	3	4	5	6	7	8	9	10	11
TURKEY	FOO	FUR	HEA	HOU	CLO	PER	OTH	CUL RES	HOS	TRA	
RURAL	FOO	HOU	HEA	PER	HOS	RES	TRA	CLO	OTH	FUR	CUL
URBAN	FOO	HOU	FUR	HEA	CLO	PER	OTH	RES	CUL	HOS	TRA
MARMARA AND AEGE.	FOO	FUR	HEA	HOU	CLO	RES	PER	OTH	CUL	HOS	TRA
MEDITERRANEAN	FOO	HEA	RES	PER	CLO	OTH	TRA	FUR	CUL	HOS	
CENTRAL ANATOLIA	FOO	HEA	HOU	PER	RES	OTH	CLO	HOS	FUR	TRA	CUL
BLACK SEA	FOO	HOU	HEA	PER	RES	CLO	TRA	HOS	OTH	FUR	CUL
EAST&SOUT ANA.	FOO	HEA	HOU	PER	RES	HOS	OTH	CLO	CUL	FUR	TRA

$\varepsilon \leq 0.900$

$0.900 < \varepsilon \leq 1.100$

$1.100 < \varepsilon$

FOO : FOOD
RES : RESTAURANT
CLO : CLOTHING
FUR : HOUSE FURNISHINGS
HOS : HOUSE OPERATIONS AND SERVICES
HEA : HEALTH
PER : PERSONAL CARE
TRA : TRANSPORTATION AND COMMUNICATION
CUL : CULTURE, EDUCATION AND ENTERTAINMENT
HOU : HOUSING
OTH : OTHER

In none of the expenditure groups, with the exception of food group, parameter of average household size elasticity is found (statistically-even at α=0.10) significant as a block covering all spatial levels (Table 6).

Elasticity of food expenditures with respect to household size (this variable, in the present study, corresponds to average household size for each income group) is below unity in all regions due to "economies of scale" as expected. This suggests that one percent increase in average household size leads to an increase lower than one percent. More explicitly, doubling (increasing by 100%) average household size does not double food expenditures, but increases only by a proportion less than 100%, provided that other factors, such as income, prices, are held constant.

Size elasticity of food expenditures is 0.566 in Turkey overall. This indicates that increasing (or decreasing) household size by 50%, increases (or decreases) food expenditures by 28.3%. In rural areas size elasticity of food group is considerably lower than that of urban areas, 0.445 versus 0.769. This difference suggests that expenditures on food are more sensitive to household size in urban areas than it is in rural areas.

A further distinction is seen between five geographical regions of Turkey. While Marmara and Aegean region has the highest (0.645) size elasticity

of food expenditures, in other regions size elasticity ranges between 0.289 and 0.386.

Table 6: Size Elasticities by Expenditure Group and Region
(Results of the Simple Double-Log Model)

	TURKEY	RURAL	URBAN	MARMARA AND AEGEAN	MEDITERR.	CENTRAL ANATOLIA	BLACK SEA	EAST.&SOUT. ANATOLIA
FOOD	0.566 *	0.445 *	0.769 *	0.645 *	0.289 *	0.314 *	0.386 *	0.321 *
RESTAURANT	insig.	0.561 **	insig.	insig.	insig.	insig.	insig.	0.753 *
CLOTHING	0.410 **	insig.	0.790 *	0.550 *	insig.	insig.	insig.	insig.
HOUSE FURNISHINGS	0.979 *	-0.742 **	insig.	insig.	insig.	insig.	insig.	-1.121 *
HOUSE OPER. AND SERVICES	insig.	insig.	insig.	insig.	insig.	insig.	insig.	insig.
HEALTH	insig.	insig.	insig.	insig.	insig.	insig.	insig.	1.018 **
PERSONAL CARE	insig.	insig.	insig.	insig.	insig.	insig.	insig.	insig.
TRANSPOR. AND COMMUNICATION	-0.842 **	insig.	-1.563 *	-0.875 **	insig.	insig.	insig.	insig.
CULTURE, EDUC. AND ENTERTAIN.	1.055 **	insig.	insig.	insig.	1.118 **	insig.	insig.	insig.
HOUSING	insig.	insig.	insig.	insig.	insig.	insig.	insig.	insig.
OTHER	insig.	insig.	insig.	insig.	insig.	insig.	insig.	insig.

Table Note: *= significant at 0.01 level; ** =significant at 0.05 level; *** =significant at 0.10 level; insig.=not significant at even 0.10 level.

In the remaining expenditure groups parameter of size elasticity is generally insignificant despite some exceptions. For expenditures in restaurants and similar places, size elasticity is found to be significant, positive and lower than unity in rural areas and Eastern and Southern Anatolia region. This implies that in these areas a 50% increase in household size causes expenditures to increase at a rate lower than 50%. Also, in clothing group, size elasticity is estimated to be positive and under unity for Turkey overall, urban areas and Marmara and Aegean region, suggesting the same explanation above.

It is peculiar to see that, size elasticity of house furnishings is negative in rural areas and Eastern and Southern Anatolia, while it is positive in Turkey overall. Moreover, the negative size elasticity in Eastern and Southern Anatolia is higher than unity. This case is particularly meaningless, due to the fact that a negative elasticity over unity requires a specific expenditure to decrease by more than 100% as household size grows by 100%, which is impossible for decreases over 100% is implausible in monetary units. So, both for the unlikely difference between Turkey overall and rural areas, and for the problem with the negative elasticity in Eastern and Southern Anatolia region, the results on size elasticity of this expenditure group are rather insignificant.

In health group, size elasticity is found significant only for Eastern and Southern Anatolia region. It is positive and approximately equal to one, which shows that a 100% increase in household size is compensated by the same percent in Eastern and Southern Anatolia region.

In urban areas, elasticity of transportation and communication expenditures group with respect to average household size is negative and greater than unity. This finding is particularly insignificant because of the points (concerning a negative elasticity over unity) discussed above.

Size elasticity of transportation and communication expenditures is also negative in Marmara and Aegean region and in Turkey overall, but it is lower than one. This implies that a 100% increase in household size causes the expenditures on transportation and communication to decrease by 87.5% in Marmara and Aegean region and 84.2% in Turkey overall. In other words, in Marmara and Aegean region, if size of a household increases from 2 to 4, this household feels the need of cutting the budget devoted to transportation and communication from, say, 1,000,000 TL to 12.5,000. This decrease, due to an expansion in family size, stems both from the increasing cost of transportation and communication and the need to allocate more money for other expenditures, such as food and clothing[5].

It is also observed that Mediterranean region and Turkey overall are the only regions where size elasticity of culture, education and entertainment expenditures is statistically significant (Table 6). For Turkey overall, elasticity of this expenditure group with respect to household size is positive and equal to 1.055, which is very close to that of Mediterranean region, 1.118.

---

[5] Houthaker (1957) formulates this second effect in the following way : "...there is also what is metaphorically called an income effect: an increase in family size makes people relatively poorer. Although, for example, an increase in family size may increase a household's "need" for clothing, the simultaneously arising "need" for more food may force it to spend less for clothing on balance."

5.2.2 Sub-Groups of Food Expenditures

In accord with the results presented in the previous section, parameter of expenditure elasticity is found statistically significant for all sub-groups of food expenditures and for all regions. Also, parameter of size elasticity is generally significant, particularly for Turkey overall, urban and rural areas. The results of double-log functional form are presented in Tables 7, 8 and 9.

Table 7: Total Expenditure Elasticities
by Sub-Group of Food Expenditures and Region
(Results of the Simple Double-Log Model)

	TURKEY	RURAL	URBAN	MARMARA AND AEGEAN	MEDITERR.	CENTRAL ANATOLIA	BLACK SEA	EAST.&SOUT. ANATOLIA
BREAD AND CEREALS	0.196 * (1)	0.368 * (1)	0.149 * (1)	0.116 * (1)	0.345 * (1)	0.269 * (1)	0.376 * (2)	0.362 * (1)
MEAT, FISH AND POULTRY	0.894 * (9)	0.955 * (9)	0.939 * (9)	0.844 * (9)	1.047 * (8)	1.100 * (9)	0.800 * (8)	1.146 * (8)
MILK, MILK PRO., EGGS AND FATS	0.485 * (5)	0.609 * (6)	0.490 * (5)	0.446 * (5)	0.588 * (4)	0.615 * (5)	0.539 * (6)	0.594 * (4)
DRIED VEGETABLES	0.261 * (2)	0.578 * (4)	0.291 * (2)	0.159 * (2)	0.514 * (3)	0.566 * (4)	0.519 * (3)	0.479 * (2)
DRIED FRUITS	0.637 * (6)	0.708 * (7)	0.807 * (8)	0.581 * (6)	1.195 * (9)	0.645 * (6)	1.140 * (9)	1.459 * (9)
FRESH VEGETABLES	0.434 * (3)	0.499 * (2)	0.443 * (4)	0.432 * (4)	0.474 * (2)	0.443 * (3)	0.528 * (4)	0.734 * (6)
FRESH FRUITS	0.737 * (8)	0.752 * (8)	0.764 * (6)	0.679 * (8)	0.856 * (7)	0.713 * (8)	0.735 * (7)	0.998 * (7)
PROCESSED FOOD	0.438 * (4)	0.542 * (3)	0.437 * (3)	0.428 * (3)	0.626 * (5)	0.434 * (2)	0.532 * (5)	0.560 * (3)
CIGAR., ALCO.& NON-ALCO. BEV.	0.661 * (7)	0.588 * (5)	0.715 * (7)	0.642 * (7)	0.634 * (6)	0.694 * (7)	0.263 ** (1)	0.663 * (5)

Table Note: *= significant at 0.01 level; ** =significant at 0.05 level; *** =significant at 0.10 level; insig.=not significant at even 0.10 level; (#) shows the rank of expenditure group within region.

From the first column of Table 7, it is seen that in Turkey overall expenditure elasticity is positive and below unity for all food sub-groups. Elasticity

of bread and cereals group is the lowest among food sub-groups, whereas meat, fish and poultry group has the highest as expected.

Expenditure elasticity of dried vegetables group is of particular interest, for it is the second lowest elasticity in Turkey overall and it is lower than elasticity of fresh vegetables. In Turkey, also, elasticity of dried fruits group is lower than that of fresh fruits.

As expected, elasticity of milk, milk products, eggs and fats is lower than elasticity of meat, fish and poultry, but higher than elasticity of bread and cereals. In addition, processed food group is placed in the middle of elasticity scale, while cigarette, alcoholic and non-alcoholic beverages is located in the upper region of scale (Table 8).

Virtually all food sub-groups, but dried fruits; fresh fruits; and cigarette, alcoholic and non-alcoholic beverages, are less expenditure elastic in urban areas than rural areas (even for dried and fresh fruits the difference between expenditure elasticities of urban and rural areas is not so important). This suggests that the percentage increase (or decrease) in expenditures on food sub-groups due to the percentage increase (or decrease) in total expenditures is generally (with the above cited exceptions) smaller in urban areas than rural areas. As a contradiction to this argument, expenditure elasticity of cigarette, alcoholic and non-alcoholic beverages group is higher in urban areas than in rural areas. Another important

difference between rural and urban areas is observed in relative ranks of dried and fresh food. In urban areas elasticities of dried vegetables and dried fruits are lower than dried ones contrary to rural areas, where the case is just the reverse. This implies that in urban areas (and Turkey overall also) dried vegetables and fruits are more important sources of nutrition than fresh ones. Needless to say, it also implies that in rural areas fresh fruits and vegetables have a more important place in nutrition than dried ones. This difference between rural and urban areas can chiefly be explained by the differences in prices and availability of these food items.

Examination of Table 7 reveals that, within each expenditure group, variations in the estimates of expenditure elasticity across regions are in a quite broad range.

In Marmara and Aegean region, expenditure elasticity of bread and cereals group is 0.116, while in other regions it ranges between 0.269 and 0.376. Elasticity of meat, fish and poultry group is under unity in Marmara and Aegean and Black Sea regions, contrary to the other regions, where it is above unity. In Marmara and Aegean region, elasticity of dried vegetables is much lower than as it is in remaining regions.

In Marmara and Aegean, and Central Anatolia regions, dried fruits group is expenditure inelastic (that is necessity), as different from other regions, where this group is classified as luxury or elastic. For expenditures on fresh

vegetables, Eastern and Southern Anatolia region has the highest expenditure elasticity; Black Sea region has the second highest; and other regions have elasticities varying between 0.432 and 0.474. Elasticity of fresh fruits group changes in a narrow range between 0.679 and 0.735 in Marmara and Aegean, Central Anatolia and Black Sea regions. In Eastern and Southern Anatolia region elasticity of this group is approximately equal to unity and it is quite higher than that of Mediterranean region. Elasticity of processed food ranges between 0.428 and 0.626 across regions. It takes its highest and lowest values in Mediterranean and Marmara and Aegean regions respectively. In Black Sea region, elasticity of cigarette, alcoholic and non-alcoholic beverages has an elasticity lower than even bread and cereals. However, this finding is quite doubtful for the implausibility of the fact that an expenditure group has an elasticity under that of a most important nutrition source in Turkey, namely bread and cereals. Due to that thinking, estimate of this elasticity in Black Sea region seems quite dubious, although it is significant statistically.

From Tables 7 and 8, it is seen that relative ranks of food sub-groups (within each region) differ between regions, except bread and cereals; and meat, fish and poultry groups, of which ranks are very close. It is observed that in all regions, bread and cereals group takes the first or, exceptionally, the second row in the ranking, while meat, fish and poultry takes the ninth or, sometimes, the eighth place. The first exception concerning the unexpected switching of ranks of cigarette, alcoholic and non-alcoholic beverages; and bread and cereals groups in

Black Sea region is quite implausible for the reasons discussed in the above paragraphs. However, the second and quite frequent exception concerning meat, fish and poultry; and dried fruits groups seems rather justifiable due to the abundance (and relatively lower prices) of the former food sub-group in Mediterranean, Black Sea, and Eastern and Southern Anatolia regions. Also, the idea that the households in these regions do not care much for dried fruits for they have to consume these products from market instead of their productions would be a plausible explanation for this situation.

Table 8: Ranking and Classification of Food Sub-Groups
by Total Expenditure Elasticity (Ranking is in ascending order)

RANK / REGIONS	1	2	3	4	5	6	7	8	9
TURKEY	BRE	DVE	FVE	PFO	MEF	DFR	CAB	FFR	MFP
RURAL	BRE	FVE	PFO	DVE	CAB	MEF	DFR	FFR	MFP
URBAN	BRE	DVE	PFO	FVE	MEF	FFR	CAB	DFR	MFP
MARMARA AND AEGE.	BRE	DVE	PFO	FVE	MEF	DFR	CAB	FFR	MFP
MEDITERRANEAN	BRE	FVE	DVE	MEF	PFO	CAB	FFR	MFP	DFR
CENTRAL ANATOLIA	BRE	PFO	FVE	DVE	MEF	DFR	CAB	FFR	MFP
BLACK SEA	CAB	BRE	DVE	FVE	PFO	MEF	FFR	MFP	DFR
EAST&SOUT ANA.	BRE	DVE	PFO	MEF	CAB	FVE	FFR	MFP	DFR

$\varepsilon \leq 0.500$

$0.500 < \varepsilon \leq 0.900$

$0.900 < \varepsilon \leq 1.100$

$1.100 < \varepsilon$

BRE : BREAD AND CEREALS
MFP : MEAT, FISH AND POULTRY
MFE : MILK, MILK PRODUCTS, EGGS AND FATS
DVE : DRIED VEGETABLES
DFR : DRIED FRUITS
FVE : FRESH VEGETABLES
FFR : FRESH FRUITS
PFO : PROCESSED FOOD
CAB : CIGARETTE, ALCOHOLIC AND NON-ALCOHOLIC BEV.

As it is seen in Table 8, bread and cereals; dried vegetables; fresh vegetables and processed food groups are in the lower segment of elasticity scale. The groups taking place in the middle segment are milk, milk products, eggs and fats; fresh fruits; cigarette, alcoholic and non-alcoholic beverages; and dried fruits in some regions. And finally, meat, fish and poultry; and dried fruits groups (in some regions) are in the upper segment.

The sub-groups in the lower segment of the elasticity scale can be conceived as the "core" of food expenditures. The groups that are within the "core" are less sensitive to changes in total expenditures in both upward and downward directions compared to other groups. On the other hand, expenditure groups in the upper segment are so sensitive to changes in total expenditures. The groups in this category, in the present case particularly meat, fish and poultry, are the first expenditure groups that will be reduced (or expanded) rapidly in response to a decrease (increase) in total expenditures.

From Table 9, it is seen that size elasticities of sub-groups of food expenditures are generally significant -except cigarette, alcoholic and non-alcoholic beverages, positive and below unity in Turkey overall. According to this finding, doubling household size increases expenditures on sub-groups of food, but by a proportion lower than 100%, which in turn implies "economies of scale". By the same token, halving household size decreases expenditures on sub-groups of food by a proportion lower than 50%. In Turkey overall the highest size elasticity is

determined for dried vegetables group, which is almost equal to unity. This means that, expenditures on dried vegetables respond to a certain percentage change in household size by an equal proportion.

As the other extreme, processed food group has the lowest size elasticity, 0.461, in Turkey overall. Following processed food group, fresh fruits group has the second lowest size elasticity in Turkey overall. In other words, these two groups are less sensitive to changes in household size compared to other groups, of which size elasticities vary between 0.691 and 0.999.

The results presented in Table 9 reveals that there is a considerable difference between rural and urban areas. In urban areas all size elasticities are much higher than elasticities determined for rural areas. One of the most striking example of this difference is observed in bread and cereals group. In urban areas size elasticity of bread and cereals groups is much higher than that of rural areas, 1.163 versus 0.476. A size elasticity higher than unity also hints the existence of "increasing returns to scale" in bread and cereals group in urban areas. However, this may be justified with the thinking that an increase in household size firstly increases expenditures on bread and cereals (the basic and cheapest source of nutrition in Turkey) and then, as a secondary effect leads to a further increases in the expenditures on the same group. This second effect stems from the fact that family gets poorer (particularly in lower income groups) following the increase in its size; and followingly substitutes necessities for luxuries and expensive ones for cheaper ones.

In urban areas size elasticity of meat, fish and poultry group is also much higher compared to rural areas. This difference between respective size elasticities of urban and rural areas can mainly be attributed to differences in provision of food and to the reporting problems. In urban areas, food is generally provided from market, whereas in rural areas a important part of food consumption is obtained from the own production of households (except cigarette, alcoholic and non-alcoholic beverages), besides market. However, this difference in provision of food in rural areas is not reflected in food expenditures adequately due to the reporting problems, which in turn forms an important basis for the difference between size elasticities of rural and urban areas.

Marmara and Aegean region is the only region where all sub-groups have statistically significant size elasticities. In Mediterranean region only bread and cereals; milk, milk products, eggs and fats; fresh vegetables; fresh fruits; and processed food groups have statistically significant elasticities. In Central Anatolia dried fruits group is added to this list also. In Black Sea region, the groups that have statistically significant are only : Bread and cereals; meat, fish and poultry; milk, milk products, eggs and fats; processed food; and cigarette, alcoholic and non-alcoholic beverages groups. Eastern and Southern Anatolia region has the shortest list of significant parameters, where only bread and cereals; milk, milk products, eggs and fats; and processed food groups have statistically significant size elasticity parameters.

Region-wise comparison of sub-groups, that have significant size elasticity parameters for all regions, indicates that Marmara and Aegean has the highest size elasticity for bread and cereals group (1.071) as much differently than other regions where size elasticity of this group ranges between 0.205 and 0.659. It would not be inappropriate to think that the discussion of the difference between size elasticities of the same group in rural and urban areas is also valid for the differences between regions.

Size elasticity of meat, fish and poultry group is nearly the same for Marmara and Aegean and Black Sea regions, 0.689 and 0.703 respectively.

In Marmara and Aegean; Black Sea; and Eastern and Southern Anatolia regions, size elasticity of milk; milk products; eggs; and fats group is positive and varies in a quite narrow range of 0.621 and 0.725. However, in the remaining regions, size elasticity of this group is quite lower and almost the same, 0.366.

Dried vegetables group has a lower elasticity in Marmara and Aegean region compared to Central Anatolia, whereas size elasticity parameter of this group is not significant in other regions. Similarly, there is a problem of statistical significance for the size parameter of dried fruits group and this problem leaves no room for region-wise comparisons.

Elasticity of expenditures on fresh vegetables with respect to household size takes its highest value, 0.746, in Central Anatolia region, while its lowest value, 0.464, is observed in Mediterranean region. In Marmara and Aegean region, size elasticity of this group is equal to 0.543. On the other hand, in the remaining regions, parameter of size elasticity is found to be insignificant for this group.

Similarly, fresh fruits group has the same statistical significance problem in Black Sea; and Eastern and Southern Anatolia regions. In Marmara and Aegean; and Central Anatolia regions size elasticity of this group is 0.519 and 0.566 respectively. Different from these two regions, in Mediterranean region, size elasticity of fresh fruits group is negative and below unity. A negative size elasticity for a food sub-group, namely fresh fruits group seems hardly justifiable since the it is at odds with the results obtained in other regions for the same group and it is not justifiable in economic terms.

Processed food sub-group is one of the rare groups that has significant size parameters for all regions. Size elasticity of this group shows a fair variation across regions as can be seen from Table 9. It takes its highest value in Marmara and Aegean region, 0.558, and its lowest value in Black Sea region, 0.292.

Cigarette, alcoholic and non-alcoholic beverages group is of particular interest for it has significant size parameter only in urban areas; Marmara and Aegean region, and Black Sea region. This, in turn, means that in the remaining

regions, expenditures on cigarette, alcoholic and non-alcoholic beverages group do not respond to changes in household size significantly. In Black Sea region size elasticity of this group is quite higher than that of Marmara and Aegean region, 0.794 versus 0.595.

Table 9: Size Elasticities by Sub-Groups of Food Expenditures and Region (Results of the Simple Double-Log Model)

	TURKEY	RURAL	URBAN	MARMARA AND AEGEAN	MEDITERR.	CENTRAL ANATOLIA	BLACK SEA	EAST.&SOUT. ANATOLIA
BREAD AND CEREALS	0.691 *	0.476 *	1.163 *	1.071 *	0.659 *	0.436 *	0.205 ***	0.380 **
MEAT, FISH AND POULTRY	0.784 *	0.388 **	1.160 *	0.689 *	insig.	insig.	0.703 *	insig.
MILK, MILK PRO., EGGS AND FATS	0.819 *	0.679 *	0.819 *	0.713 *	0.366 *	0.364 **	0.621 *	0.725 *
DRIED VEGETABLES	0.999 *	0.356 ***	1.147 *	1.071 *	insig.	insig.	insig.	insig.
DRIED FRUITS	0.757 *	0.533 ***	0.967 *	0.566 ***	insig.	0.721 **	insig.	insig.
FRESH VEGETABLES	0.755 *	0.461 *	0.868 *	0.543 *	0.464 *	0.746 *	insig.	insig.
FRESH FRUITS	0.517 *	0.240 ***	0.803 *	0.519 *	-0.309 **	0.566 *	insig.	insig.
PROCESSED FOOD	0.461 *	0.419 *	0.571 *	0.558 *	0.356 *	0.489 *	0.292 **	0.398 *
CIGAR., ALCO.& NON-ALCO. BEV.	insig.	insig.	0.425 **	0.595 *	insig.	insig.	0.794 *	insig.

Table Note: *= significant at 0.01 level; ** =significant at 0.05 level; *** =significant at 0.10 level; insig.=not significant at even 0.10 level.

5.3 Extended Models

As discussed in Chapter III, to analyze the differences between certain income groups, income dummies at two disaggregation levels are added to the simple models and the extended models are obtained. Of these two disaggregation levels, the first takes the average income as the dividing line for income groups; and the second takes the first 40%, the second 40% and the last 20% groups of

income as the line of separation. Also, relying on the same rationale discussed in Chapter III, the extended models are estimated using OLS just as the case for the simple models.

In the extended equations, dummies are so parametrized that they give both the parameters and individual significance tests of differences from the base characteristics. Naturally, the base characteristics are the first income groups determined by the separation criteria discussed above.

5.3.1 Main Expenditure Groups

As it is seen from Tables 10 and 11, and Appendix D, Tables D3-D4; in most of the expenditure groups and regions, parameters of income dummies are not found significant individually, notwithstanding some exceptions, particularly food expenditures. This finding implies that for most of the expenditure groups and regions, it is hard to find different Engel curves for different income groups.

However, in expenditure groups where difference (i.e., parameters of income dummies) between income groups are found significant, it is observed that, as expected, in lower income groups total expenditure elasticity is lower than that of higher income groups, except only health; transportation and communication; and other expenditure groups (see Table 10).

For food expenditures, it is seen that the difference between income groups below and above the average is significant in Turkey overall; in urban areas; in Marmara and Aegean; Mediterranean and Eastern; and Southern Anatolia regions (see Table 10, extended model 1.1). Different Engel curves, found significant for these two different aggregate income groups, suggest that in lower income groups food expenditures are more elastic than that of higher income groups. This finding is also justified by the results of extended model 1.2. In Marmara and Aegean region, total expenditure elasticity of food falls as it is moved from the first 40% to the last 20%. This observation is also valid for Mediterranean region. In Turkey overall, however, the difference between the first 40% and the second 40% is not found significant, suggesting that total expenditure elasticity estimated for the base group (the first 40%) is the same for the first difference group (the second 40%). Similarly, in Black Sea region, the null hypothesis implying that there is no significant difference between the first 40% and the last 20% can not be rejected even at 0.10 significance level, leading to the acceptance of null hypothesis.

In the remaining expenditure groups, but health; transportation and communication; and other expenditures groups, where different Engel curves for different income groups are justified by the significance of the income dummies, the same ranking of income groups are valid: lower income groups are ranked higher in an ascending order by total expenditure elasticity.

In Turkey overall, health expenditures is more elastic in income groups below the average compared to income groups above the average. This case, that is also observed in the simple models (elasticity of health expenditures in Marmara and Aegean, the richest, region is higher compared to other regions), indicates that health care becomes more elastic as income increases. As discussed in the section on simple models, this finding can chiefly be attributed to price, quality and specification differences between regions.

In the same manner, transportation and communication expenditures group is more expenditure elastic in lower income groups than as it is in higher income groups. In Turkey overall, expenditure elasticity of transportation and communication group has higher elasticity for the income groups above the average, in comparison with the income groups below the average. This is also the case in rural areas; Marmara and Aegean, and Eastern and Southern Anatolia regions.

Eastern and Southern Anatolia region is the only region where income dummy parameter of other expenditures group is found to be significant. In this region, it is observed that other expenditures group has a higher elasticity estimate for the income groups below the average when compared to income groups above the average. In a more stylized manner, all these show that as total expenditure (or income) increases, total expenditure (or income) elasticities of health; transportation and communication; and other expenditures groups increase also. This generalization, in effect, suggest that households increase their expenditures

on health; transportation and communication; and other consumption items, as total expenditures (or income) rises, rather than these groups become more luxurious for households following the increase in total expenditures (or income).

As it is determined from Table 10, nearly in all groups, except food, and regions size elasticities are found insignificant. In food group, size elasticities generally exceed respective size elasticities of the simple model.

From the results presented in Table 10, it is also noticed that extension of the simple model with income dummies do not alter the region-wise ordering too much.

To sum up, results of extended models are not found superior to the results of simple models in estimating Engel curves for main expenditure groups, both statistically and empirically. However, the extended models provide an analysis of the differences between income groups, albeit the cases are limited. The results of the extended models particularly show that total expenditure elasticity of all expenditure groups, except health; transportation and communication; other expenditures groups, is higher in lower income groups and vice versa. Health; transportation and communication; other expenditures groups are found to be more elastic for higher income groups. From the results, it is also inferred that ordering of regions by expenditure elasticity does not change too much from simple models to extended ones.

Table 10: Total Expenditure and Size Elasticities
by Expenditure Group and Region
(Results of the Extended Double-Log Models)

		Extended 1.1			Extended 1.2			
		groups below the average income	groups above the average income	size elasticity	the 1st 40%	the 2nd 40%	the 3rd 20%	size elasticity
FOOD	TURKEY	0.672 *	0.441 *	0.253 *	0.682 *	insig.	0.415 *	0.222
	RURAL	0.580 *	insig.	0.411 *	0.582 *	insig.	insig.	0.384
	URBAN	0.638 *	0.420 *	0.471 *	0.675 *	0.563 **	0.383 *	0.419
	MARMARA AND AEGEAN	0.654 *	0.387 *	0.297 *	0.640 *	0.416 *	0.331 *	0.271
	MEDITERRANEAN	0.658 *	0.499 **	0.247 *	0.625 *	0.421 **	insig.	0.254
	CENTRAL ANATOLIA	0.588 *	insig.	0.350 *	0.581 *	insig.	insig.	0.337
	BLACK SEA	0.552 *	insig.	0.366 *	0.653 *	0.309 *	insig.	0.282
	EAST.&SOUTH. ANA.	0.679 *	0.527 **	0.274 *	0.689 *	insig.	insig.	0.298
RESTAUR.	TURKEY	1.318 *	insig.	insig.	1.151 *	insig.	insig.	insig.
	RURAL	0.867 *	insig.	insig.	0.937 *	insig.	insig.	insig.
	URBAN	1.458 *	1.127 **	insig.	1.280 *	insig.	insig.	insig.
	MARMARA AND AEGEAN	1.275 *	insig.	insig.	1.170 *	insig.	insig.	insig.
	MEDITERRANEAN	1.001 *	insig.	insig.	1.335 *	0.675 **	insig.	insig.
	CENTRAL ANATOLIA	0.779 *	insig.	insig.	0.729 *	insig.	insig.	insig.
	BLACK SEA	1.072 *	insig.	insig.	1.226 *	insig.	insig.	insig.
	EAST.&SOUTH. ANA.	0.810 *	insig.	0.571 **	0.733 *	insig.	insig.	0.555
CLOTHING	TURKEY	1.482 *	0.907 *	insig.	1.593 *	insig.	0.849 *	-0.513
	RURAL	1.658 *	0.983 *	insig.	1.809 *	insig.	0.895 *	insig.
	URBAN	1.234 *	0.935 *	insig.	1.196 *	insig.	0.911 **	insig.
	MARMARA AND AEGEAN	1.344 *	0.868 *	insig.	1.384 *	insig.	0.853 *	insig.
	MEDITERRANEAN	1.541 *	insig.	insig.	1.739 *	1.207 **	insig.	insig.
	CENTRAL ANATOLIA	1.528 *	insig.	insig.	1.593 *	insig.	insig.	insig.
	BLACK SEA	1.373 *	insig.	insig.	1.581 *	0.828 *	insig.	insig.
	EAST.&SOUTH. ANA.	1.679 *	0.946 *	insig.	1.985 *	1.232 *	1.088 *	insig.
HOUSE FURNIS.	TURKEY	1.378 *	0.854 *	insig.	1.663 *	insig.	0.830 *	insig.
	RURAL	1.872 *	1.172 **	insig.	2.234 *	insig.	1.112 *	insig.
	URBAN	1.282 *	insig.	insig.	1.490 *	insig.	insig.	insig.
	MARMARA AND AEGEAN	0.966 *	insig.	insig.	1.046 *	insig.	insig.	insig.
	MEDITERRANEAN	1.902 *	1.149 **	insig.	2.285 *	insig.	1.009 *	insig.
	CENTRAL ANATOLIA	1.758 *	insig.	insig.	2.045 *	insig.	insig.	insig.
	BLACK SEA	1.738 *	insig.	insig.	1.662 *	insig.	insig.	insig.
	EAST.&SOUTH. ANA.	1.862 *	insig.	-1.026 *	1.780 *	2.669 **	insig.	-0.873
HOUSE OPERATION AND SERV.	TURKEY	0.919 *	insig.	insig.	insig.	1.562 **	1.537 *	1.652
	RURAL	insig.	2.106 *	insig.	insig.	insig.	insig.	insig.
	URBAN	1.734 *	insig.	insig.	1.657 *	insig.	insig.	insig.
	MARMARA AND AEGEAN	1.061 *	insig.	insig.	1.066 **	2.578 **	insig.	insig.
	MEDITERRANEAN	1.872 *	insig.	insig.	1.719 **	insig.	insig.	insig.
	CENTRAL ANATOLIA	1.159 *	insig.	insig.	insig.	insig.	insig.	insig.
	BLACK SEA	1.585 *	insig.	insig.	1.509 *	insig.	insig.	insig.
	EAST.&SOUTH. ANA.	1.602 *	insig.	insig.	insig.	insig.	insig.	insig.
HEALTH	TURKEY	0.551 *	0.961 **	insig.	insig.	0.959 **	1.013 *	insig.
	RURAL	insig.	1.220 *	insig.	insig.	insig.	insig.	insig.
	URBAN	0.891 *	insig.	insig.	0.879 *	insig.	insig.	insig.
	MARMARA AND AEGEAN	0.717 *	insig.	insig.	insig.	insig.	insig.	insig.
	MEDITERRANEAN	0.743 *	insig.	insig.	insig.	insig.	insig.	insig.
	CENTRAL ANATOLIA	insig.	1.372 *	insig.	insig.	insig.	1.279 **	insig.
	BLACK SEA	0.725 *	insig.	insig.	0.679 **	insig.	insig.	insig.
	EAST.&SOUTH. ANA.	insig.	1.226 *	0.965 **	insig.	insig.	insig.	0.953

Table Note: *= significant at 0.01 level; ** =significant at 0.05 level; *** =significant at 0.10 level; insig.=not significant at even 0.10 level.

Table 10: Total Expenditure and Size Elasticities
by Expenditure Group and by Region
(Results of the Extended Double-Log Models) (cont'd)

		Extended 1.1			Extended 1.2			
		groups below the average *income*	groups above the average *income*	size *elasticity*	*the 1st 40%*	*the 2nd 40%*	*the 3rd 20%*	size *elasticity*
PERSONAL CARE	TURKEY	1.139 *	insig.	insig.	1.201 *	insig.	insig.	insig.
	RURAL	0.833 *	0.385 **	insig.	0.957 *	insig.	insig.	insig.
	URBAN	1.108 *	insig.	insig.	1.024 *	insig.	insig.	insig.
	MARMARA AND AEGEAN	1.079 *	insig.	insig.	0.960 *	insig.	insig.	insig.
	MEDITERRANEAN	1.181 *	insig.	insig.	1.235 *	0.520 **	insig.	insig.
	CENTRAL ANATOLIA	1.025 *	insig.	insig.	1.347 *	insig.	insig.	insig.
	BLACK SEA	0.851 *	insig.	insig.	0.999 *	0.289 **	insig.	insig.
	EAST.&SOUTH. ANA.	0.844 *	insig.	insig.	0.814 *	insig.	insig.	insig.
TRANSPOR. AND COMMUN.	TURKEY	1.319 *	2.034 *	insig.	1.237 *	insig.	1.960 **	insig.
	RURAL	1.370 *	2.111 **	*insig.*	1.492 *	*insig.*	*insig.*	*insig.*
	URBAN	1.653 *	insig.	-1.272 **	1.512 *	insig.	insig.	-1.091 **
	MARMARA AND AEGEAN	1.317 *	2.003 *	insig.	1.479 *	insig.	insig.	insig.
	MEDITERRANEAN	1.520 *	insig.	insig.	1.774 *	0.812 *	insig.	insig.
	CENTRAL ANATOLIA	1.344 *	insig.	insig.	1.413 *	insig.	insig.	insig.
	BLACK SEA	1.380 *	insig.	insig.	1.277 *	insig.	insig.	insig.
	EAST.&SOUTH. ANA.	1.097 *	2.311 *	insig.	1.001 *	insig.	2.080 **	insig.
CULTURE, EDUCATION AND ENTERT.	TURKEY	1.734 *	insig.	insig.	2.279 *	insig.	1.281 **	insig.
	RURAL	2.207 *	insig.	insig.	2.224 *	insig.	insig.	insig.
	URBAN	1.614 *	insig.	insig.	1.935 *	insig.	insig.	insig.
	MARMARA AND AEGEAN	1.657 *	*insig.*	*insig.*	1.936 *	*insig.*	*insig.*	*insig.*
	MEDITERRANEAN	2.360 *	1.447 **	1.045 **	3.092 *	insig.	1.467 **	insig.
	CENTRAL ANATOLIA	2.441 *	insig.	insig.	2.372 *	insig.	insig.	insig.
	BLACK SEA	2.261 *	insig.	insig.	2.372 *	insig.	insig.	insig.
	EAST.&SOUTH. ANA.	2.021 *	insig.	insig.	1.691 *	insig.	insig.	insig.
HOUSING	TURKEY	1.007 *	insig.	insig.	1.066 *	insig.	0.831 **	insig.
	RURAL	0.544 *	0.234 *	0.321 **	0.569 *	-0.107 *	insig.	insig.
	URBAN	1.058 *	0.702 *	-0.458 **	0.995 *	insig.	0.579 *	-0.462 *
	MARMARA AND AEGEAN	1.196 *	0.752 *	-0.637 *	1.231 *	insig.	0.587 *	-0.638 *
	MEDITERRANEAN	insig.	insig.	insig.	insig.	0.360 **	insig.	insig.
	CENTRAL ANATOLIA	0.751 *	insig.	insig.	0.811 *	0.397 **	0.320 *	insig.
	BLACK SEA	0.726 *	0.362 **	insig.	1.021 *	-0.026 *	insig.	insig.
	EAST.&SOUTH. ANA.	0.814 *	0.514 **	insig.	0.884 *	0.382 **	insig.	insig.
OTHER	TURKEY	1.132 *	insig.	insig.	0.877 *	insig.	insig.	insig.
	RURAL	1.602 *	insig.	insig.	1.688 *	insig.	insig.	insig.
	URBAN	1.085 *	insig.	insig.	1.143 *	insig.	insig.	insig.
	MARMARA AND AEGEAN	1.118 *	insig.	insig.	1.080 *	insig.	insig.	insig.
	MEDITERRANEAN	1.546 *	insig.	insig.	1.779 *	insig.	insig.	insig.
	CENTRAL ANATOLIA	1.447 *	insig.	insig.	1.519 *	insig.	insig.	insig.
	BLACK SEA	1.513 *	insig.	insig.	1.407 *	insig.	insig.	insig.
	EAST.&SOUTH. ANA.	0.935 *	1.971 **	insig.	insig.	insig.	1.956 **	insig.

Table Note: *= significant at 0.01 level; ** =significant at 0.05 level; *** =significant at 0.10 level; insig.=not significant at even 0.10 level.

5.3.2 Sub-Groups of Food Expenditures

In accord with the results concerning food expenditures in the previous section; in most of the food sub-groups and regions, the differences between expenditure elasticities of different income groups are found significant, especially for the extended model 1.1 (Table 11). Despite the general significance of differences between income groups, in bread and cereals; processed food; and cigarette, alcoholic and non-alcoholic beverages sub-groups, the number of equations (of each region) having significant parameters for income dummies is very limited.

From Table 11, it is seen that virtually in all cases, where income dummies have parameters significantly different from zero, food sub-groups are more expenditure elastic in lower income groups compared to higher income groups. Even, in some cases a sub-group, which is luxury for lower income groups, becomes necessity for higher income groups.

Although extension of simple models provides a basis for the comparison of Engel curves of different income groups, it is hard to advocate that for food sub-groups extended models are statistically superior to simple models. As different from simple models, size elasticities are lower in extended models. Also, in extended models, the number of cases, where size elasticities are statistically insignificant, are higher than that of simple models.

Table 11: Total Expenditure and Size Elasticities
by Sub-Group of Food Expenditures and by Region
(Results of the Extended Double-Log Models)

		extended model 1.1			extended model 1.2			
		groups below the average income	groups above the average income	size elasticity	the 1st 40%	the 2nd 40%	the 3rd 20%	size elasticity
BREAD AND CEREALS	TURKEY	0.315 *	0.163 *	0.486 *	0.349 *	insig.	0.185 **	0.457 *
	RURAL	0.333 *	insig.	0.436 *	0.333 *	insig.	insig.	0.469 *
	URBAN	0.199 *	0.140 ***	1.009 *	0.248 *	0.129 **	0.165 ***	0.964 *
	MARMARA AND AEGEAN	0.180 *	insig.	0.977 *	0.136 ***	insig.	insig.	1.009 *
	MEDITERRANEAN	0.406 *	insig.	0.644 *	0.349 *	insig.	insig.	0.627 *
	CENTRAL ANATOLIA	0.284 *	0.083 ***	0.453 *	0.301 *	insig.	insig.	0.439 *
	BLACK SEA	0.367 *	insig.	0.249 **	0.452 *	insig.	insig.	0.228 ***
	EAST.&SOUTH. ANA.	0.336 *	insig.	0.344 **	0.383 *	insig.	insig.	0.396 **
MEAT, FISH AND POULTRY	TURKEY	1.210 *	0.633 *	insig.	1.170 *	insig.	0.587 *	insig.
	RURAL	0.942 *	insig.	0.347 ***	0.877 *	insig.	insig.	insig.
	URBAN	1.270 *	0.495 *	insig.	1.331 *	1.046 **	0.407 *	insig.
	MARMARA AND AEGEAN	1.270 *	0.503 *	insig.	1.297 *	0.822 *	0.365 *	-0.361 ***
	MEDITERRANEAN	1.162 *	0.831 ***	insig.	1.287 *	0.574 *	insig.	insig.
	CENTRAL ANATOLIA	1.056 *	0.626 **	insig.	0.869 *	insig.	0.293 **	insig.
	BLACK SEA	0.853 *	insig.	0.680 *	1.107 *	0.257 *	insig.	0.516 **
	EAST.&SOUTH. ANA.	1.178 *	0.900 **	insig.	1.166 *	insig.	insig.	insig.
MILK, MILK PROD., EGGS AND FATS	TURKEY	0.658 *	0.328 *	0.372 *	0.682 *	insig.	0.252 *	0.298 **
	RURAL	0.578 *	insig.	0.618 *	0.514 *	insig.	insig.	0.552 *
	URBAN	0.613 *	0.304 *	0.379 *	0.681 *	0.538 **	0.247 *	0.326 *
	MARMARA AND AEGEAN	0.641 *	0.257 *	0.224 ***	0.699 *	0.437 **	0.204 *	insig.
	MEDITERRANEAN	0.585 *	0.399 ***	0.294 **	0.488 *	insig.	insig.	0.335 *
	CENTRAL ANATOLIA	0.551 *	insig.	0.442 *	0.508 *	insig.	insig.	0.427 **
	BLACK SEA	0.597 *	0.299 ***	0.574 *	0.726 *	0.273 **	0.033 *	0.418 **
	EAST.&SOUTH. ANA.	0.653 *	0.328 **	0.663 *	0.606 *	insig.	0.291 ***	0.678 *
DRIED VEGETAB.	TURKEY	0.526 *	0.101 *	0.425 **	0.423 *	insig.	0.049 *	0.487 **
	RURAL	0.550 *	0.212 **	insig.	0.584 *	insig.	insig.	insig.
	URBAN	0.482 *	0.123 *	0.511 **	0.557 *	0.304 **	0.123 *	0.495 **
	MARMARA AND AEGEAN	0.311 *	0.068 ***	0.741 *	insig.	insig.	insig.	0.809 *
	MEDITERRANEAN	0.640 *	0.273 **	insig.	0.736 *	0.346 ***	0.194 **	insig.
	CENTRAL ANATOLIA	0.587 *	insig.	insig.	0.605 *	insig.	insig.	insig.
	BLACK SEA	0.519 *	insig.	insig.	0.620 *	0.124 ***	insig.	insig.
	EAST.&SOUTH. ANA.	0.534 *	-0.028 *	insig.	0.372 **	0.888 ***	-0.199 **	insig.
DRIED FRUITS	TURKEY	0.744 *	0.494 ***	insig.	0.765 *	insig.	0.430 ***	insig.
	RURAL	0.704 *	0.240 ***	insig.	0.945 *	insig.	0.247 **	insig.
	URBAN	0.974 *	0.570 *	insig.	1.060 *	insig.	0.528 *	insig.
	MARMARA AND AEGEAN	0.841 *	0.456 **	insig.	0.796 *	insig.	insig.	insig.
	MEDITERRANEAN	1.415 *	0.758 **	insig.	1.564 *	0.820 ***	0.566 **	-0.576 ***
	CENTRAL ANATOLIA	0.581 *	0.184 ***	0.831 *	0.472 **	insig.	insig.	0.875 **
	BLACK SEA	1.128 *	insig.	insig.	1.695 *	0.660 **	insig.	insig.
	EAST.&SOUTH. ANA.	1.733 *	1.032 **	insig.	2.050 *	insig.	1.054 **	insig.

Table Note: *= significant at 0.01 level; ** =significant at 0.05 level; *** =significant at 0.10 level; insig.=not significant at even 0.10 level.

Table 11: Total Expenditure and Size Elasticities
by Sub-Group of Food Expenditures and by Region
(Results of the Extended Double-Log Models) (cont'd)

		extended model 1.1			extended model 1.2			
		groups below the average income	groups above the average income	size elasticity	the 1st 40%	the 2nd 40%	the 3rd 20%	size elasticity
FRESH VEGETAB.	TURKEY	0.637 *	0.379 *	0.408 *	0.729 *	0.412 *	0.374 *	0.288 **
	RURAL	0.551 *	0.296 *	0.509 *	0.507 *	insig.	insig.	0.551 *
	URBAN	0.516 *	0.354 *	0.616 *	0.565 *	0.291 *	0.313 *	0.525 *
	MARMARA AND AEGEAN	0.559 *	0.347 *	0.259 ***	0.668 *	0.341 *	0.311 *	insig.
	MEDITERRANEAN	0.498 *	0.318 ***	0.410 *	0.563 *	0.231 **	insig.	0.398 *
	CENTRAL ANATOLIA	0.567 *	0.282 *	0.688 *	0.751 *	0.377 *	0.246 *	0.546 *
	BLACK SEA	0.573 *	0.335 ***	insig.	0.657 *	0.285 **	insig.	insig.
	EAST.&SOUTH. ANA.	0.911 *	0.475 *	insig.	1.016 *	0.549 **	0.560 **	insig.
FRESH FRUITS	TURKEY	0.956 *	0.570 *	insig.	1.047 *	0.839 **	0.542 *	insig.
	RURAL	0.772 *	0.556 **	0.246 ***	0.747 *	0.470 ***	insig.	insig.
	URBAN	0.921 *	0.489 *	insig.	0.995 *	0.809 ***	0.415 *	insig.
	MARMARA AND AEGEAN	0.863 *	0.433 *	insig.	0.968 *	0.698 **	0.343 *	insig.
	MEDITERRANEAN	0.892 *	0.623 **	-0.390 *	0.782 *	0.472 ***	insig.	-0.373 *
	CENTRAL ANATOLIA	0.703 *	0.404 **	0.618 *	0.819 *	insig.	0.449 ***	0.494 *
	BLACK SEA	0.760 *	insig.	insig.	0.888 *	0.467 **	insig.	insig.
	EAST.&SOUTH. ANA.	1.142 *	0.582 *	insig.	1.223 *	0.604 *	0.689 *	insig.
PROCESSED FOOD	TURKEY	0.503 *	0.415 ***	0.343 *	0.534 *	insig.	0.389 ***	0.285 **
	RURAL	0.518 *	insig.	0.388 *	0.626 *	0.329 **	insig.	0.227 ***
	URBAN	0.477 *	insig.	0.449 *	0.535 *	0.344 **	0.423 ***	0.384 *
	MARMARA AND AEGEAN	0.471 *	insig.	0.486 *	0.368 *	insig.	insig.	0.507 *
	MEDITERRANEAN	0.710 *	0.500 ***	0.327 **	0.760 *	0.385 **	insig.	0.279 **
	CENTRAL ANATOLIA	0.442 *	insig.	0.484 *	0.577 *	0.260 ***	insig.	0.351 **
	BLACK SEA	0.529 *	insig.	0.259 **	0.590 *	0.290 **	insig.	insig.
	EAST.&SOUTH. ANA.	0.548 *	insig.	0.368 *	0.572 *	insig.	insig.	0.441 *
CIGARETTE, ALCOHOLIC AND NON-ALCO. BEVERAGES	TURKEY	0.692 *	insig.	insig.	0.730 *	insig.	insig.	insig.
	RURAL	0.649 *	insig.	insig.	0.808 *	insig.	insig.	insig.
	URBAN	0.701 *	insig.	0.459 ***	0.712 *	insig.	insig.	insig.
	MARMARA AND AEGEAN	0.809 *	insig.	insig.	0.769 *	0.421 ***	insig.	insig.
	MEDITERRANEAN	0.594 *	insig.	insig.	0.506 *	insig.	insig.	0.331 ***
	CENTRAL ANATOLIA	0.713 *	1.209 **	insig.	0.775 *	insig.	insig.	insig.
	BLACK SEA	0.357 **	insig.	0.862 *	0.569 *	-0.002 **	insig.	0.721 *
	EAST.&SOUTH. ANA.	0.636 *	insig.	insig.	0.796 *	0.281 **	insig.	insig.

Table Note: *= significant at 0.01 level; ** =significant at 0.05 level; *** =significant at 0.10 level; insig.=not significant at even 0.10 level.

5.4 Comparison of Results with Previous Studies

5.4.1 Studies in Turkey

The results of this study are found in quite conformity with previous studies in Turkey. Although, there are differences in functional forms, coverage, data and even surveys, where data come from, all studies in Turkey suggest quite similar results for total expenditure elasticities as can be seen from Table 12.

Tansel (1986), in her study using "1978-1979 Urban Places Households Income and Consumption Expenditures Survey" data, found that food and housing expenditures groups were total expenditure inelastic; house furnishings group was unitary elastic and the remaining expenditure groups were expenditure elastic (or luxuries). Different from Tansel's study, in this study, only food expenditures group is found to be total expenditure inelastic (or necessity), whereas clothing, house furnishings, health and housing expenditures are unitary elastic; and remaining expenditure groups are classified as expenditure elastic (or luxury) (viz. Table 12).

In addition, size elasticities estimated in this study are very similar to the findings of Tansel, at least in sign, with the exception of size elasticity of culture, education and entertainment group. However, these differences should not

be overestimated due to the fact: (i) functional form employed, coverage and data is different in two studies, and (ii) economic structure of Turkey, particularly supply and prices of consumption goods and services, has changed in a great deal from 1979 to 1987.

Table 12: Comparison with Previous Studies in Turkey
(Tansel, Özmucur and Günlük-Şenesen)

	1978-79 SURVEY		1987 SURVEY			
	TANSEL (1986) (WORKING-LESER)		ÖZMUCUR (1987) (DOUBLE-LOG)	GÜNLÜK-ŞENESEN (1994) (DOUBLE-LOG)*	THIS STUDY (DOUBLE-LOG)	
	TOTAL EXPENDITURE ELASTICITY	SIZE ELASTICITY	TOTAL EXPENDITURE ELASTICITY (GROSS ELASTICITY)	TOTAL EXPENDITURE ELASTICITY (GROSS ELASTICITY)	TOTAL EXPENDITURE ELASTICITY	SIZE ELASTICITY
FOOD	0.596	0.660	0.512	0.360*	0.536	0.566
RESTAURANT	1.500	0.139	1.321	1.210	1.344	insig.
CLOTHING	1.278	0.533	1.038	1.250*	1.087	0.410
HOUSE FURNISHINGS	1.037	0.870	0.892	1.440	0.943	0.979
HOUSE OPER. AND SERVICES	1.714	-0.162	1.117	1.660	1.470	insig.
HEALTH	1.711	-0.921	0.898	0.990	0.994	insig.
PERSONAL CARE	1.292	0.010	1.010	1.050	1.162	insig.
TRANSPOR. AND COMMUNICATION	2.533	-4.002	1.699	1.280	1.739	-0.842
CULTURE, EDUC. AND ENTERTAIN.	2.030	-4.731	1.307	1.740	1.344	1.055
HOUSING	0.770	0.275	0.821	insig.	1.031	insig.
OTHER	1.581	-2.762	1.188	1.320	1.258	insig.

Table Note: *= only Working-Leser form is available for comparison.

From Table 12, it is also observed that the findings of the present study is in a close resemblance with that of Özmucur's (1987) study. In his study, Özmucur used the "1987 Households Income and Consumption Expenditures

Survey" data (covers only 20 income groups) and double-log functional form, as it is the case of the present study (although the present study covers 100 income groups). In the present study, house furnishings, health and housing expenditures are found to be unitary elastic differently from Özmucur's study, in which these groups could be defined as luxuries.

Table 12 shows that the results of the present study are also comparable with a recent study by Günlük-Şenesen (1994), particularly with the results of double-log form. The study of Günlük-Şenesen covers data on 20 income groups and 11 consumption expenditures categories taken from "1987 Households Income and Consumption Expenditures Survey". Günlük-Şenesen estimated 9 functional forms and selected different functional forms for different expenditure categories, but mostly double-log and Working-Leser forms. As in the present study, Günlük-Şenesen found out that food expenditures group is the only expenditure inelastic (or necessity) group. In the present study, clothing and house furnishings groups are classified as unitary elastic, whereas findings of Günlük-Şenesen suggest that these groups are luxuries. On the other hand, the case is just the reverse in personal care expenditures.

Apart from these, the study of Kasnakoğlu (1991b) is of particular interest, since some features of the present study are identical to those of Kasnakoğlu's study as discussed in Chapter II. However, an important difference between the present study and Kasnakoğlu's study, namely explanatory variables

employed, makes comparison meaningless. To get rid of this obstacle, income elasticities are translated into total expenditure elasticities through dividing income elasticities of expenditure groups by income elasticities of total expenditure. The results are presented in Tables 13 and 14.

Table 13: Comparison with Previous Studies in Turkey
(Kasnakoğlu-Main Expenditures)

	TURKEY		MARMARA AND AEGEAN		MEDITERR.		CENTRAL ANATOLIA		BLACK SEA		EAST.&SOUT. ANATOLIA	
	A	B	A	B	A	B	A	B	A	B	A	B
FOOD	0.494	0.536	0.499	0.508	0.629	0.628	0.780	0.609	0.684	0.539	0.783	0.666
RESTAURANT	1.324	1.344	1.189	1.205	1.318	1.148	1.762	1.185	0.790	1.154	0.942	1.055
CLOTHING	0.937	1.087	0.961	1.037	1.282	1.463	0.618	1.317	1.157	1.342	1.560	1.396
HOUSE FURNISHINGS	0.790	0.943	0.911	0.968	1.119	1.638	0.941	1.413	insig.	1.746	0.942	1.592
HOUSE OPER. AND SERVICES	1.622	1.470	1.424	1.455	1.329	2.261	1.673	1.402	1.587	1.485	insig.	1.356
HEALTH	1.152	0.994	1.062	0.983	0.712	0.854	1.268	0.764	1.600	0.817	insig.	0.557
PERSONAL CARE	1.194	1.162	1.160	1.151	1.356	1.199	1.215	1.122	1.087	0.880	0.955	0.747
TRANSPOR. AND COMMUNICATION	1.806	1.739	1.621	1.648	1.682	1.631	1.744	1.600	1.955	1.412	insig.	1.683
CULTURE, EDUC. AND ENTERTAIN.	1.119	1.344	1.213	1.363	1.397	1.907	0.604	1.923	1.786	2.133	insig.	1.536
HOUSING	1.009	1.031	1.018	1.030	0.876	insig.	1.014	0.854	0.578	0.581	0.686	0.667
OTHER	1.259	1.258	1.160	1.168	1.351	1.596	1.063	1.290	2.097	1.665	1.398	1.389

Table Note: A: Kasnakoğlu (1991b); income elasticities are translated into total expenditure elasticities through dividing income elasticities of expenditure groups by income elasticities of total expenditure, B: this study.

As it is seen in Tables 13 and 14, the findings of the present study are highly comparable with the findings of Kasnakoğlu, notwithstanding a few disagreements in some expenditure groups and regions. However, these differences between two studies can be justified by the differences in data used and explanatory variables employed.

Table 14: Comparison with Previous Studies in Turkey
(Kasnakoğlu-Food Expenditures)

	TURKEY		MARMARA AND AEGEAN		MEDITERR.		CENTRAL ANATOLIA		BLACK SEA		EAST.&SOUT. ANATOLIA	
	A	B	A	B	A	B	A	B	A	B	A	B
BREAD AND CEREALS	0.159	0.196	0.116	0.116	0.309	0.345	0.236	0.269	0.413	0.376	0.547	0.362
MEAT, FISH AND POULTRY	0.788	0.894	0.805	0.844	0.919	1.047	1.423	1.100	1.038	0.800	1.332	1.146
MILK, MILK PRO., EGGS AND FATS	0.427	0.485	0.432	0.446	0.552	0.588	0.846	0.615	0.604	0.539	0.545	0.594
DRIED VEGETABLES.	0.170	0.261	0.140	0.159	0.386	0.514	0.787	0.566	0.517	0.519	insig.	0.479
DRIED FRUITS	0.434	0.637	0.521	0.581	1.026	1.195	0.896	0.645	1.468	1.140	1.183	1.459
FRESH VEGETABLES	0.367	0.434	0.417	0.432	0.495	0.474	0.396	0.443	0.542	0.528	1.003	0.734
FRESH FRUITS	0.646	0.737	0.667	0.679	0.851	0.856	0.884	0.713	0.739	0.735	1.298	0.998
PROCESSED FOOD	0.427	0.438	0.428	0.428	0.611	0.626	0.602	0.434	0.676	0.532	0.686	0.560
CIGAR., ALCO.& NON-ALCO. BEV.	0.635	0.661	0.605	0.642	0.738	0.634	0.610	0.694	insig.	0.263	0.924	0.663

Table Note: A: Kasnakoğlu (1991b); income elasticities are translated into total expenditure elasticities through dividing income elasticities of expenditure groups by income elasticities of total expenditure, B: this study.

5.4.2 International Studies

In 1979, Clements et al., studied income elasticities of 15 countries for eight commodity groups, using Working-Leser form of Engel curves. The results of their study showed that income elasticities of different countries were highly comparable.

As can be seen from Table 13, the results of the present study are very close to those of Clements et al in food, beverage and tobacco; clothing and footwear; recreation and education; and other consumption expenditures categories notwithstanding very important differences in coverage and methodology. However, in home furnishing and operations (which is a combination of two different categories in the present study, namely house furnishings and house operations and services); medical care; and transportation and communication categories the results are very different.

Table 14: Comparison with the Study of Clements et al. (1979)

STUDY	COUNTRY	FOOD, BEVERA., TOBACCO	CLOTHING AND FOOTWEAR	GROSS RENT AND FUEL	HOME FURNIS., OPERAT.	MEDICAL CARE	TRANS. AND COMMU.	RECREA. AND EDUC.	OTHER CONSUM. EXPEND.
	INDIA	0.73	1.08	1.33	1.89	2.22	1.48	1.69	1.50
	KOREA	0.68	1.08	1.28	1.59	1.72	1.37	1.49	1.39
	PHILIPPINES	0.68	1.08	1.28	1.57	1.69	1.36	1.48	1.38
	MALAYSIA	0.64	1.07	1.25	1.48	1.57	1.33	1.42	1.34
	COLOMBIA	0.64	1.07	1.25	1.48	1.56	1.33	1.41	1.34
	IRAN	0.63	1.07	1.25	1.47	1.55	1.32	1.41	1.33
WORKING	HUNGARY	0.50	1.07	1.21	1.35	1.39	1.26	1.31	1.27
-LESER	ITALY	0.45	1.07	1.20	1.33	1.37	1.25	1.30	1.26
(CLEMENTS	JAPAN	0.45	1.07	1.20	1.33	1.36	1.25	1.30	1.26
ET AL., 1979)	NETHERLANDS	0.36	1.07	1.19	1.30	1.34	1.23	1.28	1.24
	U. KINGDOM	0.36	1.07	1.19	1.30	1.34	1.23	1.28	1.24
	W. GERMANY	0.35	1.07	1.19	1.30	1.33	1.23	1.27	1.24
	FRANCE	0.34	1.07	1.19	1.30	1.33	1.23	1.27	1.24
	BELGIUM	0.32	1.07	1.19	1.30	1.32	1.23	1.27	1.23
	UNITED STATES	0.10	1.07	1.18	1.27	1.29	1.21	1.25	1.22
(THIS STUDY)	TURKEY	0.54	1.09	not app.	0.94	0.99	1.74	1.34	1.26

Similar to Clements et al., Houthakker (1957) also made an international comparison among 30 countries and 4 expenditure groups. The results of Houthakker's study, despite very important differences in coverage and

time scope of the study, are found highly comparable with results of the present study. This fact can be accepted as a partial and crude sign of the universal uniformity of consumption patterns.

Table 15: Comparison with the Study of Houthakker (1957)

STUDY	COUNTRY	TOTAL EXPENDITURE ELASTICITY				SIZE ELASTICITY			
		FOOD	CLOTHING	HOUSING	MISC. (OTHER)	FOOD	CLOTHING	HOUSING	MISC. (OTHER)
DOUBLE -LOG (HOUTHAKKER, 1957)	AUSTRIA	0.55	1.77	0.74	1.62	0.35	-0.35	-0.21	-0.39
	CANADA	0.65	1.34	1.11	1.13	0.29	-0.11	-0.45	-0.06
	FINLAND	0.62	1.62	0.80	1.45	0.27	-0.31	0.01	-0.37
	FRANCE	0.48	1.16	1.10	1.66	0.47	0.23	-0.65	-0.54
	GERMANY 1907	0.54	1.50	0.91	1.60	0.26	0.06	-0.15	-0.36
	GERMANY 1927-28, MANUAL WORK.	0.60	1.30	1.06	1.47	0.29	-0.01	0.48	-0.48
	GERMANY 1927-28, CLERICAL WORK.	0.50	1.03	0.88	1.47	0.27	0.23	-0.05	-0.30
	GERMANY 1927-28, GOVERNMENT OF.	0.39	0.92	0.89	1.61	0.32	0.15	-0.02	-0.33
	GERMANY 1927-28, ALL THREE GRP'S	0.47	1.05	0.90	1.45	0.29	0.10	0.20	0.03
	IRELAND	0.60	1.18	0.70	1.48	0.32	0.01	-0.22	-0.22
	ITALY	0.60	1.04	A	A	0.35	-0.73	A	A
	JAPAN 1955	0.56	1.59	0.86	1.42	0.31	-0.05	-0.38	-0.18
	LATVIA	0.43	1.10	1.02	1.57	0.48	-0.07	0.00	-0.52
	MEXICO	0.66	A	A	A	0.25	A	A	A
	NETHERLANDS, MANUAL WORKERS	0.71	1.63	0.51	1.27	0.24	-0.11	0.02	-0.24
	NETHERLANDS, WHITE COLLAR WOR.	0.50	1.06	0.62	1.40	0.30	0.03	-0.02	-0.16
	NETHERLANDS, BOTH GROUPS	0.50	1.09	0.61	1.41	0.29	0.00	-0.00	-0.20
	NORWAY	0.51	1.27	0.80	1.52	0.13	-0.04	0.03	-0.30
	POLAND	0.73	1.78	0.66	1.77	0.21	-0.50	-0.07	-0.53
	SWEDEN	0.63	1.12	0.80	1.45	0.31	0.00	-0.01	-0.27
	SWITZERLAND	0.46	1.45	0.82	1.88	0.40	0.04	-0.14	-0.63
	UK, WORKING CLASS	0.59	1.04	0.55	1.79	0.29	0.14	-0.07	-0.40
	UK, MIDDLE CLASS	0.34	1.34	0.35	1.49	0.39	-0.11	0.15	-0.22
	UK, BOTH GROUPS	0.52	1.10	0.48	1.64	0.33	0.14	-0.05	-0.36
	UNITED STATES 1901	0.71	1.43	0.84	1.56	0.16	0.02	-0.11	-0.24
	US 1950, LARGE CITIES, NORTH	0.70	1.40	0.76	1.37	0.22	0.02	-0.15	-0.11
	US 1950, SUBURBS, NORTH	0.66	1.30	0.98	1.25	0.28	0.13	-0.24	-0.13
	US 1950, SMALL CITIES, NORTH	0.65	1.37	0.81	1.37	0.26	0.07	-0.24	-0.07
	US 1950, LARGE CITIES, SOUTH	0.69	1.23	0.79	1.25	0.21	0.13	-0.27	-0.10
	US 1950, SUBURBS, SOUTH	0.70	1.15	0.97	1.18	0.19	0.17	-0.29	-0.09
	US 1950, SMALL CITIES, SOUTH	0.69	1.07	1.12	1.22	0.23	0.29	-0.54	-0.15
	US 1950, LARGE CITIES, WEST	0.68	1.41	0.65	1.24	0.19	-0.11	-0.18	-0.04
	US 1950, SUBURBS, WEST	0.71	1.29	0.93	1.08	0.23	0.12	-0.40	-0.11
	US 1950, SMALL CITIES, WEST	0.65	1.19	0.77	1.29	0.30	0.15	-0.29	-0.19
	US 1950, ALL CLASSES OF CITIES	0.69	1.28	0.89	1.25	0.22	0.08	-0.29	-0.08
(THIS STUDY) (DOUBLE-LOG)	TURKEY	0.54	1.09	1.03	1.26	0.57	0.41	B	B
	TURKEY, RURAL	0.60	1.51	0.47	1.71	0.45	B	B	B
	TURKEY, URBAN	0.56	1.08	1.00	1.32	0.77	0.80	B	B

Table Note: A: could not be estimated due to data insufficiency, B: insignificant.

CHAPTER VI
CONCLUSION

In this study, an estimation of Engel curves and income-size elasticities is attempted for eleven main expenditure groups and nine sub-groups of food expenditures with particular attention to differences among selected aggregation levels of regions and income groups. To this end, double-log and Working-Leser forms of Engel curves are employed, each having household income or total expenditure, and household size as independent variables. From the estimations, two auxiliary but important (for the main results of the study) conclusions are reached: (i) Total expenditure is chosen over income since the results of the present study supports total expenditure and in several empirical and theoretical studies total expenditure is found better in reflecting the permanent income. (ii) Double-log form of Engel curve is found both statistically and theoretically superior to Working-Leser form.

In accordance with these two secondary conclusions, the results of double-log functional form employing total expenditure and household size as regressors are presented as results of this study.

The results show that total expenditure elasticities are significant in all regions, for all main expenditure categories and sub-categories of food, whereas it is hard to report a general significance for size elasticities, except food category and its sub-categories.

According to elasticities estimated, it is observed that total expenditure and size elasticities show important variations among expenditure groups and regions. The elasticities of rural areas and urban areas indicate significant

differences in consumption patterns with respect to both household budget and size. Also, considerable variations among regions, particularly between Marmara and Aegean region and remaining regions, justify the importance of estimations at disaggregated regional levels for region specific analyses and policies. From regional estimations it is observed that total expenditure elasticies of food; clothing; house furnishings; culture; education and entertainment; and other expenditures groups are lower in regions with higher income levels compared to regions with lower income levels. The case is just the reverse unexpectedly in restaurant; health; personal care; transportation and communication; and housing expenditures groups. A possible explanation for this unexpected situation would be differences in prices, availability and diversity of these expenditure items. Hence, it would be better to estimate Engel curves using disaggregated data that has precise specification for each commodity and services. This conclusion also suggests that analysis of consumption patterns employing expenditure systems that include price and quality variables as well, could give more accurate results.

The hypothesis that total expenditure elasticities are different in different income groups is generally rejected except a few regions and categories, and food sub-groups. In cases, in which differences between income groups are significant, it is observed that in higher income groups total expenditure elasticities are generally lower than it is in lower income groups and vice versa. In addition, it is seen that the extension of Engel curve functions, in a way allowing to test the variations among income groups, do not alter the relative differences in elasticities among regions.

A plausible answer for this general and unexpected rejection of the above hypothesis could be insufficiency of income variable in breaking down households into different consumption patterns.

Usage of another variable with more socio-economic content, such as father's occupation, together with income would be a possible solution for this

problem. Also, further or different break-down of income groups, such as first 20%, second 60% and last 20%, could provide a more accurate analysis of differences in consumption patterns.

In addition, results of the present study are found tobe in considerable conformity with the results of past studies in Turkey and in other countries, despite the differences in data employed, time and economic environment.

REFERENCES

Aasness, J. and Rodseth, A., 1983. "Engel Curves and Systems of Demand Functions", European Economic Review, 20, 95-121.

Bewley, R. A.,1982. "On the Functional Form of Engel Curves: The Australian Household Expenditure Survey 1975-76", The Economic Record, 58, 82-91.

Bierens, H. J., and Pott-Buter, H. A., 1990. "Specification of Household Engel Curves by Nonparametric Regression", Econometric Reviews, 9 (2), 123-184.

Blundell, R., and Ray, R., 1984. "Testing for Linear Engel Curves and Additively Separable Preferences Using A New Flexible Demand System", The Economic Journal, 94, 800-811.

Clements, K. W. et al. 1979. "A Cross-Country Tabulation of Income Elasticities of Demand", Economics Letters, 3, 199-202.

Çınar, E. M., 1987. "The Sensitivity of Extended Linear Expenditure System Household Scales to Income Declaration Errors", Journal of Econometrics, 34, 361-372.

Erlat, H., 1986. Introduction to Econometrics, Unpublished Course Notes.

Giles, D. E. A., and Hampton, P., 1985. "An Engel Curve Analysis of Household Expenditure in New Zealand", The Economic Record, 61, 450-462.

Gujarati, D., 1986. Basic Econometrics, McGraw-Hill Company, Singapore.

Günlük-Şenesen Ü. and Selim R., 1995. "Consumption Patterns of Turkish Urban and Rural Households in 1987", METU Studies in Development, (forthcoming).

Hirshleifer, J., 1984. Price Theory and Applications, Prentice/Hall International Editions, New Jersey.

Houthaker, H. S., 1957. "An International Comparison of Household Expenditure Patterns Commemorating the Centenary of Engel's Law", Econometrica, 25, 532-551.

Kakwani, N., 1977. "On the Estimation of Engel Elasticities from Grouped Observations with the Applicaitons to Indonesian Data", Journal of Econometrics, 6, 1-19.

Kasnakoğlu, Z., 1991a. "Income and Expenditure Elasticities for Selected Products in the Provinces of Ankara and Erzurum", Working Paper. State Institute of Statistics, Prime Ministry, Republic of Turkey, Ankara.

Kasnakoğlu, Z., 1991b. "Regional Consumption Patterns and Income Elasticities in Turkey: 1987", Journal of Economic Cooperation Among Islamic Countries, 12, 111-116.

Özmucur, S., 1991, "Tüketim Kalıpları, 1987", Araştırma Raporu. Sosyal Bilimler Enstitüsü, Boğaziçi Üniversitesi, ISS/EC 91-07, İstanbul.

Somermeyer, W.H., and Langhout, A., 1972. "Shapes of Engel Curves and Demand Curves: Implications of the Expenditure Allocation Model, Applied to Dutch Data", European Economic Review, 3, 351-386.

State Institute of Statistics 1990. 1987 Household Income and Consumption Expenditures Survey Results, Publication No: 1439, Ankara.

Tansel, A., 1986. "An Engel Curve Analysis of Household Expenditure in Turkey 1978-1979", METU Studies in Development, 6, 239-257.

Tansel, A., 1988. "An Analysis of Household Expenditure Pattern in Ankara", Working Paper. Ekonomik Araştırmalar Merkezi, Orta Doğu Teknik Üniversitesi, ERC/1988-5, Ankara.

APPENDICES

APPENDIX A:
COVERAGE OF MAIN EXPENDITURE GROUPS

Food: Expenditures on food, tobacco, alcoholic and non-alcoholic beverages

Restaurant: Expenditures on meals, alcoholic and non-alcoholic beverages in restaurants and similar places and takeaway meals.

Clothing: Expenditures on clothing for men, women and childern.

House Furnishings: Expenditures on house furnishings, furniture and rugs, electrical and non-electrical appliances, detergants, disinfectants and pesticades.

House Operation and Services: Expenditures on goods and services for household; expenditures on domestic services, maintenance; expenditures on cleaning agents.

Health: Expenditures on medicines and health-care services, inc. medical insurance in cash, but medical insurance in kind.

Personal Care: Goods and services for personal care.

Transportation and Communication: Expenditures on transportation and communication goods and services (inc. purchase of private motor vehicles, their spare parts and repair).

Culture, Education and Entertainment: All expenditures by households for Culture, Education and Entertainment

Housing: All expenditures for the residence unit.

Other Expenditures: Expenditures on other goods and services not listed above, such as financial documentation charges, death and burial costs, tuitions to associations and religious outlays.

APPENDIX B:
RESULTS OF PRELIMINARY DATA ANALYSIS

TABLE B1 : AVERAGE MONTHLY EXPENDITURES
BY EXPENDITURE GROUP, REGION AND INCOME GROUP

		ALL GROUPS	BELOW THE AVERAGE INCOME	ABOVE THE AVERAGE INCOME	FIRST 40%	SECOND 40%	THIRD 20%
FOOD	TURKEY	77038.8	62450.4	108039.0	52576.0	80924.1	118193.8
	RURAL	72530.7	58485.1	99795.8	49784.0	76651.1	109783.3
	URBAN	81110.7	66009.5	114723.2	55543.5	84787.4	124891.8
	MARMARA AND AEGEAN	82404.0	67199.7	116245.9	55623.5	86654.0	127465.0
	MEDITERRANEAN	68766.2	55062.3	97887.1	44011.1	75283.6	105241.6
	CENTRAL ANATOLIA	70309.4	56458.6	99742.4	47564.2	73791.7	108835.3
	BLACK SEA	73767.9	60923.6	95638.0	53122.7	78150.5	106293.3
	EAST.&SOUTH. ANA.	84571.3	70040.3	120147.2	60675.3	86533.2	128439.4
RESTAURANT	TURKEY	8334.9	4420.8	16652.4	3078.7	7251.2	21014.7
	RURAL	5234.2	3400.0	8794.8	2761.2	5078.9	10491.0
	URBAN	11135.5	5564.0	23536.5	3595.0	9791.8	28903.8
	MARMARA AND AEGEAN	13444.6	7179.7	27388.9	4944.3	11604.9	34124.5
	MEDITERRANEAN	6089.4	3533.0	11521.8	2779.2	5574.9	13738.8
	CENTRAL ANATOLIA	4893.4	2795.4	9351.7	2093.7	4420.9	11437.9
	BLACK SEA	6033.0	3645.7	10097.9	2860.3	6221.2	12001.8
	EAST.&SOUTH. ANA.	4888.2	3151.7	9139.6	2532.1	4330.5	10715.8
CLOTHING	TURKEY	29583.8	19527.3	50953.8	13980.6	29522.6	60912.7
	RURAL	22686.6	17247.7	33244.5	12523.5	24867.1	38651.9
	URBAN	35813.5	22479.7	65492.0	16023.6	34551.8	77916.8
	MARMARA AND AEGEAN	33699.5	21238.4	61435.6	14861.1	32938.3	72898.8
	MEDITERRANEAN	24740.8	14538.3	46420.9	9344.7	24461.7	56091.1
	CENTRAL ANATOLIA	28921.8	20124.5	47616.1	14033.5	29855.6	56830.8
	BLACK SEA	26347.2	17136.6	42030.1	13073.4	28123.3	49342.6
	EAST.&SOUTH. ANA.	27094.5	20895.3	42271.9	16645.8	28379.9	45421.2
HOUSE FURNISHINGS	TURKEY	22837.5	15920.4	37536.4	11844.9	23292.0	43913.7
	RURAL	18688.6	13762.6	28250.9	10529.5	22075.6	28232.8
	URBAN	26584.7	17908.1	45897.2	13911.1	24904.0	55293.3
	MARMARA AND AEGEAN	26572.5	16885.3	48134.5	12821.1	26119.2	54981.9
	MEDITERRANEAN	18669.0	12827.4	31082.5	7441.1	21538.9	35384.8
	CENTRAL ANATOLIA	20753.0	14700.2	33615.3	11197.2	23089.5	35191.5
	BLACK SEA	25702.1	17082.8	40378.3	10856.8	35853.8	35089.6
	EAST.&SOUTH. ANA.	18639.4	15545.9	26213.4	11742.3	21051.9	27608.8

TABLE B1 : AVERAGE MONTHLY EXPENDITURES
BY EXPENDITURE GROUP, REGION AND INCOME GROUP (cont'd)

		ALL GROUPS	BELOW THE AVERAGE INCOME	ABOVE THE AVERAGE INCOME	FIRST 40%	SECOND 40%	THIRD 20%
HOUSE OPERATION AND SERVICE	TURKEY	4966.3	2214.7	10813.5	1562.3	3790.9	14125.0
	RURAL	3302.7	1920.1	5986.6	1528.3	2813.3	7830.5
	URBAN	6468.7	2780.2	14678.6	1670.3	5148.6	18705.9
	MARMARA AND AEGEAN	7962.5	3340.3	18250.6	2494.7	6353.9	22115.2
	MEDITERRANEAN	3140.3	1336.5	6973.5	990.4	1925.4	9870.2
	CENTRAL ANATOLIA	3419.7	1781.0	6902.1	1189.9	3012.8	8693.4
	BLACK SEA	2576.3	1821.5	3861.4	1032.4	3441.9	3932.6
	EAST.&SOUTH. ANA.	3382.4	2635.9	5210.1	1317.6	3719.4	6838.1
HEALTH	TURKEY	6174.7	4006.6	10781.9	3295.5	5762.9	12756.5
	RURAL	5143.7	3901.9	7554.1	3435.1	5045.2	8757.5
	URBAN	7105.9	4345.0	13250.9	3539.2	6133.3	16184.4
	MARMARA AND AEGEAN	7773.6	4713.5	14584.7	3524.5	6901.4	18016.1
	MEDITERRANEAN	5825.6	4723.9	8166.7	3250.5	6856.2	8914.5
	CENTRAL ANATOLIA	4448.2	2883.0	7774.1	2554.5	3739.8	9652.2
	BLACK SEA	6179.3	5104.2	8009.8	3165.8	7955.1	8654.8
	EAST.&SOUTH. ANA.	5322.4	4091.0	8337.4	4286.6	4020.3	9998.4
PERSONAL CARE	TURKEY	2050.8	1232.3	3790.2	931.0	1834.5	4723.3
	RURAL	1128.7	903.5	1565.7	736.4	1243.8	1682.9
	URBAN	2883.8	1621.7	5692.8	1185.3	2499.8	7048.7
	MARMARA AND AEGEAN	2971.8	1643.3	5928.6	1219.5	2493.7	7432.5
	MEDITERRANEAN	1851.8	1193.8	3250.1	815.7	1846.6	3934.7
	CENTRAL ANATOLIA	1489.5	952.3	2631.0	732.1	1485.1	3013.1
	BLACK SEA	1170.3	854.8	1707.4	699.9	1208.5	2034.6
	EAST.&SOUTH. ANA.	1480.2	1234.0	2082.7	1025.4	1569.1	2211.8
TRANSPOR. AND COMMUNIC.	TURKEY	20717.4	7568.3	48659.3	5359.0	11727.8	69413.4
	RURAL	11422.6	7305.4	19414.8	5639.8	9929.3	25974.7
	URBAN	29110.8	8155.6	75753.1	5381.6	14123.2	106544.6
	MARMARA AND AEGEAN	35139.4	10263.9	90507.5	8010.4	15009.5	129657.3
	MEDITERRANEAN	10760.0	5526.8	21880.5	4072.9	7879.9	29894.3
	CENTRAL ANATOLIA	12886.0	6559.0	26330.9	4785.2	10054.8	34750.2
	BLACK SEA	12761.1	10285.5	16976.3	6249.8	16057.8	19190.5
	EAST.&SOUTH. ANA.	12243.2	4718.5	30665.9	3666.2	6416.0	41051.9

TABLE B1 : AVERAGE MONTHLY EXPENDITURES
BY EXPENDITURE GROUP, REGION AND INCOME GROUP (cont'd)

		ALL GROUPS	BELOW THE AVERAGE INCOME	ABOVE THE AVERAGE INCOME	FIRST 40%	SECOND 40%	THIRD 20%
CULTURE, EDUCATION AND ENTERTAIN.	TURKEY	11192.4	6326.3	21533.0	4661.2	9893.3	26853.1
	RURAL	6508.1	5039.3	9359.2	2926.7	7459.2	11768.5
	URBAN	15423.3	8266.8	31352.2	6035.3	13338.0	38369.8
	MARMARA AND AEGEAN	15659.7	8323.3	31989.3	6362.9	12399.7	40773.4
	MEDITERRANEAN	7840.3	4865.7	14161.5	3351.2	7019.0	18461.4
	CENTRAL ANATOLIA	9620.9	6272.7	16735.9	3601.2	9545.6	21810.9
	BLACK SEA	8493.3	5053.8	14349.8	3196.8	9666.6	16739.7
	EAST.&SOUTH. ANA.	7571.7	6319.1	10638.4	4064.7	9217.6	11294.1
HOUSING	TURKEY	50028.0	32216.8	87877.0	25354.8	47076.7	105277.1
	RURAL	22607.4	20055.7	27560.6	16759.5	25032.4	29452.9
	URBAN	74795.7	46861.3	136972.5	35582.6	70878.6	161056.3
	MARMARA AND AEGEAN	78728.7	48126.2	146844.1	36781.3	71140.3	177800.3
	MEDITERRANEAN	31648.1	23999.6	47901.0	18582.3	33274.4	54527.0
	CENTRAL ANATOLIA	38721.0	28271.5	60926.1	22203.2	40397.5	68403.3
	BLACK SEA	29232.7	26174.3	34440.3	23034.3	30781.2	38532.7
	EAST.&SOUTH. ANA.	28368.4	25711.7	34872.7	22173.0	30457.1	36581.8
OTHER	TURKEY	7646.0	4355.4	14638.4	3265.2	6821.0	18057.5
	RURAL	7791.6	4877.5	13448.3	3719.2	7758.8	16002.0
	URBAN	7514.3	3797.7	15786.8	2931.7	5791.6	20124.8
	MARMARA AND AEGEAN	8961.3	4925.1	17945.3	3625.2	7586.8	22382.7
	MEDITERRANEAN	4937.7	2548.1	10015.5	1891.4	4107.1	12691.2
	CENTRAL ANATOLIA	8151.3	5685.0	13392.3	4340.5	8507.3	15061.0
	BLACK SEA	6887.1	3691.3	12328.6	2327.8	6642.0	16495.8
	EAST.&SOUTH. ANA.	6529.7	3698.3	13461.6	2856.2	5042.3	16851.2

TABLE B2 : AVERAGE MONTHLY EXPENDITURES-BUDGET (EXPENDITURE) SHARES BY EXPENDITURE GROUP, REGION AND INCOME GROUP

		ALL GROUPS	BELOW THE AVERAGE INCOME	ABOVE THE AVERAGE INCOME	FIRST 40%	SECOND 40%	THIRD 20%
FOOD	TURKEY	32.02	38.97	26.27	41.76	35.51	23.87
	RURAL	40.97	42.72	39.14	45.12	40.78	38.04
	URBAN	27.22	35.15	21.12	38.20	31.18	19.07
	MARMARA AND AEGEAN	26.30	34.67	20.07	37.02	31.04	18.01
	MEDITERRANEAN	37.32	42.31	32.71	45.59	39.67	30.18
	CENTRAL ANATOLIA	34.53	38.54	30.69	41.62	35.49	29.13
	BLACK SEA	37.04	40.14	34.18	44.41	34.87	34.48
	EAST.&SOUTH. ANA.	42.27	44.32	39.65	46.32	43.11	38.11
RESTAURANT	TURKEY	3.46	2.76	4.05	2.45	3.18	4.24
	RURAL	2.96	2.48	3.45	2.50	2.70	3.63
	URBAN	3.74	2.96	4.33	2.47	3.60	4.41
	MARMARA AND AEGEAN	4.29	3.70	4.73	3.29	4.16	4.82
	MEDITERRANEAN	3.30	2.71	3.85	2.88	2.94	3.94
	CENTRAL ANATOLIA	2.40	1.91	2.88	1.83	2.13	3.06
	BLACK SEA	3.03	2.40	3.61	2.39	2.78	3.89
	EAST.&SOUTH. ANA.	2.44	1.99	3.02	1.93	2.16	3.18
CLOTHING	TURKEY	12.30	12.19	12.39	11.10	12.95	12.30
	RURAL	12.81	12.60	13.04	11.35	13.23	13.39
	URBAN	12.02	11.97	12.06	11.02	12.71	11.89
	MARMARA AND AEGEAN	10.76	10.96	10.61	9.89	11.80	10.30
	MEDITERRANEAN	13.43	11.17	15.51	9.68	12.89	16.08
	CENTRAL ANATOLIA	14.20	13.74	14.65	12.28	14.36	15.21
	BLACK SEA	13.23	11.29	15.02	10.93	12.55	16.00
	EAST.&SOUTH. ANA.	13.54	13.22	13.95	12.71	14.14	13.48
HOUSE FURNISHINGS	TURKEY	9.49	9.94	9.13	9.41	10.22	8.87
	RURAL	10.56	10.05	11.08	9.54	11.75	9.78
	URBAN	8.92	9.54	8.45	9.57	9.16	8.44
	MARMARA AND AEGEAN	8.48	8.71	8.31	8.53	9.35	7.77
	MEDITERRANEAN	10.13	9.86	10.39	7.71	11.35	10.15
	CENTRAL ANATOLIA	10.19	10.04	10.34	9.80	11.11	9.42
	BLACK SEA	12.91	11.26	14.43	9.08	16.00	11.38
	EAST.&SOUTH. ANA.	9.32	9.84	8.65	8.96	10.49	8.19

TABLE B2 : AVERAGE MONTHLY EXPENDITURES-BUDGET (EXPENDITURE) SHARES BY EXPENDITURE GROUP, REGION AND INCOME GROUP (cont'd)

		ALL GROUPS	BELOW THE AVERAGE INCOME	ABOVE THE AVERAGE INCOME	FIRST 40%	SECOND 40%	THIRD 20%
HOUSE OPERATION AND SERVICE	TURKEY	2.06	1.38	2.63	1.24	1.66	2.85
	RURAL	1.87	1.40	2.35	1.39	1.50	2.71
	URBAN	2.17	1.48	2.70	1.15	1.89	2.86
	MARMARA AND AEGEAN	2.54	1.72	3.15	1.66	2.28	3.13
	MEDITERRANEAN	1.70	1.03	2.33	1.03	1.01	2.83
	CENTRAL ANATOLIA	1.68	1.22	2.12	1.04	1.45	2.33
	BLACK SEA	1.29	1.20	1.38	0.86	1.54	1.28
	EAST.&SOUTH. ANA.	1.69	1.67	1.72	1.01	1.85	2.03
HEALTH	TURKEY	2.57	2.50	2.62	2.62	2.53	2.58
	RURAL	2.91	2.85	2.96	3.11	2.68	3.03
	URBAN	2.38	2.31	2.44	2.43	2.26	2.47
	MARMARA AND AEGEAN	2.48	2.43	2.52	2.35	2.47	2.55
	MEDITERRANEAN	3.16	3.63	2.73	3.37	3.61	2.56
	CENTRAL ANATOLIA	2.18	1.97	2.39	2.23	1.80	2.58
	BLACK SEA	3.10	3.36	2.86	2.65	3.55	2.81
	EAST.&SOUTH. ANA.	2.66	2.59	2.75	3.27	2.00	2.97
PERSONAL CARE	TURKEY	0.85	0.77	0.92	0.74	0.80	0.95
	RURAL	0.64	0.66	0.61	0.67	0.66	0.58
	URBAN	0.97	0.86	1.05	0.82	0.92	1.08
	MARMARA AND AEGEAN	0.95	0.85	1.02	0.81	0.89	1.05
	MEDITERRANEAN	1.01	0.92	1.09	0.84	0.97	1.13
	CENTRAL ANATOLIA	0.73	0.65	0.81	0.64	0.71	0.81
	BLACK SEA	0.59	0.56	0.61	0.59	0.54	0.66
	EAST.&SOUTH. ANA.	0.74	0.78	0.69	0.78	0.78	0.66
TRANSPOR. AND COMMUNIC.	TURKEY	8.61	4.72	11.83	4.26	5.15	14.02
	RURAL	6.45	5.34	7.61	5.11	5.28	9.00
	URBAN	9.77	4.34	13.95	3.70	5.19	16.27
	MARMARA AND AEGEAN	11.22	5.30	15.62	5.33	5.38	18.32
	MEDITERRANEAN	5.84	4.25	7.31	4.22	4.15	8.57
	CENTRAL ANATOLIA	6.33	4.48	8.10	4.19	4.84	9.30
	BLACK SEA	6.41	6.78	6.07	5.22	7.17	6.22
	EAST.&SOUTH. ANA.	6.12	2.99	10.12	2.80	3.20	12.18

TABLE B2 : AVERAGE MONTHLY EXPENDITURES-BUDGET (EXPENDITURE) SHARES BY EXPENDITURE GROUP, REGION AND INCOME GROUP (cont'd)

		ALL GROUPS	BELOW THE AVERAGE INCOME	ABOVE THE AVERAGE INCOME	FIRST 40%	SECOND 40%	THIRD 20%
CULTURE, EDUCATION AND ENTERTAIN.	TURKEY	4.65	3.95	5.24	3.70	4.34	5.42
	RURAL	3.68	3.68	3.67	2.65	3.97	4.08
	URBAN	5.18	4.40	5.77	4.15	4.90	5.86
	MARMARA AND AEGEAN	5.00	4.29	5.52	4.23	4.44	5.76
	MEDITERRANEAN	4.25	3.74	4.73	3.47	3.70	5.29
	CENTRAL ANATOLIA	4.73	4.28	5.15	3.15	4.59	5.84
	BLACK SEA	4.26	3.33	5.13	2.67	4.31	5.43
	EAST.&SOUTH. ANA.	3.78	4.00	3.51	3.10	4.59	3.35
HOUSING	TURKEY	20.80	20.11	21.37	20.14	20.66	21.26
	RURAL	12.77	14.65	10.81	15.19	13.32	10.20
	URBAN	25.10	24.95	25.22	24.47	26.06	24.59
	MARMARA AND AEGEAN	25.13	24.83	25.35	24.48	25.48	25.13
	MEDITERRANEAN	17.17	18.44	16.01	19.25	17.53	15.63
	CENTRAL ANATOLIA	19.02	19.30	18.75	19.43	19.43	18.31
	BLACK SEA	14.68	17.25	12.31	19.26	13.74	12.50
	EAST.&SOUTH. ANA.	14.18	16.27	11.51	16.93	15.17	10.85
OTHER	TURKEY	3.18	2.72	3.56	2.59	2.99	3.65
	RURAL	4.40	3.56	5.27	3.37	4.13	5.54
	URBAN	2.52	2.02	2.91	2.02	2.13	3.07
	MARMARA AND AEGEAN	2.86	2.54	3.10	2.41	2.72	3.16
	MEDITERRANEAN	2.68	1.96	3.35	1.96	2.16	3.64
	CENTRAL ANATOLIA	4.00	3.88	4.12	3.80	4.09	4.03
	BLACK SEA	3.46	2.43	4.41	1.95	2.96	5.35
	EAST.&SOUTH. ANA.	3.26	2.34	4.44	2.18	2.51	5.00

TABLE B3 : AVERAGE MONTHLY FOOD EXPENDITURES
BY EXPENDITURE GROUP, REGION AND INCOME GROUP

		ALL GROUPS	BELOW THE AVERAGE INCOME	ABOVE THE AVERAGE INCOME	FIRST 40%	SECOND 40%	THIRD 20%
BREAD AND CEREALS	TURKEY	14171.8	13020.7	16617.7	11905.0	14969.9	17109.0
	RURAL	15002.5	12906.8	19070.5	11633.2	15585.8	20574.4
	URBAN	13421.4	12926.2	14523.7	11972.1	14250.2	14662.5
	MARMARA AND AEGEAN	12974.5	12340.1	14386.5	11135.0	13990.8	14621.0
	MEDITERRANEAN	13486.0	11755.6	17163.0	9941.4	14940.6	17666.0
	CENTRAL ANATOLIA	13220.4	11860.7	16109.9	10861.5	13976.0	16427.2
	BLACK SEA	13256.7	11855.4	15642.8	10999.4	13982.2	16320.4
	EAST.&SOUTH. ANA.	20031.5	17783.1	25536.2	16651.2	19941.9	26971.3
MEAT, FISH AND POULTRY	TURKEY	14334.7	9846.5	23872.1	7225.5	15058.4	27105.7
	RURAL	11047.1	8001.5	16959.2	6183.4	11873.7	19121.3
	URBAN	17304.3	11903.5	29325.4	8673.5	18141.6	32891.2
	MARMARA AND AEGEAN	17274.2	12050.0	28902.4	8820.5	17722.7	33284.7
	MEDITERRANEAN	12287.6	8777.5	19746.6	6128.6	13598.0	21985.0
	CENTRAL ANATOLIA	12818.4	8617.3	21745.8	6030.0	13823.3	24385.4
	BLACK SEA	11942.6	8800.2	17293.2	7273.9	12292.2	20580.8
	EAST.&SOUTH. ANA.	13046.3	9500.8	21726.7	7391.4	13188.9	24071.0
MILK, MILK PROD., EGGS AND FATS	TURKEY	15322.3	12442.9	21441.2	10415.4	16262.1	23256.7
	RURAL	15926.1	12258.1	23046.4	10033.8	16798.0	25966.8
	URBAN	14777.0	12382.7	20106.2	10614.0	15554.8	21547.5
	MARMARA AND AEGEAN	15701.6	13075.1	21547.8	11028.9	16709.0	23032.4
	MEDITERRANEAN	11942.2	9496.7	17138.9	7738.0	12860.0	18515.1
	CENTRAL ANATOLIA	13913.1	10973.5	20159.6	9144.4	14756.0	21764.7
	BLACK SEA	17974.7	14483.9	23918.4	12343.7	19080.1	27025.8
	EAST.&SOUTH. ANA.	17869.4	14489.2	26145.2	12235.8	18444.9	27985.8
DRIED VEGETABLES	TURKEY	3318.1	2931.8	4139.1	2512.4	3638.0	4289.8
	RURAL	3812.6	3041.2	5310.1	2676.3	4050.1	5610.5
	URBAN	2871.5	2632.8	3402.9	2329.7	3110.0	3478.0
	MARMARA AND AEGEAN	3220.1	3014.3	3678.3	2534.3	3694.2	3643.6
	MEDITERRANEAN	2776.3	2394.5	3587.4	1998.0	3044.9	3795.3
	CENTRAL ANATOLIA	3112.9	2598.3	4206.5	2261.6	3316.7	4408.2
	BLACK SEA	3627.2	3046.5	4616.0	2560.4	4063.0	4889.1
	EAST.&SOUTH. ANA.	4174.8	3514.2	5792.1	3081.7	4461.7	5787.3

TABLE B3 : AVERAGE MONTHLY FOOD EXPENDITURES
BY EXPENDITURE GROUP, REGION AND INCOME GROUP (cont'd)

		ALL GROUPS	BELOW THE AVERAGE INCOME	ABOVE THE AVERAGE INCOME	FIRST 40%	SECOND 40%	THIRD 20%
DRIED FRUITS	TURKEY	1142.2	869.30	1722.00	723.1	1172.0	1920.9
	RURAL	1209.1	921.50	1767.60	807.8	1275.9	1878.4
	URBAN	1081.7	786.50	1738.80	611.7	1117.1	1951.0
	MARMARA AND AEGEAN	1197.4	973.30	1696.30	780.9	1259.5	1906.2
	MEDITERRANEAN	903.9	679.30	1381.30	468.9	975.2	1631.2
	CENTRAL ANATOLIA	1091.5	829.50	1648.10	673.8	1155.8	1798.1
	BLACK SEA	941.0	662.30	1415.50	586.2	908.1	1716.3
	EAST.&SOUTH. ANA.	1449.7	1119.30	2258.60	883.6	1483.5	2514.3
FRESH VEGETABLES	TURKEY	6825.7	5792.30	9021.70	4944.6	7259.3	9720.7
	RURAL	5878.6	4995.70	7592.50	4250.2	6430.4	8032.1
	URBAN	7681.1	6588.00	10114.30	5666.8	8098.8	10874.5
	MARMARA AND AEGEAN	7460.5	6310.70	10019.90	5445.0	7810.3	10791.8
	MEDITERRANEAN	7172.8	5974.90	9718.30	5092.6	7772.6	10133.6
	CENTRAL ANATOLIA	5900.2	5047.00	7713.20	4381.7	6241.9	8253.7
	BLACK SEA	6347.9	5423.10	7922.60	4753.7	6949.5	8333.3
	EAST.&SOUTH. ANA.	6785.0	5876.00	9010.50	5000.9	7200.9	9521.5
FRESH FRUITS	TURKEY	6037.6	4517.00	9269.00	3623.2	6284.9	10371.8
	RURAL	4756.4	3810.10	6593.40	3104.2	5231.0	7111.5
	URBAN	7194.9	5306.40	11398.50	4200.9	7443.2	12686.5
	MARMARA AND AEGEAN	7667.0	5701.10	12042.80	4610.2	7823.2	13468.2
	MEDITERRANEAN	5320.4	4093.20	7928.20	3019.1	5920.9	8722.1
	CENTRAL ANATOLIA	5305.1	4018.10	8039.80	3288.3	5624.4	8699.8
	BLACK SEA	4930.3	4054.40	6421.70	3531.3	5300.8	6987.3
	EAST.&SOUTH. ANA.	4607.0	3740.60	6728.30	2996.6	5026.7	6988.5
PROCESSED FOOD	TURKEY	8762.7	7425.30	11604.80	6513.4	9080.9	12625.1
	RURAL	8924.7	7366.00	11950.60	6446.6	9115.2	13500.2
	URBAN	8616.4	7399.00	11326.10	6509.1	8894.2	12275.4
	MARMARA AND AEGEAN	8318.3	7057.60	11124.40	6002.1	8706.5	12174.4
	MEDITERRANEAN	7781.5	6339.80	10845.30	5081.7	8528.0	11688.2
	CENTRAL ANATOLIA	8840.1	7508.80	11669.00	6681.0	9019.2	12800.0
	BLACK SEA	8843.6	7334.30	11413.50	6346.1	9251.4	13023.0
	EAST.&SOUTH. ANA.	10588.9	8932.50	14644.20	7932.8	10851.0	15376.6
CIGARETTE, ALCO. AND NON-ALCO. BEVERAGES	TURKEY	7123.6	5605.40	10349.90	4713.5	7199.5	11792.3
	RURAL	5973.6	5184.30	7505.70	4648.7	6289.0	7992.5
	URBAN	8162.4	6087.10	12781.60	4965.9	8177.5	14525.1
	MARMARA AND AEGEAN	8590.3	6677.60	12847.60	5230.7	9009.4	14471.4
	MEDITERRANEAN	7095.6	5550.80	10378.20	4542.9	7643.4	11105.3
	CENTRAL ANATOLIA	6107.8	4947.30	8573.80	4271.6	5848.8	10298.3
	BLACK SEA	5905.2	5270.90	6985.20	4823.6	6237.3	7404.3
	EAST.&SOUTH. ANA.	6019.5	5090.20	8294.70	4529.0	5919.7	9200.2

TABLE B4 : AVERAGE MONTHLY FOOD EXPENDITURES-BUDGET (EXPENDITURE) SHARES BY EXPENDITURE GROUP, REGION AND INCOME GROUP

		ALL GROUPS	BELOW THE AVERAGE INCOME	ABOVE THE AVERAGE INCOME	FIRST 40%	SECOND 40%	THIRD 20%
BREAD AND CEREALS	TURKEY	5.89	8.13	4.04	9.46	6.57	3.46
	RURAL	8.47	9.43	7.48	10.54	8.29	7.13
	URBAN	4.50	6.88	2.67	8.23	5.24	2.24
	MARMARA AND AEGEAN	4.14	6.37	2.48	7.41	5.01	2.07
	MEDITERRANEAN	7.32	9.03	5.74	10.30	7.87	5.07
	CENTRAL ANATOLIA	6.49	8.10	4.96	9.50	6.72	4.40
	BLACK SEA	6.66	7.81	5.59	9.20	6.24	5.29
	EAST.&SOUTH. ANA.	10.01	11.25	8.43	12.71	9.93	8.00
MEAT, FISH AND POULTRY	TURKEY	5.96	6.15	5.80	5.74	6.61	5.47
	RURAL	6.24	5.85	6.65	5.60	6.32	6.63
	URBAN	5.81	6.34	5.40	5.97	6.67	5.02
	MARMARA AND AEGEAN	5.51	6.22	4.99	5.87	6.35	4.70
	MEDITERRANEAN	6.67	6.74	6.60	6.35	7.17	6.30
	CENTRAL ANATOLIA	6.30	5.88	6.69	5.28	6.65	6.53
	BLACK SEA	6.00	5.80	6.18	6.08	5.49	6.68
	EAST.&SOUTH. ANA.	6.52	6.01	7.17	5.64	6.57	7.14
MILK, MILK PROD., EGGS AND FATS	TURKEY	6.37	7.77	5.21	8.27	7.14	4.70
	RURAL	9.00	8.95	9.04	9.09	8.94	9.00
	URBAN	4.96	6.59	3.70	7.30	5.72	3.29
	MARMARA AND AEGEAN	5.01	6.75	3.72	7.34	5.99	3.26
	MEDITERRANEAN	6.48	7.30	5.73	8.02	6.78	5.31
	CENTRAL ANATOLIA	6.83	7.49	6.20	8.00	7.10	5.82
	BLACK SEA	9.03	9.54	8.55	10.32	8.51	8.77
	EAST.&SOUTH. ANA.	8.93	9.17	8.63	9.34	9.19	8.30
DRIED VEGETABLES	TURKEY	1.38	1.83	1.01	2.00	1.60	0.87
	RURAL	2.15	2.22	2.08	2.43	2.16	1.94
	URBAN	0.96	1.40	0.63	1.60	1.14	0.53
	MARMARA AND AEGEAN	1.03	1.56	0.64	1.69	1.32	0.52
	MEDITERRANEAN	1.51	1.84	1.20	2.07	1.61	1.09
	CENTRAL ANATOLIA	1.53	1.77	1.29	1.98	1.60	1.18
	BLACK SEA	1.82	2.01	1.65	2.14	1.81	1.59
	EAST.&SOUTH. ANA.	2.09	2.22	1.91	2.35	2.22	1.72

TABLE B4 : AVERAGE MONTHLY FOOD EXPENDITURES-BUDGET (EXPENDITURE) SHARES BY EXPENDITURE GROUP, REGION AND INCOME GROUP (cont'd)

		ALL GROUPS	BELOW THE AVERAGE INCOME	ABOVE THE AVERAGE INCOME	FIRST 40%	SECOND 40%	THIRD 20%
DRIED FRUITS	TURKEY	0.470	0.54	0.42	0.57	0.51	0.39
	RURAL	0.680	0.67	0.69	0.73	0.68	0.65
	URBAN	0.360	0.42	0.32	0.42	0.41	0.30
	MARMARA AND AEGEAN	0.380	0.50	0.29	0.52	0.45	0.27
	MEDITERRANEAN	0.490	0.52	0.46	0.49	0.51	0.47
	CENTRAL ANATOLIA	0.540	0.57	0.51	0.59	0.56	0.48
	BLACK SEA	0.470	0.44	0.51	0.49	0.41	0.56
	EAST.&SOUTH. ANA.	0.720	0.71	0.75	0.68	0.74	0.75
FRESH VEGETABLES	TURKEY	2.840	3.62	2.19	3.93	3.19	1.96
	RURAL	3.320	3.65	2.98	3.85	3.42	2.78
	URBAN	2.580	3.51	1.86	3.90	2.98	1.66
	MARMARA AND AEGEAN	2.380	3.26	1.73	3.62	2.80	1.53
	MEDITERRANEAN	3.890	4.59	3.25	5.28	4.10	2.91
	CENTRAL ANATOLIA	2.900	3.45	2.37	3.83	3.00	2.21
	BLACK SEA	3.190	3.57	2.83	3.97	3.10	2.70
	EAST.&SOUTH. ANA.	3.390	3.72	2.97	3.82	3.59	2.83
FRESH FRUITS	TURKEY	2.510	2.82	2.25	2.88	2.76	2.09
	RURAL	2.690	2.78	2.59	2.81	2.78	2.46
	URBAN	2.410	2.83	2.10	2.89	2.74	1.94
	MARMARA AND AEGEAN	2.450	2.94	2.08	3.07	2.80	1.90
	MEDITERRANEAN	2.890	3.15	2.65	3.13	3.12	2.50
	CENTRAL ANATOLIA	2.610	2.74	2.47	2.88	2.71	2.33
	BLACK SEA	2.480	2.67	2.30	2.95	2.37	2.27
	EAST.&SOUTH. ANA.	2.300	2.37	2.22	2.29	2.50	2.07
PROCESSED FOOD	TURKEY	3.640	4.63	2.82	5.17	3.99	2.55
	RURAL	5.040	5.38	4.69	5.84	4.85	4.68
	URBAN	2.890	3.94	2.09	4.48	3.27	1.87
	MARMARA AND AEGEAN	2.650	3.64	1.92	3.99	3.12	1.72
	MEDITERRANEAN	4.220	4.87	3.62	5.26	4.49	3.35
	CENTRAL ANATOLIA	4.340	5.13	3.59	5.85	4.34	3.43
	BLACK SEA	4.440	4.83	4.08	5.31	4.13	4.22
	EAST.&SOUTH. ANA.	5.290	5.65	4.83	6.06	5.41	4.56
CIGARETTE, ALCO. AND NON-ALCO. BEVERAGES	TURKEY	2.960	3.50	2.52	3.74	3.16	2.38
	RURAL	3.370	3.79	2.94	4.21	3.35	2.77
	URBAN	2.740	3.24	2.35	3.42	3.01	2.22
	MARMARA AND AEGEAN	2.740	3.45	2.22	3.48	3.23	2.05
	MEDITERRANEAN	3.850	4.27	3.47	4.71	4.03	3.18
	CENTRAL ANATOLIA	3.000	3.38	2.64	3.74	2.81	2.76
	BLACK SEA	2.970	3.47	2.50	4.03	2.78	2.40
	EAST.&SOUTH. ANA.	3.010	3.22	2.74	3.46	2.95	2.73

APPENDIX C:
FIGURES OF PRELIMINARY DATA ANALYSIS

ABBREVIATIONS IN FIGURES

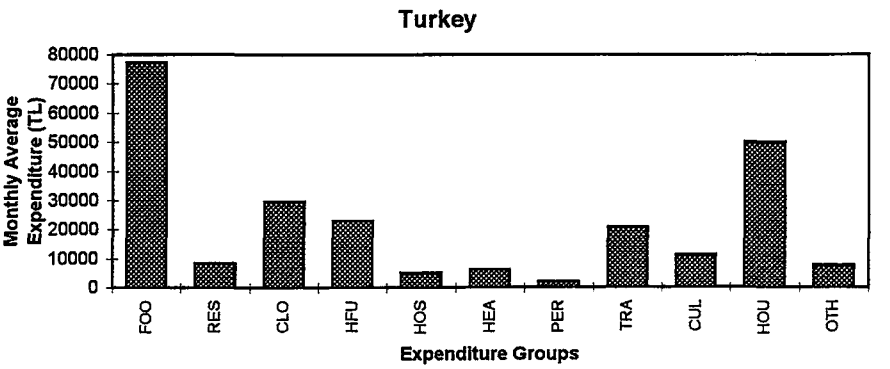
MAIN EXPENDITURE GROUPS

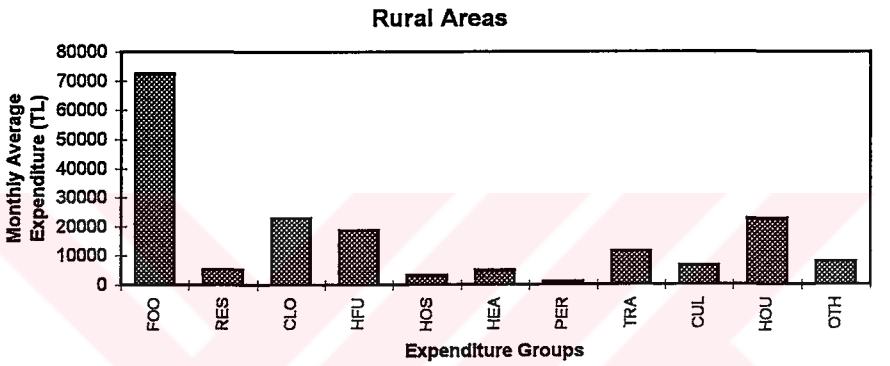
FOO : FOOD
RES : RESTAURANT
CLO : CLOTHING
HFU : HOUSE FURNISHINGS
HOS : HOUSE OPERATIONS AND SERVICES
HEA : HEALTH
PER : PERSONAL CARE
TRA : TRANSPORTATION AND COMMUNICATION
CUL : CULTURE, EDUCATION AND ENTERTAINMENT
HOU : HOUSING
OTH : OTHER

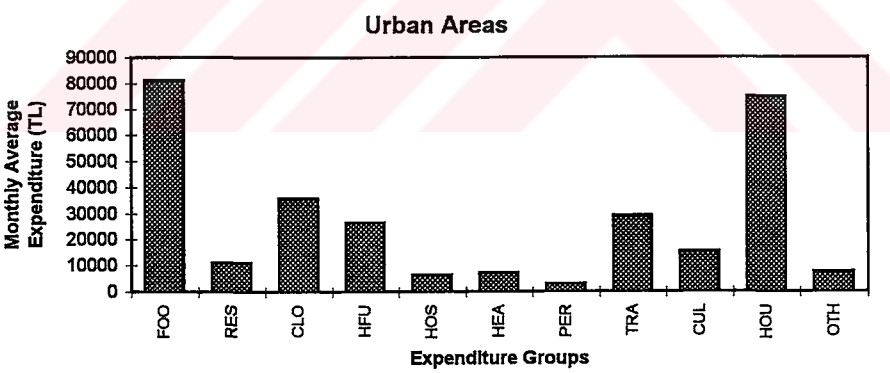
SUB-GROUPS OF FOOD EXPENDITURES

BRE : BREAD AND CEREALS
MFP : MEAT, FISH AND POULTRY
MFE : MILK, MILK PRODUCTS, EGGS AND FATS
DVE : DRIED VEGETABLES
DFR : DRIED FRUITS
FVE : FRESH VEGETABLES
FFR : FRESH FRUITS
PFO : PROCESSED FOOD
CAB : CIGARETTE, ALCOHOLIC AND NON-ALCOHOLIC BEV.

Figure C1 : Monthly Average Expenditures by Expenditure Group and Region-All Income Groups







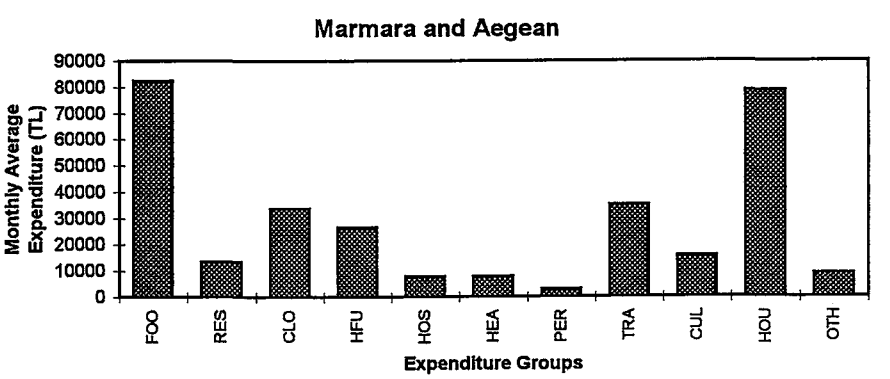
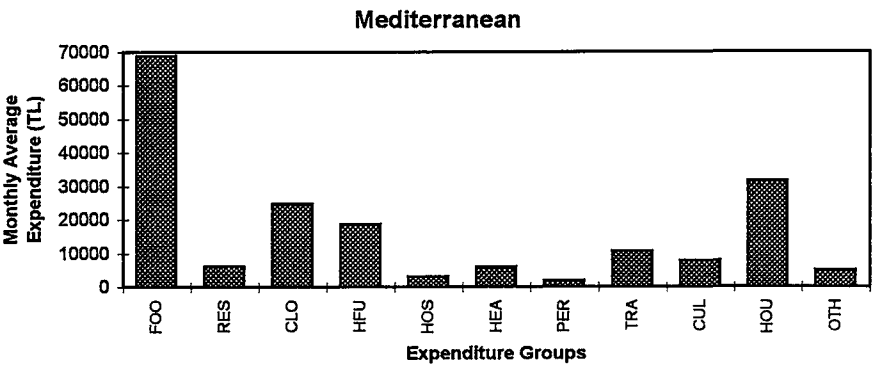
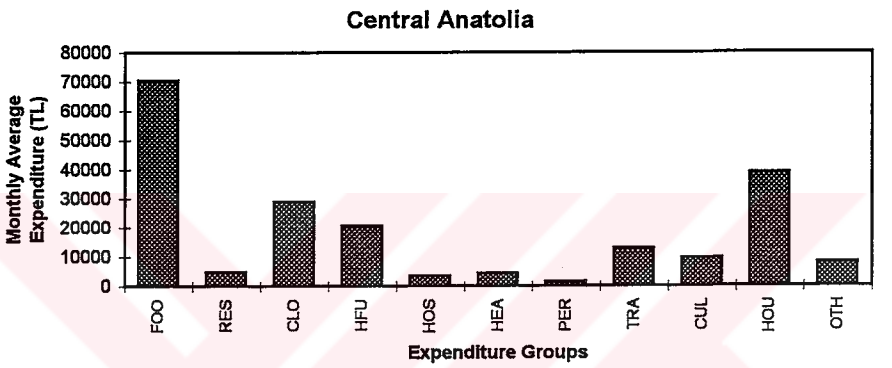
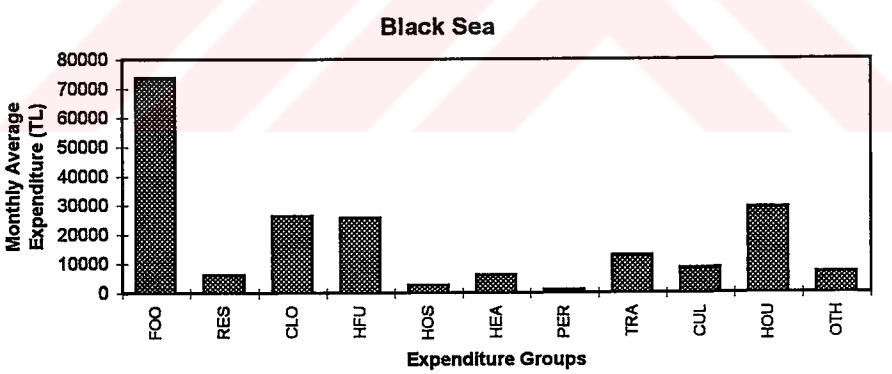


Figure C1 : Monthly Average Expenditures by Expenditure Group and Region-All Income Groups (cont'd)







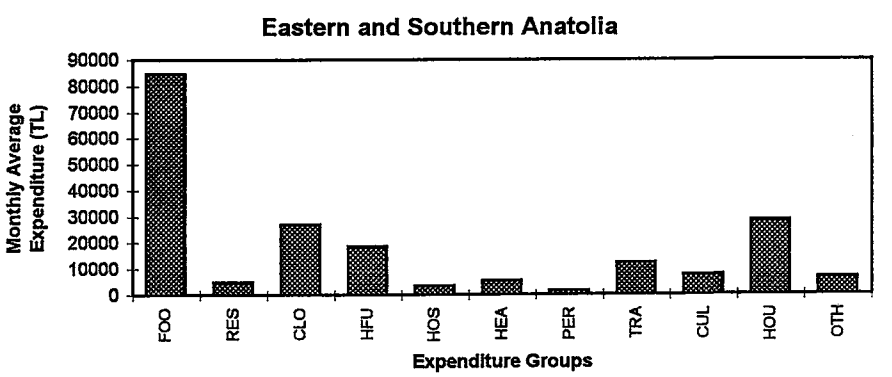
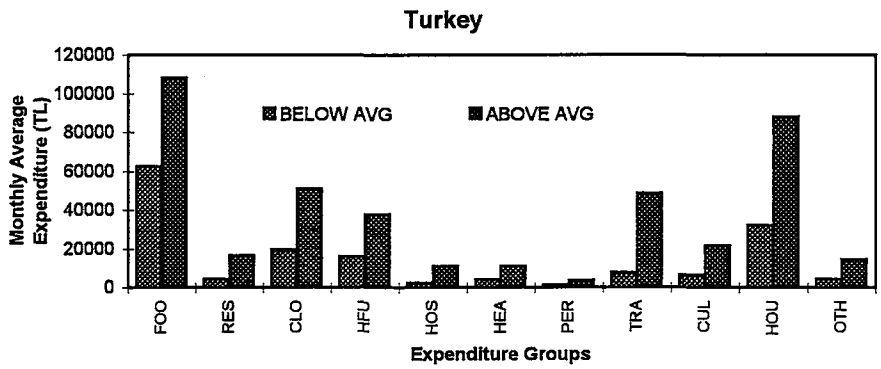
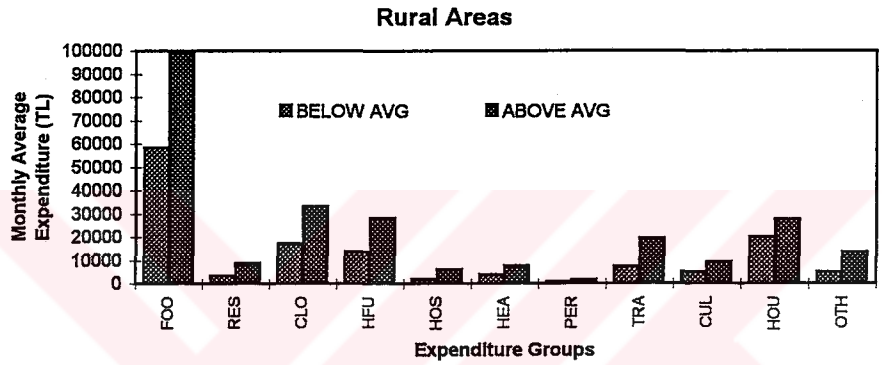
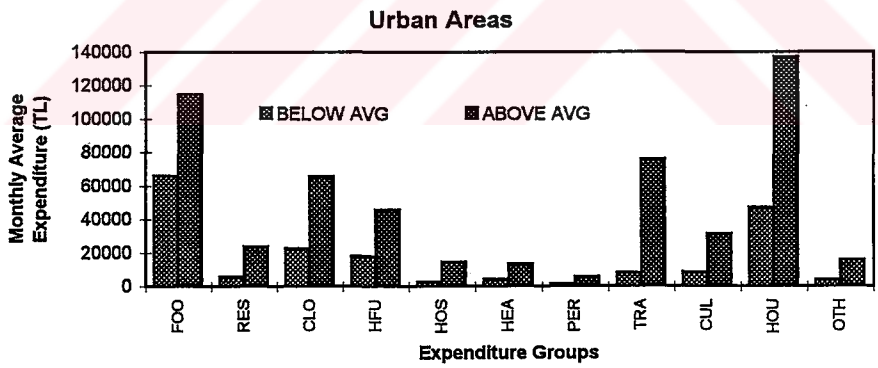


Figure C2 : Monthly Average Expenditures by Expenditure Group, Region and Income Group (Below and Above the Average)







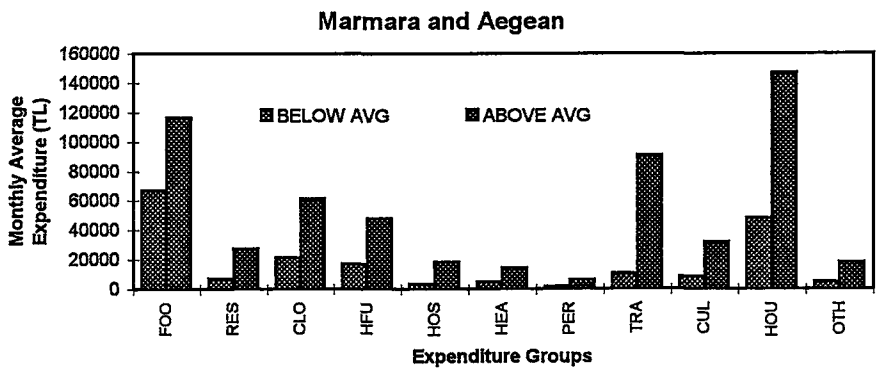
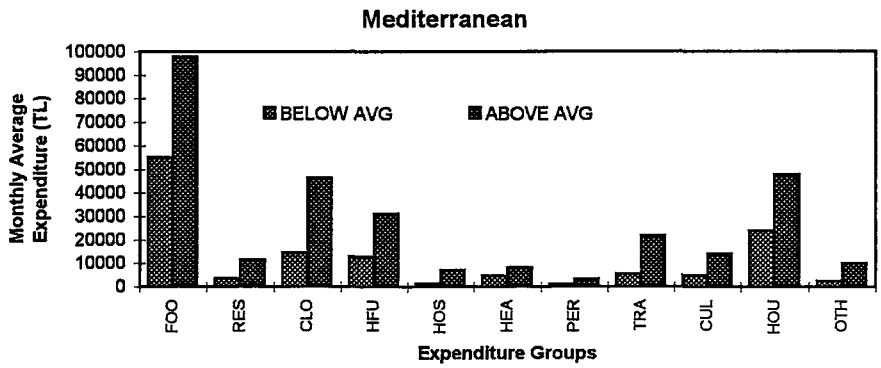
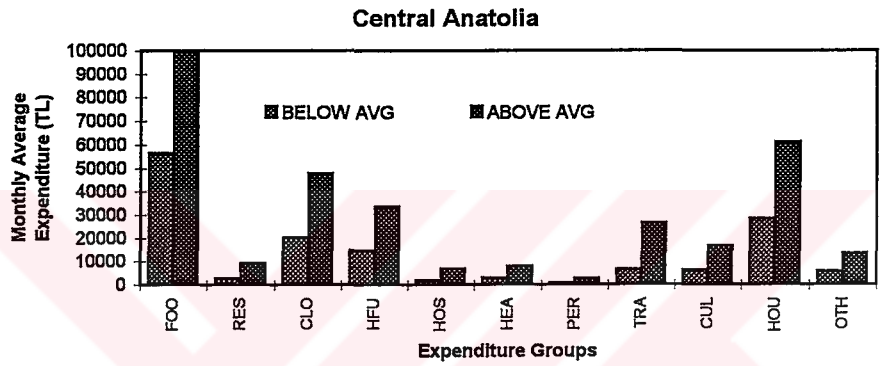
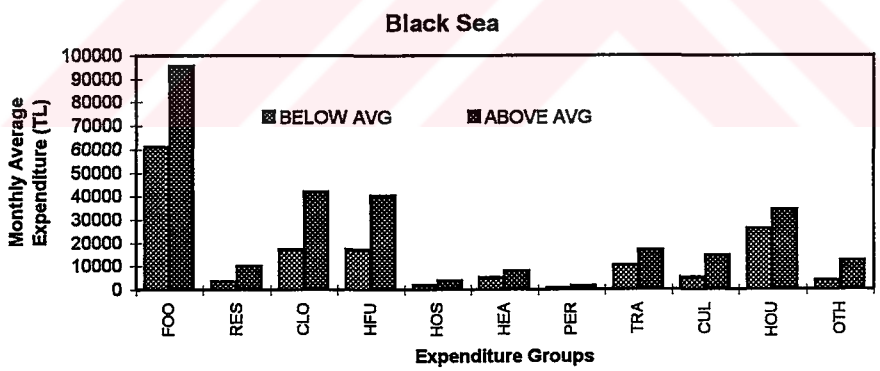


Figure C2 : Monthly Average Expenditures by Expenditure Group, Region and Income Group (Below and Above the Average) (cont'd)







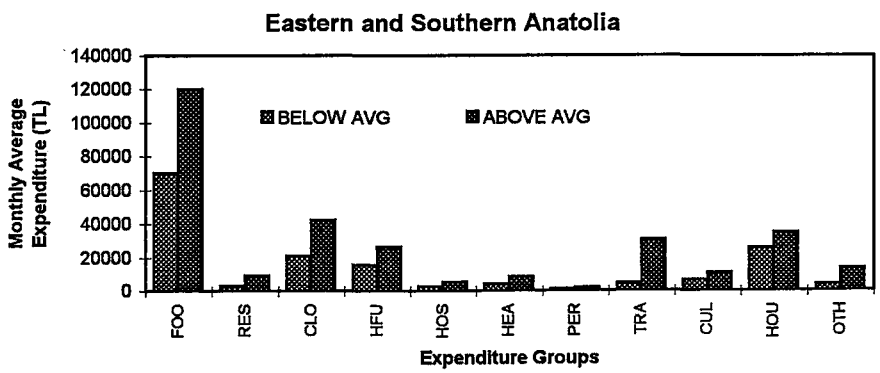
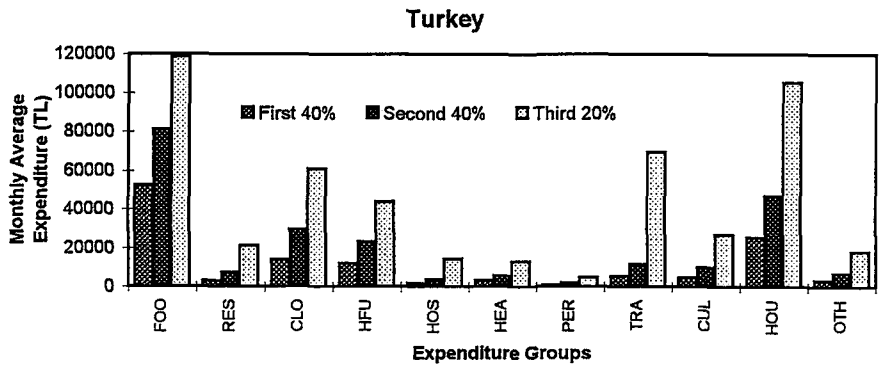
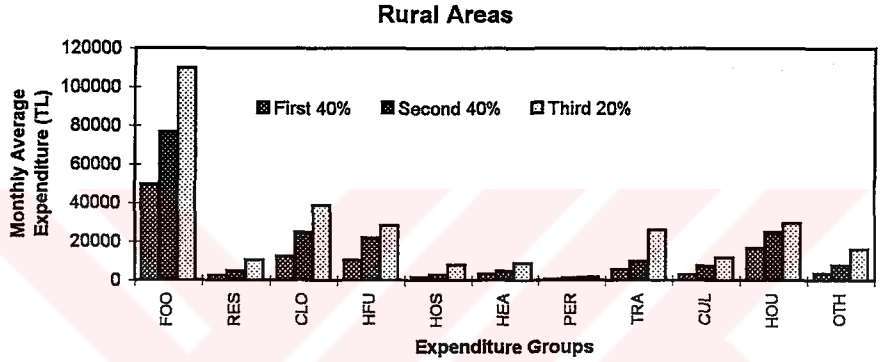
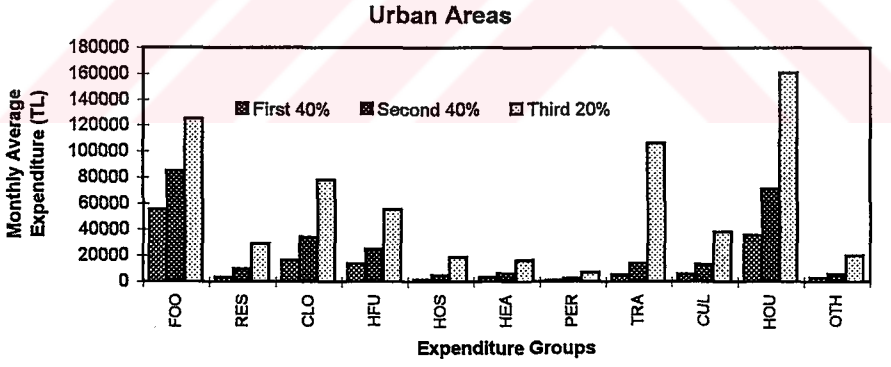


Figure C3 : Monthly Average Expenditures by Expenditure Group, Region and Income Group (1st 40%, 2nd 40% and 3rd 20%)







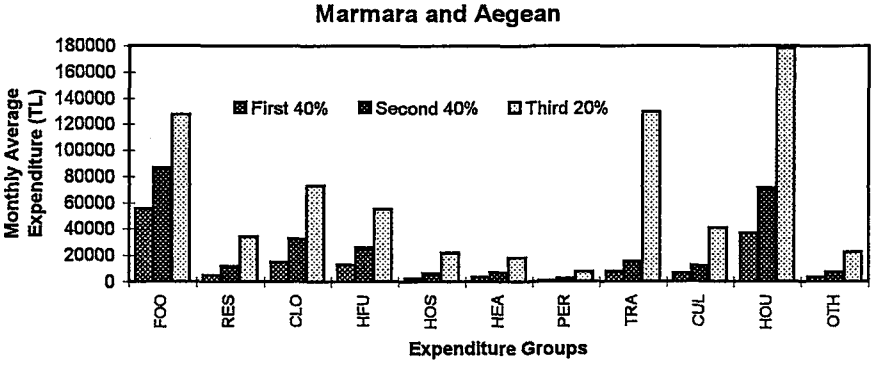
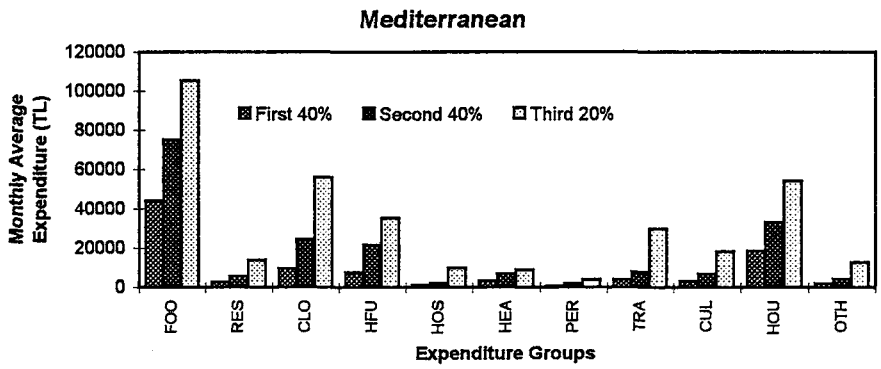
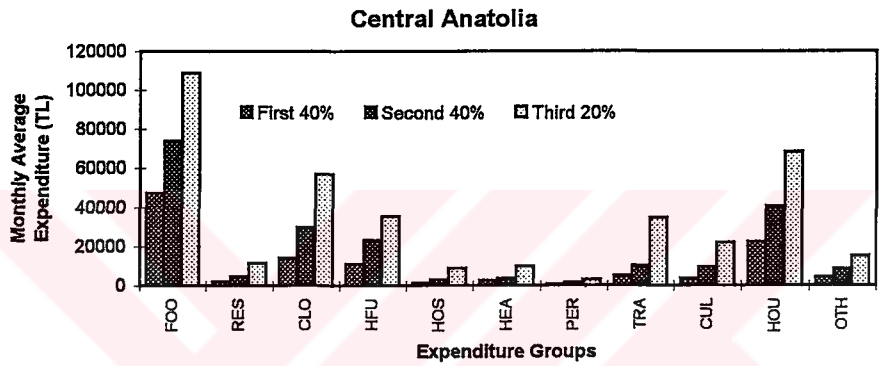
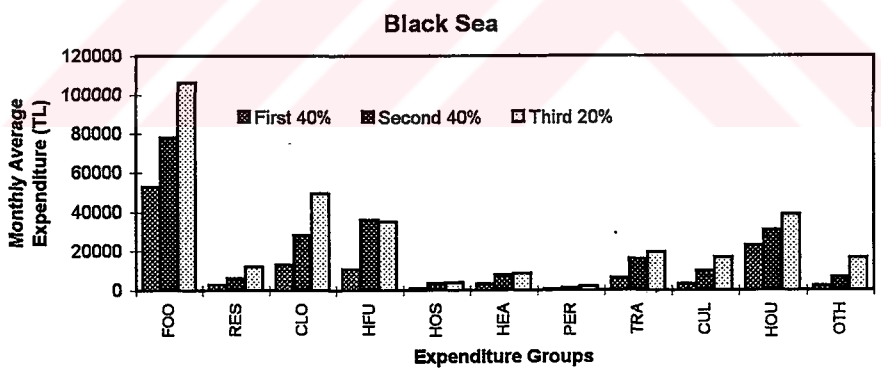


Figure C3 : Monthly Average Expenditures by Expenditure Group, Region and Income Group (1st 40%, 2nd 40% and 3rd 20%) (cont'd)







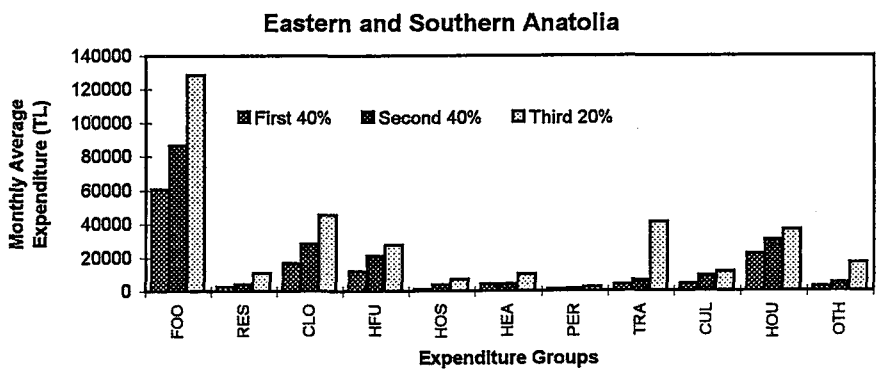
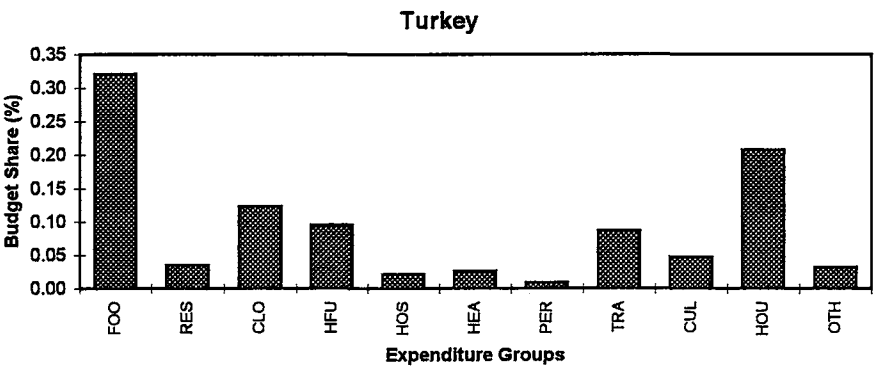
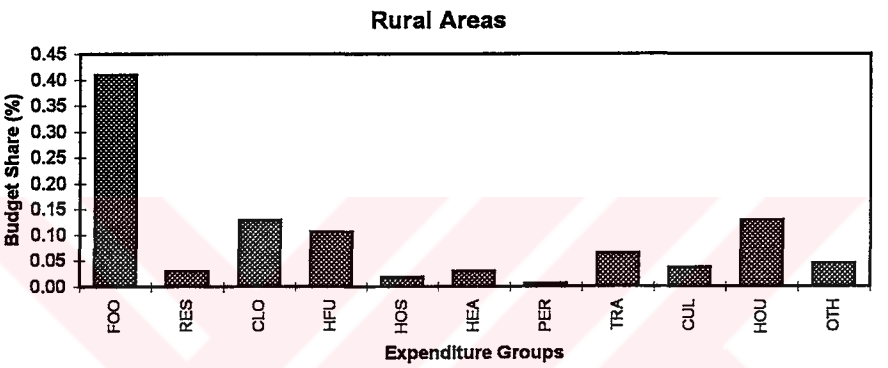
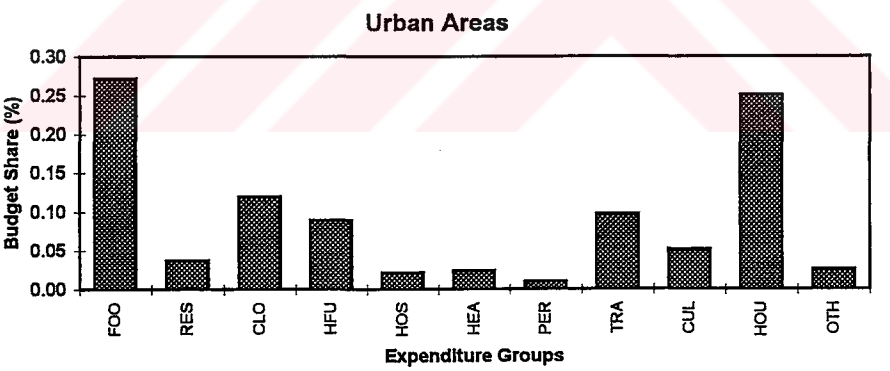


Figure C4 : Budget Shares of Expenditures by Expenditure Group and Region







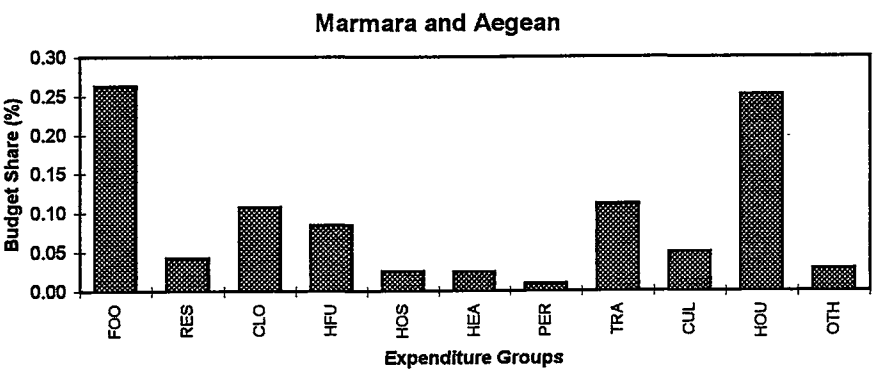
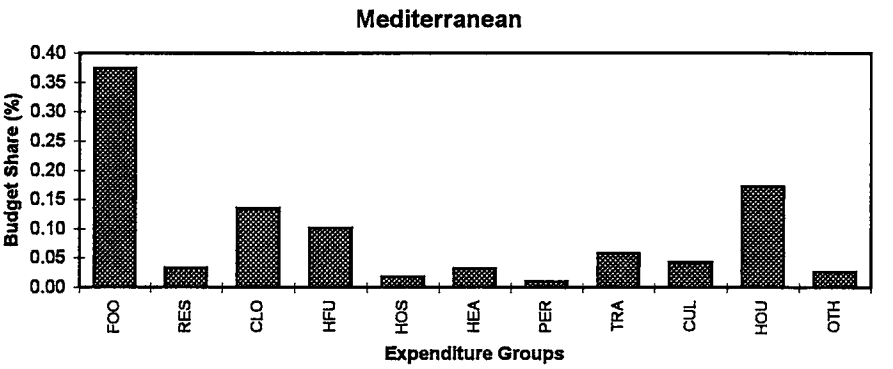
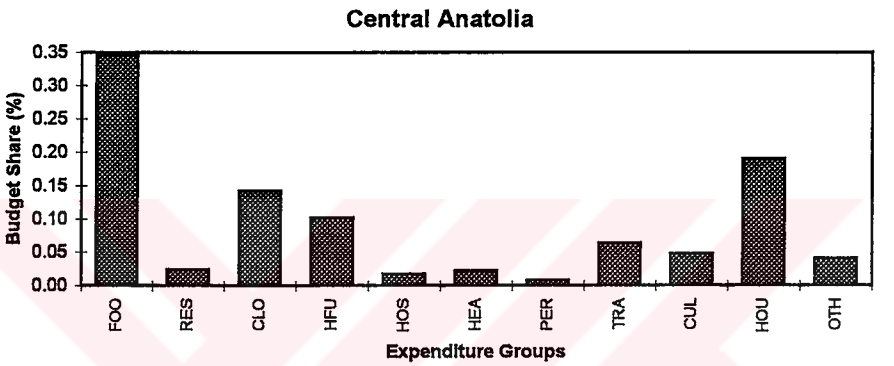
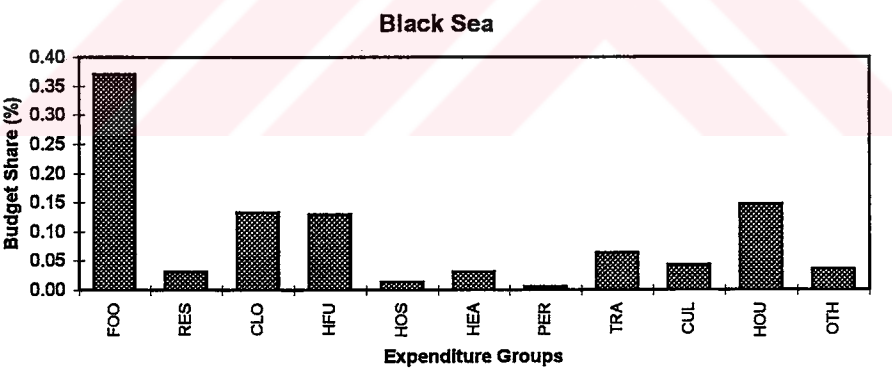


Figure C4 : Budget Shares of Expenditures by Expenditure Group and Region (cont'd)







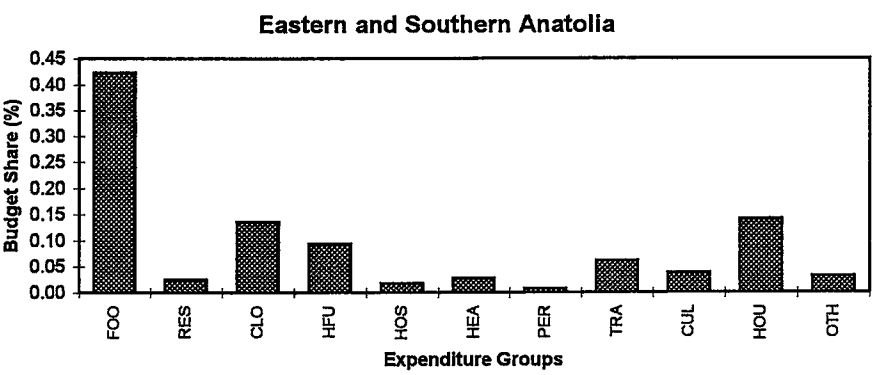
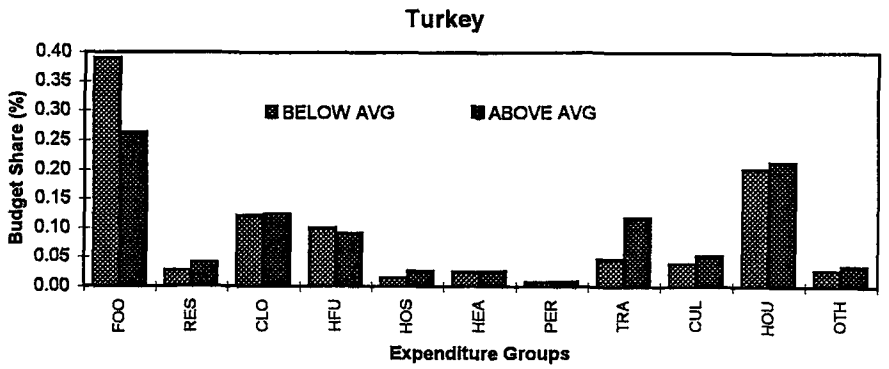
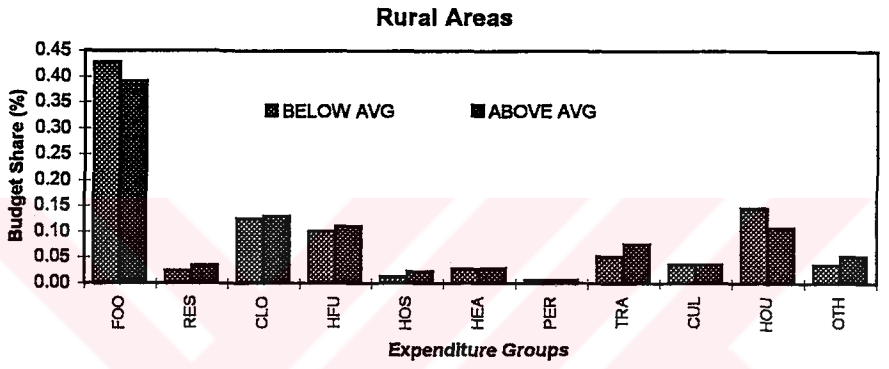
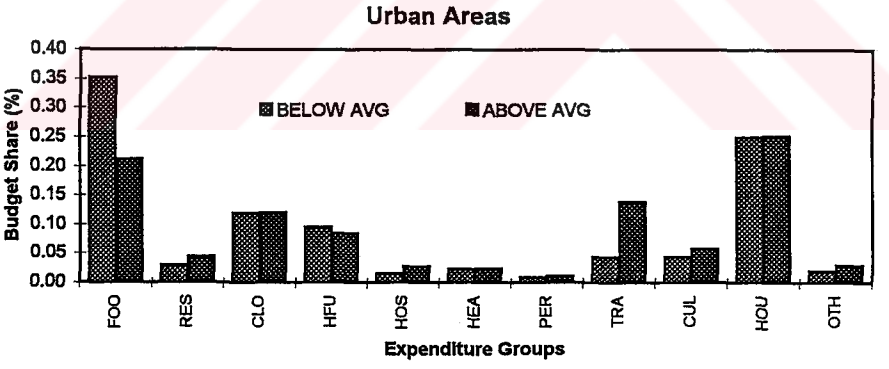


Figure C5 : Budget Shares of Expenditures by Expenditure Group
Region and Income Group (Below and Above the Average)







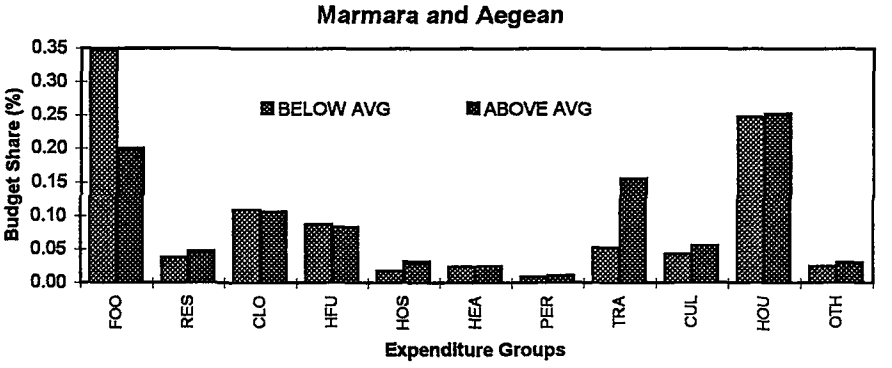
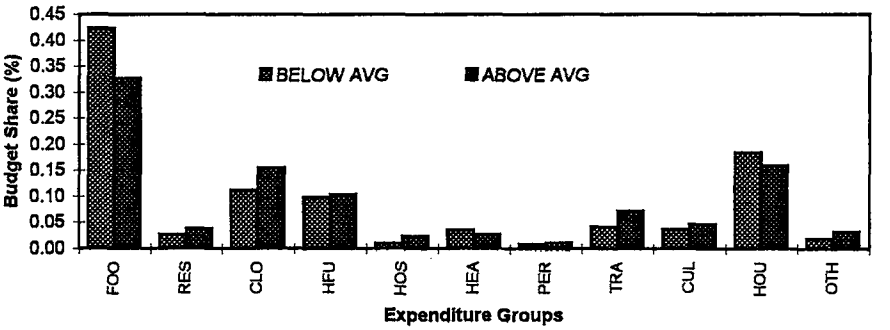
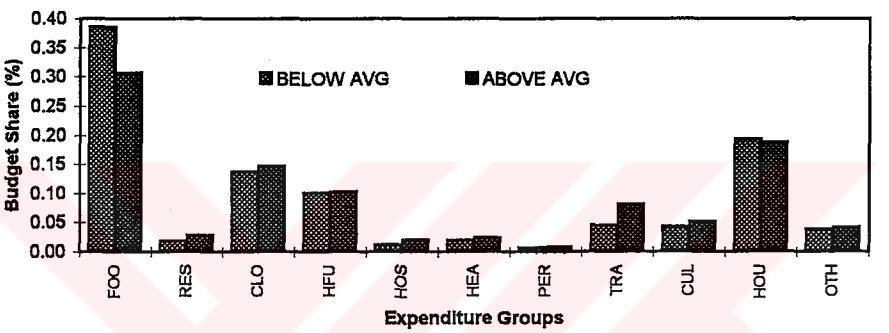


Figure C5 : Budget Shares of Expenditures by Expenditure Group
Region and Income Group (Below and Above the Average) (cont'd)

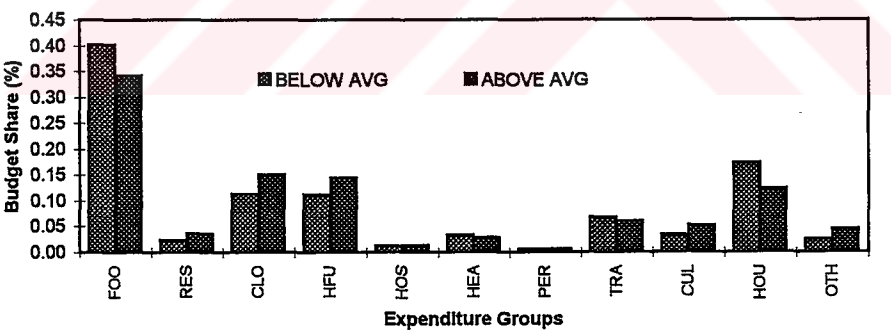
Mediterranean



Central Anatolia



Black Sea



Eastern and Southern Anatolia

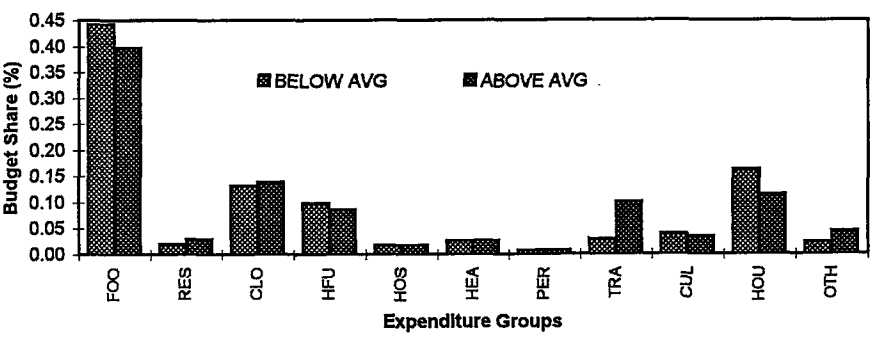
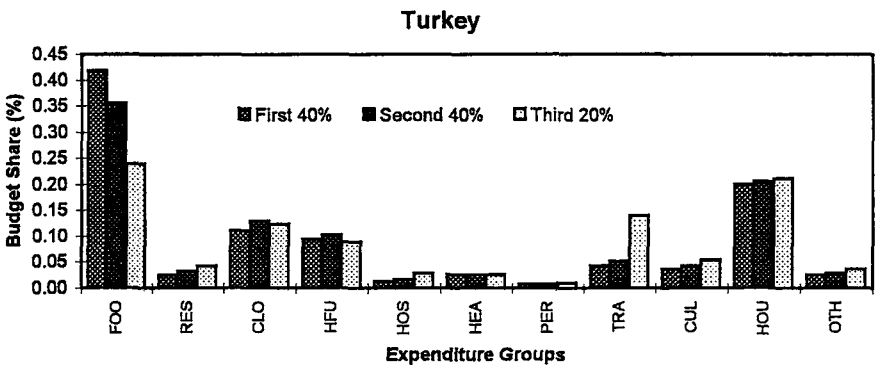
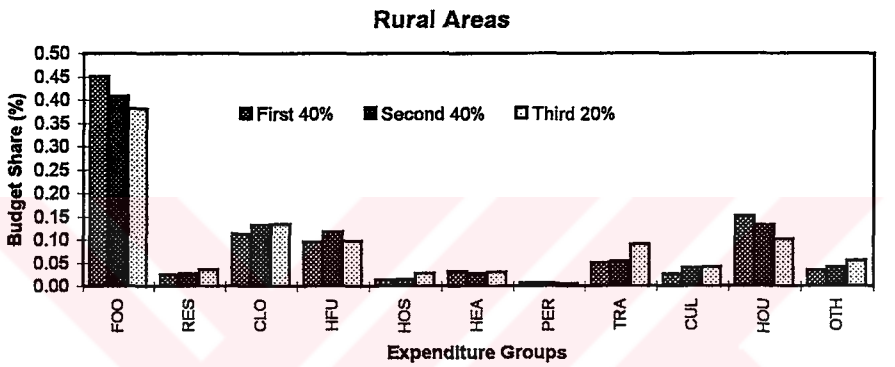
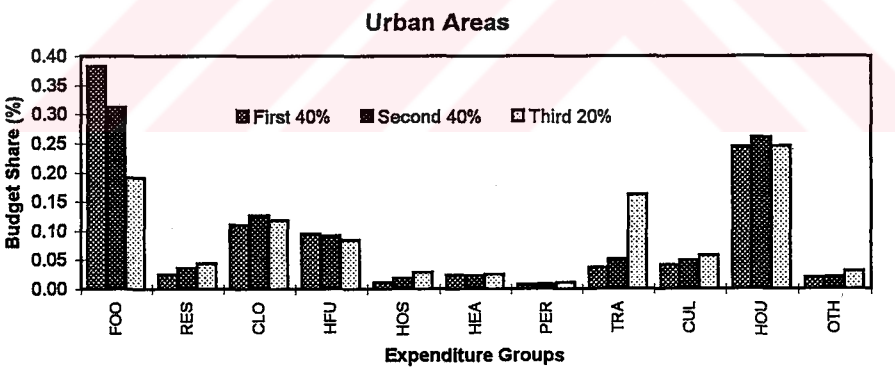


Figure C6 : Budget Shares of Expenditures by Expenditure Group, Region and Income Group (1st 40%, 2nd 40% and 3rd 20%)







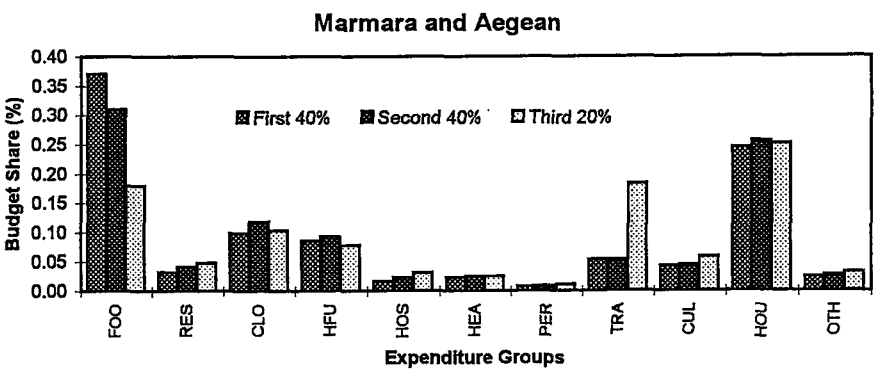
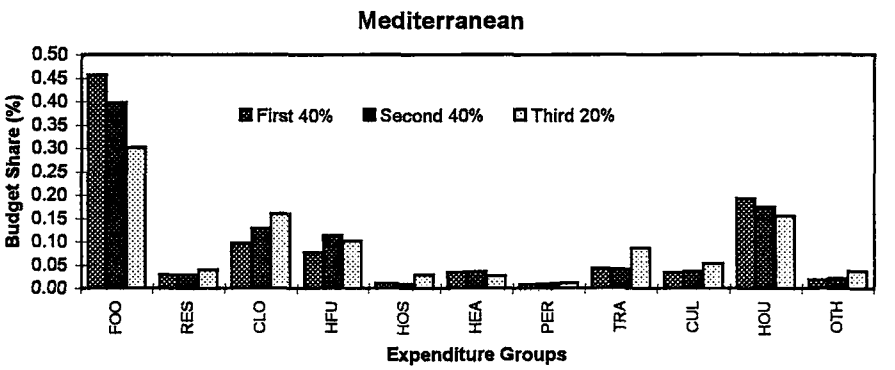
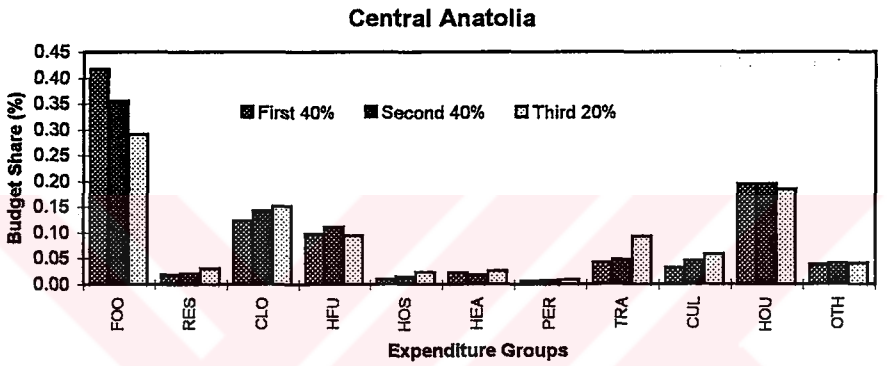
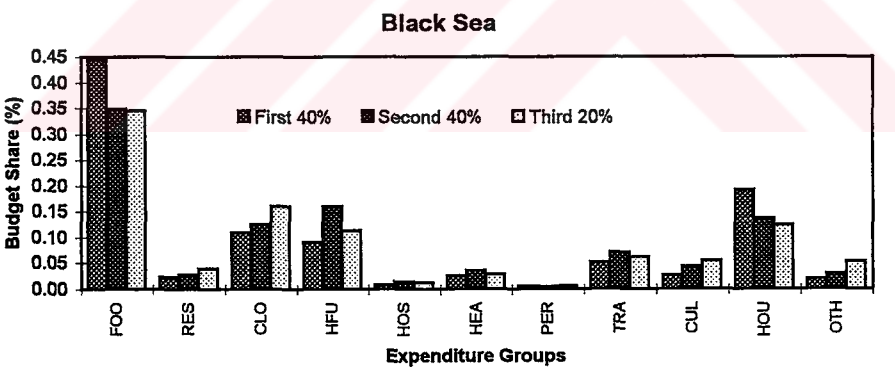


Figure C6 : Budget Shares of Expenditures by Expenditure Group, Region and Income Group (1st 40%, 2nd 40% and 3rd 20%) (cont'd)







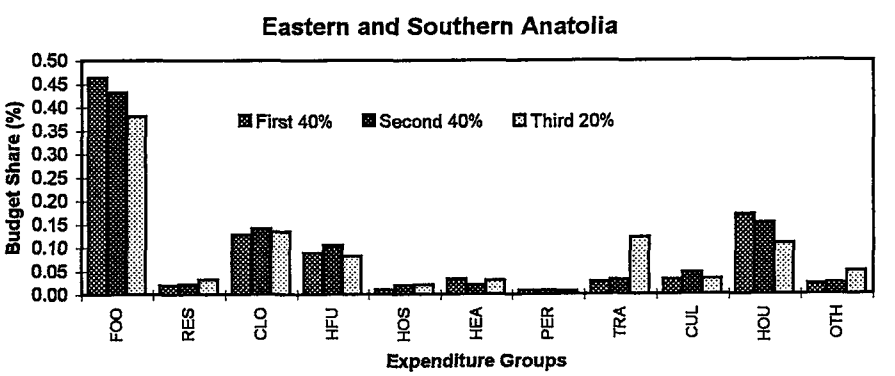
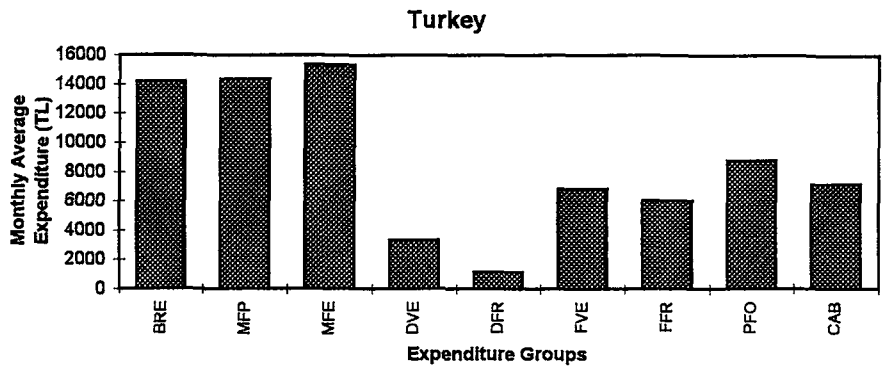
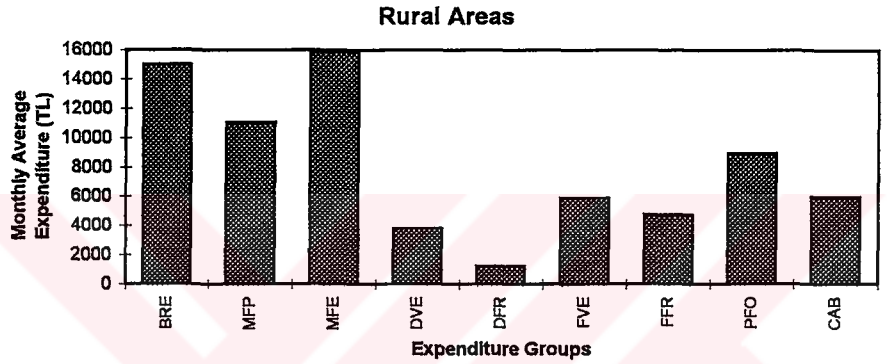
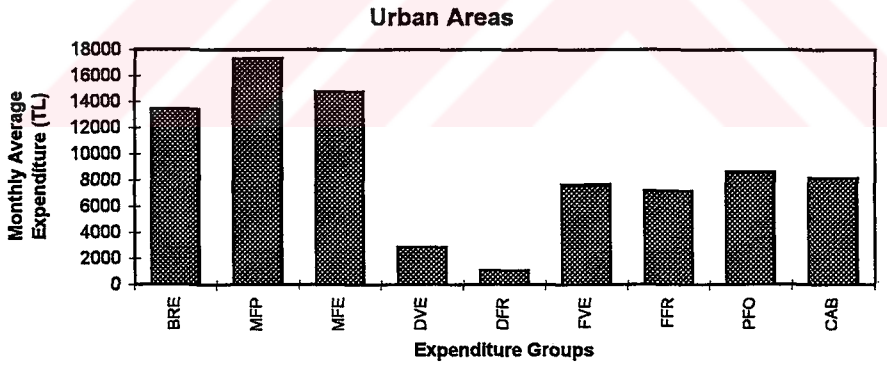


Figure C7 : Monthly Average Food Expenditures by Expenditure Group and Region-All Income Groups







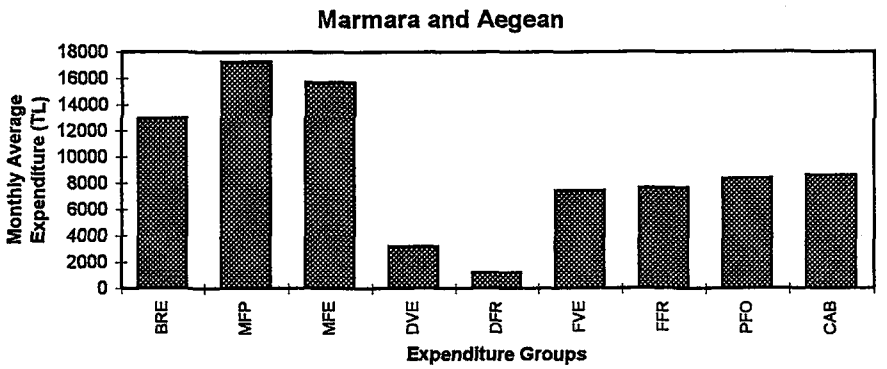
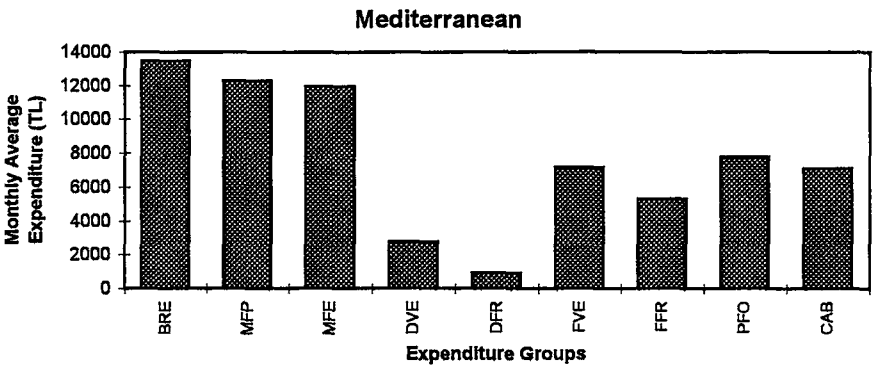
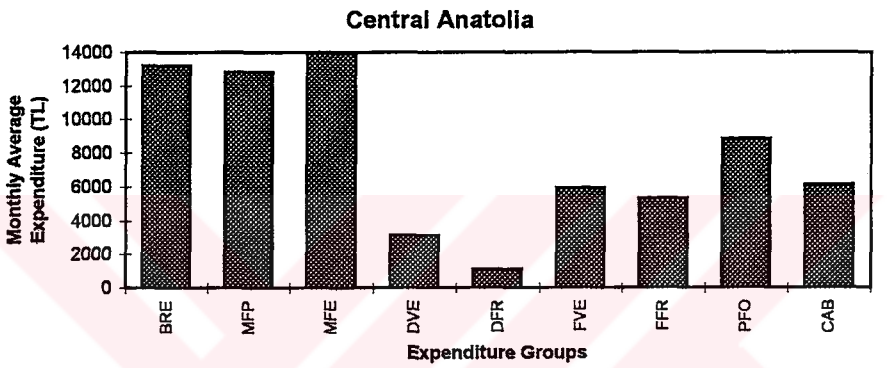
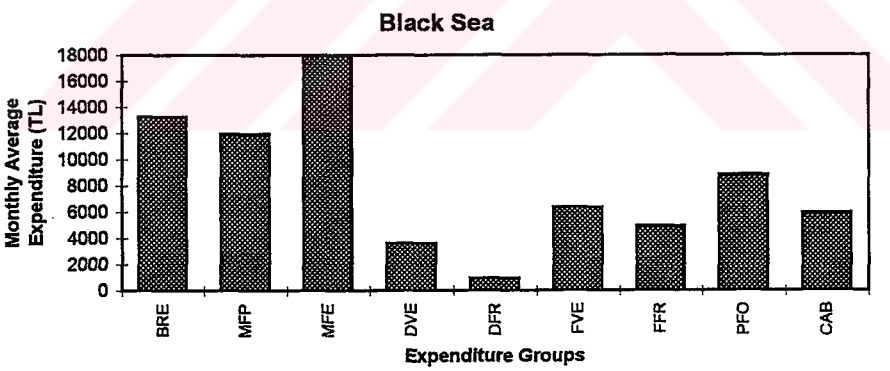


Figure C7 : Monthly Average Food Expenditures by Expenditure Group and Region-All Income Groups (cont'd)







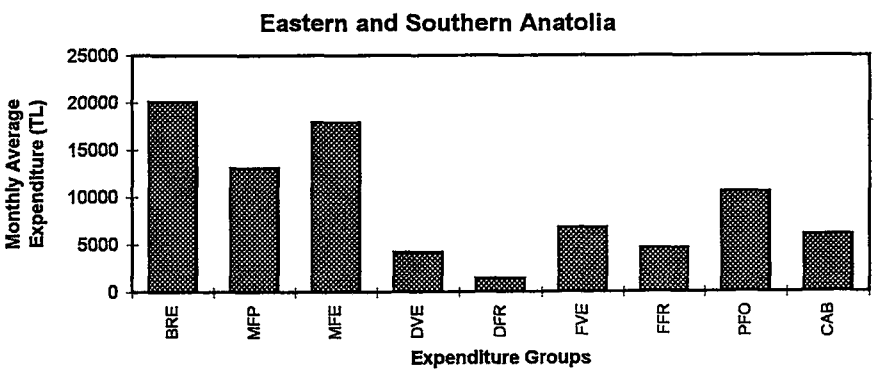
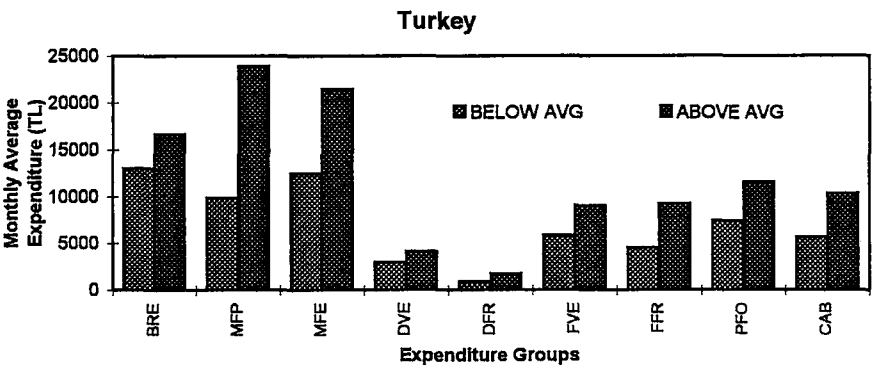
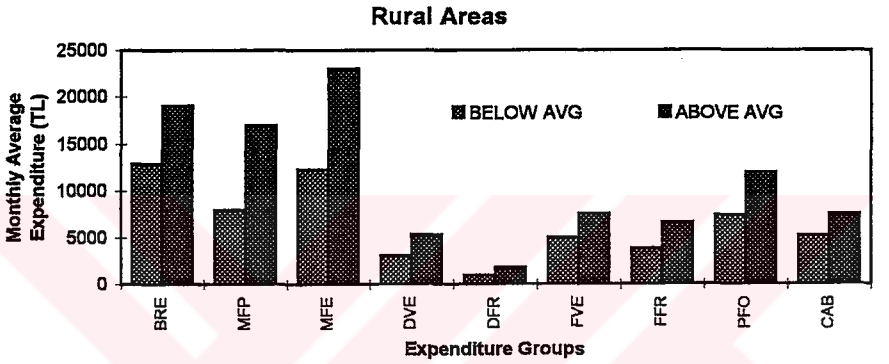
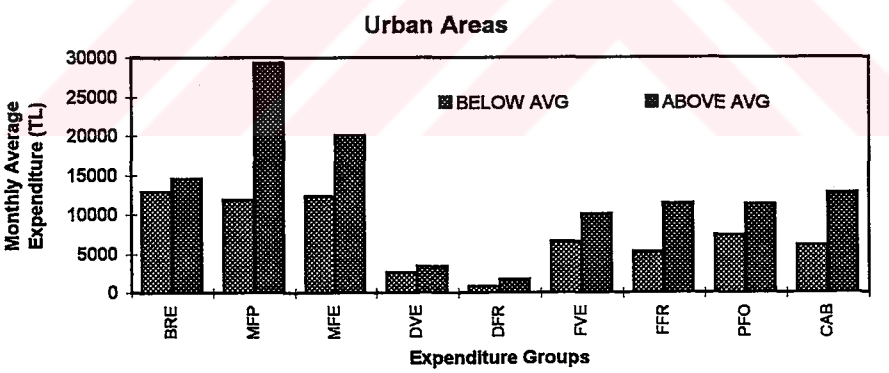


Figure C8 : Monthly Average Food Expenditures by Expenditure Group, Region and Income Group (Below and Above the Average)







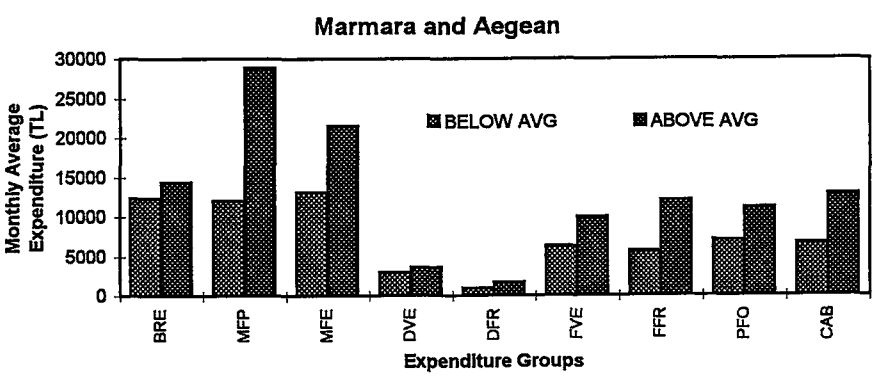
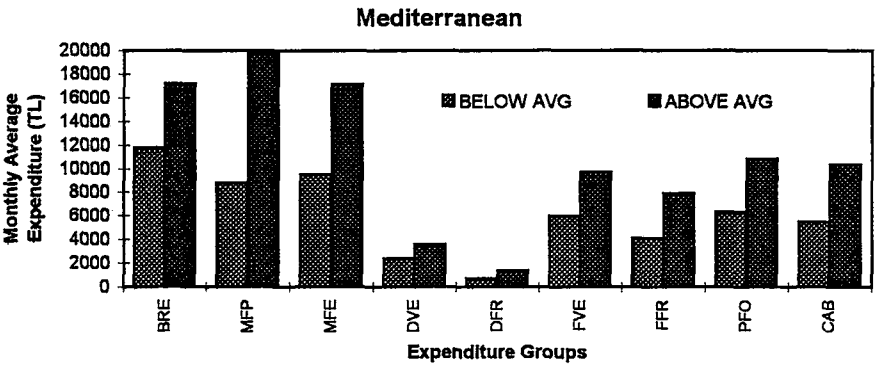
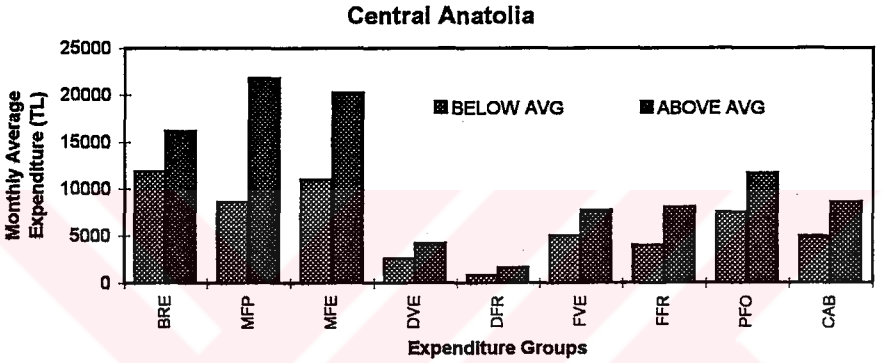
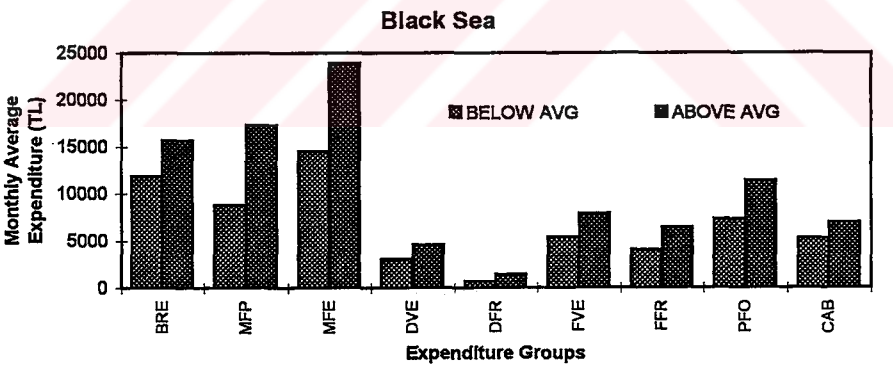


Figure C8 : Monthly Average Food Expenditures by Expenditure Group, Region and Income Group (Below and Above the Average) (cont'd)







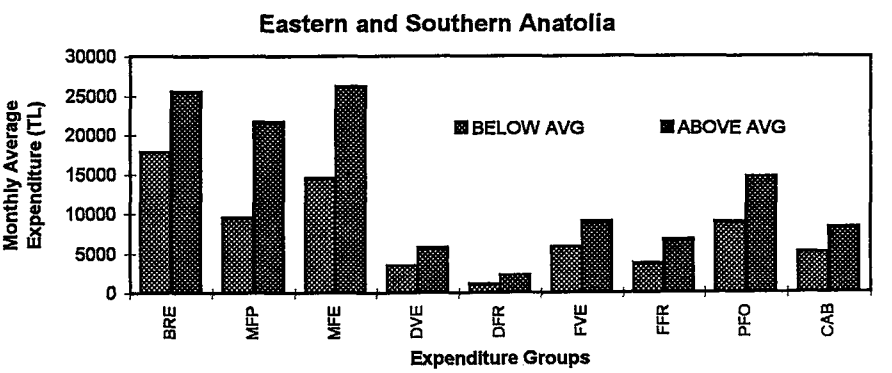
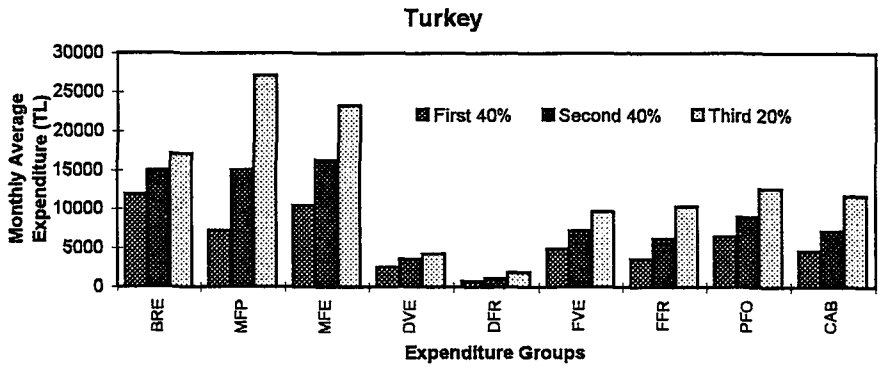
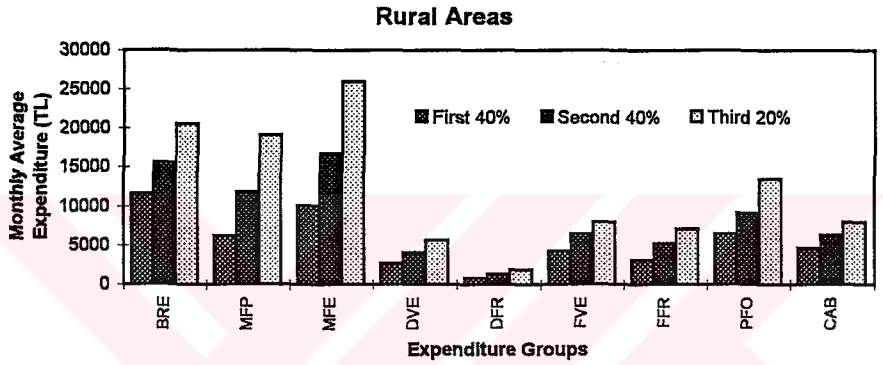
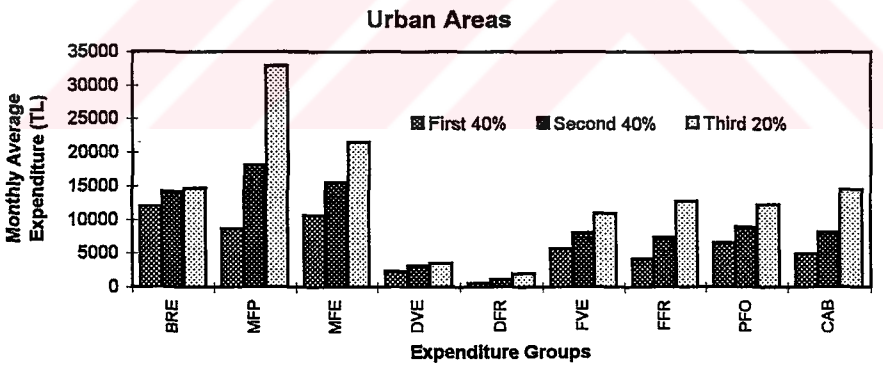


Figure C9 : Monthly Average Food Expenditures by Expenditure Group, Region and Income Group (1st 40%, 2nd 40% and 3rd 20%)







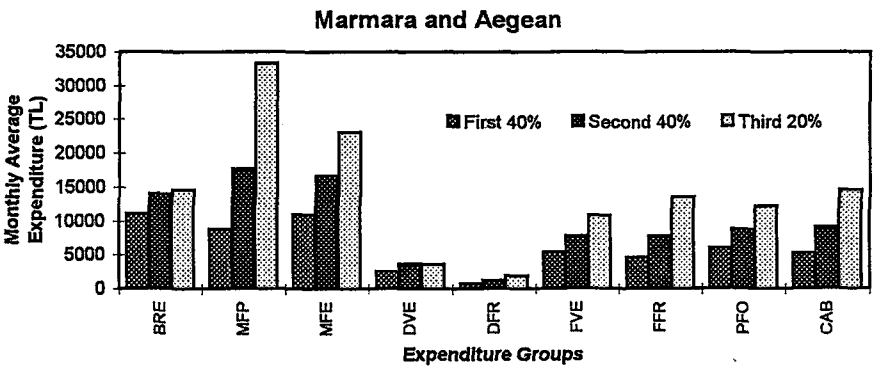
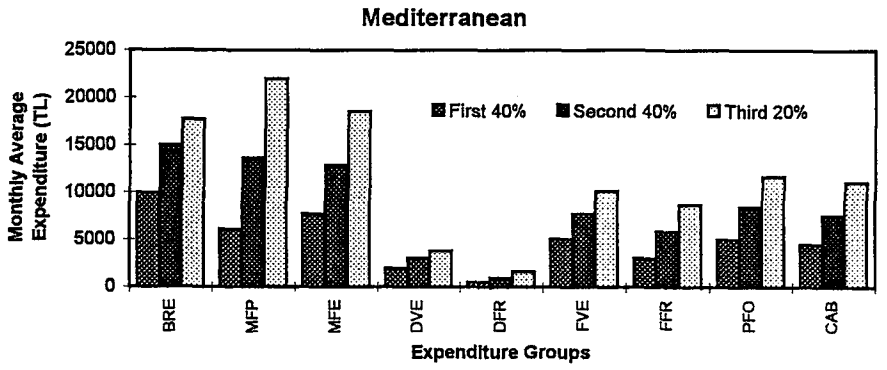
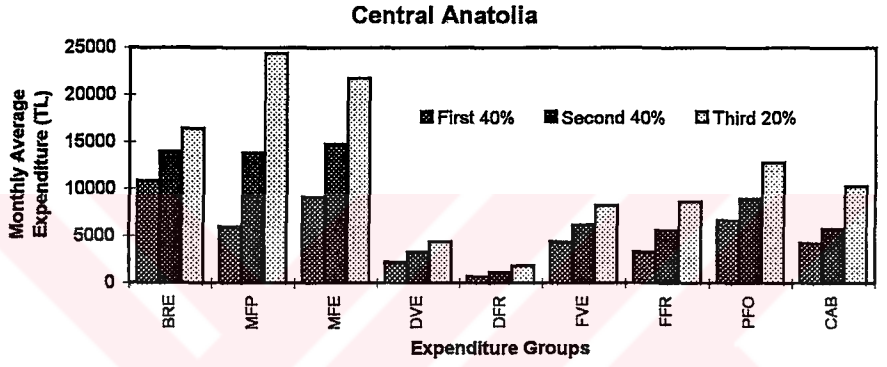
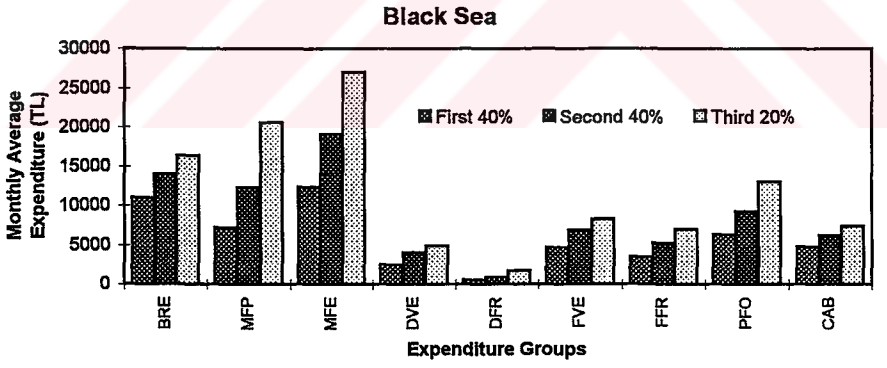


Figure C9 : Monthly Average Food Expenditures by Expenditure Group, Region and Income Group (1st 40%, 2nd 40% and 3rd 20%) (cont'd)







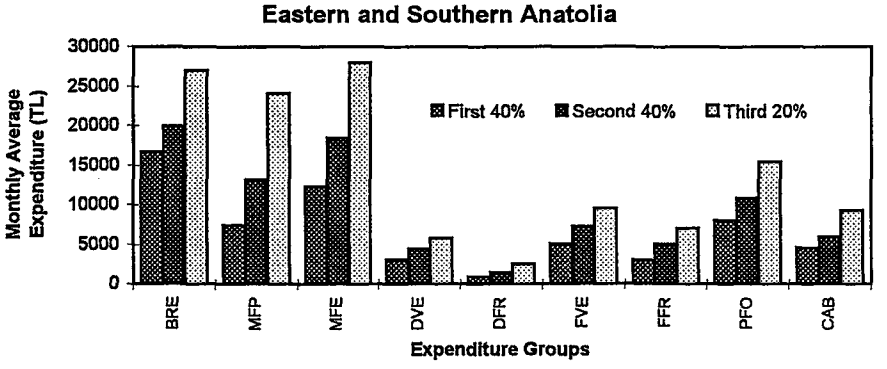
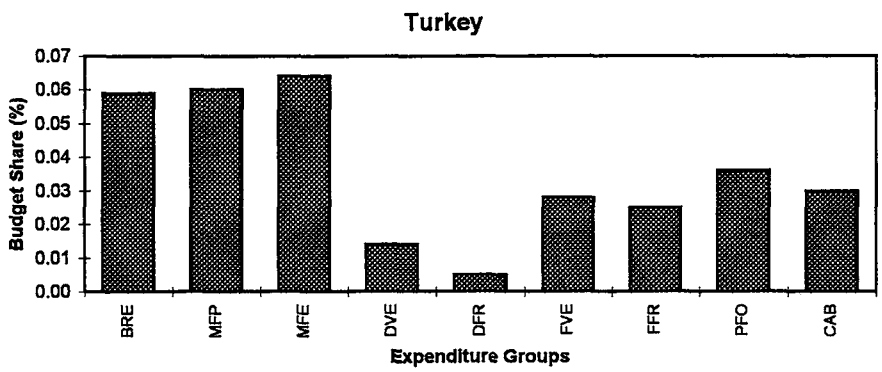
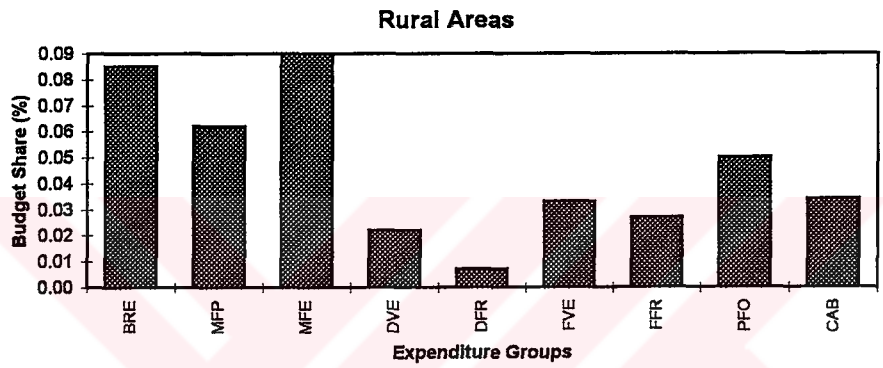
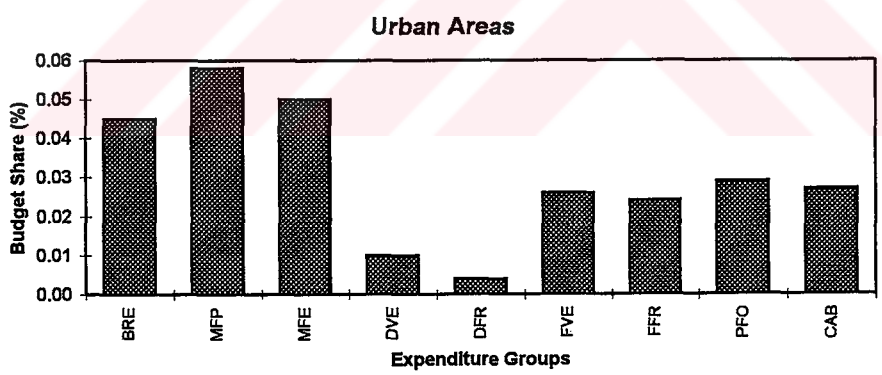


Figure C10 : Budget Shares of Food Expenditures by Expenditure Group and Region







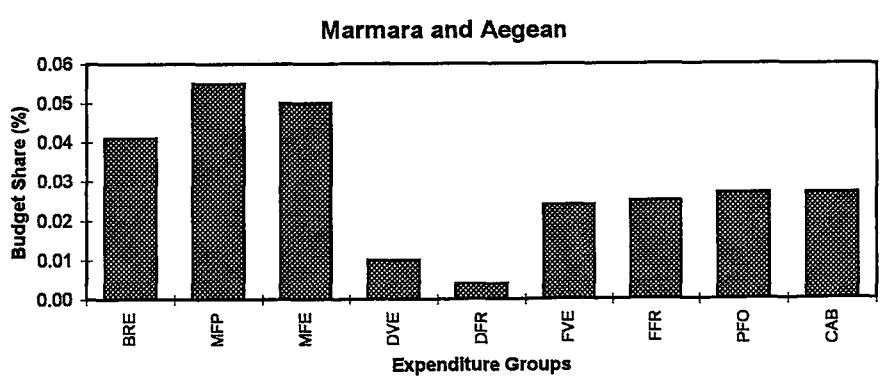
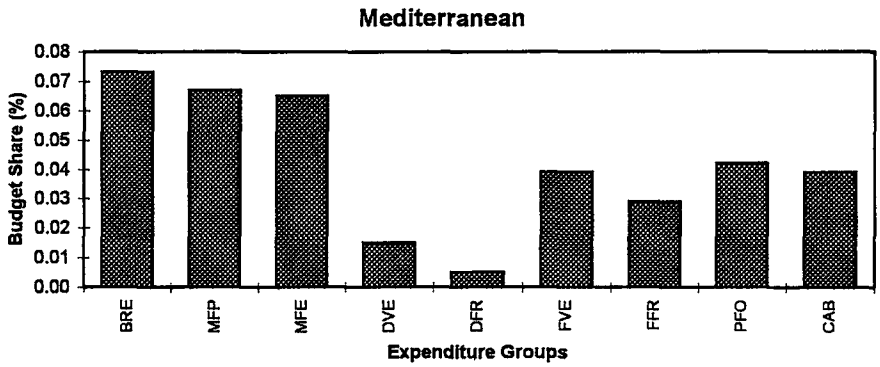
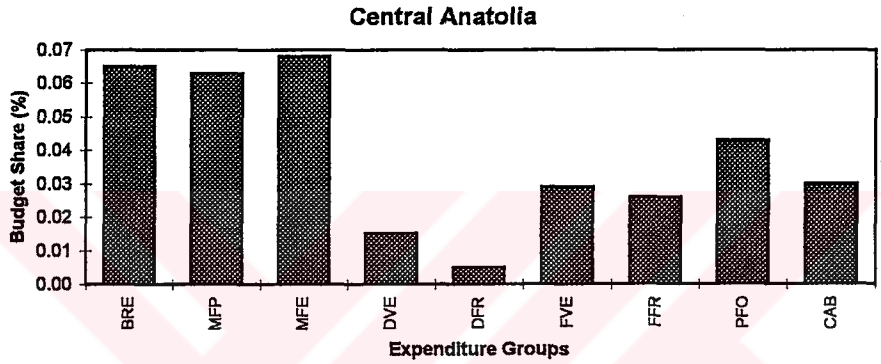
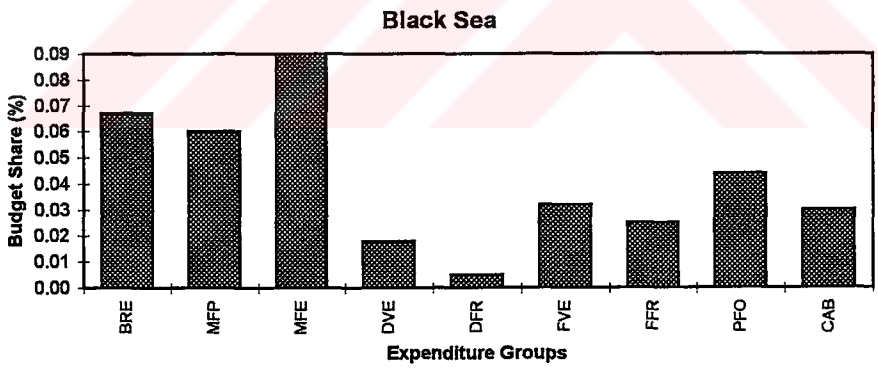


Figure C10 : Budget Shares of Food Expenditures by Expenditure Group and Region (cont'd)







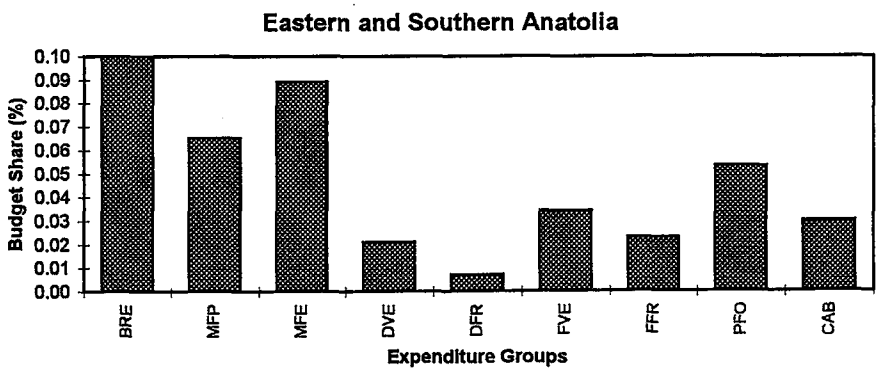
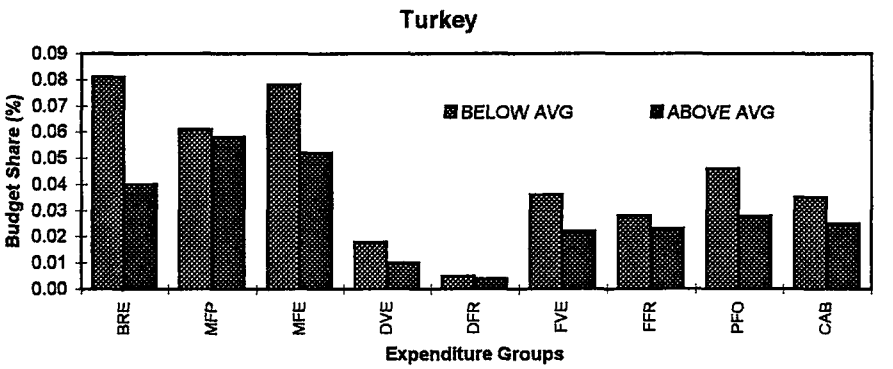
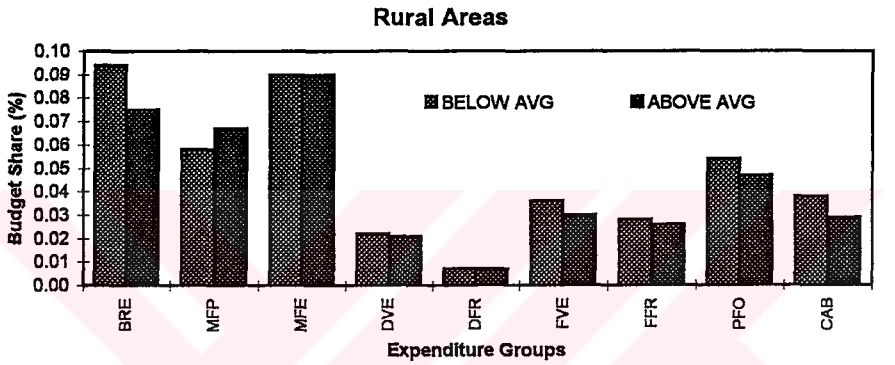
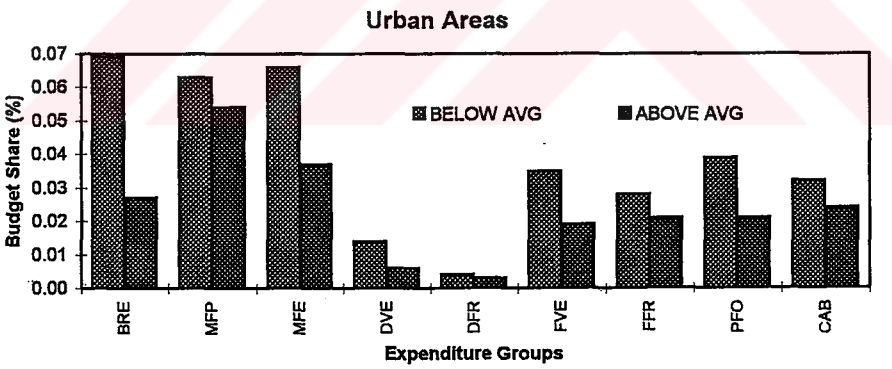


Figure C11 : Budget Shares of Food Expenditures by Expenditure Group Region and Income Group (Below and Above the Average)







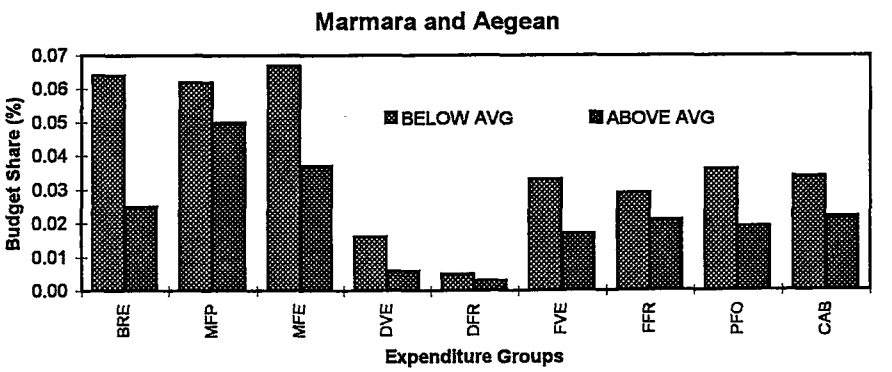
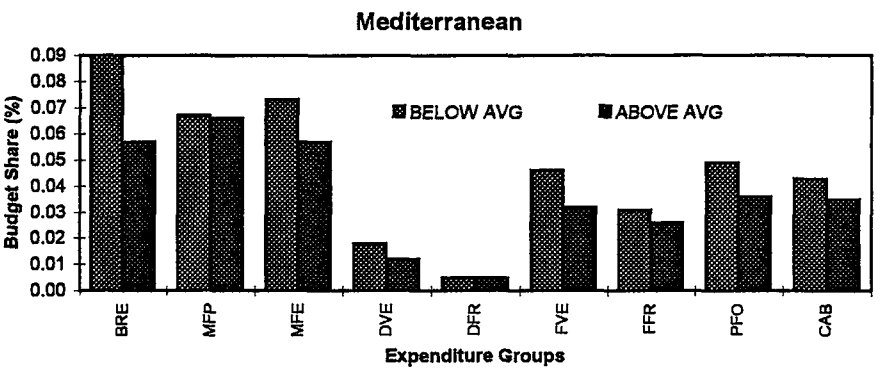
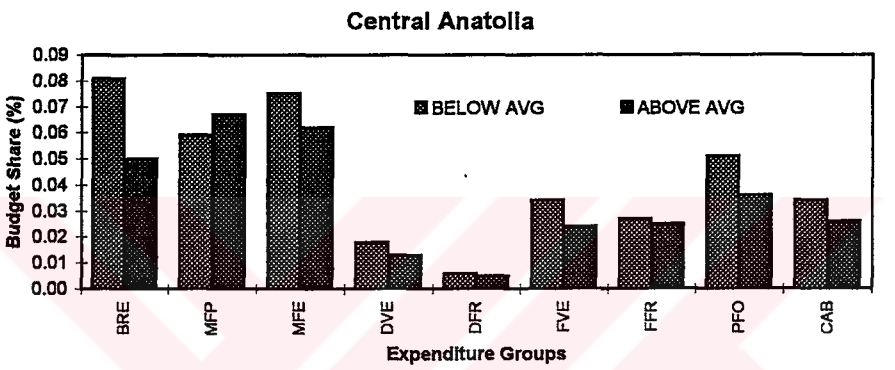
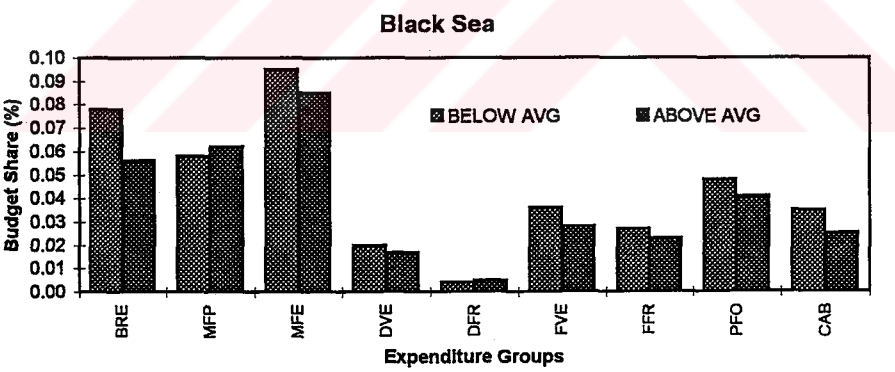


Figure C11 : Budget Shares of Food Expenditures by Expenditure Group Region and Income Group (Below and Above the Average) (cont'd)







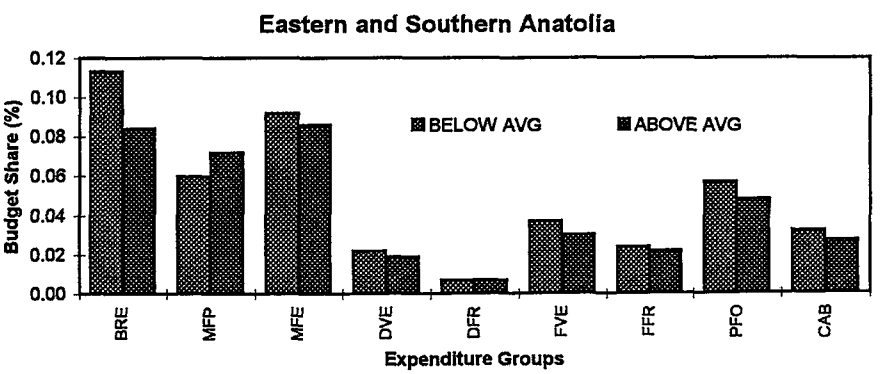
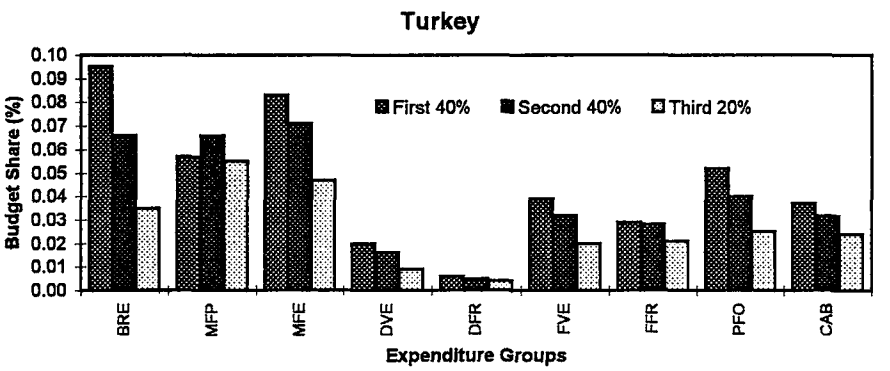
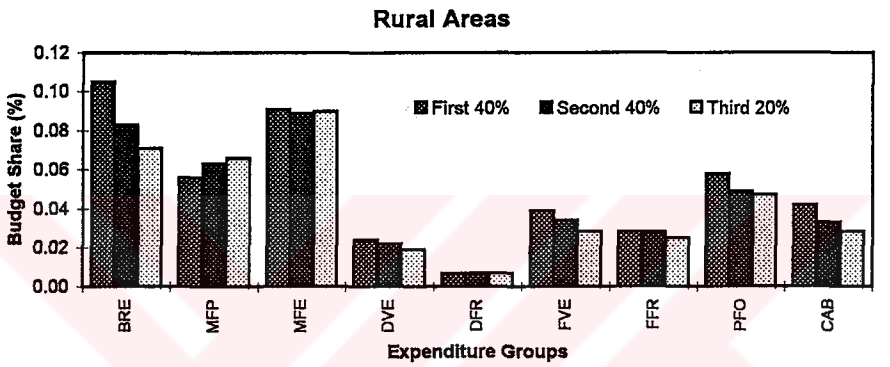
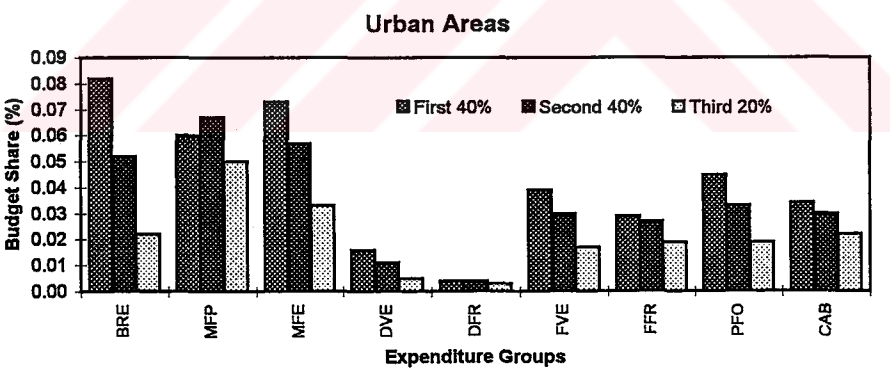


Figure C12 : Budget Shares of Food Expenditures by Expenditure Group, Region and Income Group (1st 40%, 2nd 40% and 3rd 20%)







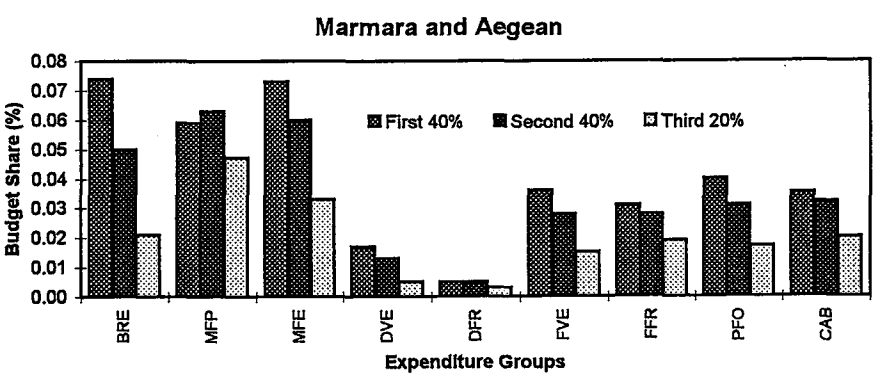
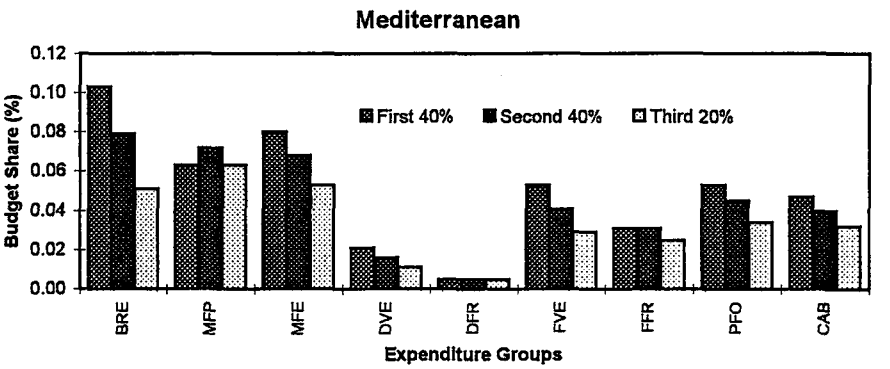
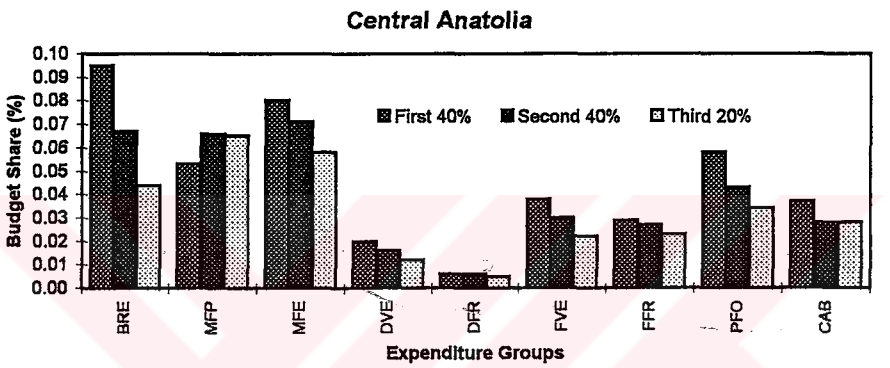
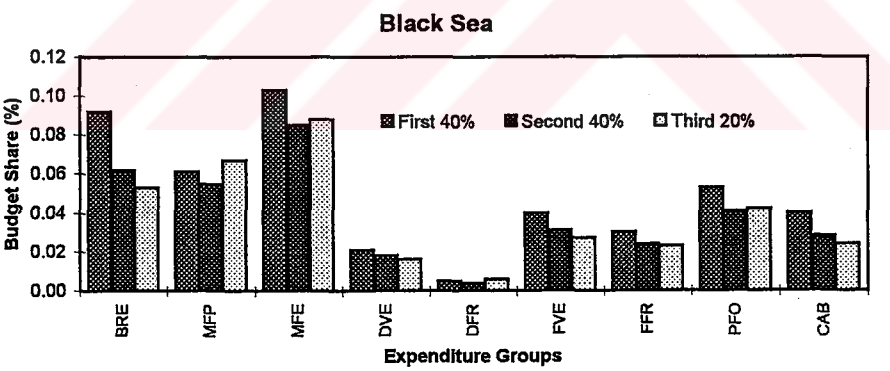
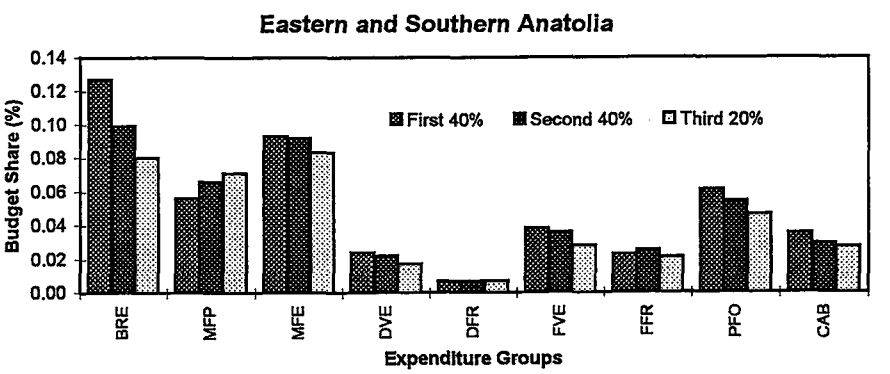


Figure C12 : Budget Shares of Food Expenditures by Expenditure Group, Region and Income Group (1st 40%, 2nd 40% and 3rd 20%) (cont'd)









APPENDIX D:
RESULTS OF SIMPLE AND EXTENDED DOUBLE-LOG MODELS
(Main Expenditures)

EXPLANATORY NOTES:

ey:	parameter of income
ee:	parameter of total expenditure
ee1:	parameter of total expenditure (for 2nd 40%)
ee2:	parameter of total expenditure (for 3rd 20%)
ee3:	parameter of total expenditure (for income above the average)
s:	parameter of household size
*:	individually significant at 0.01
**:	individually significant at 0.05
***:	individually significant at 0.1
F-STAT:	F-Statistics
saw0.01:	model is significant as a whole at 0.01
saw0.05:	model is significant as a whole at 0.05
saw0.1:	model is significant as a whole at 0.1
R-SQ:	R-Square
R-BAR-SQ:	Adjusted R-Square
DW-ST:	Durbin-Watson Statistics
SC:	Serial Correlation
sc0.01:	serial correlation at 0.01
sc0.05:	serial correlation at 0.5
sc0.1:	serial correlation at 0.1
HT:	Heteroscedasticity
ht0.01:	heteroscedasticity at 0.01
ht0.05:	heteroscedasticity at 0.05
ht0.1:	heteroscedasticity at 0.1

TABLE D1 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL WITHOUT INCOME DUMMIES
(EXPLANATORY VARIABLES ARE INCOME AND AVERAGE HOUSEHOLD SIZE)

		ey	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
FOOD	TURKEY	0.3980 *	0.4180 *	saw0.01	0.9770	0.9760	1.2320	sc0.01	
	RURAL	0.3430 *	0.3940 *	saw0.01	0.9320	0.9300	1.6470		
	URBAN	0.4430 *	0.6830 *	saw0.01	0.9830	0.9820	1.6790		hts0.05
	MARMARA AND AEGEAN	0.4290 *	0.3890 *	saw0.01	0.9700	0.9700	1.5800		hts0.05
	MEDITERRANEAN	0.4150 *	0.4290 *	saw0.01	0.8840	0.8810	1.6220		hts0.01
	CENTRAL ANATOLIA	0.3910 *	0.4420 *	saw0.01	0.9030	0.9010	1.7330		
	BLACK SEA	0.3550 *	0.4540 *	saw0.01	0.8760	0.8730	2.0640		hts0.01
	EAST.&SOUTH. ANA.	0.3380 *	0.3180 *	saw0.01	0.8950	0.8930	2.0600		
RESTAURANT	TURKEY	0.9900 *	-0.2250	saw0.01	0.9550	0.9540	1.5460		hts0.05
	RURAL	0.6270 *	0.3300	saw0.01	0.8230	0.8200	1.8970		
	URBAN	1.0990 *	0.2040	saw0.01	0.9620	0.9610	2.1560		
	MARMARA AND AEGEAN	1.0100 *	-0.3470	saw0.01	0.9340	0.9330	2.0380		
	MEDITERRANEAN	0.8150 *	0.4460	saw0.01	0.7950	0.7900	1.7360		
	CENTRAL ANATOLIA	0.8420 *	0.0970	saw0.01	0.7650	0.7600	1.4670	sc0.05	
	BLACK SEA	0.8620 *	0.4100	saw0.01	0.6550	0.6480	1.8960		
	EAST.&SOUTH. ANA.	0.5350 *	0.7440 **	saw0.01	0.7290	0.7230	1.8910		hts0.01
CLOTHING	TURKEY	0.7770 *	0.2620	saw0.01	0.9210	0.9190	1.8380		
	RURAL	0.6650 *	0.1400	saw0.01	0.7170	0.7110	1.5220	sc0.05	
	URBAN	0.8480 *	0.6470 *	saw0.01	0.9500	0.9490	2.2370		
	MARMARA AND AEGEAN	0.8360 *	0.1740	saw0.01	0.8830	0.8810	1.9140		hts0.01
	MEDITERRANEAN	0.9250 *	0.5400 **	saw0.01	0.7970	0.7920	1.9780		hts0.01
	CENTRAL ANATOLIA	0.7030 *	0.8460 **	saw0.01	0.7330	0.7280	2.0200		
	BLACK SEA	0.8170 *	0.4020	saw0.01	0.7340	0.7280	2.2890		hts0.01
	EAST.&SOUTH. ANA.	0.6570 *	-0.1350	saw0.01	0.7260	0.7210	2.0440		hts0.01

TABLE D1 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL WITHOUT INCOME DUMMIES (cont'd)
(EXPLANATORY VARIABLES ARE INCOME AND AVERAGE HOUSEHOLD SIZE)

		ey	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
HOUSE FURNISHINGS	TURKEY	0.6490 *	0.9770 **	saw0.01	0.8240	0.8210	1.9760		
	RURAL	0.6750 *	0.1710	saw0.01	0.5780	0.5700	1.8400		
	URBAN	0.7580 *	0.5700	saw0.01	0.7380	0.7330	2.2580		
	MARMARA AND AEGEAN	0.7520 *	0.4810	saw0.01	0.6450	0.6380	2.2090		
	MEDITERRANEAN	0.9310 *	0.3300	saw0.01	0.5720	0.5630	1.9440		
	CENTRAL ANATOLIA	0.6600 *	0.8050	saw0.01	0.5340	0.5240	1.8060		
	BLACK SEA	0.7670 *	0.4110	saw0.01	0.4460	0.4350	2.1950		
	EAST.&SOUTH. ANA.	0.6310 *	-0.5520	saw0.01	0.4260	0.4140	2.3220		
HOUSE OPERATION AND SERVICES	TURKEY	1.0210 *	0.0910	saw0.01	0.7420	0.7360	1.6860		hts0.01
	RURAL	0.3220	1.9220 **	saw0.01	0.4270	0.4150	1.7920		
	URBAN	1.3030 *	0.7960	saw0.01	0.8100	0.8060	2.1470		
	MARMARA AND AEGEAN	1.1570 *	0.1900	saw0.01	0.6950	0.6890	1.9180		
	MEDITERRANEAN	1.2980 *	-0.0660	saw0.01	0.2910	0.2770	1.7010		hts0.01
	CENTRAL ANATOLIA	0.8030 *	1.3120	saw0.01	0.4470	0.4350	2.0280		hts0.01
	BLACK SEA	0.8760 *	0.8950	saw0.01	0.3630	0.3500	1.8510		
	EAST.&SOUTH. ANA.	0.5670 **	1.1410	saw0.01	0.2190	0.2030	1.8920		
HEALTH	TURKEY	0.7140 *	-0.8590 **	saw0.01	0.7270	0.7210	1.7990		
	RURAL	0.3820 *	0.2050	saw0.01	0.3680	0.3550	2.0750		
	URBAN	0.7980 *	-0.8620 **	saw0.01	0.8120	0.8080	1.9820		
	MARMARA AND AEGEAN	0.7980 *	-0.5300	saw0.01	0.6780	0.6720	1.7240		
	MEDITERRANEAN	0.5990 *	-0.1070	saw0.01	0.3290	0.3160	2.3560		
	CENTRAL ANATOLIA	0.6030 *	-0.2220	saw0.01	0.4410	0.4290	1.5520	sc0.05	
	BLACK SEA	0.6030 *	0.1840	saw0.01	0.3470	0.3330	2.0120		
	EAST.&SOUTH. ANA.	0.1580	1.4240 *	saw0.01	0.3000	0.2850	2.1590		

TABLE D1 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL WITHOUT INCOME DUMMIES (cont'd)
(EXPLANATORY VARIABLES ARE INCOME AND AVERAGE HOUSEHOLD SIZE)

		ey	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
PERSONAL CARE	TURKEY	0.8440 *	-0.1190	saw0.01	0.9450	0.9440	1.6050		
	RURAL	0.4060 *	0.4240	saw0.01	0.7010	0.6940	1.6560		
	URBAN	0.9230 *	-0.0400	saw0.01	0.9590	0.9580	1.8240		hts0.01
	MARMARA AND AEGEAN	0.9460 *	-0.5980 *	saw0.01	0.9180	0.9160	1.5170	sc0.05	
	MEDITERRANEAN	0.8240 *	0.1290	saw0.01	0.8020	0.7980	1.5230		hts0.05
	CENTRAL ANATOLIA	0.7760 *	0.5340	saw0.01	0.7860	0.7820	2.0400		
	BLACK SEA	0.7000 *	0.1520	saw0.01	0.6360	0.6280	1.6500		hts0.05
	EAST.&SOUTH. ANA.	0.3720 *	0.3080	saw0.01	0.6200	0.6120	1.7430		
TRANSPORTATIO AND COMMUNICATION	TURKEY	1.2180 *	-0.9520 **	saw0.01	0.8620	0.8590	1.6410		
	RURAL	0.7180 *	0.3050	saw0.01	0.6260	0.6180	1.9600		
	URBAN	1.3600 *	-1.7790 *	saw0.01	0.9200	0.9190	2.1880		hts0.05
	MARMARA AND AEGEAN	1.3010 *	-1.3710 *	saw0.01	0.8140	0.8100	1.8240		
	MEDITERRANEAN	1.0440 *	0.0460	saw0.01	0.7270	0.7220	1.9310		hts0.05
	CENTRAL ANATOLIA	1.0230 *	-0.1350	saw0.01	0.7630	0.7590	1.5780		
	BLACK SEA	0.8420 *	-0.0210	saw0.01	0.4900	0.4800	2.0280		
	EAST.&SOUTH. ANA.	0.7530 *	0.6420	saw0.01	0.6230	0.6150	2.1740		
CULTURE, EDUCATION AND ENTERTAINMENT	TURKEY	0.9460 *	0.9490	saw0.01	0.8090	0.8050	2.2410		hts0.01
	RURAL	0.6460 *	0.8750	saw0.01	0.4980	0.4880	1.7740		
	URBAN	1.0740 *	0.9110	saw0.01	0.7860	0.7820	1.8730		hts0.01
	MARMARA AND AEGEAN	1.1050 *	-0.1540	saw0.01	0.6920	0.6850	2.3250		hts0.01
	MEDITERRANEAN	1.1770 *	1.7460 *	saw0.01	0.6520	0.6450	1.9450		
	CENTRAL ANATOLIA	1.0950 *	0.5230	saw0.01	0.5700	0.5610	2.0830		
	BLACK SEA	1.0360 *	1.0500	saw0.01	0.5010	0.4900	1.8310		
	EAST.&SOUTH. ANA.	0.5950 *	0.4590	saw0.01	0.3000	0.2850	1.7930		hts0.05

TABLE D1 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL WITHOUT INCOME DUMMIES (cont'd)
(EXPLANATORY VARIABLES ARE INCOME AND AVERAGE HOUSEHOLD SIZE)

		ey	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
HOUSING	TURKEY	0.7630 *	-0.3040 **	saw0.01	0.9660	0.9650	1.4830		
	RURAL	0.2860 *	0.1480	saw0.01	0.7540	0.7490	1.6040		
	URBAN	0.7950 *	-0.3140 **	saw0.01	0.9760	0.9750	1.1490	sc0.01	hts0.01
	MARMARA AND AEGEAN	0.8640 *	-0.6110 *	saw0.01	0.9480	0.9470	1.2620	sc0.01	hts0.01
	MEDITERRANEAN	0.5278 *	0.1689	saw0.01	0.8625	0.8597	1.3565	sc0.01	
	CENTRAL ANATOLIA	0.5940 *	0.1050	saw0.01	0.8760	0.8740	1.8500		hts0.05
	BLACK SEA	0.3540 *	0.2460	saw0.01	0.5560	0.5470	1.5430	sc0.05	
	EAST.&SOUTH. ANA.	0.3330 *	-0.1820	saw0.01	0.6120	0.6040	1.8440		
OTHER	TURKEY	0.8770 *	-0.2830	saw0.01	0.7560	0.7510	1.7020		hts0.01
	RURAL	0.8410 *	-0.0390	saw0.01	0.5400	0.5300	1.4110	sc0.05	hts0.01
	URBAN	1.0350 *	0.3180	saw0.01	0.8250	0.8220	2.2820		
	MARMARA AND AEGEAN	0.9400 *	0.3860	saw0.01	0.7320	0.7270	2.5530	sc0.01	hts0.05
	MEDITERRANEAN	0.9800 *	0.5080	saw0.01	0.5640	0.5550	1.8840		hts0.01
	CENTRAL ANATOLIA	0.6880 *	1.0530	saw0.01	0.4580	0.4470	1.6490		hts0.05
	BLACK SEA	1.1230 *	-0.3330	saw0.01	0.5330	0.5240	2.1040		
	EAST.&SOUTH. ANA.	0.6300 *	0.4850	saw0.01	0.3950	0.3820	2.2440		

TABLE D2 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL WITHOUT INCOME DUMMIES
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
FOOD	TURKEY	0.5357 *	0.5662 *	saw0.01	0.9719	0.9713	1.3811	sc0.05	hts0.01
	RURAL	0.5968 *	0.4448 *	saw0.01	0.9510	0.9500	1.7801		hts0.05
	URBAN	0.5563 *	0.7688 *	saw0.01	0.9734	0.9728	1.8542		hts0.01
	MARMARA AND AEGEAN	0.5077 *	0.6445 *	saw0.01	0.9503	0.9492	1.9058		hts0.01
	MEDITERRANEAN	0.6276 *	0.2894 *	saw0.01	0.9315	0.9301	1.8676		
	CENTRAL ANATOLIA	0.6093 *	0.3142 *	saw0.01	0.9245	0.9230	1.3316	sc0.01	hts0.05
	BLACK SEA	0.5392 *	0.3864 *	saw0.01	0.9101	0.9082	2.0790		
	EAST.&SOUTH. ANA.	0.6664 *	0.3211 *	saw0.01	0.9346	0.9333	2.2150		hts0.01
RESTAURANT	TURKEY	1.3443 *	0.1041	saw0.01	0.9547	0.9538	1.6695		
	RURAL	1.0155 *	0.5607 **	saw0.01	0.8232	0.8196	1.8727		
	URBAN	1.3797 *	0.4183	saw0.01	0.9510	0.9500	2.0008		
	MARMARA AND AEGEAN	1.2051 *	0.2317	saw0.01	0.9214	0.9198	2.2896		
	MEDITERRANEAN	1.1484 *	0.3216	saw0.01	0.7756	0.7710	1.8195		
	CENTRAL ANATOLIA	1.1853 *	0.1150	saw0.01	0.7271	0.7214	1.4772	sc0.05	
	BLACK SEA	1.1544 *	0.5027	saw0.01	0.6383	0.6308	1.8736		
	EAST.&SOUTH. ANA.	1.0545 *	0.7525 *	saw0.01	0.7559	0.7509	1.8214		
CLOTHING	TURKEY	1.0865 *	0.4097 **	saw0.01	0.9418	0.9406	1.6861		
	RURAL	1.5061 *	-0.4159	saw0.01	0.8554	0.8524	1.2428	sc0.01	
	URBAN	1.0778 *	0.7895 *	saw0.01	0.9614	0.9606	1.9805		hts0.05
	MARMARA AND AEGEAN	1.0372 *	0.5504 *	saw0.01	0.9219	0.9203	1.9384		
	MEDITERRANEAN	1.4630 *	0.1103	saw0.01	0.8955	0.8934	1.9846		
	CENTRAL ANATOLIA	1.3169 *	0.1049	saw0.01	0.8521	0.8491	1.8952		
	BLACK SEA	1.3419 *	0.0817	saw0.01	0.8203	0.8166	2.1694		
	EAST.&SOUTH. ANA.	1.3960 *	-0.2924	saw0.01	0.8312	0.8277	1.3583	sc0.05	

TABLE D2 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL WITHOUT INCOME DUMMIES (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
HOUSE FURNISHINGS	TURKEY	0.9428 *	0.9788 *	saw0.01	0.8590	0.8561	1.8388		
	RURAL	1.7141 *	-0.7424 **	saw0.01	0.7465	0.7413	1.7480		
	URBAN	0.9976 *	0.6393	saw0.01	0.7952	0.7909	2.2171		
	MARMARA AND AEGEAN	0.9679 *	0.7310	saw0.01	0.7056	0.6996	2.1654		
	MEDITERRANEAN	1.6384 *	-0.4043	saw0.01	0.7515	0.7463	1.7802		
	CENTRAL ANATOLIA	1.4128 *	-0.2969	saw0.01	0.6928	0.6864	1.7787		
	BLACK SEA	1.7461 *	-0.6910	saw0.01	0.6704	0.6636	2.1343		
	EAST.&SOUTH. ANA.	1.5922 *	-1.1210 *	saw0.01	0.6314	0.6238	2.4067	sc0.05	
HOUSE OPERATION AND SERVICES	TURKEY	1.4697 *	0.1402	saw0.01	0.7783	0.7738	1.8934		hts0.05
	RURAL	0.9702 *	1.2036	saw0.01	0.4653	0.4543	1.7829		
	URBAN	1.6661 *	0.9979	saw0.01	0.8282	0.8246	2.1293		hts0.05
	MARMARA AND AEGEAN	1.4552 *	0.6589	saw0.01	0.7402	0.7349	1.9499		hts0.05
	MEDITERRANEAN	2.2612 *	-1.0465	saw0.01	0.3867	0.3740	1.7572		hts0.01
	CENTRAL ANATOLIA	1.4016 *	0.7025	saw0.01	0.4868	0.4763	2.0624		hts0.05
	BLACK SEA	1.4849 *	0.4773	saw0.01	0.4040	0.3917	1.8642		
	EAST.&SOUTH. ANA.	1.3562 *	0.7512	saw0.01	0.2496	0.2341	1.9035		
HEALTH	TURKEY	0.9939 *	-0.7076	saw0.01	0.7475	0.7423	1.7668		
	RURAL	0.6380 *	0.3099	saw0.01	0.3724	0.3595	1.9771		
	URBAN	1.0032 *	-0.7077	saw0.01	0.8038	0.7998	2.0886		
	MARMARA AND AEGEAN	0.9830 *	-0.1521	saw0.01	0.7034	0.6973	1.8134		
	MEDITERRANEAN	0.8535 *	-0.2164	saw0.01	0.3253	0.3114	2.4745	sc0.05	
	CENTRAL ANATOLIA	0.7642 *	-0.0135	saw0.01	0.3786	0.3657	1.5810		
	BLACK SEA	0.8168 *	0.2333	saw0.01	0.3394	0.3258	1.9816		
	EAST.&SOUTH. ANA.	0.5570 *	1.0184 **	saw0.01	0.3356	0.3219	2.1547		

TABLE D2 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL WITHOUT INCOME DUMMIES (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
PERSONAL CARE	TURKEY	1.1621 *	0.1069	saw0.01	0.9563	0.9554	1.6909		
	RURAL	0.7587 *	0.3848	saw0.01	0.7338	0.7283	1.8506		
	URBAN	1.1623 *	0.1357	saw0.01	0.9521	0.9511	2.0805		hts0.01
	MARMARA AND AEGEAN	1.1512 *	-0.1151	saw0.01	0.9340	0.9327	2.0386		
	MEDITERRANEAN	1.1985 *	-0.0652	saw0.01	0.8140	0.8102	1.5547	sc0.05	
	CENTRAL ANATOLIA	1.1222 *	0.4819	saw0.01	0.7668	0.7620	1.9996		
	BLACK SEA	0.8803 *	0.3232	saw0.01	0.5919	0.5835	1.7555		
	EAST.&SOUTH. ANA.	0.7465 *	0.2930	saw0.01	0.6553	0.6482	1.5549	sc0.05	
TRANSPORTATIO AND COMMUNICATION	TURKEY	1.7385 *	-0.8417 **	saw0.01	0.9062	0.9042	1.6921		
	RURAL	1.4756 *	-0.0135	saw0.01	0.6963	0.6900	1.9446		hts0.05
	URBAN	1.7363 *	-1.5627 *	saw0.01	0.9396	0.9384	2.0372		
	MARMARA AND AEGEAN	1.6483 *	-0.8746 **	saw0.01	0.8876	0.8853	1.9557		
	MEDITERRANEAN	1.6307 *	-0.4013	saw0.01	0.8162	0.8124	2.2792		
	CENTRAL ANATOLIA	1.5996 *	-0.4817	saw0.01	0.7932	0.7890	1.8488		
	BLACK SEA	1.4115 *	-0.3982	saw0.01	0.5769	0.5682	2.1297		
	EAST.&SOUTH. ANA.	1.6830 *	0.3242	saw0.01	0.7095	0.7036	2.1301		hts0.01
CULTURE, EDUCATION AND ENTERTAINMENT	TURKEY	1.3443 *	1.0545 **	saw0.01	0.8344	0.8310	2.2893		hts0.01
	RURAL	1.8989 *	-0.4812	saw0.01	0.6446	0.6373	1.7972		
	URBAN	1.3904 *	1.0489	saw0.01	0.8216	0.8180	1.9199		hts0.01
	MARMARA AND AEGEAN	1.3629 *	0.3644	saw0.01	0.7173	0.7114	2.2620		hts0.01
	MEDITERRANEAN	1.9066 *	1.1175 **	saw0.01	0.7331	0.7276	1.9762		
	CENTRAL ANATOLIA	1.9228 *	-0.3347	saw0.01	0.6472	0.6400	2.0921		
	BLACK SEA	2.1329 *	-0.0656	saw0.01	0.6426	0.6352	1.7678		hts0.05
	EAST.&SOUTH. ANA.	1.5363 *	-0.1380	saw0.01	0.3871	0.3745	1.7210		

TABLE D2 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL WITHOUT INCOME DUMMIES (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
HOUSING	TURKEY	1.0309 *	-0.0306	saw0.01	0.9616	0.9608	1.7353		hts0.01
	RURAL	0.4678 *	0.2433	saw0.01	0.7567	0.7517	1.5425	sc0.05	
	URBAN	0.9964 *	-0.1554	saw0.01	0.9609	0.9601	1.3720		hts0.01
	MARMARA AND AEGEAN	1.0303 *	-0.1141	saw0.01	0.9331	0.9317	1.4277	sc0.05	hts0.01
	MEDITERRANEAN	0.7754	0.0311	saw0.01	0.8863	0.8839	1.8952		
	CENTRAL ANATOLIA	0.8544 *	0.0743	saw0.01	0.8476	0.8444	1.7818		
	BLACK SEA	0.5810 *	0.1080	saw0.01	0.6150	0.6071	1.6697		
	EAST.&SOUTH. ANA.	0.6666 *	-0.1952	saw0.01	0.6687	0.6619	1.8840		
OTHER	TURKEY	1.2580 *	-0.2279	saw0.01	0.7946	0.7904	1.9432		hts0.01
	RURAL	1.7103 *	-0.3805	saw0.01	0.6106	0.6025	1.6847		hts0.01
	URBAN	1.3203 *	0.4848	saw0.01	0.8400	0.8367	2.3376		
	MARMARA AND AEGEAN	1.1679 *	0.8041	saw0.01	0.7648	0.7599	2.5043	sc0.01	
	MEDITERRANEAN	1.5955 *	-0.0298	saw0.01	0.6600	0.6530	1.9248		hts0.01
	CENTRAL ANATOLIA	1.2896 *	0.3268	saw0.01	0.5250	0.5152	1.6550		
	BLACK SEA	1.6645 *	-0.4756	saw0.01	0.5638	0.5548	2.0260		
	EAST.&SOUTH. ANA.	1.3889 *	0.2497	saw0.01	0.4470	0.4356	2.2609		

TABLE D3 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL
WITH INCOME DUMMIES FOR THE LEVELS BELOW AND ABOVE THE AVERAGE INCOME
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee1	s	ee2	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
FOOD	TURKEY	0.6724 *	0.2533 *	0.4412 *	saw0.01	0.9804	0.9796	1.6605		hts0.05
	RURAL	0.5801 *	0.4112 *	0.4955	saw0.01	0.9564	0.9545	1.8098		
	URBAN	0.6377 *	0.4714 *	0.4204 *	saw0.01	0.9823	0.9815	2.1592		hts0.05
	MARMARA AND AEGEAN	0.6539 *	0.2973 *	0.3873 *	saw0.01	0.9629	0.9614	2.2512		
	MEDITERRANEAN	0.6585 *	0.2470 *	0.4989 **	saw0.01	0.9362	0.9336	1.9192		
	CENTRAL ANATOLIA	0.5881 *	0.3502 *	0.4590	saw0.01	0.9291	0.9261	1.3697	sc0.01	
	BLACK SEA	0.5524 *	0.3658 *	0.4618	saw0.01	0.9117	0.9080	2.0168		
	EAST.&SOUTH. ANA.	0.6793 *	0.2736 *	0.5271 **	saw0.01	0.9420	0.9396	2.2380		hts0.05
RESTAURANT	TURKEY	1.3184 *	-0.0291	1.2216	saw0.01	0.9578	0.9560	1.7813		
	RURAL	0.8667 *	0.3659	1.0737	saw0.01	0.8456	0.8391	2.0182		
	URBAN	1.4582 *	0.0822	1.1267 **	saw0.01	0.9562	0.9543	2.1391		
	MARMARA AND AEGEAN	1.2750 *	-0.0603	1.0087	saw0.01	0.9272	0.9241	2.4122	sc0.05	
	MEDITERRANEAN	1.0006 *	0.2654	1.0908	saw0.01	0.7864	0.7774	1.7790		
	CENTRAL ANATOLIA	0.7792 *	0.4008	1.0770	saw0.01	0.7659	0.7560	1.6000	sc0.05	
	BLACK SEA	1.0723 *	0.2538	0.7592	saw0.01	0.6690	0.6550	1.9366		
	EAST.&SOUTH. ANA.	0.8102 *	0.5715 **	1.1028	saw0.01	0.7815	0.7723	1.9902		
CLOTHING	TURKEY	1.4815 *	-0.3661	0.9070 *	saw0.01	0.9591	0.9574	1.8201		
	RURAL	1.6578 *	-0.2679	0.9833 *	saw0.01	0.8771	0.8719	1.3443	sc0.01	
	URBAN	1.2340 *	0.2664	0.9347 *	saw0.01	0.9653	0.9639	1.9981		
	MARMARA AND AEGEAN	1.3436 *	-0.1017	0.8680 *	saw0.01	0.9324	0.9296	2.0015		
	MEDITERRANEAN	1.5409 *	0.0875	1.3571	saw0.01	0.8972	0.8928	2.0382		
	CENTRAL ANATOLIA	1.5277 *	-0.0283	1.2690	saw0.01	0.8618	0.8560	1.9385		
	BLACK SEA	1.3734 *	-0.0148	1.0476	saw0.01	0.8266	0.8193	2.1915		
	EAST.&SOUTH. ANA.	1.6789 *	-0.2473	0.9460 *	saw0.01	0.8636	0.8579	1.6084		

TABLE D3 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL
WITH INCOME DUMMIES FOR THE LEVELS BELOW AND ABOVE THE AVERAGE INCOME (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	ee2	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
HOUSE FURNISHINGS	TURKEY	1.3779 *	0.2729	0.8537 *	saw0.01	0.8811	0.8761	1.8928		
	RURAL	1.8718 *	-0.5884	1.1717 **	saw0.01	0.7646	0.7546	1.9924		
	URBAN	1.2822 *	-0.1939	1.0328	saw0.01	0.8068	0.7986	2.2624		
	MARMARA AND AEGEAN	0.9656 *	0.7554	0.9905	saw0.01	0.7057	0.6933	2.1637		
	MEDITERRANEAN	1.9024 *	-0.5319	1.1494 **	saw0.01	0.7683	0.7586	1.8629		
	CENTRAL ANATOLIA	1.7575 *	-0.4971	1.2143	saw0.01	0.7148	0.7028	1.9006		
	BLACK SEA	1.7375 *	-0.6800	1.7910	saw0.01	0.6705	0.6566	2.1242		
	EAST.&SOUTH. ANA.	1.8622 *	-1.0263 *	1.2864	saw0.01	0.6535	0.6389	2.4554	sc0.05	
HOUSE OPERATION AND SERVICES	TURKEY	0.9193 *	0.8794	1.4701	saw0.01	0.8002	0.7917	1.9784		hts0.05
	RURAL	0.6108	0.8417	2.1063 *	saw0.01	0.5169	0.4965	1.8299		
	URBAN	1.7342 *	0.7727	1.6105	saw0.01	0.8284	0.8212	2.1360		hts0.05
	MARMARA AND AEGEAN	1.0610 *	1.3136	1.4701	saw0.01	0.7477	0.7371	2.0527		hts0.05
	MEDITERRANEAN	1.8720 *	-1.0013	2.6112	saw0.01	0.3952	0.3697	1.7705		hts0.01
	CENTRAL ANATOLIA	1.1593 *	0.7615	2.1032	saw0.01	0.5000	0.4790	2.1059		hts0.05
	BLACK SEA	1.5849 *	0.2464	0.7254	saw0.01	0.4170	0.3925	1.8569		
	EAST.&SOUTH. ANA.	1.6022 *	1.0235	1.5231	saw0.01	0.2594	0.2282	1.9150		
HEALTH	TURKEY	0.5513 *	-0.1581	0.9614 **	saw0.01	0.7899	0.7810	1.9597		
	RURAL	0.3594	-0.0032	1.2199 *	saw0.01	0.4496	0.4265	2.3457		
	URBAN	0.8906 *	-0.3673	1.0157	saw0.01	0.8054	0.7972	2.0581		
	MARMARA AND AEGEAN	0.7174 *	0.2085	0.9044	saw0.01	0.7159	0.7039	1.8101		
	MEDITERRANEAN	0.7430 *	-0.2294	0.8857	saw0.01	0.3295	0.3013	2.4576	sc0.05	
	CENTRAL ANATOLIA	0.1190	0.3270	1.3721 *	saw0.01	0.5206	0.5005	2.0234		
	BLACK SEA	0.7245 *	0.1705	0.8767	saw0.01	0.3455	0.3179	2.0079		
	EAST.&SOUTH. ANA.	0.1532	0.9652 **	1.2260 *	saw0.01	0.3861	0.3602	2.3123		

TABLE D3 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL
WITH INCOME DUMMIES FOR THE LEVELS BELOW AND ABOVE THE AVERAGE INCOME (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	ee2	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
PERSONAL CARE	TURKEY	1.1386 *	0.1408	1.1639	saw0.01	0.9564	0.9546	1.6919		
	RURAL	0.8332 *	0.4447	0.3848 **	saw0.01	0.7499	0.7394	2.0448		
	URBAN	1.1076 *	0.2733	1.0996	saw0.01	0.9532	0.9513	2.0770		hts0.01
	MARMARA AND AEGEAN	1.0790 *	-0.0213	1.1252	saw0.01	0.9350	0.9323	2.0400		
	MEDITERRANEAN	1.1806 *	-0.1010	1.1160	saw0.01	0.8152	0.8074	1.5225	sc0.05	
	CENTRAL ANATOLIA	1.0245 *	0.5870	0.8464	saw0.01	0.7728	0.7632	2.0410		
	BLACK SEA	0.8513 *	0.2532	0.7827	saw0.01	0.5962	0.5792	1.7241		
	EAST.&SOUTH. ANA.	0.8444 *	0.2849	0.5339	saw0.01	0.6648	0.6506	1.6051		
TRANSPORTATIO AND COMMUNICATION	TURKEY	1.3186 *	0.1265	2.0342 *	saw0.01	0.9178	0.9144	1.7782		
	RURAL	1.3701 *	-0.0868	2.1109 **	saw0.01	0.7127	0.7006	2.1782		
	URBAN	1.6526 *	-1.2723 **	1.8381	saw0.01	0.9403	0.9378	2.0236		
	MARMARA AND AEGEAN	1.3169 *	-0.0130	2.0034 *	saw0.01	0.8991	0.8948	2.1292		
	MEDITERRANEAN	1.5199 *	-0.3003	1.9593	saw0.01	0.8218	0.8143	2.4182	sc0.05	
	CENTRAL ANATOLIA	1.3435 *	-0.3435	1.8197	saw0.01	0.8054	0.7972	1.8718		
	BLACK SEA	1.3801 *	-0.4886	1.2715	saw0.01	0.5810	0.5634	2.1091		
	EAST.&SOUTH. ANA.	1.0969 *	0.1036	2.3107 *	saw0.01	0.7664	0.7566	2.5298	sc0.01	hts0.01
CULTURE, EDUCATION AND ENTERTAINMENT	TURKEY	1.7336 *	0.4109	1.2558	saw0.01	0.8434	0.8368	2.3005		hts0.01
	RURAL	2.2074 *	-0.0855	1.7039	saw0.01	0.6819	0.6685	1.9894		
	URBAN	1.6141 *	0.3018	1.1901	saw0.01	0.8257	0.8184	1.8845		hts0.01
	MARMARA AND AEGEAN	1.6565 *	-0.1492	1.3231	saw0.01	0.7216	0.7099	2.2815		hts0.01
	MEDITERRANEAN	2.3600 *	1.0447 **	1.4466 **	saw0.01	0.7540	0.7436	2.0731		
	CENTRAL ANATOLIA	2.4414 *	-0.7107	2.1371	saw0.01	0.6725	0.6588	2.2284		
	BLACK SEA	2.2607 *	-0.0360	1.9168	saw0.01	0.6455	0.6306	1.8080		hts0.05
	EAST.&SOUTH. ANA.	2.0207 *	0.0981	1.1461	saw0.01	0.4191	0.3946	1.8473		

TABLE D3 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL
WITH INCOME DUMMIES FOR THE LEVELS BELOW AND ABOVE THE AVERAGE INCOME (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	ee2	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
HOUSING	TURKEY	1.0069 *	-0.1572	0.9148	saw0.01	0.9664	0.9650	1.8560		hts0.01
	RURAL	0.5441 *	0.3210 **	0.2337 *	saw0.01	0.7817	0.7725	1.7169		
	URBAN	1.0581 *	-0.4579 **	0.7022 *	saw0.01	0.9752	0.9741	1.6855		hts0.01
	MARMARA AND AEGEAN	1.1964 *	-0.6367 *	0.7525 *	saw0.01	0.9495	0.9474	1.7830		hts0.01
	MEDITERRANEAN	0.7259	0.0283	0.7976	saw0.01	0.8887	0.8840	1.8499		
	CENTRAL ANATOLIA	0.7508 *	0.1900	0.5324	saw0.01	0.8648	0.8591	1.8981		
	BLACK SEA	0.7259 *	0.1530	0.3624 **	saw0.01	0.6587	0.6443	1.9253		hts0.05
	EAST.&SOUTH. ANA.	0.8135 *	-0.1378	0.5143 **	saw0.01	0.6987	0.6860	2.1811		
OTHER	TURKEY	1.1317 *	-0.2533	1.1156	saw0.01	0.8025	0.7942	2.0154		hts0.01
	RURAL	1.6021 *	-0.5530	1.4689	saw0.01	0.6233	0.6074	1.6993		hts0.01
	URBAN	1.0854 *	1.1990	1.3570	saw0.01	0.8439	0.8373	2.3532		
	MARMARA AND AEGEAN	1.1175 *	0.8218	1.0971	saw0.01	0.7660	0.7562	2.5231	sc0.01	
	MEDITERRANEAN	1.5463 *	-0.2264	1.1138	saw0.01	0.6732	0.6594	1.9690		hts0.01
	CENTRAL ANATOLIA	1.4474 *	0.2565	1.0520	saw0.01	0.5294	0.5095	1.6488		
	BLACK SEA	1.5126 *	-0.6993	1.4834	saw0.01	0.5860	0.5686	2.0639		
	EAST.&SOUTH. ANA.	0.9351 *	0.1187	1.9705 **	saw0.01	0.4791	0.4572	2.3914	sc0.05	

TABLE D4 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL
WITH INCOME DUMMIES FOR THE 1ST 40%, 2ND 40% AND 3RD 20%
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee1	s	ee2	ee3	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
FOOD	TURKEY	0.6819 *	0.2221 **	0.6126	0.4152 *	saw0.01	0.9812	0.9800	1.6545		
	RURAL	0.5823 *	0.3841 *	0.4540	0.5277	saw0.01	0.9561	0.9533	1.6569		
	URBAN	0.6752 *	0.4188 *	0.5634 **	0.3830 *	saw0.01	0.9835	0.9825	2.2227		
	MARMARA AND AEGEAN	0.6401 *	0.2707 *	0.4160 *	0.3305 *	saw0.01	0.9700	0.9681	2.2442		
	MEDITERRANEAN	0.6250 *	0.2535 *	0.4214 **	0.5663	saw0.01	0.9448	0.9412	1.9787		
	CENTRAL ANATOLIA	0.5805 *	0.3371 *	0.5617	0.4479	saw0.01	0.9282	0.9236	1.3519	sc0.01	
	BLACK SEA	0.6532 *	0.2819 *	0.3085 *	0.4616	saw0.01	0.9307	0.9263	2.2119		
	EAST.&SOUTH. ANA.	0.6890 *	0.2984 *	0.6823	0.5295	saw0.01	0.9383	0.9343	2.2311		hts0.05
RESTAURANT	TURKEY	1.1506 *	0.1027	1.4408	1.1374	saw0.01	0.9604	0.9578	1.8641		
	RURAL	0.9370 *	0.3199	0.7530	1.2282	saw0.01	0.8359	0.8254	1.8165		
	URBAN	1.2804 *	0.1448	1.4792	1.0951	saw0.01	0.9593	0.9567	2.2731		
	MARMARA AND AEGEAN	1.1703 *	-0.0882	0.9592	0.9272	saw0.01	0.9330	0.9287	2.3861	sc0.05	
	MEDITERRANEAN	1.3345 *	0.2739	0.6751 **	1.2268	saw0.01	0.7900	0.7764	1.8713		
	CENTRAL ANATOLIA	0.7285 *	0.2774	0.5273	0.9880	saw0.01	0.7710	0.7562	1.5362	sc0.05	
	BLACK SEA	1.2262 *	0.2641	0.7803	0.7440	saw0.01	0.6592	0.6372	1.8720		
	EAST.&SOUTH. ANA.	0.7331 *	0.5546 **	0.7375	1.1586	saw0.01	0.7791	0.7649	2.0038		
CLOTHING	TURKEY	1.5934 *	-0.5131 **	1.2870	0.8490 *	saw0.01	0.9577	0.9550	1.8365		
	RURAL	1.8090 *	-0.4674	1.6815	0.8954 *	saw0.01	0.8765	0.8685	1.4312	sc0.01	
	URBAN	1.1962 *	0.3456	1.1049	0.9115 **	saw0.01	0.9655	0.9633	2.0091		
	MARMARA AND AEGEAN	1.3842 *	-0.1942	1.0220	0.8528 *	saw0.01	0.9344	0.9301	2.0749		
	MEDITERRANEAN	1.7391 *	-0.0232	1.2074 **	1.2975	saw0.01	0.9024	0.8961	2.0736		
	CENTRAL ANATOLIA	1.5925 *	-0.0172	1.5943	1.3354	saw0.01	0.8623	0.8534	1.9475		
	BLACK SEA	1.5808 *	-0.0945	0.8283 *	1.3766	saw0.01	0.8393	0.8290	2.0920		
	EAST.&SOUTH. ANA.	1.9845 *	-0.1949	1.2323 *	1.0875 *	saw0.01	0.8790	0.8712	1.6245		

TABLE D4 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL
WITH INCOME DUMMIES FOR 1ST 40%, 2ND 40% AND 3RD 20% (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	ee2	ee3	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
HOUSE FURNISHINGS	TURKEY	1.6626 *	-0.0414	1.2061	0.8304 *	saw0.01	0.8832	0.8757	1.9145		
	RURAL	2.2341 *	-0.5265	1.9138	1.1121 *	saw0.01	0.7943	0.7811	2.1222		
	URBAN	1.4901 *	-0.1708	0.9639	1.0190	saw0.01	0.8085	0.7961	2.2504		
	MARMARA AND AEGEAN	1.0462 *	0.8040	1.6345	1.2042	saw0.01	0.7264	0.7088	2.1306		
	MEDITERRANEAN	2.2853 *	-0.6724	2.5194	1.0093 *	saw0.01	0.7936	0.7803	1.8537		
	CENTRAL ANATOLIA	2.0454 *	-0.6102	1.8654	1.6967	saw0.01	0.7404	0.7237	1.9693		
	BLACK SEA	1.6621 *	-0.4877	2.3007	1.6709	saw0.01	0.6910	0.6711	2.2158		
	EAST.&SOUTH. ANA.	1.7798 *	-0.8729 *	2.6689 **	1.0734	saw0.01	0.6848	0.6645	2.4035	sc0.05	
HOUSE OPERATION AND SERVICES	TURKEY	0.2787	1.6516 **	1.5624 **	1.5369 *	saw0.01	0.8109	0.7986	2.0895		hts0.05
	RURAL	0.6250	0.8322	0.6043	1.9668	saw0.01	0.5031	0.4710	1.8543		hts0.05
	URBAN	1.6568 *	0.8368	2.0028	1.7568	saw0.01	0.8311	0.8202	2.1239		hts0.05
	MARMARA AND AEGEAN	1.0662 **	1.3758	2.5784 **	1.7080	saw0.01	0.7642	0.7490	2.1620		hts0.05
	MEDITERRANEAN	1.7192 **	-0.8637	1.3664	2.5845	saw0.01	0.3987	0.3599	1.7628		hts0.01
	CENTRAL ANATOLIA	0.3955	1.4891	1.9632	1.3366	saw0.01	0.5163	0.4851	2.1647		hts0.05
	BLACK SEA	1.5091 *	0.4182	0.7963	1.2943	saw0.01	0.4253	0.3882	1.8806		
	EAST.&SOUTH. ANA.	1.3691	0.7404	1.4817	1.1613	saw0.01	0.2501	0.2017	1.8958		
HEALTH	TURKEY	0.1846	0.2830	0.9590 **	1.0133 *	saw0.01	0.7884	0.7747	1.9928		
	RURAL	0.1974	0.1596	1.0666	0.8229	saw0.01	0.4479	0.4123	2.2856		
	URBAN	0.8794 *	-0.4329	0.9217	0.9658	saw0.01	0.8058	0.7933	2.0574		
	MARMARA AND AEGEAN	0.1582	0.5650	0.8547	0.8522	saw0.01	0.7353	0.7182	2.0171		
	MEDITERRANEAN	0.5450	-0.2249	0.7320	0.5014	saw0.01	0.3407	0.2981	2.4813	sc0.05	
	CENTRAL ANATOLIA	0.0051	0.2966	0.1640	1.2787 **	saw0.01	0.5125	0.4811	2.0194		
	BLACK SEA	0.6786 **	0.1897	0.6584	0.7850	saw0.01	0.3471	0.3050	1.9852		
	EAST.&SOUTH. ANA.	0.4438	0.9533 **	0.4698	0.9929	saw0.01	0.3887	0.3493	2.3320		

TABLE D4 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL
WITH INCOME DUMMIES FOR 1ST 40%, 2ND 40% AND 3RD 20% (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	ee2	ee3	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
PERSONAL CARE	TURKEY	1.2006 *	0.0420	1.1198	1.1077	saw0.01	0.9570	0.9542	1.6907		
	RURAL	0.9566 *	0.3337	0.4336	0.5307	saw0.01	0.7560	0.7403	1.9558		
	URBAN	1.0237 *	0.3334	1.2034	1.0046	saw0.01	0.9552	0.9523	2.0286		hts0.01
	MARMARA AND AEGEAN	0.9601 *	0.0177	1.1780	1.0081	saw0.01	0.9383	0.9344	2.0395		
	MEDITERRANEAN	1.2346 *	-0.1263	0.5197 **	1.1867	saw0.01	0.8323	0.8215	1.5342	sc0.05	
	CENTRAL ANATOLIA	1.3472 *	0.2642	0.7350	0.8954	saw0.01	0.7760	0.7615	1.9158		
	BLACK SEA	0.9986 *	0.1182	0.2888 **	0.9374	saw0.01	0.6304	0.6065	1.6608		
	EAST.&SOUTH. ANA.	0.8139 *	0.3254	0.8656	0.5665	saw0.01	0.6659	0.6443	1.5911	sc0.05	
TRANSPORTATIO AND COMMUNICATION	TURKEY	1.2365 *	0.1679	1.5672	1.9597 **	saw0.01	0.9191	0.9139	1.7754		
	RURAL	1.4916 *	-0.0143	1.7737	2.2665	saw0.01	0.7263	0.7087	2.2571		
	URBAN	1.5119 *	-1.0911 **	1.5655	1.7608	saw0.01	0.9415	0.9378	2.0879		
	MARMARA AND AEGEAN	1.4785 *	-0.1472	1.2676	1.9573	saw0.01	0.8985	0.8920	2.0643		
	MEDITERRANEAN	1.7739 *	-0.4064	0.8120 *	1.9204	saw0.01	0.8380	0.8276	2.4034	sc0.05	
	CENTRAL ANATOLIA	1.4131 *	-0.5022	1.0724	1.7297	saw0.01	0.8122	0.8001	1.8521		
	BLACK SEA	1.2766 *	-0.4237	1.7191	1.0021	saw0.01	0.5886	0.5621	2.1395		
	EAST.&SOUTH. ANA.	1.0008 *	-0.0093	1.4378	2.0803 **	saw0.01	0.7850	0.7711	2.7261	sc0.01	hts0.01
CULTURE, EDUCATION AND ENTERTAINMENT	TURKEY	2.2786 *	-0.1322	1.5319	1.2814 **	saw0.01	0.8545	0.8451	2.3552		hts0.01
	RURAL	2.2240 *	-0.3319	1.3404	1.8916	saw0.01	0.6678	0.6464	2.0138		
	URBAN	1.9347 *	0.1207	1.8117	1.2693	saw0.01	0.8335	0.8227	1.9239		hts0.01
	MARMARA AND AEGEAN	1.9360 *	-0.2245	1.7302	1.3718	saw0.01	0.7257	0.7080	2.3058		hts0.01
	MEDITERRANEAN	3.0915 *	0.7115	1.9765	1.4665 **	saw0.01	0.7664	0.7513	2.2276		
	CENTRAL ANATOLIA	2.3723 *	-0.7423	1.2021	1.8041	saw0.01	0.6647	0.6431	2.1986		
	BLACK SEA	2.3718 *	0.1080	2.0287	3.0947	saw0.01	0.6588	0.6368	1.8102		hts0.05
	EAST.&SOUTH. ANA.	1.6909 *	-0.0336	1.6055	1.0455	saw0.01	0.4315	0.3948	1.8607		

TABLE D4 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL
WITH INCOME DUMMIES FOR 1ST 40%, 2ND 40% AND 3RD 20% (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	ee2	ee3	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
HOUSING	TURKEY	1.0655 *	-0.2498	1.0410	0.8313 **	saw0.01	0.9663	0.9641	1.8411		hts0.05
	RURAL	0.5688 *	0.1004	-0.1073 *	0.3429	saw0.01	0.8394	0.8291	1.8638		
	URBAN	0.9948 *	-0.4617 *	1.0678	0.5794 *	saw0.01	0.9783	0.9769	1.6483		hts0.01
	MARMARA AND AEGEAN	1.2312 *	-0.6378 *	1.1562	0.5870 *	saw0.01	0.9577	0.9550	1.9972		
	MEDITERRANEAN	0.6484	0.0427	0.3598 **	0.8152	saw0.01	0.9086	0.9027	1.7991		
	CENTRAL ANATOLIA	0.8111 *	0.0411	0.3967 **	0.3201 *	saw0.01	0.8826	0.8751	1.9595		
	BLACK SEA	1.0211 *	-0.0835	-0.0263 *	0.7082	saw0.01	0.7479	0.7316	1.9632		
	EAST.&SOUTH. ANA.	0.8844 *	-0.1998	0.3821 **	0.5554	saw0.01	0.7141	0.6957	2.1454		
OTHER	TURKEY	0.8768 *	0.0405	1.3207	1.1157	saw0.01	0.8032	0.7905	2.0648		hts0.01
	RURAL	1.6880 *	-0.6833	1.4784	1.4450	saw0.01	0.6180	0.5934	1.6563		hts0.01
	URBAN	1.1433 *	1.0309	1.4074	1.2966	saw0.01	0.8435	0.8334	2.3423		
	MARMARA AND AEGEAN	1.0798 *	0.8072	0.8288	0.9952	saw0.01	0.7705	0.7557	2.5614	sc0.01	hts0.05
	MEDITERRANEAN	1.7791 *	-0.2256	1.6379	0.8714	saw0.01	0.6742	0.6532	1.9819		hts0.01
	CENTRAL ANATOLIA	1.5186 *	0.3055	1.8175	0.9765	saw0.01	0.5353	0.5053	1.7137		
	BLACK SEA	1.4072 *	-0.6673	0.8457	1.5919	saw0.01	0.6069	0.5816	2.1398		
	EAST.&SOUTH. ANA.	0.5913	0.1264	1.4607	1.9557 **	saw0.01	0.4840	0.4507	2.4293	sc0.05	

APPENDIX E:
RESULTS OF SIMPLE AND EXTENDED WORKING-LESER MODELS

(Main Expenditures)

EXPLANATORY NOTES:

ey:	parameter of income
ee:	parameter of total expenditure
ee1:	parameter of total expenditure (for 2nd 40%)
ee2:	parameter of total expenditure (for 3rd 20%)
ee3:	parameter of total expenditure (for income above the average)
s:	parameter of household size
*:	individually significant at 0.01
**:	individually significant at 0.05
***:	individually significant at 0.1
F-STAT:	F-Statistics
saw0.01:	model is significant as a whole at 0.01
saw0.05:	model is significant as a whole at 0.05
saw0.1:	model is significant as a whole at 0.1
R-SQ:	R-Square
R-BAR-SQ:	Adjusted R-Square
DW-ST:	Durbin-Watson Statistics
SC:	Serial Correlation
sc0.01:	serial correlation at 0.01
sc0.05:	serial correlation at 0.5
sc0.1:	serial correlation at 0.1
HT:	Heteroscedasticity
ht0.01:	heteroscedasticity at 0.01
ht0.05:	heteroscedasticity at 0.05
ht0.1:	heteroscedasticity at 0.1

TABLE E1 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL WITHOUT INCOME DUMMIES
(EXPLANATORY VARIABLES ARE INCOME AND AVERAGE HOUSEHOLD SIZE)

		ey	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
FOOD	TURKEY	0.3005 *	0.1635 **	saw0.01	0.8259	0.8223	0.8094	sc0.05	hts0.01
	RURAL	-0.3312 *	2.5818 *	saw0.01	0.7049	0.6988	0.7016	sc0.01	hts0.01
	URBAN	0.3488 *	0.6328 *	saw0.01	0.9666	0.9659	1.0606	sc0.01	
	MARMARA AND AEGEAN	0.3342 *	0.4039 *	saw0.01	0.8800	0.8775	0.6457	sc0.01	hts0.01
	MEDITERRANEAN	-0.0357 *	1.6273	saw0.01	0.5329	0.5233	0.9750		hts0.01
	CENTRAL ANATOLIA	0.2843 *	1.0055	saw0.01	0.8412	0.8379	1.1730	sc0.01	hts0.01
	BLACK SEA	0.1309 *	1.5176 *	saw0.01	0.7862	0.7818	1.5432		hts0.01
	EAST.&SOUTH. ANA.	-0.3441 *	2.6509 *	saw0.01	0.6344	0.6269	0.9927		hts0.01
RESTAURANT	TURKEY	0.9819	0.7266		0.0570	0.0375	1.3979		hts0.01
	RURAL	0.3719 *	1.8550	saw0.01	0.4225	0.4106	1.5250		hts0.01
	URBAN	1.0895 *	1.1503	saw0.01	0.1705	0.1534	2.0675		
	MARMARA AND AEGEAN	1.0089	0.6297		0.0327	0.0127	2.0719		
	MEDITERRANEAN	0.7360 *	1.4661	saw0.01	0.1378	0.1200	1.6673		hts0.01
	CENTRAL ANATOLIA	0.8197 **	0.9616	saw0.01	0.1108	0.0925	1.3549	sc0.01	hts0.01
	BLACK SEA	0.8460	1.5421		0.0180	-0.0023	1.9378		
	EAST.&SOUTH. ANA.	-0.1890 *	3.5322 *	saw0.01	0.3444	0.3309	1.3707		hts0.01
CLOTHING	TURKEY	0.7747 *	1.0408	saw0.01	0.2868	0.2721	1.8527		
	RURAL	0.6748	0.7208	saw0.01	0.1832	0.1664	1.7630		
	URBAN	0.8484 *	1.6082 **	saw0.01	0.3033	0.2889	2.3450		
	MARMARA AND AEGEAN	0.8111 *	0.9856	saw0.01	0.1848	0.1679	1.9063		hts0.01
	MEDITERRANEAN	0.7885 **	1.5972	saw0.05	0.0670	0.0477	1.6950		hts0.01
	CENTRAL ANATOLIA	0.7205	1.6221		0.0395	0.0197	1.9341		
	BLACK SEA	0.7534 **	1.4111	saw0.05	0.0627	0.0433	2.4283	sc0.05	hts0.01
	EAST.&SOUTH. ANA.	0.5770 *	0.6282	saw0.01	0.2513	0.2358	2.3589		hts0.05

TABLE E1 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL WITHOUT INCOME DUMMIES (cont'd)
(EXPLANATORY VARIABLES ARE INCOME AND AVERAGE HOUSEHOLD SIZE)

		ey	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
HOUSE FURNISHINGS	TURKEY	0.6319 *	1.9773 **	saw0.01	0.2592	0.2439	2.0045		
	RURAL	0.6212 **	1.2904	saw0.01	0.1297	0.1118	1.9993		
	URBAN	0.7475 *	1.4630	saw0.01	0.1521	0.1346	2.1976		
	MARMARA AND AEGEAN	0.7313 *	1.7857	saw0.05	0.0893	0.0705	2.3290		
	MEDITERRANEAN	0.8353	1.2366		0.0077	-0.0128	1.9876		
	CENTRAL ANATOLIA	0.6506 **	1.6290	saw0.05	0.0606	0.0412	1.7826		hts0.05
	BLACK SEA	0.6416	2.0168		0.0199	-0.0004	1.9125		hts0.05
	EAST.&SOUTH. ANA.	0.3883 *	0.5364	saw0.01	0.2982	0.2837	2.2849	sc0.05	hts0.01
HOUSE OPERATION AND SERVICES	TURKEY	0.8818	0.7060		0.0289	0.0089	1.2716		hts0.01
	RURAL	-1.9877 *	8.6207 *	saw0.01	0.2244	0.2084	1.2318		hts0.01
	URBAN	1.2204 *	1.2932	saw0.01	0.1586	0.1412	2.1804		
	MARMARA AND AEGEAN	1.1262	0.9939		0.0366	0.0167	1.8754		
	MEDITERRANEAN	-3.3494 *	5.3489	saw0.01	0.1389	0.1212	1.0778		hts0.01
	CENTRAL ANATOLIA	0.7265	1.4729		0.0220	0.0018	2.0032		hts0.05
	BLACK SEA	0.8504	1.4375		0.0037	-0.0168	1.7827		
	EAST.&SOUTH. ANA.	-1.0664 *	6.5735 **	saw0.01	0.1392	0.1215	1.4892		hts0.01
HEALTH	TURKEY	0.6085 *	-1.4390 *	saw0.01	0.4593	0.4481	1.3980	sc0.05	hts0.01
	RURAL	-0.1987 *	1.3610	saw0.01	0.4263	0.4145	1.5708		hts0.01
	URBAN	0.7627 *	-0.3007 **	saw0.01	0.2448	0.2293	1.8526		
	MARMARA AND AEGEAN	0.6440 *	-0.3286	saw0.01	0.2025	0.1861	1.1485	sc0.01	hts0.01
	MEDITERRANEAN	0.4644 **	0.3370	saw0.01	0.1182	0.1000	2.1648		
	CENTRAL ANATOLIA	0.4088 *	-0.1701	saw0.01	0.3781	0.3653	0.9959	sc0.01	hts0.01
	BLACK SEA	0.3817	2.0906		0.0370	0.0172	2.0486		
	EAST.&SOUTH. ANA.	-0.8994 *	3.3529	saw0.01	0.1776	0.1606	1.9711		

TABLE E1 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL WITHOUT INCOME DUMMIES (cont'd)
(EXPLANATORY VARIABLES ARE INCOME AND AVERAGE HOUSEHOLD SIZE)

		ey	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
PERSONAL CARE	TURKEY	0.8110 *	0.7855	saw0.01	0.3662	0.3531	1.4636		hts0.01
	RURAL	-0.1655 *	2.6258 **	saw0.01	0.5296	0.5199	1.0262	sc0.05	hts0.01
	URBAN	0.9263 *	0.8780	saw0.01	0.1261	0.1081	1.7865		
	MARMARA AND AEGEAN	0.9392	0.3256 *	saw0.01	0.1897	0.1729	1.4394	sc0.05	
	MEDITERRANEAN	0.7043 *	1.1766	saw0.01	0.1664	0.1492	1.2985		hts0.01
	CENTRAL ANATOLIA	0.7567 *	1.5014	saw0.05	0.0877	0.0689	2.0328		
	BLACK SEA	0.6114 *	1.0422	saw0.01	0.2056	0.1892	1.5038		hts0.01
	EAST.&SOUTH. ANA.	-0.4504 *	3.2854 *	saw0.01	0.4587	0.4476	1.3805		hts0.01
TRANSPORTATIO AND COMMUNICATION	TURKEY	1.2429 *	-0.0445 **	saw0.01	0.1009	0.0823	1.6420		
	RURAL	0.4511 **	2.0368	saw0.05	0.0831	0.0642	2.0877		
	URBAN	1.3404 *	-0.8307 *	saw0.01	0.4014	0.3891	2.0683		hts0.01
	MARMARA AND AEGEAN	1.3282 *	-0.6528 *	saw0.01	0.1722	0.1551	1.6936		hts0.01
	MEDITERRANEAN	0.9049	1.2042		0.0058	-0.0147	1.9942		
	CENTRAL ANATOLIA	0.9852	1.3947		0.0068	-0.0136	1.6311		hts0.05
	BLACK SEA	0.8049	1.0098		0.0076	-0.0129	2.1111		
	EAST.&SOUTH. ANA.	0.4913 **	2.7876 **	saw0.05	0.0627	0.0434	1.7672		hts0.01
CULTURE, EDUCATION AND ENTERTAINMENT	TURKEY	0.9038	1.7607		0.0186	-0.0016	2.2293		
	RURAL	0.7232	1.3016		0.0291	0.0091	1.9887		
	URBAN	0.9971	1.3794		0.0037	-0.0168	1.8911		hts0.05
	MARMARA AND AEGEAN	0.9912	0.6146		0.0056	-0.0149	2.3236		
	MEDITERRANEAN	0.8307	2.8988		0.0348	0.0149	2.0655		
	CENTRAL ANATOLIA	1.0091	1.3136		0.0034	-0.0172	2.0301		
	BLACK SEA	1.0050	1.6520		0.0302	0.0102	1.9484		
	EAST.&SOUTH. ANA.	0.3888 **	1.5009	saw0.05	0.0910	0.0723	1.7691		hts0.01

TABLE E1 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL WITHOUT INCOME DUMMIES (cont'd)
(EXPLANATORY VARIABLES ARE INCOME AND AVERAGE HOUSEHOLD SIZE)

		ey	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
HOUSING	TURKEY	0.7437 *	0.3335 *	saw0.01	0.7213	0.7155	1.1777		hts0.01
	RURAL	-0.4637 *	2.3669 **	saw0.01	0.7425	0.7372	0.8259	sc0.01	hts0.01
	URBAN	0.7888 *	0.3087 *	saw0.01	0.8364	0.8331	1.6217		
	MARMARA AND AEGEAN	0.8594 *	0.1286 *	saw0.01	0.5436	0.5342	1.1729	sc0.01	hts0.01
	MEDITERRANEAN	0.1847	1.2194	saw0.01	0.5347	0.5251	0.7706	sc0.05	hts0.01
	CENTRAL ANATOLIA	0.5876 *	0.7056	saw0.01	0.7154	0.7096	2.0694		hts0.01
	BLACK SEA	0.1199 *	1.4493	saw0.01	0.6277	0.6200	1.7627		hts0.01
	EAST.&SOUTH. ANA.	-0.2442 *	1.6556	saw0.01	0.6933	0.6870	1.1521		hts0.01
OTHER	TURKEY	0.7559 **	0.1734	saw0.01	0.1756	0.1586	1.4484		hts0.01
	RURAL	-0.0020 *	2.6124	saw0.01	0.1882	0.1715	1.3929		hts0.01
	URBAN	0.9305	1.3354		0.0055	-0.0150	2.1497		
	MARMARA AND AEGEAN	0.8533	0.7863		0.0255	0.0055	2.3985	sc0.05	
	MEDITERRANEAN	0.5115 *	1.0830	saw0.01	0.0981	0.0795	1.5684		hts0.01
	CENTRAL ANATOLIA	0.6271	1.1614		0.0484	0.0288	1.7090		hts0.05
	BLACK SEA	1.3757 **	-0.3252 **		0.0569	0.0375	2.1053		hts0.01
	EAST.&SOUTH. ANA.	-1.8493 *	8.4506 *	saw0.01	0.2064	0.1900	1.1776		hts0.01

TABLE E2 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL WITHOUT INCOME DUMMIES
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
FOOD	TURKEY	0.5836 *	1.2552 *	saw0.01	0.9368	0.9355	1.7866		
	RURAL	0.6116 *	1.3974 *	saw0.01	0.6789	0.6723	1.7638		
	URBAN	0.5565 *	1.4477 *	saw0.01	0.9586	0.9578	2.1243		
	MARMARA AND AEGEAN	0.5383 *	1.3333 *	saw0.01	0.9101	0.9082	2.2190		hts0.05
	MEDITERRANEAN	0.6161 *	1.2765 *	saw0.01	0.7610	0.7561	1.8646		
	CENTRAL ANATOLIA	0.5884 *	1.3174 *	saw0.01	0.7414	0.7360	1.4728	sc0.05	
	BLACK SEA	0.5205 *	1.3794 *	saw0.01	0.7323	0.7268	2.0965		
	EAST.&SOUTH. ANA.	0.6704 *	1.3164 *	saw0.01	0.5788	0.5701	2.2968		hts0.05
RESTAURANT	TURKEY	1.3362 *	0.9497	saw0.01	0.5989	0.5906	1.7016		hts0.05
	RURAL	1.0421	1.5247 **	saw0.01	0.1789	0.1620	1.9499		
	URBAN	1.3274 *	1.0629	saw0.01	0.6087	0.6007	1.8657		hts0.05
	MARMARA AND AEGEAN	1.1973 *	1.0928	saw0.01	0.2672	0.2521	2.2195		
	MEDITERRANEAN	1.1863 **	1.1250	saw0.01	0.1100	0.0917	1.8920		hts0.01
	CENTRAL ANATOLIA	1.2269 **	1.0003	saw0.01	0.1110	0.0927	1.4810	sc0.05	
	BLACK SEA	1.1335	1.4896	saw0.01	0.1010	0.0825	1.8841		
	EAST.&SOUTH. ANA.	1.0440	1.7608 *	saw0.01	0.2037	0.1873	1.6700		
CLOTHING	TURKEY	1.1054 **	1.1806	saw0.01	0.1642	0.1470	1.7320		
	RURAL	1.5985 *	0.2518 *	saw0.01	0.2702	0.2552	1.3303	sc0.01	hts0.01
	URBAN	1.0758 *	1.6812 *	saw0.01	0.2494	0.2340	2.0172		
	MARMARA AND AEGEAN	1.0367	1.4625 **	saw0.01	0.0951	0.0764	1.9211		
	MEDITERRANEAN	1.3710 *	0.9962	saw0.01	0.4297	0.4179	2.0970		
	CENTRAL ANATOLIA	1.3532 *	0.7596	saw0.01	0.2067	0.1903	1.8279		hts0.05
	BLACK SEA	1.2459 *	1.1490	saw0.01	0.2156	0.1995	2.1873		hts0.01
	EAST.&SOUTH. ANA.	1.3271 *	0.7103	saw0.01	0.1639	0.1467	1.6456		

TABLE E2 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL WITHOUT INCOME DUMMIES (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
HOUSE FURNISHINGS	TURKEY	0.9561	1.8111 **	saw0.05	0.0842	0.0653	1.8856		
	RURAL	1.6665 *	0.1900 **	saw0.01	0.1826	0.1657	1.8281		
	URBAN	1.0005	1.6088		0.0208	0.0006	2.2032		
	MARMARA AND AEGEAN	0.9730	1.8912		0.0417	0.0220	2.2914		hts0.05
	MEDITERRANEAN	1.5755 *	0.3348	saw0.01	0.2018	0.1854	1.8187		hts0.01
	CENTRAL ANATOLIA	1.3509 **	0.5707	saw0.05	0.0783	0.0593	1.8593		
	BLACK SEA	1.7394 *	0.2416 **	saw0.01	0.1792	0.1622	2.0031		hts0.01
	EAST.&SOUTH. ANA.	1.5555 *	-0.1772 *	saw0.01	0.1301	0.1122	2.2685		hts0.05
HOUSE OPERATION AND SERVICES	TURKEY	1.4579 *	0.7243	saw0.01	0.2943	0.2797	1.7782		
	RURAL	0.9247	2.0999	saw0.05	0.0799	0.0609	1.7350		
	URBAN	1.4941 *	0.9138	saw0.01	0.4219	0.4100	2.1120		
	MARMARA AND AEGEAN	1.3737 *	1.1290	saw0.01	0.2355	0.2197	1.8334		
	MEDITERRANEAN	1.3511	0.3312		0.0155	-0.0048	1.4830		
	CENTRAL ANATOLIA	1.1934	1.7747	saw0.05	0.0786	0.0596	2.0178		
	BLACK SEA	1.3451	1.0884		0.0361	0.0162	1.8096		
	EAST.&SOUTH. ANA.	1.3222	1.2742		0.0159	-0.0043	2.0991		
HEALTH	TURKEY	0.9995	0.0141 **	saw0.01	0.1053	0.0868	1.7158		
	RURAL	0.7162	0.9828		0.0590	0.0396	1.9636		
	URBAN	1.0079	0.3088		0.0222	0.0020	2.0117		
	MARMARA AND AEGEAN	0.9778	0.6464		0.0116	-0.0087	1.6936		
	MEDITERRANEAN	0.9671	0.2766		0.0209	0.0007	2.2899		
	CENTRAL ANATOLIA	0.7784	0.7119	saw0.05	0.0763	0.0573	1.6080		
	BLACK SEA	0.8368	1.5169		0.0051	-0.0154	2.0455		
	EAST.&SOUTH. ANA.	0.7189	1.4131		0.0105	-0.0099	2.0636		

TABLE E2 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL WITHOUT INCOME DUMMIES (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
PERSONAL CARE	TURKEY	1.1791 *	0.9682	saw0.01	0.3499	0.3365	1.7105		hts0.01
	RURAL	0.8476	1.1979		0.0258	0.0057	1.8410		
	URBAN	1.1664 *	1.0039	saw0.01	0.2889	0.2742	2.1150		hts0.01
	MARMARA AND AEGEAN	1.1544 *	0.8596	saw0.01	0.2012	0.1848	1.9253		hts0.05
	MEDITERRANEAN	1.2144 *	0.8330	saw0.01	0.1283	0.1104	1.4963	sc0.05	
	CENTRAL ANATOLIA	1.1467	1.2314	saw0.01	0.1089	0.0905	2.0372		
	BLACK SEA	0.8397	1.4007		0.0204	0.0002	1.8450		
	EAST.&SOUTH. ANA.	0.7767 **	1.2340	saw0.05	0.0628	0.0435	1.5745	sc0.05	
TRANSPORTATIO AND COMMUNICATION	TURKEY	1.8478 *	-0.6199 *	saw0.01	0.5084	0.4983	1.4451		hts0.01
	RURAL	1.5713 **	0.9482	saw0.01	0.1510	0.1335	1.6617		hts0.05
	URBAN	1.6580 *	-1.0341 *	saw0.01	0.5727	0.5639	1.6216		hts0.01
	MARMARA AND AEGEAN	1.6431 *	-0.4492 *	saw0.01	0.4802	0.4695	1.3642		hts0.01
	MEDITERRANEAN	1.5657 *	0.5820	saw0.01	0.2249	0.2089	2.0130		
	CENTRAL ANATOLIA	1.4845 *	1.0253	saw0.01	0.1647	0.1475	1.5890	sc0.05	hts0.05
	BLACK SEA	1.6779 **	0.0380		0.0593	0.0399	2.1454		hts0.05
	EAST.&SOUTH. ANA.	1.9392 *	1.4109	saw0.01	0.2704	0.2553	2.3375	sc0.05	hts0.01
CULTURE, EDUCATION AND ENTERTAINMENT	TURKEY	1.2736 *	1.4117	saw0.01	0.2907	0.2760	2.2812		
	RURAL	1.7708 *	0.3796	saw0.01	0.1546	0.1372	1.7987		
	URBAN	1.2642 *	1.1917	saw0.01	0.1979	0.1814	1.9534		hts0.05
	MARMARA AND AEGEAN	1.2320 *	0.8331	saw0.05	0.0769	0.0579	2.2557		
	MEDITERRANEAN	1.4633 **	1.6600	saw0.01	0.1403	0.1226	2.1237		
	CENTRAL ANATOLIA	1.6318 *	0.5614	saw0.01	0.1532	0.1358	2.0832		
	BLACK SEA	1.7348 *	0.8012	saw0.01	0.1927	0.1761	2.0460		hts0.01
	EAST.&SOUTH. ANA.	1.4833	0.4005		0.0295	0.0095	1.7085		

TABLE E2 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL WITHOUT INCOME DUMMIES (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
HOUSING	TURKEY	1.0434	0.9291		0.0311	0.0111	1.7539		hts0.01
	RURAL	0.4882 *	1.1746	saw0.01	0.6398	0.6324	1.5914		
	URBAN	1.0127	0.7835		0.0210	0.0009	1.5072		hts0.01
	MARMARA AND AEGEAN	1.0549	0.8126		0.0347	0.0148	1.4715	sc0.05	hts0.01
	MEDITERRANEAN	0.7637	1.0049	saw0.01	0.3991	0.3867	1.8397		
	CENTRAL ANATOLIA	0.8953	0.9688	saw0.01	0.1029	0.0844	1.7280		
	BLACK SEA	0.5872 *	1.1263	saw0.01	0.3565	0.3432	1.7841		
	EAST.&SOUTH. ANA.	0.6584 *	0.8404	saw0.01	0.4558	0.4446	2.0233		
OTHER	TURKEY	1.2140 **	0.6161	saw0.05	0.0647	0.0454	2.0452		
	RURAL	1.4911 **	0.6739	saw0.01	0.1109	0.0925	1.9908		
	URBAN	1.2267 *	1.0415	saw0.05	0.0820	0.0631	2.2026		
	MARMARA AND AEGEAN	1.1208	1.2716		0.0341	0.0142	2.3556		
	MEDITERRANEAN	1.3682 *	0.6996	saw0.05	0.0872	0.0684	1.8677		
	CENTRAL ANATOLIA	1.2687	0.6235		0.0173	-0.0030	1.7580		
	BLACK SEA	1.9590 *	-0.3093 **	saw0.01	0.1201	0.1020	1.8509		hts0.01
	EAST.&SOUTH. ANA.	1.5699	0.9822	saw0.05	0.0815	0.0626	2.0181		hts0.05

TABLE E3 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL
WITH INCOME DUMMIES FOR THE LEVELS BELOW AND ABOVE THE AVERAGE INCOME
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee1	s	ee2	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
FOOD	TURKEY	0.6724 *	1.2353 *	0.4959	saw0.01	0.9373	0.9346	1.8379		hts0.05
	RURAL	0.6070 *	1.3606 *	0.5189	saw0.01	0.7092	0.6969	1.7781		
	URBAN	0.6314 *	1.5619 *	0.4836	saw0.01	0.9604	0.9587	2.2329		
	MARMARA AND AEGEAN	0.6450 *	1.3784 *	0.4453	saw0.01	0.9120	0.9083	2.3091		hts0.05
	MEDITERRANEAN	0.6645 *	1.2558 *	0.4984	saw0.01	0.7643	0.7544	1.8359		
	CENTRAL ANATOLIA	0.5851 *	1.3624 *	0.4543	saw0.01	0.7534	0.7430	1.5009	sc0.05	
	BLACK SEA	0.5536 *	1.3719 *	0.4717	saw0.01	0.7328	0.7216	2.0772		
	EAST.&SOUTH. ANA.	0.6805 *	1.2681 *	0.5371	saw0.01	0.6160	0.5998	2.2916		
RESTAURANT	TURKEY	1.3286 *	0.9280	1.2116	saw0.01	0.6292	0.6136	1.8367		
	RURAL	0.8782	1.3416	1.1298	saw0.01	0.2630	0.2319	2.0870		
	URBAN	1.4358 *	0.9279	1.1115 **	saw0.01	0.6479	0.6331	1.9536		
	MARMARA AND AEGEAN	1.3156 *	0.7872	0.9953 **	saw0.01	0.3305	0.3023	2.3579		
	MEDITERRANEAN	1.0185	1.0864	1.1614	saw0.01	0.1655	0.1304	1.8997		hts0.01
	CENTRAL ANATOLIA	0.8524	1.2380	1.1397	saw0.01	0.2317	0.1994	1.6470		
	BLACK SEA	1.1036	1.2443	0.7304	saw0.01	0.1705	0.1356	1.9461		
	EAST.&SOUTH. ANA.	0.7181	1.5816 **	1.1257	saw0.01	0.2998	0.2703	1.8862		hts0.05
CLOTHING	TURKEY	1.5129 *	0.3773 **	0.9146 *	saw0.01	0.3897	0.3640	1.9111		hts0.05
	RURAL	1.7522 *	0.3923 **	1.1307 *	saw0.01	0.3538	0.3266	1.3738	sc0.01	hts0.01
	URBAN	1.2205 *	1.2043	0.9547 *	saw0.01	0.3109	0.2819	2.0416		
	MARMARA AND AEGEAN	1.3528 *	0.7862	0.8691 *	saw0.01	0.2191	0.1862	2.0002		hts0.05
	MEDITERRANEAN	1.4271 *	0.9978	1.3326	saw0.01	0.4302	0.4062	2.0914		
	CENTRAL ANATOLIA	1.6035 *	0.5918	1.4384	saw0.01	0.2688	0.2380	1.8492		hts0.01
	BLACK SEA	1.2236	1.0621	1.1468	saw0.01	0.2458	0.2140	2.2403		hts0.05
	EAST.&SOUTH. ANA.	1.5617 *	0.7299	0.9392 *	saw0.01	0.2829	0.2527	1.8271		

TABLE E3 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL
WITH INCOME DUMMIES FOR THE LEVELS BELOW AND ABOVE THE AVERAGE INCOME (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	ee2	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
HOUSE FURNISHINGS	TURKEY	1.3574 *	1.1184	0.8546 *	saw0.01	0.2002	0.1666	1.9423		
	RURAL	1.8037 *	0.2898	1.3359	saw0.01	0.2037	0.1702	1.9702		
	URBAN	1.2629	0.7842	1.0297		0.0713	0.0322	2.2438		
	MARMARA AND AEGEAN	1.0088	1.8436	0.9849		0.0423	0.0020	2.2848		hts0.05
	MEDITERRANEAN	1.9590 *	0.2436 **	1.1215 **	saw0.01	0.2745	0.2440	1.8669		hts0.01
	CENTRAL ANATOLIA	1.6340 *	0.4152	1.1659	saw0.05	0.1217	0.0847	1.9369		
	BLACK SEA	1.7441 *	0.3430	2.0510	saw0.01	0.1966	0.1628	1.8979		hts0.01
	EAST.&SOUTH. ANA.	1.8197 *	-0.0639 *	1.2300 **	saw0.01	0.1952	0.1613	2.3294		hts0.05
HOUSE OPERATION AND SERVICES	TURKEY	0.8297	1.6616	1.4557 *	saw0.01	0.3866	0.3608	1.8820		
	RURAL	0.4157	1.7560	2.0162 *	saw0.01	0.1982	0.1644	1.7980		hts0.05
	URBAN	1.6734 *	1.0708	1.5034	saw0.01	0.4270	0.4029	2.1349		
	MARMARA AND AEGEAN	1.0323	1.7031	1.3030	saw0.01	0.2660	0.2351	1.9375		
	MEDITERRANEAN	0.1796	0.6059	2.1465 *	saw0.05	0.1090	0.0715	1.5935		
	CENTRAL ANATOLIA	0.6434	1.9789	1.6817 **	saw0.01	0.1345	0.0980	2.1975		hts0.01
	BLACK SEA	1.5869	0.9465	0.5951		0.0572	0.0175	1.7937		
	EAST.&SOUTH. ANA.	1.5356	1.6328	1.7594		0.0312	-0.0096	2.1381		
HEALTH	TURKEY	0.5592 **	0.5422	0.9644	saw0.01	0.2047	0.1712	1.8237		
	RURAL	0.4551 **	0.7014	1.2499 **	saw0.05	0.1284	0.0916	2.1841		
	URBAN	0.9407	0.4958	0.9902		0.0250	-0.0161	1.9899		
	MARMARA AND AEGEAN	0.6975	1.0626	0.9458		0.0389	-0.0016	1.6767		
	MEDITERRANEAN	1.0990	0.3009	0.9339		0.0260	-0.0150	2.3301		
	CENTRAL ANATOLIA	0.0137 *	1.0402	1.5303 *	saw0.01	0.2883	0.2583	2.0586		hts0.01
	BLACK SEA	1.0474	1.5328	0.3448		0.0171	-0.0243	2.0245		
	EAST.&SOUTH. ANA.	0.3761	1.3890	1.2977		0.0397	-0.0008	2.1680		

TABLE E3 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL WITH INCOME DUMMIES FOR THE LEVELS BELOW AND ABOVE THE AVERAGE INCOME (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	ee2	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
PERSONAL CARE	TURKEY	1.1553	1.0271	1.1704	saw0.01	0.3529	0.3256	1.7159		hts0.01
	RURAL	0.9212	1.2563	0.5066 **		0.0735	0.0344	2.0091		
	URBAN	1.1110	1.1835	1.1084	saw0.01	0.3056	0.2764	2.1096		hts0.01
	MARMARA AND AEGEAN	1.0671	0.9851	1.1151	saw0.01	0.2218	0.1890	1.9420		hts0.01
	MEDITERRANEAN	1.2286 **	0.8150	1.1553	saw0.05	0.1299	0.0932	1.4755	sc0.01	
	CENTRAL ANATOLIA	1.0758	1.3064	0.9930	saw0.05	0.1220	0.0850	2.0569		
	BLACK SEA	0.7982	1.3419	0.7885		0.0284	-0.0125	1.8269		
	EAST.&SOUTH. ANA.	0.8833	1.2441	0.5855		0.0835	0.0449	1.6101		
TRANSPORTATIO AND COMMUNICATION	TURKEY	1.2227	1.2579	2.0977 *	saw0.01	0.6738	0.6601	1.5293		hts0.01
	RURAL	1.5248	0.8950	2.5089 *	saw0.01	0.2439	0.2120	2.0264		
	URBAN	1.6202	0.3965	1.9663 *	saw0.01	0.6892	0.6761	1.7317		hts0.01
	MARMARA AND AEGEAN	1.2459	1.0348	1.9569 *	saw0.01	0.6502	0.6355	1.7744		hts0.01
	MEDITERRANEAN	1.4704 **	0.7830	1.9739 *	saw0.01	0.2858	0.2557	2.3172		
	CENTRAL ANATOLIA	1.2115	1.1602	1.8472 **	saw0.01	0.2195	0.1866	1.6601		hts0.01
	BLACK SEA	1.8121 *	0.0795	1.3875		0.0724	0.0334	2.1242		hts0.01
	EAST.&SOUTH. ANA.	1.0188	1.2606	2.4572 *	saw0.01	0.4328	0.4089	2.6496	sc0.01	hts0.01
CULTURE, EDUCATION AND ENTERTAINMENT	TURKEY	1.4482 **	1.3004	1.2638	saw0.01	0.2985	0.2690	2.2855		
	RURAL	2.0013 *	0.7139	1.9457	saw0.01	0.2297	0.1973	1.9209		hts0.05
	URBAN	1.4309 **	0.8549	1.1667	saw0.01	0.2030	0.1694	1.9288		hts0.05
	MARMARA AND AEGEAN	1.3049	0.8768	1.3020		0.0829	0.0442	2.2628		
	MEDITERRANEAN	1.8252 *	1.7353	1.4510	saw0.01	0.1618	0.1265	2.1216		
	CENTRAL ANATOLIA	2.0674 *	0.2445	2.1683	saw0.01	0.2066	0.1732	2.2218		
	BLACK SEA	1.7971 **	0.8453	1.9027	saw0.01	0.2011	0.1675	2.0082		hts0.01
	EAST.&SOUTH. ANA.	1.8884 **	0.6333	1.1509		0.0741	0.0352	1.7984		

TABLE E3 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL
WITH INCOME DUMMIES FOR THE LEVELS BELOW AND ABOVE THE AVERAGE INCOME (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	ee2	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
HOUSING	TURKEY	1.0217	0.8209	0.9403	saw0.01	0.1469	0.1110	1.8702		
	RURAL	0.5976 *	1.2317	0.2842	saw0.01	0.6522	0.6376	1.6584		
	URBAN	1.0609	0.5357 **	0.7529 *	saw0.01	0.3445	0.3169	1.8422		
	MARMARA AND AEGEAN	1.2169 *	0.3186 *	0.7986 *	saw0.01	0.2596	0.2284	1.8215		
	MEDITERRANEAN	0.7188	1.0149	0.8167	saw0.01	0.4188	0.3943	1.8001		hts0.05
	CENTRAL ANATOLIA	0.8320 **	1.0591	0.5692 **	saw0.01	0.2005	0.1669	1.8561		
	BLACK SEA	0.7421 *	1.2095	0.4474	saw0.01	0.4146	0.3900	2.0629		
	EAST.&SOUTH. ANA.	0.7945 *	0.9035	0.5087	saw0.01	0.4830	0.4612	2.2316		hts0.05
OTHER	TURKEY	1.0049	0.7845	1.1169	saw0.05	0.1039	0.0662	2.1296		
	RURAL	1.3828	0.4475	1.5528	saw0.01	0.1552	0.1196	2.0399		
	URBAN	0.7322	2.4345	1.3639	saw0.05	0.1269	0.0901	2.2043		
	MARMARA AND AEGEAN	0.9299	1.5312	1.0726		0.0450	0.0048	2.3992	sc0.05	
	MEDITERRANEAN	1.1514	0.5551	1.1159	saw0.01	0.1539	0.1182	2.0309		
	CENTRAL ANATOLIA	1.4303	0.5385	1.1696		0.0224	-0.0187	1.7480		
	BLACK SEA	1.9483 **	-0.4971 **	1.9166	saw0.01	0.1640	0.1288	1.9050		hts0.01
	EAST.&SOUTH. ANA.	0.9043	0.9058	2.2097 *	saw0.01	0.1706	0.1357	2.3408	sc0.05	hts0.01

TABLE E4 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL
WITH INCOME DUMMIES FOR THE 1ST 40%, 2ND 40% AND 3RD 20%
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee1	s	ee2	ee3	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
FOOD	TURKEY	0.6770 *	1.2632 *	0.6059	0.4749	saw0.01	0.9387	0.9347	1.8125		hts0.05
	RURAL	0.6090 *	1.3563 *	0.5140	0.5335	saw0.01	0.7046	0.6855	1.6941		
	URBAN	0.6849 *	1.4946 *	0.5649	0.4580	saw0.01	0.9613	0.9588	2.3020		
	MARMARA AND AEGEAN	0.6339 *	1.3596 *	0.4083 **	0.3740	saw0.01	0.9234	0.9185	2.1679		hts0.05
	MEDITERRANEAN	0.6341 *	1.2832 *	0.4615	0.5754	saw0.01	0.7953	0.7821	1.9612		
	CENTRAL ANATOLIA	0.5818 *	1.3825 *	0.5890	0.4248	saw0.01	0.7510	0.7349	1.4903	sc0.05	
	BLACK SEA	0.6538 *	1.3091 *	0.3347 *	0.4475	saw0.01	0.7623	0.7470	2.1963		
	EAST.&SOUTH. ANA.	0.6953 *	1.2972 *	0.6959	0.5362	saw0.01	0.5895	0.5630	2.2791		hts0.05
RESTAURANT	TURKEY	1.1747	1.0253	1.4597	1.1225	saw0.01	0.6552	0.6330	1.9506		hts0.05
	RURAL	0.9364	1.3034	0.8389	1.2372	saw0.01	0.2374	0.1882	1.9565		
	URBAN	1.3004	0.9630	1.4825	1.0758	saw0.01	0.6727	0.6516	2.0944		
	MARMARA AND AEGEAN	1.2507	0.7601	0.9723	0.9039	saw0.01	0.3893	0.3499	2.3171		hts0.01
	MEDITERRANEAN	1.2850	1.1392	0.8479	1.2891	saw0.05	0.1542	0.0996	1.9705		hts0.01
	CENTRAL ANATOLIA	0.7306	1.1889	0.7791	1.0757	saw0.01	0.2475	0.1990	1.6181		
	BLACK SEA	1.1922	1.2365	0.8102	0.6168	saw0.05	0.1622	0.1082	1.9385		
	EAST.&SOUTH. ANA.	0.6249	1.5338 **	0.6167	1.1351	saw0.01	0.3067	0.2620	1.9081		hts0.01
CLOTHING	TURKEY	1.6266 *	0.2902 *	1.3431	0.8594 *	saw0.01	0.3582	0.3168	1.9137		
	RURAL	1.8890 *	0.2810 *	2.0188	0.9517 *	saw0.01	0.3769	0.3367	1.4717	sc0.01	hts0.01
	URBAN	1.1711	1.3118	1.1013	0.9427	saw0.01	0.3147	0.2704	2.0535		
	MARMARA AND AEGEAN	1.3898 **	0.7206	1.0270	0.8660 *	saw0.01	0.2376	0.1884	2.0845		hts0.05
	MEDITERRANEAN	1.5863 *	0.9709	1.2729	1.2962	saw0.01	0.4332	0.3967	2.0955		
	CENTRAL ANATOLIA	1.5816 *	0.7735	1.9203	1.4623	saw0.01	0.2853	0.2392	1.8318		hts0.01
	BLACK SEA	1.3299	1.0723	0.8835	1.4075	saw0.01	0.2703	0.2233	2.1190		hts0.05
	EAST.&SOUTH. ANA.	1.8368 *	0.7966	1.2264 **	1.0794 *	saw0.01	0.3318	0.2887	1.7503		

TABLE E4 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL
WITH INCOME DUMMIES FOR THE 1ST 40%, 2ND 40% AND 3RD 20% (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee1	s	ee2	ee3	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
	TURKEY	1.6068 *	0.8643	1.2656	0.8352 *	saw0.01	0.2075	0.1564	1.9268		hts0.05
	RURAL	2.0435 *	0.6022	2.0776	1.1712 **	saw0.01	0.3065	0.2617	2.0366		hts0.01
	URBAN	1.4890 **	0.7984	1.0196	0.9969		0.0896	0.0308	2.2452		
HOUSE	MARMARA AND AEGEAN	0.9701	2.0128	1.7018	1.2187		0.1135	0.0563	2.2329		hts0.05
FURNISHINGS	MEDITERRANEAN	2.3014 *	0.1755 **	3.0082 *	0.9522 **	saw0.01	0.4126	0.3747	1.6699		hts0.01
	CENTRAL ANATOLIA	2.0047 *	0.2615	1.7518	1.7346	saw0.01	0.2077	0.1565	2.0229		
	BLACK SEA	1.6039	0.5822	2.5812 *	1.2932	saw0.01	0.3415	0.2991	2.1686		hts0.01
	EAST.&SOUTH. ANA.	1.7336 *	0.0609 *	2.3578	1.0802	saw0.01	0.2429	0.1940	2.2707		
	TURKEY	0.0105 **	2.2392 **	1.3811 **	1.4607 *	saw0.01	0.4188	0.3813	1.9796		
	RURAL	0.1388	1.9006	0.6771	1.8425 *	saw0.01	0.1826	0.1299	1.8309		hts0.05
HOUSE	URBAN	1.5777	1.2204	1.8330	1.6244	saw0.01	0.4485	0.4129	2.1354		
OPERATION	MARMARA AND AEGEAN	1.1151	1.6884	2.4705 *	1.5383	saw0.01	0.3264	0.2829	2.1264		
AND SERVICES	MEDITERRANEAN	-1.0942	1.0397	1.0114	1.8361 **	saw0.05	0.1352	0.0794	1.6401		
	CENTRAL ANATOLIA	-0.3010	2.4226	1.3892	1.6438 **	saw0.05	0.1576	0.1033	2.2957		hts0.01
	BLACK SEA	1.4550	1.0420	0.6944	1.1268		0.0794	0.0200	1.8665		
	EAST.&SOUTH. ANA.	0.5119	1.0198	0.6216	1.3804		0.0359	-0.0263	2.1496		
	TURKEY	0.1546 *	1.0241	0.8243	1.0091 **	saw0.01	0.2196	0.1693	1.8981		
	RURAL	0.2582 **	0.8876	1.1152	0.9128	saw0.05	0.1382	0.0826	2.1945		
	URBAN	1.0339	0.3580	0.9148	0.9455		0.0282	-0.0345	1.9919		
HEALTH	MARMARA AND AEGEAN	-0.1443 *	1.6113	0.8975 **	0.8851 **	saw0.05	0.1375	0.0818	1.9547		
	MEDITERRANEAN	0.8427	0.2392	1.5632	0.4414		0.0399	-0.0220	2.3707		hts0.05
	CENTRAL ANATOLIA	-0.1211 *	1.1325	0.0702	1.4197 *	saw0.01	0.2933	0.2477	2.0656		hts0.01
	BLACK SEA	0.4336	1.6579	0.9333	0.5809		0.0224	-0.0407	2.0692		
	EAST.&SOUTH. ANA.	1.0264	1.4122	0.5836	1.0061		0.0837	0.0246	2.1353		

TABLE E4 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL
WITH INCOME DUMMIES FOR THE 1ST 40%, 2ND 40% AND 3RD 20% (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee1	s	ee2	ee3	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
PERSONAL CARE	TURKEY	1.2131	0.9400	1.1384	1.1060	saw0.01	0.3639	0.3228	1.7238		hts0.01
	RURAL	0.9912	1.2016	0.6395	0.6398		0.0828	0.0237	1.9389		
	URBAN	1.0271	1.2395	1.1937	1.0085	saw0.01	0.3396	0.2970	2.0534		hts0.01
	MARMARA AND AEGEAN	0.9346	1.0288	1.1872	1.0004	saw0.01	0.2721	0.2251	1.9583		hts0.01
	MEDITERRANEAN	1.2764	0.7990	0.7600	1.1982	saw0.01	0.1772	0.1241	1.5134	sc0.05	
	CENTRAL ANATOLIA	1.2622	1.1510	0.9899	1.0170		0.1170	0.0600	2.0072		
	BLACK SEA	0.9356	1.2286	0.2481 **	0.8985		0.0882	0.0294	1.7301		
	EAST.&SOUTH. ANA.	0.8500	1.2811	0.8977	0.6242		0.0863	0.0273	1.6039		
TRANSPORTATIO AND COMMUNICATION	TURKEY	0.9202	1.5190	1.3643	2.0536 *	saw0.01	0.6887	0.6686	1.4911	sc0.05	hts0.01
	RURAL	1.5782	1.0384	1.9453	2.5429 *	saw0.01	0.2733	0.2264	2.0659		
	URBAN	1.5441	0.4698	1.5213	1.9553 *	saw0.01	0.7043	0.6852	1.7023		hts0.01
	MARMARA AND AEGEAN	1.7526	0.8590	1.2406	1.9388 *	saw0.01	0.6786	0.6579	1.7664		hts0.01
	MEDITERRANEAN	2.0012 *	0.6973	0.8323	1.8695	saw0.01	0.3375	0.2948	2.3206		
	CENTRAL ANATOLIA	1.2899	1.0545	1.0636	1.6776	saw0.01	0.2336	0.1842	1.6583		hts0.01
	BLACK SEA	1.5585	0.1980	2.4468	0.9800		0.1001	0.0421	2.1057		hts0.01
	EAST.&SOUTH. ANA.	0.9025	1.0896	1.4413	2.1924 *	saw0.01	0.4603	0.4255	2.7397	sc0.01	hts0.01
CULTURE, EDUCATION AND ENTERTAINMENT	TURKEY	1.9054 *	0.9746	1.4198	1.2786	saw0.01	0.3284	0.2851	2.3032		
	RURAL	2.2065 **	0.4689	1.2875	1.9240	saw0.01	0.1759	0.1227	1.9175		hts0.05
	URBAN	1.6317 **	0.8441	1.7110	1.2487	saw0.01	0.2316	0.1821	1.9531		
	MARMARA AND AEGEAN	1.4912	0.9263	1.6858	1.3363		0.1045	0.0468	2.2914		
	MEDITERRANEAN	2.5742 *	1.4939	1.9696	1.3908	saw0.01	0.1902	0.1380	2.1028		
	CENTRAL ANATOLIA	2.4210 **	0.2280	1.1466	1.9375	saw0.01	0.1737	0.1204	2.1590		
	BLACK SEA	1.5980	1.2245	1.7857	3.1299 *	saw0.01	0.2770	0.2303	1.9292		hts0.01
	EAST.&SOUTH. ANA.	1.7813	0.5794	1.8218	0.9480		0.0815	0.0223	1.7804		

TABLE E4 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL
WITH INCOME DUMMIES FOR THE 1ST 40%, 2ND 40% AND 3RD 20% (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee1	s	ee2	ee3	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
HOUSING	TURKEY	1.0742	0.7403	1.0472	0.8630	saw0.05	0.1455	0.0903	1.8574		
	RURAL	0.5831 *	1.0646	0.0208 *	0.3632	saw0.01	0.7218	0.7038	1.8480		
	URBAN	0.9962	0.5320 *	1.0669	0.6410 *	saw0.01	0.4084	0.3702	1.7956		
	MARMARA AND AEGEAN	1.2496 **	0.3225 *	1.1647	0.6388 *	saw0.01	0.3786	0.3385	2.0322		
	MEDITERRANEAN	0.6168	1.0481	0.3941	0.8383 **	saw0.01	0.5198	0.4888	1.8044		
	CENTRAL ANATOLIA	0.8177	0.9938	0.5845	0.2884 *	saw0.01	0.3140	0.2697	2.0537		
	BLACK SEA	0.9966	0.9809	0.0797 *	0.6806	saw0.01	0.5210	0.4901	2.0176		
	EAST.&SOUTH. ANA.	0.8548	0.8323	0.3702 **	0.5524	saw0.01	0.5090	0.4774	2.1797		
OTHER	TURKEY	0.6819	1.0767	1.1349	1.1099		0.1104	0.0530	2.1765		
	RURAL	1.4292	0.3907	1.3479	1.5209	saw0.05	0.1448	0.0896	1.9936		
	URBAN	0.7119	2.3006	1.4080	1.2845	saw0.05	0.1276	0.0713	2.2070		
	MARMARA AND AEGEAN	0.7846	1.5806	0.9262	0.9901		0.0519	-0.0093	2.4438	sc0.05	
	MEDITERRANEAN	1.1517	0.6610	1.6561	0.7924	saw0.01	0.1770	0.1239	2.0632		
	CENTRAL ANATOLIA	1.6439	0.4308	1.4156	1.3047		0.0285	-0.0342	1.7477		
	BLACK SEA	2.2953	-0.5945 *	0.9618	1.8071	saw0.01	0.2157	0.1651	1.9704		hts0.01
	EAST.&SOUTH. ANA.	0.2927	0.9150	1.9864	2.0963 *	saw0.01	0.1872	0.1347	2.3853	sc0.01	hts0.01

APPENDIX F:

RESULTS OF SIMPLE AND

EXTENDED DOUBLE-LOG MODELS

(Food Expenditures)

EXPLANATORY NOTES:

ey:	parameter of income
ee:	parameter of total expenditure
ee1:	parameter of total expenditure (for 2nd 40%)
ee2:	parameter of total expenditure (for 3rd 20%)
ee3:	parameter of total expenditure (for income above the average)
s:	parameter of household size
*:	individually significant at 0.01
**:	individually significant at 0.05
***:	individually significant at 0.1
F-STAT:	F-Statistics
saw0.01:	model is significant as a whole at 0.01
saw0.05:	model is significant as a whole at 0.05
saw0.1:	model is significant as a whole at 0.1
R-SQ:	R-Square
R-BAR-SQ:	Adjusted R-Square
DW-ST:	Durbin-Watson Statistics
SC:	Serial Correlation
sc0.01:	serial correlation at 0.01
sc0.05:	serial correlation at 0.5
sc0.1:	serial correlation at 0.1
HT:	Heteroscedasticity
ht0.01:	heteroscedasticity at 0.01
ht0.05:	heteroscedasticity at 0.05
ht0.1:	heteroscedasticity at 0.1

TABLE F1 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL WITHOUT INCOME DUMMIES
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
BREAD AND CEREALS	TURKEY	0.1960 *	0.6911 *	saw0.01	0.8490	0.8459	1.8591		
	RURAL	0.3683 *	0.4761 *	saw0.01	0.8067	0.8027	1.8686		
	URBAN	0.1488 *	1.1628 *	saw0.01	0.8884	0.8861	2.2589		
	MARMARA AND AEGEAN	0.1156 *	1.0709 *	saw0.01	0.7787	0.7742	1.8304		
	MEDITERRANEAN	0.3449 *	0.6594 *	saw0.01	0.7910	0.7866	1.8990		
	CENTRAL ANATOLIA	0.2690 *	0.4358 *	saw0.01	0.6564	0.6493	2.1330		
	BLACK SEA	0.3761 *	0.2050 ***	saw0.01	0.6622	0.6553	2.1151		
	EAST.&SOUTH. ANA.	0.3622 *	0.3796 **	saw0.01	0.5733	0.5645	2.0154		hts0.05
MEAT, FISH AND POULTRY	TURKEY	0.8945 *	0.7840 *	saw0.01	0.9443	0.9431	1.2953	sc0.01	hts0.01
	RURAL	0.9547 *	0.3880 **	saw0.01	0.8584	0.8555	1.8494		
	URBAN	0.9386 *	1.1600 *	saw0.01	0.9367	0.9354	1.3828	sc0.05	hts0.01
	MARMARA AND AEGEAN	0.8436 *	0.6890 *	saw0.01	0.9038	0.9019	1.3906	sc0.05	hts0.01
	MEDITERRANEAN	1.0469 *	0.1370	saw0.01	0.7899	0.7856	2.3323		hts0.05
	CENTRAL ANATOLIA	1.0996 *	0.1227	saw0.01	0.8441	0.8409	1.4580	sc0.01	
	BLACK SEA	0.8000 *	0.7029 *	saw0.01	0.7365	0.7310	1.9303		
	EAST.&SOUTH. ANA.	1.1464 *	0.2104	saw0.01	0.8783	0.8758	1.9981		
MILK, MILK PRODUCTS, EGGS AND FATS	TURKEY	0.4854 *	0.8192 *	saw0.01	0.9335	0.9322	1.7053		hts0.05
	RURAL	0.6093 *	0.6791 *	saw0.01	0.8925	0.8903	1.7555		
	URBAN	0.4904 *	0.8189 *	saw0.01	0.9430	0.9418	1.5098		hts0.01
	MARMARA AND AEGEAN	0.4458 *	0.7126 *	saw0.01	0.8924	0.8902	1.6086		hts0.05
	MEDITERRANEAN	0.5875 *	0.3665 *	saw0.01	0.8156	0.8118	2.0569		
	CENTRAL ANATOLIA	0.6152 *	0.3640 **	saw0.01	0.8351	0.8317	1.2687	sc0.01	
	BLACK SEA	0.5387 *	0.6210 *	saw0.01	0.7317	0.7262	2.0093		
	EAST.&SOUTH. ANA.	0.5935 *	0.7247 *	saw0.01	0.8103	0.8064	1.9447		

TABLE F1 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL WITHOUT INCOME DUMMIES (Cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
DRIED VEGETABLES	TURKEY	0.2609 *	0.9988 *	saw0.01	0.7592	0.7542	1.7238		
	RURAL	0.5775 *	0.3560 ***	saw0.01	0.7031	0.6970	1.6591		
	URBAN	0.2911 *	1.1469 *	saw0.01	0.7678	0.7630	1.9513		
	MARMARA AND AEGEAN	0.1587 *	1.0711 *	saw0.01	0.5096	0.4995	1.8422		
	MEDITERRANEAN	0.5136 *	0.1729	saw0.01	0.6176	0.6097	1.9327		
	CENTRAL ANATOLIA	0.5662 *	0.0038	saw0.01	0.5017	0.4915	1.9895		
	BLACK SEA	0.5191 *	0.3893	saw0.01	0.4762	0.4654	2.0520		
	EAST.&SOUTH. ANA.	0.4792 *	0.2975	saw0.01	0.4441	0.4327	1.5826		
DRIED FRUITS	TURKEY	0.6372 *	0.7566 *	saw0.01	0.8448	0.8416	1.8456		
	RURAL	0.7078 *	0.5327 ***	saw0.01	0.6267	0.6190	1.8601		
	URBAN	0.8072 *	0.9666 *	saw0.01	0.8961	0.8940	2.0421		hts0.01
	MARMARA AND AEGEAN	0.5811 *	0.5658 ***	saw0.01	0.6497	0.6424	2.1553		hts0.05
	MEDITERRANEAN	1.1948 *	-0.2968	saw0.01	0.6469	0.6396	1.7703		
	CENTRAL ANATOLIA	0.6448 *	0.7213 **	saw0.01	0.6330	0.6254	2.1552		
	BLACK SEA	1.1397 *	-0.4628	saw0.01	0.3484	0.3349	1.9775		hts0.05
	EAST.&SOUTH. ANA.	1.4589 *	-0.2799	saw0.01	0.6480	0.6407	1.9095		
FRESH VEGETABLES	TURKEY	0.4344 *	0.7549 *	saw0.01	0.9252	0.9236	1.5456		
	RURAL	0.4986 *	0.4606 *	saw0.01	0.8756	0.8731	1.3444	sc0.01	
	URBAN	0.4433 *	0.8684 *	saw0.01	0.9265	0.9250	1.9256		
	MARMARA AND AEGEAN	0.4319 *	0.5427 *	saw0.01	0.8721	0.8695	1.6716		
	MEDITERRANEAN	0.4736 *	0.4639 *	saw0.01	0.7782	0.7736	1.8001		
	CENTRAL ANATOLIA	0.4434 *	0.7464 *	saw0.01	0.8367	0.8333	1.3710	sc0.01	
	BLACK SEA	0.5279 *	0.1841	saw0.01	0.7112	0.7053	1.7903		
	EAST.&SOUTH. ANA.	0.7340 *	0.0850	saw0.01	0.7236	0.7179	1.4991	sc0.05	hts0.05

TABLE F1 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL WITHOUT INCOME DUMMIES (Cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
FRESH FRUITS	TURKEY	0.7367 *	0.5171 *	saw0.01	0.9541	0.9532	1.5102		hts0.05
	RURAL	0.7517 *	0.2403 ***	saw0.01	0.8718	0.8691	2.0508		
	URBAN	0.7637 *	0.8027 *	saw0.01	0.9433	0.9421	1.7163		hts0.01
	MARMARA AND AEGEAN	0.6787 *	0.5191 *	saw0.01	0.9135	0.9117	1.5723		hts0.01
	MEDITERRANEAN	0.8559 *	-0.3089 **	saw0.01	0.8353	0.8319	1.7814		
	CENTRAL ANATOLIA	0.7129 *	0.5662 *	saw0.01	0.8557	0.8527	1.7230		
	BLACK SEA	0.7352 *	-0.0446	saw0.01	0.6560	0.6489	2.0884		
	EAST.&SOUTH. ANA.	0.9977 *	-0.1254	saw0.01	0.7849	0.7805	1.4943	sc0.05	
PROCESSED FOOD	TURKEY	0.4382 *	0.4613 *	saw0.01	0.9431	0.9419	2.1043		
	RURAL	0.5422 *	0.4190 *	saw0.01	0.8852	0.8828	2.2776		
	URBAN	0.4373 *	0.5714 *	saw0.01	0.9402	0.9389	2.0041		
	MARMARA AND AEGEAN	0.4276 *	0.5584 *	saw0.01	0.8828	0.8804	2.2526		
	MEDITERRANEAN	0.6264 *	0.3562 *	saw0.01	0.8196	0.8159	1.9794		hts0.05
	CENTRAL ANATOLIA	0.4336 *	0.4886 *	saw0.01	0.7622	0.7573	1.4706	sc0.05	
	BLACK SEA	0.5321 *	0.2925 **	saw0.01	0.7729	0.7682	2.1099		
	EAST.&SOUTH. ANA.	0.5604 *	0.3979 *	saw0.01	0.8185	0.8147	1.8660		
CIGARETTE, ALCOHOLIC AND NON-ALCOHOLIC BEVERAGES	TURKEY	0.6609 *	0.2330	saw0.01	0.9163	0.9146	2.0913		
	RURAL	0.5876 *	0.1967	saw0.01	0.6483	0.6410	1.6270		
	URBAN	0.7154 *	0.4249 **	saw0.01	0.9307	0.9293	2.0800		hts0.01
	MARMARA AND AEGEAN	0.6422 *	0.5946 *	saw0.01	0.8381	0.8347	2.0408		
	MEDITERRANEAN	0.6344 *	0.2732	saw0.01	0.6849	0.6784	1.7670		
	CENTRAL ANATOLIA	0.6944 *	0.0247	saw0.01	0.6177	0.6099	1.5771	sc0.05	
	BLACK SEA	0.2626 **	0.7940 *	saw0.01	0.3911	0.3785	1.6839		
	EAST.&SOUTH. ANA.	0.6625 *	0.2453	saw0.01	0.6655	0.6586	2.1438		

TABLE F2 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL
WITH INCOME DUMMIES FOR THE LEVELS BELOW AND ABOVE THE AVERAGE INCOME
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee1	s	ee2	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
BREAD AND CEREALS	TURKEY	0.3148 *	0.4863 *	0.1628 *	saw0.01	0.8674	0.8619	2.1012		
	RURAL	0.3332 *	0.4361 *	0.4364	saw0.01	0.8115	0.8035	1.9022		
	URBAN	0.1994 *	1.0089 *	0.1402 ***	saw0.01	0.8948	0.8904	2.2727		
	MARMARA AND AEGEAN	0.1803 *	0.9769 *	0.1280	saw0.01	0.7879	0.7790	1.8772		
	MEDITERRANEAN	0.4064 *	0.6436 *	0.2672	saw0.01	0.7988	0.7903	2.0195		
	CENTRAL ANATOLIA	0.2843 *	0.4527 *	0.0835 ***	saw0.01	0.6702	0.6563	2.1788		
	BLACK SEA	0.3674 *	0.2489 **	0.4976	saw0.01	0.6711	0.6573	2.1716		
	EAST.&SOUTH. ANA.	0.3356 *	0.3445 **	0.3305	saw0.01	0.5771	0.5592	2.0146		
MEAT, FISH AND POULTRY	TURKEY	1.2104 *	0.0019	0.6329 *	saw0.01	0.9639	0.9624	1.6689		
	RURAL	0.9421 *	0.3469 ***	0.7321	saw0.01	0.8657	0.8601	1.8932		
	URBAN	1.2696 *	-0.0047	0.4954 *	saw0.01	0.9719	0.9707	1.9664		
	MARMARA AND AEGEAN	1.2695 *	-0.3135	0.5027 *	saw0.01	0.9430	0.9406	1.7101		
	MEDITERRANEAN	1.1617 *	0.0803	0.8310 ***	saw0.01	0.7971	0.7886	2.4318	sc0.05	
	CENTRAL ANATOLIA	1.0561 *	0.2205	0.6259 **	saw0.01	0.8588	0.8528	1.6169		
	BLACK SEA	0.8527 *	0.6803 *	0.6301	saw0.01	0.7393	0.7283	1.9425		
	EAST.&SOUTH. ANA.	1.1778 *	0.1332	0.8997 **	saw0.01	0.8867	0.8819	2.0525		
MILK, MILK PRODUCTS, EGGS AND FATS	TURKEY	0.6582 *	0.3720 *	0.3281 *	saw0.01	0.9509	0.9489	1.9856		
	RURAL	0.5778 *	0.6181 *	0.4404	saw0.01	0.9041	0.9000	1.8425		
	URBAN	0.6128 *	0.3791 *	0.3037 *	saw0.01	0.9639	0.9624	1.6296		
	MARMARA AND AEGEAN	0.6407 *	0.2239 ***	0.2568 *	saw0.01	0.9243	0.9211	2.0321		
	MEDITERRANEAN	0.5854 *	0.2936 **	0.3993 ***	saw0.01	0.8274	0.8202	2.1163		hts0.05
	CENTRAL ANATOLIA	0.5508 *	0.4418 *	0.3747	saw0.01	0.8477	0.8413	1.2837	sc0.01	
	BLACK SEA	0.5967 *	0.5737 *	0.2993 ***	saw0.01	0.7410	0.7300	1.9146		
	EAST.&SOUTH. ANA.	0.6528 *	0.6626 *	0.3276 **	saw0.01	0.8260	0.8187	2.0484		

TABLE F2 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL
WITH INCOME DUMMIES FOR THE LEVELS BELOW AND ABOVE THE AVERAGE INCOME (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	ee2	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
	TURKEY	0.5256 *	0.4249 **	0.1011 *	saw0.01	0.8052	0.7970	2.1102		
	RURAL	0.5499 *	0.2789	0.2119 **	saw0.01	0.7446	0.7338	1.7977		
DRIED	URBAN	0.4820 *	0.5107 **	0.1234 *	saw0.01	0.8123	0.8043	2.1245		
VEGETABLES	MARMARA AND AEGEAN	0.3108 *	0.7410 *	0.0678 ***	saw0.01	0.5292	0.5094	1.9494		
	MEDITERRANEAN	0.6398 *	0.1093	0.2728 **	saw0.01	0.6440	0.6290	2.0860		
	CENTRAL ANATOLIA	0.5871 *	0.0075	0.4457	saw0.01	0.5041	0.4832	1.9825		
	BLACK SEA	0.5187 *	0.4118	0.5722	saw0.01	0.4769	0.4549	2.0572		
	EAST.&SOUTH. ANA.	0.5341 *	0.1309	-0.0283 *	saw0.01	0.5240	0.5040	1.7976		
	TURKEY	0.7444 *	0.4166	0.4940 ***	saw0.01	0.8523	0.8461	1.9055		hts0.05
	RURAL	0.7041 *	0.4768	0.2400 ***	saw0.01	0.6549	0.6404	1.9756		hts0.05
DRIED	URBAN	0.9736 *	0.3754	0.5703 *	saw0.01	0.9088	0.9049	2.0742		
FRUITS	MARMARA AND AEGEAN	0.8408 *	0.0293	0.4556 **	saw0.01	0.6645	0.6503	2.1850		hts0.05
	MEDITERRANEAN	1.4152 *	-0.4142	0.7582 **	saw0.01	0.6670	0.6530	1.7667		
	CENTRAL ANATOLIA	0.5805 *	0.8311 *	0.1835 ***	saw0.01	0.6529	0.6383	2.1383		
	BLACK SEA	1.1283 *	-0.5534	0.9546	saw0.01	0.3523	0.3250	1.9782		hts0.05
	EAST.&SOUTH. ANA.	1.7329 *	-0.2324	1.0323 **	saw0.01	0.6692	0.6553	1.9353		hts0.05
	TURKEY	0.6369 *	0.4076 *	0.3792 *	saw0.01	0.9441	0.9418	1.8279		hts0.05
	RURAL	0.5510 *	0.5094 *	0.2964 *	saw0.01	0.8871	0.8824	1.5000	sc0.05	
FRESH	URBAN	0.5157 *	0.6165 *	0.3537 *	saw0.01	0.9327	0.9299	1.9166		
VEGETABLES	MARMARA AND AEGEAN	0.5591 *	0.2590 ***	0.3474 *	saw0.01	0.8820	0.8770	1.6847		
	MEDITERRANEAN	0.4977 *	0.4097 *	0.3184 ***	saw0.01	0.7865	0.7775	1.7820		
	CENTRAL ANATOLIA	0.5670 *	0.6877 *	0.2817 *	saw0.01	0.8542	0.8480	1.5472		
	BLACK SEA	0.5733 *	0.1447	0.3351 ***	saw0.01	0.7213	0.7096	1.7512		
	EAST.&SOUTH. ANA.	0.9111 *	0.1226	0.4747 *	saw0.01	0.7544	0.7440	1.7646		hts0.05

TABLE F2 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL
WITH INCOME DUMMIES FOR THE LEVELS BELOW AND ABOVE THE AVERAGE INCOME (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	ee2	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
FRESH FRUITS	TURKEY	0.9559 *	-0.0048	0.5704 *	saw0.01	0.9677	0.9664	1.6672		
	RURAL	0.7719 *	0.2463 ***	0.5559 **	saw0.01	0.8778	0.8726	2.1119		
	URBAN	0.9208 *	0.2240	0.4891 *	saw0.01	0.9624	0.9608	2.1056		
	MARMARA AND AEGEAN	0.8631 *	-0.0036	0.4335 *	saw0.01	0.9387	0.9361	1.8141		
	MEDITERRANEAN	0.8920 *	-0.3901 *	0.6234 **	saw0.01	0.8455	0.8390	1.8914		
	CENTRAL ANATOLIA	0.7029 *	0.6177 *	0.4044 **	saw0.01	0.8659	0.8602	1.8279		
	BLACK SEA	0.7599 *	-0.1032	0.5441	saw0.01	0.6633	0.6491	2.0610		hts0.05
	EAST.&SOUTH. ANA.	1.1415 *	-0.1805	0.5820 *	saw0.01	0.8152	0.8074	1.6901		
PROCESSED FOOD	TURKEY	0.5033 *	0.3425 *	0.4153 ***	saw0.01	0.9454	0.9431	2.2050		
	RURAL	0.5178 *	0.3882 *	0.5606	saw0.01	0.8869	0.8822	2.2961		
	URBAN	0.4772 *	0.4494 *	0.4295	saw0.01	0.9412	0.9387	2.0248		hts0.05
	MARMARA AND AEGEAN	0.4706 *	0.4862 *	0.4250	saw0.01	0.8838	0.8790	2.2949		
	MEDITERRANEAN	0.7100 *	0.3269 **	0.5005 ***	saw0.01	0.8277	0.8204	2.0601		hts0.05
	CENTRAL ANATOLIA	0.4418 *	0.4841 *	0.4268	saw0.01	0.7623	0.7523	1.4693	sc0.05	
	BLACK SEA	0.5291 *	0.2592 **	0.4617	saw0.01	0.7757	0.7662	2.0944		
	EAST.&SOUTH. ANA.	0.5481 *	0.3681 *	0.5132	saw0.01	0.8205	0.8129	1.8830		
CIGARETTE, ALCOHOLIC AND NON-ALCOHOLIC BEVERAGES	TURKEY	0.6919 *	0.2524	0.7055	saw0.01	0.9186	0.9152	2.1547		
	RURAL	0.6492 *	0.2735	0.5291	saw0.01	0.6575	0.6431	1.7024		
	URBAN	0.7006 *	0.4588 ***	0.6906	saw0.01	0.9310	0.9281	2.0768		hts0.05
	MARMARA AND AEGEAN	0.8086 *	0.2988	0.6146	saw0.01	0.8445	0.8379	2.1084		
	MEDITERRANEAN	0.5943 *	0.2276	0.5398	saw0.01	0.6908	0.6778	1.7332		
	CENTRAL ANATOLIA	0.7126 *	-0.0623	1.2091 **	saw0.01	0.6492	0.6344	1.7355		
	BLACK SEA	0.3565 **	0.8617 *	0.2104	saw0.01	0.4082	0.3833	1.7868		
	EAST.&SOUTH. ANA.	0.6355 *	0.2690	0.7727	saw0.01	0.6684	0.6545	2.1520		

TABLE F3 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL
WITH INCOME DUMMIES FOR 1ST 40%, 2ND 40% AND 3RD 20%
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee1	s	ee2	ee3	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
BREAD AND CEREALS	TURKEY	0.3492 *	0.4571 *	0.2398	0.1847 **	saw0.01	0.8688	0.8603	2.0943		
	RURAL	0.3334 *	0.4690 *	0.2850	0.4814	saw0.01	0.8106	0.7984	1.8755		
	URBAN	0.2480 *	0.9645 *	0.1290 **	0.1651 ***	saw0.01	0.9033	0.8970	2.4324	sc0.05	
	MARMARA AND AEGEAN	0.1359 ***	1.0086 *	0.0117	0.1213	saw0.01	0.7863	0.7725	1.8453		
	MEDITERRANEAN	0.3491 *	0.6270 *	0.2845	0.2741	saw0.01	0.8095	0.7973	2.0941		
	CENTRAL ANATOLIA	0.3010 *	0.4386 *	0.3388	0.2377	saw0.01	0.6659	0.6443	2.1815		
	BLACK SEA	0.4523 *	0.2285 ***	0.3723	0.5830	saw0.01	0.6802	0.6595	2.2263		
	EAST.&SOUTH. ANA.	0.3835 *	0.3956 **	0.5177	0.3166	saw0.01	0.5842	0.5574	2.0294		
MEAT, FISH AND POULTRY	TURKEY	1.1696 *	0.0139	1.1345	0.5874 *	saw0.01	0.9652	0.9629	1.6802		
	RURAL	0.8772 *	0.3133	0.7161	0.7668	saw0.01	0.8693	0.8608	1.8553		
	URBAN	1.3314 *	-0.0224	1.0458 **	0.4070 *	saw0.01	0.9736	0.9719	2.0365		
	MARMARA AND AEGEAN	1.2971 *	-0.3611 ***	0.8225 *	0.3648 *	saw0.01	0.9514	0.9483	1.7731		
	MEDITERRANEAN	1.2869 *	-0.0073	0.5739 *	0.9068	saw0.01	0.8153	0.8033	2.3829	sc0.05	hts0.01
	CENTRAL ANATOLIA	0.8693 *	0.3217	1.0071	0.2926 **	saw0.01	0.8724	0.8642	1.5953		
	BLACK SEA	1.1066 *	0.5156 **	0.2575 *	0.9048	saw0.01	0.7720	0.7573	1.9917		
	EAST.&SOUTH. ANA.	1.1659 *	0.1242	0.9836	0.9093	saw0.01	0.8865	0.8792	1.9941		
MILK, MILK PRODUCTS, EGGS AND FATS	TURKEY	0.6817 *	0.2975 **	0.5675	0.2521 *	saw0.01	0.9553	0.9524	2.1180		
	RURAL	0.5142 *	0.5525 *	0.4111	0.3843	saw0.01	0.9124	0.9067	1.9982		
	URBAN	0.6810 *	0.3261 *	0.5379 **	0.2471 *	saw0.01	0.9674	0.9653	1.7748		
	MARMARA AND AEGEAN	0.6993 *	0.1640	0.4374 **	0.2042 *	saw0.01	0.9296	0.9251	2.0674		
	MEDITERRANEAN	0.4876 *	0.3346 *	0.4810	0.3882	saw0.01	0.8297	0.8187	2.1141		hts0.05
	CENTRAL ANATOLIA	0.5078 *	0.4272 **	0.4974	0.4877	saw0.01	0.8434	0.8333	1.3006	sc0.01	
	BLACK SEA	0.7260 *	0.4176 **	0.2731 **	0.0333 *	saw0.01	0.7675	0.7525	2.0462		
	EAST.&SOUTH. ANA.	0.6064 *	0.6776 *	0.6610	0.2907 ***	saw0.01	0.8246	0.8132	2.0984		

TABLE F3 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL
WITH INCOME DUMMIES FOR 1ST 40%, 2ND 40% AND 3RD 20% (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	ee2	ee3	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
DRIED VEGETABLES	TURKEY	0.4227 *	0.4868 **	0.5080	0.0492 *	saw0.01	0.8078	0.7954	2.1019		
	RURAL	0.5844 *	0.2758	0.5581	0.2833	saw0.01	0.7143	0.6959	1.6750		
	URBAN	0.5569 *	0.4952 **	0.3045 **	0.1230 *	saw0.01	0.8147	0.8028	2.2123		
	MARMARA AND AEGEAN	0.0613	0.8085 *	0.0610	0.0885	saw0.01	0.5816	0.5546	1.9088		hts0.01
	MEDITERRANEAN	0.7358 *	0.0202	0.3461 ***	0.1945 **	saw0.01	0.6551	0.6329	2.1272		
	CENTRAL ANATOLIA	0.6051 *	-0.0270	0.5700	0.8664	saw0.01	0.5127	0.4813	2.0366		
	BLACK SEA	0.6201 *	0.3059	0.1242 ***	0.5666	saw0.01	0.4987	0.4663	1.9881		
	EAST.&SOUTH. ANA.	0.3715 **	0.2003	0.8878 ***	-0.1987 **	saw0.01	0.5339	0.5039	1.8253		
DRIED FRUITS	TURKEY	0.7647 *	0.3870	0.9265	0.4297 ***	saw0.01	0.8547	0.8453	1.9465		hts0.05
	RURAL	0.9454 *	0.4121	0.6252	0.2471 **	saw0.01	0.6449	0.6220	1.8870		
	URBAN	1.0600 *	0.2670	0.8502	0.5281 *	saw0.01	0.9106	0.9049	2.0721		
	MARMARA AND AEGEAN	0.7960 *	0.0064	0.3411	0.3779	saw0.01	0.6728	0.6517	2.1016		hts0.05
	MEDITERRANEAN	1.5635 *	-0.5762 ***	0.8197 ***	0.5657 **	saw0.01	0.6758	0.6549	1.8594		
	CENTRAL ANATOLIA	0.4717 **	0.8753 **	0.6196	0.0140	saw0.01	0.6527	0.6303	2.2106		
	BLACK SEA	1.6951 *	-0.7624	0.6604 **	1.0596	saw0.01	0.3936	0.3545	2.0331		hts0.01
	EAST.&SOUTH. ANA.	2.0503 *	-0.2211	1.3062	1.0537 **	saw0.01	0.6797	0.6590	1.8976		hts0.01
FRESH VEGETABLES	TURKEY	0.7291 *	0.2876 **	0.4117 *	0.3741 *	saw0.01	0.9466	0.9432	1.9088		
	RURAL	0.5074 *	0.5509 *	0.3560	0.4177	saw0.01	0.8974	0.8908	1.5361		
	URBAN	0.5652 *	0.5245 *	0.2913 *	0.3127 *	saw0.01	0.9405	0.9367	2.0375		
	MARMARA AND AEGEAN	0.6677 *	0.1439	0.3407 *	0.3106 *	saw0.01	0.8905	0.8834	1.8329		
	MEDITERRANEAN	0.5631 *	0.3983 *	0.2312 **	0.3893	saw0.01	0.7954	0.7822	1.7562		
	CENTRAL ANATOLIA	0.7509 *	0.5460 *	0.3770 *	0.2461 *	saw0.01	0.8724	0.8642	1.5377	sc0.05	
	BLACK SEA	0.6565 *	0.0952	0.2850 **	0.3903	saw0.01	0.7339	0.7167	1.6988		
	EAST.&SOUTH. ANA.	1.0161 *	0.1064	0.5493 **	0.5601 **	saw0.01	0.7585	0.7429	1.8375		

TABLE F3 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF DOUBLE-LOG MODEL (cont'd)
WITH INCOME DUMMIES FOR 1ST 40%, 2ND 40% AND 3RD 20% (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	ee2	ee3	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
FRESH FRUITS	TURKEY	1.0469 *	-0.1118	0.8387 **	0.5423 *	saw0.01	0.9693	0.9673	1.7107		
	RURAL	0.7471 *	0.2355	0.4697 ***	0.6746	saw0.01	0.8880	0.8808	2.1445		
	URBAN	0.9950 *	0.1265	0.8091 ***	0.4148 *	saw0.01	0.9646	0.9623	2.2217		
	MARMARA AND AEGEAN	0.9677 *	-0.1042	0.6980 **	0.3428 *	saw0.01	0.9449	0.9413	1.9397		
	MEDITERRANEAN	0.7818 *	-0.3729 *	0.4724 ***	0.6719	saw0.01	0.8690	0.8605	1.9565		
	CENTRAL ANATOLIA	0.8191 *	0.4940 *	0.5877	0.4485 ***	saw0.01	0.8655	0.8568	1.7615		
	BLACK SEA	0.8884 *	-0.1671	0.4670 **	0.5952	saw0.01	0.6743	0.6532	1.9822		hts0.01
	EAST.&SOUTH. ANA.	1.2233 *	-0.1982	0.6036 *	0.6894 *	saw0.01	0.8281	0.8170	1.6634		
PROCESSED FOOD	TURKEY	0.5337 *	0.2849 **	0.4688	0.3890 ***	saw0.01	0.9459	0.9424	2.2131		
	RURAL	0.6255 *	0.2269 ***	0.3292 **	0.5203	saw0.01	0.8968	0.8901	2.2565		hts0.05
	URBAN	0.5353 *	0.3838 *	0.3436 **	0.4232 ***	saw0.01	0.9444	0.9408	2.0965		hts0.05
	MARMARA AND AEGEAN	0.3676 *	0.5075 *	0.2936	0.3824	saw0.01	0.8913	0.8842	2.2276		
	MEDITERRANEAN	0.7599 *	0.2788 **	0.3848 **	0.5544	saw0.01	0.8374	0.8269	2.1089		hts0.01
	CENTRAL ANATOLIA	0.5773 *	0.3512 **	0.2601 ***	0.4849	saw0.01	0.7721	0.7574	1.4369	sc0.01	
	BLACK SEA	0.5899 *	0.1646	0.2899 **	0.3684	saw0.01	0.8044	0.7917	2.1592		
	EAST.&SOUTH. ANA.	0.5720 *	0.4412 *	0.6908	0.5483	saw0.01	0.8217	0.8102	1.8946		
CIGARETTE, ALCOHOLIC AND NON-ALCOHOLIC BEVERAGES	TURKEY	0.7300 *	0.1913	0.5423	0.7138	saw0.01	0.9189	0.9137	2.1543		
	RURAL	0.8081 *	0.2523	0.4542	0.7901	saw0.01	0.6806	0.6600	1.7978		
	URBAN	0.7121 *	0.3581	0.6562	0.6763	saw0.01	0.9316	0.9271	2.0792		hts0.05
	MARMARA AND AEGEAN	0.7688 *	0.2164	0.4215 ***	0.6115	saw0.01	0.8526	0.8430	2.1425		
	MEDITERRANEAN	0.5065 *	0.3312 ***	0.2939	0.8623	saw0.01	0.7054	0.6863	1.7704		
	CENTRAL ANATOLIA	0.7752 *	-0.0678	0.6952	0.9305	saw0.01	0.6386	0.6152	1.6891		
	BLACK SEA	0.5686 *	0.7205 *	-0.0019 **	0.3980	saw0.01	0.4289	0.3921	1.8397		
	EAST.&SOUTH. ANA.	0.7964 *	0.2099	0.2805 **	0.8165	saw0.01	0.6845	0.6642	2.2613		

APPENDIX G:
RESULTS OF SIMPLE AND EXTENDED WORKING-LESER MODELS
(Food Expenditures)

EXPLANATORY NOTES:

ey:	parameter of income
ee:	parameter of total expenditure
ee1:	parameter of total expenditure (for 2nd 40%)
ee2:	parameter of total expenditure (for 3rd 20%)
ee3:	parameter of total expenditure (for income above the average)
s:	parameter of household size
*:	individually significant at 0.01
**:	individually significant at 0.05
***:	individually significant at 0.1
F-STAT:	F-Statistics
saw0.01:	model is significant as a whole at 0.01
saw0.05:	model is significant as a whole at 0.05
saw0.1:	model is significant as a whole at 0.1
R-SQ:	R-Square
R-BAR-SQ:	Adjusted R-Square
DW-ST:	Durbin-Watson Statistics
SC:	Serial Correlation
sc0.01:	serial correlation at 0.01
sc0.05:	serial correlation at 0.5
sc0.1:	serial correlation at 0.1
HT:	Heteroscedasticity
ht0.01:	heteroscedasticity at 0.01
ht0.05:	heteroscedasticity at 0.05
ht0.1:	heteroscedasticity at 0.1

TABLE G1 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL WITHOUT INCOME DUMMIES
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
BREAD AND CEREALS	TURKEY	0.2873 *	0.7520	saw0.01	0.9217	0.9201	1.9573		
	RURAL	0.3425 *	1.4149 *	saw0.01	0.7130	0.7070	1.8114		hts0.05
	URBAN	0.0942 *	0.8551	saw0.01	0.9407	0.9395	0.8789	sc0.01	
	MARMARA AND AEGEAN	0.1541 *	1.1876	saw0.01	0.8857	0.8833	1.1961	sc0.01	
	MEDITERRANEAN	0.3037 *	1.6132 *	saw0.01	0.7578	0.7528	1.9685		hts0.05
	CENTRAL ANATOLIA	0.1931 *	1.2947 ***	saw0.01	0.7984	0.7942	2.0929		hts0.01
	BLACK SEA	0.2152 *	1.2605 ***	saw0.01	0.7515	0.7464	1.9828		hts0.01
	EAST.&SOUTH. ANA.	0.3112 *	1.4292 **	saw0.01	0.5743	0.5655	1.8998		
MEAT, FISH AND POULTRY	TURKEY	0.9193 **	1.6988 *	saw0.01	0.1587	0.1414	1.3579	sc0.01	
	RURAL	0.9705	1.3453 ***	saw0.05	0.0833	0.0644	1.8973		
	URBAN	0.9625	2.0378 *	saw0.01	0.2304	0.2145	1.4960	sc0.05	
	MARMARA AND AEGEAN	0.8837 *	1.5727 *	saw0.01	0.1438	0.1262	1.5006	sc0.05	hts0.05
	MEDITERRANEAN	1.0302	1.0376		0.0065	-0.0140	2.2145		
	CENTRAL ANATOLIA	1.1116	1.0741	saw0.05	0.0643	0.0450	1.5457	sc0.05	
	BLACK SEA	0.8350	1.5967 *	saw0.05	0.0772	0.0582	1.9968		
	EAST.&SOUTH. ANA.	1.1308 ***	1.2094	saw0.01	0.1905	0.1738	2.1078		
MILK, MILK PRODUCTS, EGGS AND FATS	TURKEY	0.5578 *	1.4524 *	saw0.01	0.8382	0.8349	2.1919		hts0.05
	RURAL	0.6363 *	1.6214 *	saw0.01	0.2636	0.2484	1.7597		
	URBAN	0.4952 *	1.3711 *	saw0.01	0.9432	0.9420	1.6528		hts0.01
	MARMARA AND AEGEAN	0.4958 *	1.2962 **	saw0.01	0.8695	0.8668	2.2579		hts0.05
	MEDITERRANEAN	0.5603 *	1.3158 **	saw0.01	0.5187	0.5088	2.0661		hts0.01
	CENTRAL ANATOLIA	0.5987 *	1.3141 ***	saw0.01	0.4473	0.4359	1.2377	sc0.01	hts0.01
	BLACK SEA	0.5324 *	1.6459 *	saw0.01	0.2454	0.2299	1.9868		
	EAST.&SOUTH. ANA.	0.5971 *	1.7454 *	saw0.01	0.2534	0.2380	1.9974		

TABLE G1 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL WITHOUT INCOME DUMMIES (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
DRIED VEGETABLES	TURKEY	0.3942 *	1.1944	saw0.01	0.8054	0.8014	2.1296		hts0.01
	RURAL	0.6112 *	1.2720	saw0.01	0.2514	0.2360	1.6664		
	URBAN	0.2865 *	1.2904	saw0.01	0.8812	0.8788	1.8012		
	MARMARA AND AEGEAN	0.2097 *	1.2583	saw0.01	0.7177	0.7118	1.9118		
	MEDITERRANEAN	0.5258 *	1.0393	saw0.01	0.4668	0.4558	2.1354		hts0.05
	CENTRAL ANATOLIA	0.5954 *	0.6993	saw0.01	0.3685	0.3555	1.8208		hts0.05
	BLACK SEA	0.4978 *	1.4571	saw0.01	0.1663	0.1491	2.0278		
	EAST.&SOUTH. ANA.	0.5775 *	1.1331	saw0.01	0.2186	0.2025	1.7854		
DRIED FRUITS	TURKEY	0.6638 *	1.5800 ***	saw0.01	0.2817	0.2669	1.8903		hts0.05
	RURAL	0.7397 ***	1.4184		0.0315	0.0115	1.7524		
	URBAN	0.8306 *	1.9286 *	saw0.01	0.2812	0.2663	2.0803		
	MARMARA AND AEGEAN	0.5684 *	1.2745	saw0.01	0.2268	0.2108	2.0391		
	MEDITERRANEAN	1.1310	0.6673		0.0131	-0.0073	1.9177		
	CENTRAL ANATOLIA	0.6370 *	1.7130 **	saw0.01	0.0960	0.0773	2.2370		
	BLACK SEA	1.1649	0.2511		0.0213	0.0011	1.8648		
	EAST.&SOUTH. ANA.	1.4308 *	0.4583	saw0.05	0.0744	0.0553	1.8497		
FRESH VEGETABLES	TURKEY	0.4873 *	1.4263 *	saw0.01	0.8579	0.8549	1.5596		hts0.01
	RURAL	0.4931 *	1.4498 *	saw0.01	0.6140	0.6060	1.4298	sc0.05	hts0.05
	URBAN	0.4318 *	1.3784 **	saw0.01	0.9074	0.9055	1.7748		
	MARMARA AND AEGEAN	0.4592 *	1.0838	saw0.01	0.8450	0.8418	1.7628		
	MEDITERRANEAN	0.4365 *	1.4577 *	saw0.01	0.6403	0.6328	1.9160		hts0.01
	CENTRAL ANATOLIA	0.4148 *	1.8311 *	saw0.01	0.6495	0.6423	1.4933	sc0.05	hts0.05
	BLACK SEA	0.5147 *	1.0992	saw0.01	0.5360	0.5265	1.6920		hts0.01
	EAST.&SOUTH. ANA.	0.7448 *	1.0507	saw0.01	0.2006	0.1841	1.6093		hts0.01

TABLE G1 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL WITHOUT INCOME DUMMIES (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
FRESH FRUITS	TURKEY	0.7701 *	1.4006 *	saw0.01	0.5064	0.4962	1.5824		
	RURAL	0.7773 *	1.1906	saw0.01	0.1851	0.1683	2.0600		
	URBAN	0.7855 *	1.6980 *	saw0.01	0.5691	0.5602	2.0404		
	MARMARA AND AEGEAN	0.7171 *	1.3390 **	saw0.01	0.5825	0.5739	1.8333		
	MEDITERRANEAN	0.8571 *	0.6484 **	saw0.01	0.2738	0.2588	1.8554		
	CENTRAL ANATOLIA	0.7218 *	1.5697 *	saw0.01	0.2156	0.1994	1.7967		
	BLACK SEA	0.7157 *	0.8956	saw0.01	0.2322	0.2164	1.9365		hts0.01
	EAST.&SOUTH. ANA.	1.0054	0.8652		0.0118	-0.0086	1.4994	sc0.05	
PROCESSED FOOD	TURKEY	0.4879 *	0.9445	saw0.01	0.9086	0.9068	2.1005		hts0.01
	RURAL	0.5696 *	1.3061 **	saw0.01	0.5684	0.5595	2.2616		hts0.01
	URBAN	0.4035 *	0.9394	saw0.01	0.9342	0.9328	1.3483	sc0.01	
	MARMARA AND AEGEAN	0.4355 *	1.0901	saw0.01	0.8333	0.8298	1.9812		hts0.05
	MEDITERRANEAN	0.6133 *	1.3365 **	saw0.01	0.4561	0.4449	2.1672		hts0.01
	CENTRAL ANATOLIA	0.4076 *	1.4364 **	saw0.01	0.6550	0.6478	1.6386		hts0.05
	BLACK SEA	0.5214 *	1.2138	saw0.01	0.5246	0.5148	2.0656		
	EAST.&SOUTH. ANA.	0.5628 *	1.3918 *	saw0.01	0.4683	0.4574	1.9439		
CIGARETTE, ALCOHOLIC AND NON-ALCOHOLIC BEVERAGES	TURKEY	0.6662 *	1.0843	saw0.01	0.6405	0.6331	2.0086		hts0.01
	RURAL	0.5540 *	1.2220	saw0.01	0.3413	0.3277	1.5054	sc0.05	hts0.01
	URBAN	0.7124 *	1.3001	saw0.01	0.6226	0.6149	1.9399		
	MARMARA AND AEGEAN	0.6460 *	1.5414 **	saw0.01	0.4505	0.4391	1.9837		hts0.05
	MEDITERRANEAN	0.5808 *	1.2990	saw0.01	0.3238	0.3099	1.7515		
	CENTRAL ANATOLIA	0.6527 *	1.0288	saw0.01	0.2640	0.2489	1.6214		hts0.05
	BLACK SEA	0.2690 *	1.6447 **	saw0.01	0.3532	0.3398	1.7393		hts0.05
	EAST.&SOUTH. ANA.	0.6548 *	1.2086	saw0.01	0.2059	0.1896	2.1191		

TABLE G2 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL
WITH INCOME DUMMIES FOR THE LEVELS BELOW AND ABOVE THE AVERAGE INCOME
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee1	s	ee2	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
BREAD AND CEREALS	TURKEY	0.2989 *	1.3616 **	0.2466 *	saw0.01	0.9431	0.9408	2.1951		hts0.01
	RURAL	0.3527 *	1.3497 **	0.4627 **	saw0.01	0.7324	0.7212	1.9144		hts0.05
	URBAN	0.1685 *	2.1305 *	0.2492 *	saw0.01	0.9863	0.9857	1.5000	sc0.05	
	MARMARA AND AEGEAN	0.1896 *	2.1786 *	0.2140 *	saw0.01	0.9350	0.9323	1.6659		
	MEDITERRANEAN	0.4019 *	1.6663 *	0.3189 ***	saw0.01	0.7658	0.7559	1.9952		hts0.05
	CENTRAL ANATOLIA	0.2402 *	1.3808 **	0.0120	saw0.01	0.8122	0.8043	2.2210		hts0.05
	BLACK SEA	0.2534 *	1.3079 **	0.4377 *	saw0.01	0.7737	0.7642	2.1112		hts0.05
	EAST.&SOUTH. ANA.	0.2831 *	1.3891 **	0.3420 ***	saw0.01	0.5934	0.5763	2.0593		
MEAT, FISH AND POULTRY	TURKEY	1.1984 *	0.9968	0.6777 *	saw0.01	0.4153	0.3906	1.7513		
	RURAL	0.9490	1.2980	0.7770	saw0.01	0.1320	0.0954	1.9501		
	URBAN	1.2458 *	0.9757	0.5555 *	saw0.01	0.6119	0.5956	2.1367		
	MARMARA AND AEGEAN	1.2387 *	0.6975	0.5703 *	saw0.01	0.4257	0.4015	1.7709		
	MEDITERRANEAN	1.1308	0.9786	0.8136 ***		0.0466	0.0064	2.3024		
	CENTRAL ANATOLIA	1.0844	1.1659	0.6520 **	saw0.01	0.1475	0.1116	1.7136		
	BLACK SEA	0.8517	1.5828 **	0.7617	saw0.1	0.0792	0.0405	2.0014		
	EAST.&SOUTH. ANA.	1.1609 ***	1.1207	0.8942 **	saw0.01	0.2575	0.2262	2.1725		
MILK, MILK PRODUCTS, EGGS AND FATS	TURKEY	0.6706 *	1.3519 **	0.4188	saw0.01	0.8403	0.8336	2.2276		hts0.05
	RURAL	0.6043 *	1.5626 *	0.4720	saw0.01	0.3356	0.3076	1.8240		
	URBAN	0.5992 *	1.4773 *	0.3992	saw0.01	0.9452	0.9429	1.7623		hts0.01
	MARMARA AND AEGEAN	0.6342 *	1.2835	0.3304	saw0.01	0.8697	0.8642	2.2782		hts0.05
	MEDITERRANEAN	0.5551 *	1.2760	0.4269	saw0.01	0.5360	0.5164	2.0991		hts0.01
	CENTRAL ANATOLIA	0.5497 *	1.4017 **	0.3606	saw0.01	0.4783	0.4563	1.2390	sc0.01	hts0.01
	BLACK SEA	0.6146 *	1.5991 *	0.2489 ***	saw0.01	0.2673	0.2364	1.9138		
	EAST.&SOUTH. ANA.	0.6528 *	1.6878 *	0.3449 **	saw0.01	0.2933	0.2636	2.0543		

TABLE G2 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL
WITH INCOME DUMMIES FOR THE LEVELS BELOW AND ABOVE THE AVERAGE INCOME (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	ee2	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
DRIED VEGETABLES	TURKEY	0.5383 *	1.2683	0.2342	saw0.01	0.8071	0.7990	2.1392		hts0.01
	RURAL	0.5759 *	1.1716	0.2756	saw0.01	0.3455	0.3180	1.8090		hts0.05
	URBAN	0.4715 *	1.5431	0.2108 **	saw0.01	0.8927	0.8882	1.9609		hts0.01
	MARMARA AND AEGEAN	0.2977 *	1.9333 **	0.1389 *	saw0.01	0.7397	0.7287	1.9190		
	MEDITERRANEAN	0.6625 *	1.0309	0.3294	saw0.01	0.4721	0.4499	2.1644		hts0.05
	CENTRAL ANATOLIA	0.5834 *	0.7497	0.5354	saw0.01	0.3729	0.3465	1.8471		hts0.05
	BLACK SEA	0.5466 *	1.5108	0.5796	saw0.01	0.1711	0.1362	2.0366		
	EAST.&SOUTH. ANA.	0.5526 *	0.9431	0.1549	saw0.01	0.2985	0.2690	1.8944		
DRIED FRUITS	TURKEY	0.7293 **	1.4457	0.5394	saw0.01	0.2881	0.2581	1.9034		hts0.05
	RURAL	0.7266 ***	1.3582	0.3391	saw0.1	0.0857	0.0472	1.8437		
	URBAN	0.9690	1.4767	0.6563 **	saw0.01	0.3147	0.2858	2.0778		
	MARMARA AND AEGEAN	0.7430	1.1716	0.5051	saw0.01	0.2305	0.1981	2.0506		
	MEDITERRANEAN	1.3592 **	0.5816	0.7435 ***		0.0599	0.0203	1.9524		
	CENTRAL ANATOLIA	0.5919 *	1.8278 **	0.0888	saw0.01	0.1401	0.1039	2.2253		hts0.05
	BLACK SEA	0.9906	0.0915	1.1682		0.0442	0.0040	1.8869		
	EAST.&SOUTH. ANA.	1.6342 *	0.4889	1.1195	saw0.05	0.1008	0.0629	1.8066		
FRESH VEGETABLES	TURKEY	0.6368 *	1.4685 *	0.4402	saw0.01	0.8736	0.8683	1.7966		hts0.01
	RURAL	0.5744 *	1.4879 *	0.2841 ***	saw0.01	0.6296	0.6140	1.5047	sc0.05	hts0.05
	URBAN	0.5088 *	1.7383 *	0.4288 *	saw0.01	0.9196	0.9162	2.0425		hts0.05
	MARMARA AND AEGEAN	0.5485 *	1.3035	0.3995 ***	saw0.01	0.8528	0.8466	1.8747		hts0.05
	MEDITERRANEAN	0.4953 *	1.4479 *	0.3176	saw0.01	0.6426	0.6275	1.8739		hts0.01
	CENTRAL ANATOLIA	0.5910 *	1.7710 *	0.2343	saw0.01	0.6674	0.6534	1.5739		
	BLACK SEA	0.5768 *	1.0683	0.3440	saw0.01	0.5401	0.5207	1.6631		hts0.01
	EAST.&SOUTH. ANA.	0.9048	1.0827	0.4581 **	saw0.01	0.2638	0.2328	1.8238		

TABLE G2 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL
WITH INCOME DUMMIES FOR THE LEVELS BELOW AND ABOVE THE AVERAGE INCOME (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s	ee2	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
FRESH FRUITS	TURKEY	0.9539	1.0039	0.6158 *	saw0.01	0.5998	0.5830	1.7319		
	RURAL	0.8006 *	1.1938	0.5909 ***	saw0.01	0.2149	0.1819	2.1001		
	URBAN	0.9197 ***	1.2674	0.5507 *	saw0.01	0.6378	0.6226	2.2452		
	MARMARA AND AEGEAN	0.8528 *	1.0360	0.4974 *	saw0.01	0.6253	0.6095	1.9051		hts0.05
	MEDITERRANEAN	0.9017	0.5768 *	0.6172 ***	saw0.01	0.3064	0.2772	1.9468		
	CENTRAL ANATOLIA	0.7320 *	1.6115 *	0.4196 **	saw0.01	0.2622	0.2311	1.8968		
	BLACK SEA	0.7230 *	0.8601	0.6375	saw0.01	0.2362	0.2041	1.9409		hts0.01
	EAST.&SOUTH. ANA.	1.1523	0.8152	0.5723 *	saw0.01	0.1423	0.1062	1.6900		
PROCESSED FOOD	TURKEY	0.4991 *	1.2468	0.4656 *	saw0.01	0.9195	0.9161	2.1725		hts0.01
	RURAL	0.5618 *	1.2633 **	0.6153	saw0.01	0.5806	0.5630	2.3284		hts0.01
	URBAN	0.4612 *	1.4348 *	0.4637 *	saw0.01	0.9542	0.9523	1.7932		
	MARMARA AND AEGEAN	0.4559 *	1.5497 *	0.4666 *	saw0.01	0.8561	0.8501	2.1049		hts0.01
	MEDITERRANEAN	0.7114 *	1.3355 **	0.5099	saw0.01	0.4636	0.4410	2.1931		hts0.01
	CENTRAL ANATOLIA	0.4629 *	1.4474 **	0.4236	saw0.01	0.6602	0.6459	1.6894		hts0.05
	BLACK SEA	0.5269 *	1.1885	0.5031	saw0.01	0.5319	0.5122	2.1208		
	EAST.&SOUTH. ANA.	0.5462 *	1.3603 *	0.5419	saw0.01	0.4775	0.4555	1.9562		
CIGARETTE, ALCOHOLIC AND NON-ALCOHOLIC BEVERAGES	TURKEY	0.6810 *	1.2668	0.7145	saw0.01	0.6537	0.6392	2.0864		hts0.01
	RURAL	0.6406 *	1.2793	0.4912	saw0.01	0.3512	0.3238	1.5535	sc0.05	hts0.05
	URBAN	0.7038 *	1.5045	0.7171	saw0.01	0.6279	0.6122	1.9711		
	MARMARA AND AEGEAN	0.7794 **	1.4745	0.6411	saw0.01	0.4636	0.4410	2.0636		hts0.05
	MEDITERRANEAN	0.5627 *	1.2426	0.4149	saw0.01	0.3417	0.3140	1.7361		
	CENTRAL ANATOLIA	0.6547 *	0.9800	1.2024 *	saw0.01	0.3231	0.2946	1.7939		hts0.01
	BLACK SEA	0.4097 *	1.7220 *	0.2349	saw0.01	0.3649	0.3381	1.7728		hts0.05
	EAST.&SOUTH. ANA.	0.6399 *	1.2318	0.7682	saw0.01	0.2155	0.1824	2.1313		hts0.05

TABLE G3 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL
WITH INCOME DUMMIES FOR 1ST 40%, 2ND 40% AND 3RD 20%
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee1	s	ee2	ee3	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
BREAD AND CEREALS	TURKEY	0.3473 *	1.5023 *	0.2368	0.2813 *	ahs0.01	0.9474	0.9440	2.3435		hts0.01
	RURAL	0.3669 *	1.4415 *	0.3533	0.4705 **	ahs0.01	0.7317	0.7144	1.9198		hts0.05
	URBAN	0.2877 *	2.0978 *	0.1369 *	0.2960 *	ahs0.01	0.9886	0.9879	1.9049		
	MARMARA AND AEGEAN	0.2074 *	2.3065 *	0.0148	0.1993 *	ahs0.01	0.9425	0.9388	1.8044		
	MEDITERRANEAN	0.3662 *	1.7106 *	0.3029	0.3220 **	ahs0.01	0.7755	0.7610	2.1135		hts0.01
	CENTRAL ANATOLIA	0.2849 *	1.4638 **	0.3499 **	0.1727 **	ahs0.01	0.8181	0.8064	2.1604		hts0.05
	BLACK SEA	0.3334 *	1.3651 **	0.3428 **	0.4663 **	ahs0.01	0.7733	0.7587	2.1317		hts0.05
	EAST.&SOUTH. ANA.	0.3475 *	1.4592 *	0.5211	0.3383	ahs0.01	0.6037	0.5781	2.0471		
MEAT, FISH AND POULTRY	TURKEY	1.1447	1.0472	1.1196	0.6379 *	ahs0.01	0.4337	0.3971	1.7522		
	RURAL	0.8847	1.2815	0.7763	0.8116	ahs0.05	0.1391	0.0836	1.9050		
	URBAN	1.3018 *	0.9799	1.0496 **	0.4780 *	ahs0.01	0.6136	0.5887	2.1279		
	MARMARA AND AEGEAN	1.2787 *	0.6421 ***	0.8325 *	0.4296 *	ahs0.01	0.4800	0.4465	1.7490		
	MEDITERRANEAN	1.1665	0.9391	0.7478 ***	0.9082	ahs0.1	0.1076	0.0500	2.2499		
	CENTRAL ANATOLIA	0.8831	1.2608	1.0207	0.2977 **	ahs0.01	0.2260	0.1760	1.6968		
	BLACK SEA	1.0603	1.4394 ***	0.2874 *	0.9872	ahs0.01	0.1734	0.1201	2.0407		
	EAST.&SOUTH. ANA.	1.1519	1.1090	0.9907	0.8773	ahs0.01	0.2516	0.2033	2.1025		hts0.05
MILK, MILK PRODUCTS, EGGS AND FATS	TURKEY	0.6804 *	1.3489 **	0.5523	0.3443	ahs0.01	0.8434	0.8332	2.2085		hts0.05
	RURAL	0.5261 *	1.5132 *	0.4827	0.4065	ahs0.01	0.3892	0.3497	1.9903		
	URBAN	0.6867 *	1.4033 *	0.5437	0.3660	ahs0.01	0.9481	0.9448	1.8737		hts0.01
	MARMARA AND AEGEAN	0.6946 *	1.2257	0.4396 ***	0.2697	ahs0.01	0.8752	0.8672	2.2448		hts0.05
	MEDITERRANEAN	0.4717 *	1.3571 **	0.4929	0.4213	ahs0.01	0.5476	0.5184	2.1238		hts0.01
	CENTRAL ANATOLIA	0.5101 *	1.4189 **	0.5228	0.4831	ahs0.01	0.4725	0.4385	1.2892	sc0.01	hts0.01
	BLACK SEA	0.7406 **	1.4608 **	0.2844 ***	-0.0050 **	ahs0.01	0.3126	0.2682	1.9968		
	EAST.&SOUTH. ANA.	0.6342 *	1.7170 *	0.6911	0.3009	ahs0.01	0.2837	0.2375	2.0922		

TABLE G3 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL
WITH INCOME DUMMIES FOR 1ST 40%, 2ND 40% AND 3RD 20% (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s		ee2	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
	TURKEY	0.4381 *	1.4896 ***	0.5447	0.1903 ***	ahs0.01	0.8150	0.8030	2.1591		hts0.05
	RURAL	0.5946 *	1.2380	0.6697	0.3246	ahs0.01	0.2707	0.2236	1.7044		
DRIED	URBAN	0.5818 *	1.5047 ***	0.3156	0.2218 ***	ahs0.01	0.8972	0.8906	2.0093		hts0.01
VEGETABLES	MARMARA AND AEGEAN	0.0296 *	2.1023 *	-0.0515	0.1101 *	ahs0.01	0.7836	0.7697	1.9261		hts0.05
	MEDITERRANEAN	0.7657 **	0.9715	0.4573	0.2371	ahs0.01	0.4766	0.4429	2.1964		hts0.01
	CENTRAL ANATOLIA	0.5947 **	0.7654	0.6420	0.9946	ahs0.01	0.3832	0.3434	1.8844		hts0.05
	BLACK SEA	0.6220 **	1.4291	0.1429	0.6274	ahs0.01	0.1915	0.1394	1.9792		
	EAST.&SOUTH. ANA.	0.4093 *	1.0540	0.9726 ***	-0.0291	ahs0.01	0.2894	0.2435	1.9212		
	TURKEY	0.7578	1.4447	0.9267	0.4691	ahs0.01	0.2941	0.2485	1.9279		hts0.05
	RURAL	0.9467	1.3224	0.7614	0.2704 ***		0.0651	0.0048	1.7841		
DRIED	URBAN	1.0456	1.3647	0.8399	0.6416 **	ahs0.01	0.3264	0.2829	2.1000		
FRUITS	MARMARA AND AEGEAN	0.6558	1.1863	0.2927	0.4160	ahs0.01	0.2390	0.1900	2.0172		
	MEDITERRANEAN	1.6255 **	0.3776	0.8424 ***	0.5385 **		0.0778	0.0183	2.0198		
	CENTRAL ANATOLIA	0.5458 **	1.8289 **	0.5989	0.0083	ahs0.1	0.1229	0.0663	2.2741		
	BLACK SEA	1.2624	-0.0511 ***	0.8163	0.7425		0.0602	-0.0004	1.9053		hts0.05
	EAST.&SOUTH. ANA.	1.8326 *	0.4986	1.4777	1.0818		0.1058	0.0482	1.7650		hts0.05
	TURKEY	0.7344 *	1.3756 **	0.4016 *	0.4452	ahs0.01	0.8807	0.8730	1.9330		hts0.01
	RURAL	0.5548 *	1.5399 *	0.3899	0.3913	ahs0.01	0.6549	0.6326	1.5388		hts0.05
FRESH	URBAN	0.5869 *	1.6101 *	0.2918 ***	0.3983 **	ahs0.01	0.9241	0.9192	2.0834		hts0.05
VEGETABLES	MARMARA AND AEGEAN	0.6471 *	1.1947	0.3375	0.3550	ahs0.01	0.8581	0.8489	1.9019		hts0.05
	MEDITERRANEAN	0.5718 *	1.4725 *	0.2871	0.3849	ahs0.01	0.6481	0.6254	1.8979		hts0.01
	CENTRAL ANATOLIA	0.7780 *	1.6365 *	0.4174 **	0.1756 **	ahs0.01	0.6989	0.6795	1.6115		
	BLACK SEA	0.6643 *	1.0459	0.3251	0.3870	ahs0.01	0.5476	0.5184	1.6422		hts0.01
	EAST.&SOUTH. ANA.	0.9981	1.0728	0.5732 **	0.5632 ***	ahs0.01	0.2761	0.2294	1.9005		

TABLE G3 : ESTIMATED ELASTICITIES AND DIAGNOSTIC STATISTICS OF WORKING-LESER MODEL
WITH INCOME DUMMIES FOR 1ST 40%, 2ND 40% AND 3RD 20% (cont'd)
(EXPLANATORY VARIABLES ARE EXPENDITURE AND AVERAGE HOUSEHOLD SIZE)

		ee	s		ee2	F-STAT	R-SQ	R-BAR-SQ	DW-ST	SC	HT
FRESH FRUITS	TURKEY	1.0322	0.9179	0.8295 **	0.5973 *	ahs0.01	0.6191	0.5946	1.7819		
	RURAL	0.7672 **	1.1899	0.5419	0.6932	ahs0.01	0.2695	0.2223	2.1320		
	URBAN	1.0001	1.1400	0.8021 ***	0.4890 *	ahs0.01	0.6495	0.6269	2.3266		
	MARMARA AND AEGEAN	0.9544	0.9110	0.6852 **	0.3957 *	ahs0.01	0.6435	0.6205	1.9567		hts0.05
	MEDITERRANEAN	0.7983 **	0.5907 *	0.5103 ***	0.6513	ahs0.01	0.4058	0.3675	2.0463		hts0.05
	CENTRAL ANATOLIA	0.8224 ***	1.5295 *	0.7024	0.4416	ahs0.01	0.2523	0.2041	1.8498		
	BLACK SEA	0.8272	0.8278	0.5852	0.6183	ahs0.01	0.2417	0.1928	1.9102		hts0.01
	EAST.&SOUTH. ANA.	1.2347 ***	0.7965	0.6190 *	0.6900 **	ahs0.01	0.2047	0.1534	1.6466		
PROCESSED FOOD	TURKEY	0.5301 *	1.2812 ***	0.4729	0.4337 *	ahs0.01	0.9193	0.9141	2.1521		hts0.01
	RURAL	0.6570 *	1.1389	0.4264	0.5452	ahs0.01	0.6018	0.5762	2.3379		hts0.01
	URBAN	0.5403 *	1.3736 **	0.3433	0.4626 *	ahs0.01	0.9554	0.9525	1.8909		
	MARMARA AND AEGEAN	0.3633 *	1.6323 *	0.2777	0.4023 *	ahs0.01	0.8669	0.8583	2.0892		hts0.05
	MEDITERRANEAN	0.7521 *	1.3083 **	0.4408	0.5846	ahs0.01	0.4814	0.4480	2.2409		hts0.01
	CENTRAL ANATOLIA	0.5925 *	1.3763 **	0.3481	0.4452	ahs0.01	0.6642	0.6426	1.6542		hts0.05
	BLACK SEA	0.5796 *	1.1206	0.3435	0.3208	ahs0.01	0.5696	0.5418	2.1891		hts0.05
	EAST.&SOUTH. ANA.	0.5874 *	1.4361 *	0.7000	0.5679	ahs0.01	0.4777	0.4440	1.9518		
CIGARETTE, ALCOHOLIC AND NON-ALCOHOLIC BEVERAGES	TURKEY	0.7126 *	1.2353	0.5290	0.7188	ahs0.01	0.6533	0.6309	2.0781		hts0.01
	RURAL	0.8101	1.2853	0.4931	0.7493	ahs0.01	0.3974	0.3586	1.6661		hts0.01
	URBAN	0.7186 *	1.3986	0.6392	0.7012	ahs0.01	0.6298	0.6059	1.9760		
	MARMARA AND AEGEAN	0.7251 **	1.3886	0.3874	0.6246	ahs0.01	0.4952	0.4627	2.1012		hts0.01
	MEDITERRANEAN	0.4890 *	1.3925 ***	0.2954	0.8368 ***	ahs0.01	0.3662	0.3253	1.7679		
	CENTRAL ANATOLIA	0.6928 **	1.0124	0.6421	0.9441	ahs0.01	0.3090	0.2644	1.7442		hts0.01
	BLACK SEA	0.5853 *	1.6547 **	0.1685	0.4281	ahs0.01	0.3732	0.3328	1.7971		hts0.01
	EAST.&SOUTH. ANA.	0.7860 ***	1.1815	0.2947 ***	0.8287	ahs0.01	0.2445	0.1957	2.2172		hts0.05