



Changes in Household Demand Patterns: A Cross-Country Comparison

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I INTRODUCTION

This study examines the changes in household demand patterns over the last two decades across countries. In particular we are interesting in the trends in service related commodities. In additional we examine several explanations for the observed changes that are put forward in the literature.

The years and countries under investigation are 1980 and 1990 for Spain (ES), 1979 and 1998 for the Netherlands (NL), 1980 and 1997 for the United States (US), 1979 and 1995 for France (FR), 1980 and 1998 for the United Kingdom (UK) and 1978 and 1993 for Germany (DE). A key issue in this study is to obtain statistics that are comparable across countries and this yields the main contributions to the existing literature. Previous studies differ in definitions and methodology to such an extent that a cross-country comparison is virtually impossible. Based on budget household data this study creates comparable expenditure categories and variables for the household demographic and employment composition. Next, for all countries under investigation we use a common empirical framework (Engel curves) to examine several explanations for the observed changes in demand that have been put forward in the economic literature: (1) Household compositional effects. Changes in households' demographic composition and employment structure may have affected the allocation of expenditures among the different commodities. It is hypothesized that these changes caused an increase in the demand for services related commodities. (2) Income effects. Most developed countries have experienced real income growth. The way the demand for a commodity is affected by income growth depends on whether this commodity is a luxury, necessary or an inferior commodity. Under the assumption that services related commodities are a luxury, their budget share will have increased over the last decades. (3) Price Effects. Baumol's cost disease stipulates that certain sectors, such as the service sector, experience relatively lower productivity growth and, consequently, face relatively higher increasing costs (Baumol, 1967). This translates into relatively higher prices of the commodities produced in these sectors. Consequently, in the case demand is price inelastic the budget shares of these commodities increase. The change in the budget share due to a change in relative prices holding quantities constant is referred to in this study as the Price effect. (4) Preference changes and substitution effects. Demand will most likely respond to relative price changes and preferences over commodities may have changed.

These two effects cannot be separately identified in this study and are considered unexplained or residual effects.

The outline of this study is as follows: Section 2 described that data for each country, Section 3 reports on the changes in household composition, employment and household expenditure patterns over time for each country, Section 4: Steve's analysis and examines several explanations for the observed changes in household expenditure patterns, and Section 5 concludes.

2 THE DATA

This section describes briefly the data sources for each country on which all Tables and analyses in this study are based. More detailed descriptions and statistics are available from the country studies on which this study is based: Luengo-Prado and Ruiz-Castillo (2003) for Spain, Kalwij and Salverda (2003) for the Netherlands, Smith (2003) for the US, Gardes and Starzec (2003) for France, Blow (2003) for the UK, and Deelen and Schettkat (2003) for Germany. We refer to these six studies as the country-studies.

2.1 THE DATA

Spain

The data from Spain are taken from the *Encuestas de Presupuestos Familiares* (EPF) collected by the *Instituto Nacional de Estadística* (INE) 1980-81 and 1990-91. The observation periods are from the third quarter up to and including the second quarter in the next year. These periods are referred to as 1980 and 1990. These surveys consist of 23,707, and 21,155 household observations representative of a population of approximately 10 and 11 million households in, respectively, 1980 and 1990, occupying private residential housing in all of Spain.

The EPF's are spread out uniformly over a period of 52 weeks. All household members of 14 or more years of age are supposed to record all expenditures that take place during a sample week. Then, in depth interviews are conducted to register past expenditures over reference periods beyond a week and up to a year. From that information, the INE estimates annual household total expenditures. Information on bulk purchases is used to construct food and drinks annual expenditures (for 1990). On the income side, a maximum of four income recipients are asked about the income earned from different sources during the year prior to the sample week. Therefore, household expenditures and household income are not estimated for the same period. Income information is not of vital importance for this study. Nevertheless it is noteworthy to report that INE's estimates that total expenditures is greater than household income for more than 60% of households, underlining that income is severely underestimated in the EPF.

The Netherlands

The data for the Netherlands are taken from the Dutch budget survey, which has been held by Statistics Netherlands on a yearly basis since 1978. For this study the 1979 and 1998 waves are used. Each wave consists of about two thousands households. All households keep a daily record of all expenses per item, over and above a threshold amount, during one year except when being on holidays. The latter expenditures are recorded in a separate holidays-diary. The threshold amount for the daily records was 25 Guilders (€11) in 1979 and 35 Guilders (€16) in 1998. For a limited time period all expenses are recorded from which yearly expenses are deduced on goods with a price below this threshold amount. This period equalled one month in 1979 but has been reduced to 7 or 8 days in 1998. The survey contains information on income, family composition and background information on all members of the household such as age, education and labour market status. All expenditures are directly observed except the rental value of the house for homeowners and this is imputed by Statistic Netherlands. The final sample consists of 1884 households in 1979 and 1904 households in 1998.

The United States

The CEX is a relatively small, but detailed, survey of the expenditure patterns of US households. The principal purpose of the survey is to gather household-expenditure information for use in connection with the maintenance of the official Consumer Price Index. The CEX has two separate components, each with its own questionnaire and –in the present context, most importantly– its own independent sample. The first of the two components is the Interview portion, in which households participate for five consecutive quarters in a detailed interview that covers up to 95% of their total expenditures in the preceding three-month period. The second component of the CEX is the Diary portion, in which households keep a Diary of almost all expenditures made over two, consecutive one-week periods.

The Interview portion of the CEX is a rotating panel of about 5,000 households, with new panels beginning every month. Each participating household completes five consecutive quarterly interviews (a small share does not complete all five interviews). The first of these interviews collects household-member information including age, sex, race, marital status, education, relationship to the household "reference person," and other characteristics. This first interview also conducts an inventory of household consumer durables. The initial interview does not collect information on household expenditures; the second through fifth interviews do collect information on household expenditures over the preceding three months. The second and the

fifth interviews also ask households detailed questions about their annual income. The fifth interview (but not the second) also gathers information on annual household spending on occupation-related expenditures (including union dues), cash contributions (such as to charities), and some financial services; none of the earlier interviews gather information on these types of expenditures. The questionnaire for the Interview portion of the survey is designed to capture expenditures on major items. The Bureau of Labor Statistics (BLS) estimates that the expenditures collected in the Interview portion typically cover 80-95% of total household expenditures. The Interview questionnaire collects fairly detailed information on 60-70% of total expenditures and less-detailed information on an additional 20-25% of total expenditures, including food (again, all percentages are BLS estimates). The Interview portion, however, does not collect any data on housekeeping supplies, personal care products, or nonprescription drugs, which typically amount to 5-15% of household expenditures.

The Diary portion of the survey has a much smaller sample than does the Interview portion, with a quarterly sample of only about 1,500 households. Each participating household answers an initial questionnaire on householder characteristics and income and then keeps track of daily expenditures for two consecutive one-week periods in a specially designed diary. The diary is designed to collect detailed expenditure data on small, frequently purchased items. In principle, households should record all expenditures, but particular attention is paid to items such as food, drinks, food away from home, gasoline, housekeeping supplies, nonprescription drugs, medical supplies, and personal care goods and services. In this respect, the Diary portion complements several gaps in the coverage of the Interview portion of the survey.

The final sample of the BLS in this study uses the 1980 and 1997 years that have information on, respectively, 5897 and 6454 households.

France

The main source of statistical information used in this study for France is based on family budget surveys (FBS). The FBS project has a very long history and has been modified continuously during all period of its existence. Some methodological changes were minor from the comparative point of view but others could influence the sense of observed evolutions. The present study is based on FBS that belongs to the same generation (1979-1995) with almost identical methodological choices, guaranteeing comparability across time.

The survey covers all civilian non-institutional households in metropolitan France and overseas departments. Overseas territories are not in the scope of the survey. The metropolitan sample has been obtained using as a sample frame the Census housing files, completed by a file containing new houses. It is a random uniform sample of dwellings. The household's expenditures are not recorded over a year. It is thus necessary to have a uniform break down of the sample over the year, in order to take into account the seasonal effects that may affect some expenditures: the impact of season (fruits, vegetables), of temperature (clothes, energy), of the calendar (taxes, energy bills) can be great. The careful breakdown of the sample is necessary to get a correct estimate of the annual expenditure, but also a faithful picture of the seasonal movements throughout the year. This is why there are eight waves of survey, of six weeks each, and each one having an eighth of the sample. Data collection is made in several waves (8) during 1 year over two calendar years (for instance 1994-1995) starting in the spring. There is no data collection during the first half of August and the second half of December. The interviewer will visit the household three times. It is necessary to respect the relevant waiting periods between visits in order to let the household fill the diaries. The interviewer is completing the expenditure information by a special "quality questionnaire describing the condition of the data collection. The households keep a diary during 14 days.

The survey also collects information about non-monetary consumption: food produced for own consumption, fictitious rent, employer' payments in kind. The FBS survey can be considered as a reliable source of data on income, which completes the information provided by the « Fiscal Revenue » survey. The FBS records all types of income: taxable income, non-taxable income, social security benefits, money transfers from other households, exceptional income.

The final sample of the FBS in this study uses the 1979 and 1995 years that have information on, respectively, 10645 and 12102 households.

The United Kingdom

The UK Family Expenditure Survey (FES) is a continuous household survey that began in 1957 and is carried out by the Office for National Statistics. Annual samples of around 11,000 private households (about 1 in 2000 of all United Kingdom households) are selected each year from the Postcode Address File (a comprehensive list of all delivery points - post-boxes). About 11% of the addresses prove to be ineligible because they are for institutions and businesses rather than private households. Approximately 60% of the households co-operate by providing information

about the household, household and personal incomes, and certain payments that recur regularly. The survey is made up of:

- A comprehensive household questionnaire which asks about regular household bills and expenditure on major but infrequent purchases (e.g., rent, gas and electricity bills, telephone accounts, insurances, season tickets, and hire purchase payments);
- An individual questionnaire for each adult (aged 16 or over) which asks detailed questions about their income, including details about economic activity (primary and secondary) and sources of income (including wages, pensions and benefits);
- A diary of all personal expenditure kept by each adult for two weeks;
- A simplified diary kept by children aged 7 to 15 years, also kept for two weeks.

The FES operates strict response rules. Households count as responding only if the household expenditure questionnaire is complete and all adults complete the income questionnaire (without refusing any item of information) and keep a two-week diary of all their expenditure.

The FES provides detailed information about household expenditure on goods and services (including housing costs, food, fuel, travel, clothing and leisure), with considerable detail in the categories used. It provides information about the ownership of consumer durables and cars; plus basic information on housing and a range of demographic and socio-economic variables. For each sampled household, information is collected about the household (housing tenure, number of rooms, amenities) and about each usually resident member (such as their age, sex, marital status and relationship to the head of household).

The FES sample does not include: homeless people; people in a Bed & Breakfast accommodation; people in care or nursing homes or in hospital for longer than one month; people in hostels/halls of residence (students, nurses etc); children's homes; the military, police, their families, civilians living in military installations; foreign armed forces, diplomats etc, and; prisoners.

The final sample of the FES in this study uses the 1980 and 1998 years that have information on, respectively, 6810 and 6030 households.

(West) Germany

Information on income and expenditures of households in Germany is collected every 5 years in the so-called 'EVS' (Einkommens- und Verbrauchs-Stichprobe) with fairly large sample sizes (about 35000 households in West Germany) varying a bit between the years. The major purpose of the EVS is to record all income sources and expenditures as well as the stock of household durables, the housing situation and the financial situation of households (savings, financial assets, insurances). At the beginning of the survey period the household's socio-demographic characteristics are recorded and in the following four months households report their expenditures. To capture smaller and frequent expenditures (such as expenditures on food, beverages etc.) about a fifth of the households report in one month these detailed expenditures in a diary. The monthly figures reported in the detailed diary for one month are then multiplied by twelve to achieve annual figures. This may lead to under- and over-estimation of actual expenditures (Statistisches Bundesamt 1997-7: 33).

Households of foreigners are included in the EVS only since 1993. The institutional population is never included. The final sample of the EVS in this study uses the 1978 and 1993 years that have information on, respectively, 22.468 and 31.774 households in West Germany.

2.2 DEFINITIONS AND THE COMMODITY CLASSIFICATION

The unit of observation in all budget surveys used in this study is the household. The respondent is the head of household, defined as the highest earner, and the position of all other members of the household are with respect to the head of household.

A household is defined as a single-person household in case the head of household is the only adult in the home, in case the head of household is married or cohabiting and there are two adults in this household then a household is defined as a couple, and otherwise the household is defined as "other". If the couple has children these are registered as such. The exceptions are Spain and France. For Spain only the age of the household member is known and not the relationship with respect to the head of household, hence a child is defined as a household member younger than 19 years of age. For France a child is defined as a household member younger than 15 years of age. In most countries the "other" groups is small but in countries such as Spain it is common to have parents or parents-in-law of the head of household living in the household and such a household is defined as "other". A household in which the head of household is over 64 years of age is defined as retired. The employment status is defined based

on having a job with positive earnings, irrespective of the number of hours of work. For example, a person on welfare is classified as jobless.

Gross household income – if available in the survey - includes gross labour income of all household members, gross income of other activities, asset income, rent subsidies, child allowances, social security benefits, pension income, other monetary transfers such as inheritance, scholarships and alimony. To arrive at net household income social security contributions and labour and income tax are deducted from gross household income. In addition mandatory health insurance contributions are deducted from net income and the rental value of the house is added to net income. In the case of a public health plan the premiums are standard. In the case of a private health plan only the premium for the mandatory basic private health insurance is deducted. Additional insurances, which are optional, are registered as expenditures on health services. The definition of household income used in this study deviates from net household income by taking into account mandatory health insurance premiums, interest payments, and the rental value of the house for homeowners. This income concept is closely linked to household expenditures and the difference between household income as defined in this study and disposable income are the interest payments which are not reported on most of the surveys in every year. As discussed in Section 2.1, income is poorly measured in several countries and it is not a key variable for this study. Given this discussion, savings can clearly not be deduced from the difference between income and expenditures.

When constructing the different aggregated commodities the emphasis is put on services. Table 3, which is discussed in the next section, lists the consumer commodities we distinguish. We distinguish 20 categories and the budget share of a certain aggregate commodity is defined as the expenditures on this aggregated commodity divided by household total expenditures. Appendix B provides a detailed description of the expenditure categories. The commodity classification used is more detailed than that in other studies and it is especially detailed for the service related commodities. Some of the service categories are too small to make robust inferences and for this reason we often only make inferences on the aggregate of all services related commodities later on. The results on the most detailed level are, of course, always reported on. An even more detailed classification is reported on in the six country-papers.

All descriptive statistics reported in this study are weighted sample statistics; hence for each country we provide a representative picture of the population. A detailed comparison with the

national accounts is provided in the country papers referred to above. Data cleaning is done in a similar way across countries. Trimming is used to deal with outliers that may influence the empirical results and is carried out on the expenditure shares, i.e. expenditures on a certain commodities over total expenditures. Households who report a budget share over the average share plus six times the standard deviation are removed from the sample. This yielded a removal of only a small proportion of the samples and details are provided in the country papers referred to above.

3 CHANGES IN HOUSEHOLD COMPOSITION, EMPLOYMENT AND EXPENDITURES

Section 3.1 describes the major changes in household composition and employment. Section 3.2 examines the distribution of household total expenditures and how expenditures are distributed over the different commodities.

3.1 HOUSEHOLD COMPOSITION AND EMPLOYMENT

Table I shows that the major demographic changes in the six countries. Panel A show that average household size has decreased in all countries, mainly due to a decrease in the number of children in the household and to a lesser extent due to a decrease in the number of adults. Spain even experienced a slight increase in the number of adults in the household. However, as Panel B shows, all countries experienced an increase in the number of single households. The most notable demographic change is the decrease in the percentage of households with children. Furthermore, an increase in lone mothers is observed in all countries. Finally, the data shows the aging of the population by increasing percentages of retired household (age 65 or over).

Panel C, Table I, shows the major trends in household employment. The general trend become clearer in Panel D that reports a decrease in all countries of the percentage traditional households of a couple with children in which the only one adult works. This decrease has been largest in the Netherlands that experienced a fast increase in part-time employed women during the 1990's. This latter aspect is also clear in Panel C with a doubling in the Netherlands of two-jobs couples. Panel D shows that, in contrast to common believes, the percentage of two-jobs couples with children has decreased somewhat in the US, FR, UK and DE. The percentage jobless household has in particular risen (doubled) in France and the UK and remained stable in the other countries (Panel D, Table I). In this respect France and the UK has passed the level of Spain and became closer to the infamous high Dutch level of jobless households. The US remains to have a low percentage of jobless households. These findings are in particular noteworthy given the reported relatively low unemployment rates reported by the OECD in the late 1990's in especially counties like the UK and the Netherlands that match US levels. On a household level there is no sign that the percentages of jobless households got any closer to the low US levels.

In short, the overall trend in all countries is that the traditional household is losing ground, there is an increase in employed single person households and couples have fewer children.

3.2 HOUSEHOLD EXPENDITURES

Table 2 reports on real household total expenditures. Spain and the UK report strong increases in real expenditures, around 2% per year. The Netherlands, France, the US and Germany experienced much lower growth, around 0.3-1% per year. Expenditures inequality based on the ratio of 90th and 10th percentile of the expenditures distribution (P90/P10) remains relatively stable in NL, the US and the UK and decreased in ES and FR. Clearly, these are raw statistics in the sense that this not based on adult-equivalent expenditures, i.e. taking household composition into account. At the bottom of Table 2 average household total expenditures is broken down into several major categories. Most notably is the steep increase in expenditures on Housing, where most of the total expenditures gains appear to have gone too. We return to this break down underneath.

Table 3 reports on the distribution of total expenditures over the 20 different commodity groups. At the bottom of Table 3 we summarize these in two main groups: Goods and Services. The share of goods decreases in all countries and this is mainly due to a decrease in the budget share of “Food and non-alcoholic beverages” and “clothing and footwear”. The budget share of services has gone up in all countries. To some extent the increase in services is due to increases in services related commodities such as “food and beverages away from home” and “private transport services”. However, this increase is mainly caused by an increase in “housing”: increases of about 5%-points for Spain, France Germany, the US, and up to almost 10%-points in the Netherlands and the UK.

Table 4 provides a clearer picture of what is going on across countries and over time. Table 4 distinguishes between expenditures on durable goods, health, education, housing and non-durable goods & services. This latter category is broken down over the 17 remaining categories it is based upon. Note that we keep the numbering consistent with the numbering in Table 3.

Durable goods, included in Table 3 in the different categories, such as cars are considered investment goods and not consumption goods. For this reason we examine them separately from Non-durable goods & Services and are excluded from the detailed empirical analysis of household expenditure patterns in the next Section. The durable categories are lumped into one

durable goods category (see Appendix B for details). Table 4 shows that the expenditure share on durables increases somewhat in the US, and decreases somewhat in the Netherlands and France.

The differences across countries in the budget shares on education and health are largely determined by institutional differences and the extent to which these services are provided directly by the government. For instance, Tables 6 and 7 make clear that the health and education sectors are largely publicly financed, with the exception of the US health system. For this reason we report on Health and Education expenditures separately and, as can be seen in Table 4, these categories are relatively small except for the private health expenditures in the US and Germany (inconsistent with Table 6?).

As discussed above, the expenditures on housing and the trend over time vary considerably across countries. These differences may be associated with differences in the housing market but, moreover, there are fundamental differences across countries in the way imputed rent is calculated (see country-papers). For this reason we conclude that housing expenditures are not comparable across countries and are analysed separately from the commodities we analyse in detail in the next Section (Non-durable goods & Services). A final note is that housing allowances (rent subsidies) are considered to be disposable income, hence we report on 'gross' rents.

Summarizing the top of Table 4: the main increase is observed in the expenditure share on housing, as in Table 3, and the main decrease is in the expenditure shares on non-durable goods and services.

Next we turn to the categories within non-durable goods and services, which are considered comparable across countries. The summary at the bottom of Table 4 shows that expenditure shares on services increase over time for all countries. This increase is mainly due to an increase in "Food and beverages away from home", "private transport services", "communication" and to some extent due to an increase in "entertainment services" in some of the countries. Explanation for these observed changes are examined in the next Section 4.

Table 7 reports on the average price changes per year. Durable goods have become relatively cheaper in all countries except Germany. Prices of Health and Education have in particular

increased in the US and UK. The price of housing has sharply increased in NL, FR and the UK and has decreased somewhat in the US. Non-durable goods and services have become relatively cheaper in all countries except Germany. Except for Germany (?), services became more expensive over time and, consequently, goods became relatively cheaper. This observation is in line with Baumol's cost disease applied to the labour intensive service sector that experience lower productivity gains than goods related sectors of industries.

4 ANALYZING TRENDS IN EXPENDITURE PATTERNS ACROSS COUNTRIES AND TIME

Section 4.1 presents a formal analysis of the changes in non-durable goods and services over time and across countries. Section 4.2 examines the explanations as discussed in the introduction for the observed changes over time.

4.1 STEVE'S ANALYSIS, NO NEED TO INCLUDE ALL QUANTILE TABLES ETC. REFER TO COUNTRY PAPERS.

4.2 EMPIRICAL ANALYSIS: DECOMPOSITION

This section examines possible explanations for the changes in the expenditure patterns over time, as reported on in Table 4. In particular we are interested in the changes in services over time. For this purpose a system of Engel curves is estimated and based on these estimates the change is decomposed with respect to demographic, employment and household total expenditures changes. These estimations have been carried out in the country papers. Essentially, for each country separately, a system of reduced form Engel curves are estimated where the expenditure shares on the seventeen different commodity (Table 4) are related to the logarithm of household total expenditures and demographic and employment variables. These estimates are used to assess the extent to which changes in household demographics, employment and expenditures (Tables 1 and 2) explain the observed changes in the budget shares in Table 4. The methodological details are described in the accompanying study of Blow, Kalwij and Ruiz-Castillo (2003). Important here to note is that the same analysis is carried out for each country, hence the empirical results are fully comparable across countries.

The explanatory variables used in the empirical analysis are:

A. Household expenditures on non-durable goods and services:

- Logarithm of expenditures

B. Household demographic variables:

- Logarithm of Household size
- Number of persons under 6 years of age divided by household size
- Number of person over 5 and under 18 years of age divided by household size

- Number of person over 17 and under 31 years of age divided by household size
- Number of person over 30 and under 65 years of age divided by household size
- Number of person over 64 years of age divided by household size
- Age and Age squared of the head of household
- C. Household employment variables:
 - Number of employed persons in the household
 - A dummy variable equal to 1 if all adults are employed, 0 otherwise
 - A dummy variable equal to 1 if all adults are employed and a person under 6 years of age is present in the household, 0 otherwise

For several countries dummy variables for region are included. The results for each country are reported in detail in the country-papers. We take the estimation results and predict the explained changes in household demand over time. As discussed in the introduction, we possible explanations are examined:

1. Changes in Household Composition: here we distinguish demographic changes and changes in household employment. (Variables sets B and C, above)
2. Change in household expenditures” here we distinguish between changes in the average budget and changes in expenditures inequality. (Variables A, above)
3. Price effects: the increase in the budget share due to an increase in the relative price of this commodity, ignoring substitution effects. The price indices of Table 7 are used.
4. Price substitution effects and preferences changes over time. (Residual)

Table 8 reports on the contributions of these explanations to the observed change in the budget shares of the two aggregate commodities Non-Durable Goods and Services, in %-points. Appendix A reports on the results for all 17 commodities for each country. Demographic changes explain about 10-20% of the change in the Services share. Change in household employment are observed to be small (Section 3.1) and add therefore little to the explanation of the changes in the Services share. The way increases in expenditures impacts the budget share of Services depends on the budget elasticity. Table 9 show that Services are a luxury, hence we expect in increase in the share of services with expenditures. Increases in household total expenditures explain about 40% of the increase in the Services share in Spain, and 30% in France and the UK. In the Netherlands the overall expenditure effects are relatively small and in the US we find a small negative impact, which is the result of a decrease in the real expenditures on

Non-durable goods and Services (see Table 2). The price effects are relatively large, except for France (? Unexpected/implausible given the price change in Table 7). Most notably, for the UK the price effect explains 68% of the increase: 6.3 of the 9.2 %-point increase.

At the bottom of Table 8 we report the averages over countries of the estimated changes per. These provide a more general overview: in these five countries the average increase in the budget share of Services is about 0.6%-point per year, about one-third is due to Price effects, one-third due to changes in preferences and price substitution effect, and the remaining one-third is equally divided over demographic changes and budget increases.

The interpretation of “Services” as used above may be open to questions. Table 10 reports on a similar decomposition as Table 8 but now uses a different way of aggregating over the 17 commodities (Appendix A). This provides important insights in the trends over time. In all countries the decrease in the budget share of “Food and beverages” is strongest and relatively large, between 5-10%-points decreases. The explanations for the changes are different across countries. In Spain the decrease is caused by changes in the budget and preferences, in the Netherlands the decrease is caused by demographic changes and preferences, in the US most of the decrease is a Price effect and a some a preference change, in France the decrease is caused by price changes and preference changes, and in the UK the decrease is mainly caused by budget and preference changes. The budget shares that experienced most of the increase are “Food away from home, Holidays & Entertainment” and “Transport and Communication”.

A BIT OF A MESS, therefore:

Table 11 reports on the averages over countries of the estimated changes per year and summarizes the main results of the empirical analysis: Households decrease relatively spending on “Food and beverages” due to an increase in the budget, changes in preferences and price substitution effects, and to some extent due to changes in household composition. Households increase relative spending on “Transport and Communication” and “Food away from home, Holidays & Entertainment”. The increase on “Transport and Communication” is due to an increase in the budget and changes in preferences and price substitution effects. The increase on “Food away from home, Holidays & Entertainment” is due to a price effect, an increase in the budget and changes in preferences and price substitution effects.

5 CONCLUSIONS

I wait until final numbers are in

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Smith (2003) for the US,

APPENDIX:

Table 1: Household Composition and Employment

Country Year	ES 1980	ES 1990	NL 1979	NL 1998	US 1980	US 1997	FR 1979	FR 1995	UK 1980	UK 1998	DE 1978	DE 1993
Panel A	(Absolute)											
Average Household Size (in persons)	3.70	3.41	2.87	2.30	2.73	2.54	3.05	2.58	2.71	2.42		
Average Number of Children	1.20	0.86	1.05	0.68	0.80	0.70	0.70	0.51	0.74	0.62		
Average Number of Adults	2.50	2.55	1.82	1.62	1.93	1.83	2.35	2.07	1.97	1.80		
Panel B: Demographics	(%)											
Single	3.1	3.6	11.0	21.4	16.1	18.3	8.7	14.4	8.7	15.1	32.9	37.2
Single Parents	3.9	5.2	3.6	6.2	5.4	6.3	3.4	4.6	5.5	8.8	5.0	4.9
Couple, Childless	8.4	7.5	17.2	22.6	20.9	18.6	15.6	15.6	17.1	18.9	24.6	28.7
Couple with Children	52.4	51.1	46.2	29.4	31.0	24.8	34.9	25.7	38.3	28.9	32.8	26.5
Retiry	12.4	15.9	16.8	19.2	17.8	19.5	13.7	21.2	22.0	22.6	0.0	0.0
Other	19.8	16.8	5.2	1.3	8.7	12.5	23.7	18.5	8.4	5.8	4.8	2.6
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.1	99.9
Panel C: Employment	(%)											
Single, no job	2.6	3.6	8.3	10.7	3.0	3.0	3.7	7.7	4.4	9.5	22.6	21.6
Single, one job	4.4	5.2	6.3	16.8	18.5	21.6	8.4	11.3	9.8	14.5	15.3	20.5
Couple, no job	6.3	7.2	9.5	7.1	1.6	1.5	2.3	5.3	2.9	4.5	13.0	12.9
Couple, one job	37.9	31.3	42.1	22.0	13.4	9.6	21.5	13.8	17.8	11.1	24.2	21.4
Couple, two jobs	16.6	20.2	11.8	22.9	36.9	32.4	26.7	22.2	34.6	32.1	20.2	20.9
Retiry	12.4	15.9	16.8	19.2	17.8	19.5	13.7	21.2	22.0	22.6	0.0	0.0
Other	19.8	16.8	5.2	1.3	8.7	12.5	23.7	18.5	8.4	5.8	4.8	2.6
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.1	99.9
Panel D: Specific types	(%)											
A couple with children and one job	32.9	27.7	33.0	15.8	8.5	5.5	15.7	9.1	12.8	6.8		
Jobless households	8.9	10.7	17.8	17.8	4.6	4.4	6.0	13.0	7.4	14.0		
Two-earners with children	15.1	18.5	7.2	11.9	22.1	19.0	18.6	15.5	23.8	20.2	12.8	12.1

Table 2: Household real total expenditures per year.

Country	ES 1980	ES 1990	NL	NL	US	US	FR	FR	UK	UK	DE	DE
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Year	1979		1998		1980		1997		1979		1995		1980		1998		1978		1993		
(Currency)	(Pesetas, 1000x)		(Guilders)		(Dollars)		(Francs)		(Pounds)		(D-Mark)										
Mean	2040	2451	42286	48559	30331	32709	178165	187644	13782	19221	45646	49582									
Percentiles																					
10th	642	830	19571	22240	10840	12343	69800	82311	4622	6966											
50th	1777	2138	39113	44913	26781	27975	157127	164220	11910	15756											
90th	3860	4538	69889	78508	53980	58743	306059	318585	24814	35073											
Inequality Measures																					
P90/P10	6.01	5.46	3.57	3.53	4.98	4.76	4.38	3.87	5.37	5.03											
Theil Index	0.23	0.21	0.11	0.12	-0.18	-0.18	0.20	0.20													
Disaggregated Total Expenditures																					
Durables	158	200	6073	5775	3,894	4,575	16805	15706	1560	2539	8707	7034									
Health	52	38	570	609	1,343	1,749	8144	8557	109	267	2166	3420									
Education	44	65	291	488	346	486	1179	807	85	217	0	0									
Housing	235	491	8341	13055	6,127	8,378	32163	45935	2207	4568	7440	9424									
Non-Durables and Services	1,458	1,765	27010	28631	18,621	17,521	122064	132359	9820	11630	27334	29705									
Total Expenditures	1,946	2,560	42286	48559	30,331	32,709	178586	187644	13782	19221	45646	49582									

Table 3: The distribution of Expenditures over the twenty commodities, i.e. the budget shares (in %).

Country	ES	ES	NL	NL	FR	FR	UK	UK	DE	DE		
Year	1980	1990	1979	1998	US 1980	US 1997	1979	1995	1978	1993		
Gross Household Income			167.1	153.3	110.5	121.1	89.1	80.0	144.2	121.3	141.2	146.0
Disposable Net Income	87.7	84.0	127.9	131.6	96.5	110.9	97.0	88.6	116.4	106.3	118.6	121.4
All goods and services	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1. Food and non-alcoholic beverages	35.5	27.5	19.9	12.5	16.3	12.4	19.8	14.4	21.9	12.8	14.7	11.6
2. Alcoholic beverages and tobacco	2.8	2.5	3.7	2.4	2.9	1.8	2.6	2.4	7.9	5.4	4.0	2.8
3. Clothing and footwear	8.2	8.8	9.6	6.4	4.6	3.8	7.7	5.0	7.0	5.2	8.1	6.8
4. Private transport goods	5.5	5.7	6.6	6.2	11.8	9.2	10.4	9.5	7.2	7.9	10.0	8.5
5. Furnishing and appliances	6.0	4.5	7.2	5.5	3.3	2.6	6.3	4.7	4.1	4.9	8.3	5.7
6. Entertainment goods	2.5	2.7	5.9	6.0	2.9	3.2	5.7	6.4	4.5	4.6	5.9	5.5
7. Personal Goods	0.8	1.0	0.9	1.3	2.8	2.7	1.4	1.4	1.3	1.3	2.1	2.0
8. Home energy	4.0	4.0	7.5	5.4	5.3	4.7	4.1	3.9	7.3	5.7	5.3	5.0
9. Food and beverages away from home	5.0	7.7	2.4	3.6	3.6	3.3	4.2	4.4	3.8	4.2	2.6	2.1
10. Holiday Services	0.3	0.6	4.8	4.8	2.2	2.0	1.9	1.9	1.3	2.0	5.3	7.0
11. Housing	15.8	20.2	20.8	29.5	22.6	28.4	18.0	24.5	19.1	29.2	14.7	19.0
12. Household services	1.6	1.3	0.9	1.4	1.6	1.6	1.4	1.3	1.0	0.9	0.6	0.3
13. Health goods and services	2.2	2.4	1.2	1.4	4.6	5.7	4.6	4.6	0.8	1.2	4.7	6.9
14. Personal services	0.6	0.6	0.7	0.7	0.9	0.9	1.3	1.2	0.7	0.6	0.7	1.0
15. Public transport services	1.4	1.0	0.8	1.1	1.1	1.0	1.2	2.0	2.0	1.5	0.9	0.9
16. Private transport services	2.9	3.1	2.6	3.9	4.1	4.8	5.4	7.7	2.5	3.5	3.0	4.6
17. Communication services	0.9	1.3	2.0	2.5	2.3	3.4	1.2	1.6	1.8	2.3	1.8	2.0
18. Education and training services	1.2	1.1	0.6	1.0	1.0	1.4	0.7	0.4	0.4	0.7	0.0	0.0
19. Entertainment services	1.8	1.8	1.2	2.5	1.2	2.2	1.6	2.4	3.4	3.7	1.8	2.9
20. Miscellaneous services	1.0	2.2	0.7	1.9	4.9	4.7	0.6	0.4	1.9	2.3	5.5	5.6
Goods (1-8)	65.3	56.7	61.3	45.7	50.0	40.6	58.0	47.6	61.3	47.9	58.4	47.7
Services (9-20)	34.7	43.3	38.7	54.3	50.0	59.4	42.0	52.4	38.7	52.1	41.6	52.3

Table 4: Durables, Health, Education and Non-Durable Goods and Services.

Country Year	ES 1980	ES 1990	NL 1979	NL 1998	US 1980	US 1997	FR 1979	FR 1995	UK 1980	UK 1998	DE 1978	DE 1993
Share of Total Expenditures (%)												
Total Expenditures	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Expenditure on Durables	7.0	6.1	12.2	10.0	9.4	9.5	9.4	8.4				
Health Expenditures	2.2	2.4	1.2	1.4	4.6	5.7	4.6	4.6				
Education Expenditures	1.2	1.1	0.6	1.0	1.0	1.4	0.7	0.4				
Housing Expenditures	15.8	20.2	20.8	29.5	22.6	28.4	18.0	24.5				
Expenditure on Non-Durable Goods and Services	73.7	70.2	65.2	58.2	62.4	55.0	67.4	62.2				
As a shares of Non Durable Goods and Services (%)												
1. Food and non-alcoholic beverages	47.9	39.5	30.5	21.5	26.3	22.8	25.9	20.4	30.9	22.2	23.6	19.3
2. Alcoholic beverages and tobacco	3.7	3.4	5.6	4.0	4.5	3.2	3.4	3.4	10.6	8.8	6.4	4.7
3. Clothing and footwear	11.2	12.2	14.6	10.9	6.4	5.9	10.0	7.1	9.5	8.2	13.1	11.3
4. Private transport goods	4.5	4.2	3.3	5.1	11.0	7.0	13.5	13.4	4.5	5.5		
5. Furnishing and appliances	3.3	3.1	2.3	1.8	1.0	1.1	8.2	6.7	1.4	2.5		
6. Entertainment goods	1.8	2.4	6.0	6.5	2.7	2.9	7.4	9.0	5.1	5.7	9.5	9.1
7. Personal Goods	1.0	1.3	1.4	2.1	4.5	5.0	1.8	2.0	1.9	2.1	3.4	3.3
8. Home energy	5.7	5.9	11.7	9.8	8.7	8.9	5.4	5.5	10.5	10.3	8.5	8.3
9. Food and beverages away from home	6.7	10.7	3.6	6.1	5.7	5.9	7.9	9.0	5.2	7.0	4.2	3.4
10. Holiday Services	0.4	0.9	7.1	7.8	3.4	3.5	0.0	0.0	1.6	2.8	8.6	11.7
12. Household services	2.3	1.9	1.5	2.4	2.6	2.9	1.9	1.8	1.5	1.5	1.0	0.5
14. Personal services	0.8	0.9	1.0	1.2	1.4	1.7	1.7	1.7	1.1	1.1	1.1	1.7
15. Public transport services	1.9	1.5	1.2	1.9	1.7	1.8	1.6	2.8	2.7	2.4	1.4	1.5
16. Private transport services	3.9	4.4	4.2	6.8	6.5	8.7	7.0	10.9	3.5	6.0	4.7	7.7
17. Communication services	1.3	2.0	3.2	4.4	3.8	6.1	1.6	2.3	2.6	4.1	2.9	3.3
19. Entertainment services	2.4	2.5	1.9	4.4	1.9	4.1	2.1	3.4	4.7	6.1	2.9	4.8
20. Miscellaneous services	1.4	3.1	1.0	3.3	8.0	8.6	0.8	0.6	2.6	3.6	8.8	9.3
Non Durable Goods (1-8)	79.1	72.1	75.3	61.7	65.0	56.7	75.5	67.5	74.5	65.4	64.4	56.0
Services (9-20)	20.9	27.9	24.7	38.3	35.0	43.3	24.5	32.5	25.5	34.6	35.6	44.0

Table 5: Health expenditures as % of GDP in 1998.

	Total	Public	Private
France	9.5	7.2	2.3
Germany	10.6	7.9	2.7
Netherlands	8.6	6.0	2.6
Spain	7.1	5.4	1.7
UK	6.7	5.6	1.1
USA	13.6	6.1	7.5

Source: Smith (2003).

Table 6: Education expenditures as % of GDP in 1998.

	Total	Public	Private
France	6.2	5.9	0.4
Germany	5.5	4.4	1.2
Netherlands	4.6	4.5	0.1
Spain	5.3	4.4	0.9
UK	4.9	4.6	0.3
USA	6.4	4.8	1.6

Source: Smith (2003).

Table 7: Price changes, in average %-change per year.

Country	ES	NL	US	FR	UK	DE
Period	1980-1990	1979-1998	1980-1997	1980-1995	1980-1998	1978-1993
All Goods and Services	14.1	2.8	5.7	8.5	7.4	
Within All Goods and Services						
Durable Goods	-2.1	-0.6	-1.2	-1.6	-1.6	0.0
Health Services	-1.2	0.1	3.6	-1.4	2.3	0.1
Education Services	0.0	0.7	5.7	2.0	4.3	-0.9
Housing	0.7	2.0	-0.1	1.3	2.5	0.1
Non-Durable Goods and Services	0.1	-0.6	-0.2	-0.2	-0.2	0.0
Within Non-Durable Goods and Services						
1. Food and non-alcoholic beverages	-0.1	-0.3	-0.4	-1.0	-0.8	-0.1
2. Alcoholic beverages and tobacco	0.2	1.5	0.2	1.3	2.8	-0.1
3. Clothing and footwear	0.3	-1.1	-1.7	-0.2	-2.4	0.0
4. Private transport goods	-0.2	0.7	-0.6	-0.8	-1.4	-0.9
5. Furnishing and appliances	-0.8	-0.4	-2.0	-0.4	-0.3	-0.9
6. Entertainment goods	0.2	-0.5	-0.6	-1.3	-0.7	-0.1
7. Personal Goods	-1.7	-0.1	-0.3	-0.7	1.8	0.1
8. Home energy	-0.5	0.4	-0.5	-0.6	-0.8	0.0
9. Food and beverages away from home	1.4	1.4	-0.1	1.6	1.6	-0.3
10. Holiday Services	3.3	0.3	2.3	1.3	4.0	0.2
12. Household services	0.6	1.5	0.2	1.5	1.7	0.0
14. Personal services	1.2	-0.1	0.1	1.1	4.0	0.0
15. Public transport services	0.5	2.2	2.4	0.2	0.8	0.1
16. Private transport services	2.1	0.9	1.1	-6.7	2.4	0.1
17. Communication services	-2.1	-0.1	-0.9	-2.8	-1.5	0.1
19. Entertainment services	-0.1	0.0	1.0	-1.3	1.3	-0.1
20. Miscellaneous services	-0.9	0.0	2.3	1.3	1.4	0.2
Non Durable Goods (1-8)	-0.1	-0.2	-0.6	-0.7	-0.4	0.0
Services (9-20)	0.8	0.6	1.0	0.8	1.3	0.1

Table 8: Empirical Results on the Explanations for the change in the expenditure shares on Non-Durable Goods and Services.

Cells: %-points	Total Change	Demo- graphics	Employ- ment	Budget Level	Budget Inequality	Price Effects	Substitution & Preferences
<i>ES, 1980-1990</i>							
Non-Durable Goods (1-8)	-7.0	-1.0	0.1	-3.0	0.0	-1.9	-1.2
Services (9-20)	7.0	1.0	-0.1	3.0	0.0	1.9	1.2
<i>NL, 1979-1998</i>							
Non-Durable Goods (1-8)	-13.6	-2.6	-0.1	-0.9	0.6	-2.9	-7.7
Services (9-20)	13.6	2.6	0.1	0.9	-0.6	2.9	7.7
<i>US, 1980-1997</i>							
Non-Durable Goods (1-8)	-8.3	-0.8	0.1	0.9	0.0	-3.2	-5.1
Services (9-20)	8.3	0.8	-0.1	-0.9	0.0	3.2	5.1
<i>FR, 1980-1995</i>							
Non-Durable Goods (1-8)	-8.0	-1.1	0.2	-2.6	0.0	-5.2	0.7
Services (9-20)	8.0	1.1	-0.2	2.6	0.0	5.2	-0.7
<i>UK, 1980-1998</i>							
Non-Durable Goods (1-8)	-9.2	-1.6	-0.1	-2.8	0.5	-6.3	1.1
Services (9-20)	9.2	1.6	0.1	2.8	-0.5	6.3	-1.1
<i>DE, 1978-1993</i>							
Non-Durable Goods (1-8)	-8.4						
Services (9-20)	8.4						
Average %-point Changes per year over all countries^a							
Non-Durable Goods (1-8)	-0.59	-0.09	0.00	-0.13	0.01	-0.25	-0.14
Services (9-20)	0.59	0.09	0.00	0.13	-0.01	0.25	0.14

^a Here we use a Mean Group Estimator to average over countries.

Table 9: Estimated budget elasticities

Country	ES	NL	US	FR	UK	DE
Year	1980	1979	1980	1980	1980	1978
Non-Durable Goods and Services						
1. Food and non-alcoholic beverages	0.58	0.42	0.51	0.55	0.39	0.33
2. Alcoholic beverages and tobacco	0.56	0.72	0.91	0.59	0.87	0.62
3. Clothing and footwear	1.25	1.15	1.04	1.17	1.43	
4. Private transport goods	1.71	2.28	1.15	1.68	1.90	
5. Furnishing and appliances	0.88	1.39	1.51	0.86	1.08	1.24
6. Entertainment goods	2.16	1.09	1.20	1.37	0.99	1.30
7. Personal Goods	1.29	1.07	0.67	1.34	0.86	1.40
8. Home energy	0.84	0.68	0.84	0.14	0.56	0.39
9. Food and beverages away from home	1.42	1.73	1.14	1.16	1.63	1.21
10. Holiday Services	3.26	2.10	1.57	-	2.63	1.74
12. Household services	2.63	2.13	1.33	1.71	3.00	0.90
14. Personal services	1.93	1.56	1.36	1.15	1.28	1.24
15. Public transport services	1.12	0.09	1.23	1.22	1.07	0.86
16. Private transport services	1.75	2.01	1.52	1.26	2.15	1.48
17. Communication services	1.96	0.85	0.65	0.02	1.27	1.03
19. Entertainment services	1.52	0.95	1.49	1.26	0.85	1.05
20. Miscellaneous services	1.62	0.79	1.72	-2.59	2.33	1.72
Non Durable Goods (1-8)	0.82	0.80	0.80	0.97	0.77	0.75
Services (9-20)	1.70	1.61	1.38	1.09	1.66	1.45

Table 10: Decomposition, T=Total Change, D=Demographics, E=Employment, B=Budget Level, I=Budget Inequality, P=Price Effects, S=Substitution & Preferences

Country & Period	ES, 1980-1990							NL, 1979-1998							US, 1980-1997							
Non-Durable Goods and Services	T	D	E	B	I	P	S	T	D	E	B	I	P	S	T	D	E	B	I	P	S	
Food and beverages (1+2)	-8.6	-0.9	0.1	-3.8	0.1	-0.1	-3.9	-10.5	-3.6	0.2	-1.1	0.7	-0.3	-6.4	-4.8	-0.6	0.1	0.9	0.0	-4.0	-1.1	
Clothing and Footwear (3)	1.0	-0.1	0.0	0.6	0.0	0.5	0.0	-3.7	0.1	0.0	0.1	-0.1	-3.2	-0.6	-0.5	-0.1	0.0	0.0	0.0	1.6	-1.9	
Transport and Communication (4+15+16+17)	0.5	0.0	0.0	0.9	0.0	-1.1	0.8	6.4	1.1	-0.1	0.4	-0.3	1.6	3.6	0.6	-0.2	0.0	-0.2	0.0	0.3	0.6	
Furnishing & Appliances (5+6+20)	2.1	0.2	0.0	0.6	0.0	-0.1	1.4	2.3	0.1	0.0	0.1	0.0	-0.8	2.9	0.9	0.3	0.0	-0.4	0.0	-0.7	1.6	
Personal Care (7+12+14)	0.0	0.2	0.0	0.8	0.0	0.1	-1.0	1.8	0.6	0.0	0.1	-0.1	0.4	0.9	1.1	0.1	0.0	0.0	0.0	1.0	-0.1	
Home Energy (8)	0.2	0.1	0.0	-0.2	0.0	-0.2	0.4	-1.9	0.2	-0.2	-0.2	0.1	0.9	-2.7	0.2	0.1	0.0	0.1	0.0	0.8	-0.8	
Food away, Holidays & Entertainment (9+10+19)	4.7	0.4	-0.1	1.1	0.0	1.0	2.4	5.6	1.6	0.2	0.6	-0.4	1.3	2.2	2.5	0.2	0.0	-0.3	0.0	0.9	1.7	
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Country & Period	FR, 1980-1995							UK, 1980-1998														
Non-Durable Goods and Services	T	D	E	B	I	P	S	T	D	E	B	I	P	S								
Food and beverages (1+2)	-5.4	-0.9	0.2	-4.6	0.0	-2.3	2.1	-10.6	-2.0	0.1	-3.4	0.6	0.6	-6.4								
Clothing and Footwear (3)	-2.9	-0.1	0.0	0.3	0.0	0.1	-3.2	-1.3	0.2	-0.1	0.7	-0.1	-4.5	2.6								
Transport and Communication (4+15+16+17)	5.8	0.0	-0.4	0.6	0.0	1.1	4.5	4.6	0.6	0.1	1.5	-0.3	-0.5	3.1								
Furnishing & Appliances (5+6+20)	-0.1	0.1	0.2	1.8	0.0	-1.2	-1.0	2.7	0.3	0.1	0.6	-0.1	0.3	1.5								
Personal Care (7+12+14)	0.1	0.4	0.0	1.1	0.0	0.7	-2.2	0.3	0.4	0.0	0.5	-0.1	1.4	-1.9								
Home Energy (8)	0.0	0.3	-0.1	-1.1	0.0	-0.3	1.2	-0.2	0.1	-0.1	-0.8	0.1	-1.1	1.4								
Food away, Holidays & Entertainment (9+10+19)	2.5	0.2	0.0	1.9	0.0	1.9	-1.5	4.4	0.5	-0.2	0.9	-0.2	3.8	-0.4								
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								

Table 11: Averages over countries of the estimated changes. Cells: Yearly Changes, in %-points

Non-Durable Goods and Services	Total Change	Demo-graphics	Employment	Budget Level	Budget Inequality	Price Effects	Substitution & Preferences
Food and beverages (1+2)	-0.53	-0.10	0.01	-0.18	0.02	-0.08	-0.20
Clothing and Footwear (3)	-0.08	0.00	0.00	0.02	0.00	-0.05	-0.04
Transport and Communication (4+15+16+17)	0.21	0.02	0.00	0.05	-0.01	0.01	0.16
Furnishing & Appliances (5+6+20)	0.11	0.01	0.00	0.04	0.00	-0.03	0.08
Personal Care (7+12+14)	0.04	0.02	0.00	0.04	0.00	0.04	-0.06
Home Energy (8)	-0.02	0.01	0.00	-0.03	0.00	0.00	0.00
Food away, Holidays & Entertainment (9+10+19)	0.27	0.04	0.00	0.06	-0.01	0.11	0.07
All	0.00	0.00	0.00	0.00	0.00	0.00	0.00

APPENDIX A: EMPIRICAL RESULTS ON THE EXPLANATIONS FOR THE CHANGE IN THE EXPENDITURE SHARES ON NON-DURABLE GOODS AND SERVICES.

Table A1

Country Period	ES 1980-1990								NL 1979-1998								US 1980-1997							
	T	D	E	B	I	P	S	T	D	E	B	I	P	S	T	D	E	B	I	P	S			
Non-Durable Goods and Services																								
1. Food and non-alcoholic beverages	-8.4	-0.7	0.1	-3.5	0.1	-0.1	-4.2	-9.0	-3.5	0.0	-1.0	0.7	-1.9	-3.3	-3.5	-0.6	0.1	0.8	0.0	-2.6	-1.2			
2. Alcoholic beverages and tobacco	-0.3	-0.2	0.0	-0.4	0.0	0.0	0.3	-1.5	-0.2	0.1	-0.1	0.1	1.6	-3.0	-1.3	0.0	0.0	0.1	0.0	-1.5	0.1			
3. Clothing and footwear	1.0	-0.1	0.0	0.6	0.0	0.5	0.0	-3.7	0.1	0.0	0.1	-0.1	-3.2	-0.6	-0.5	-0.1	0.0	0.0	0.0	1.6	-1.9			
4. Private transport goods	-0.3	-0.1	0.0	0.2	0.0	-1.8	1.5	1.8	0.5	0.0	0.2	-0.2	0.4	0.7	-4.0	-0.2	0.0	0.0	0.0	-3.3	-0.4			
5. Furnishing and appliances	-0.2	0.0	0.0	-0.2	0.0	-0.2	0.2	-0.5	0.2	0.0	0.1	0.0	-0.2	-0.4	0.1	0.0	0.0	0.0	0.0	0.6	-0.5			
6. Entertainment goods	0.6	0.0	0.0	0.4	0.0	0.1	0.2	0.5	0.1	0.1	0.0	0.0	-0.6	0.9	0.2	0.0	0.0	-0.1	0.0	0.5	-0.2			
7. Personal Goods	0.3	0.0	0.0	0.0	0.0	-0.2	0.4	0.8	0.0	0.0	0.0	0.0	0.0	0.8	0.5	-0.1	0.0	0.1	0.0	0.6	-0.2			
8. Home energy	0.2	0.1	0.0	-0.2	0.0	-0.2	0.4	-1.9	0.2	-0.2	-0.2	0.1	0.9	-2.7	0.2	0.1	0.0	0.1	0.0	0.8	-0.8			
9. Food and beverages away from home	4.1	0.2	-0.1	0.6	0.0	0.9	2.5	2.5	0.4	0.1	0.2	-0.1	1.0	1.0	0.2	0.1	0.0	-0.1	0.0	0.2	0.0			
10. Holiday Services	0.5	0.1	0.0	0.3	0.0	0.1	0.0	0.7	1.2	0.1	0.5	-0.3	0.4	-1.2	0.1	0.1	0.0	-0.2	0.0	-0.8	1.0			
12. Household services	-0.4	0.1	0.0	0.7	0.0	0.1	-1.3	0.9	0.4	0.0	0.1	-0.1	0.4	0.1	0.3	0.2	0.0	-0.1	0.0	0.1	0.1			
14. Personal services	0.2	0.1	0.0	0.1	0.0	0.1	-0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.3	0.0	0.0	0.0	0.0	0.3	0.0			
15. Public transport services	-0.4	0.0	0.0	0.0	0.0	0.1	-0.5	0.7	-0.1	0.0	-0.1	0.0	0.5	0.3	0.1	0.1	0.0	0.0	0.0	-0.4	0.5			
16. Private transport services	0.5	0.0	0.0	0.6	0.0	0.8	-0.8	2.6	0.4	-0.1	0.2	-0.2	0.7	1.5	2.2	0.0	0.0	-0.2	0.0	0.8	1.6			
17. Communication services	0.7	0.1	0.0	0.2	0.0	-0.2	0.6	1.2	0.3	0.0	0.0	0.0	0.0	1.0	2.3	0.0	0.0	0.1	0.0	3.3	-1.0			
19. Entertainment services	0.1	0.0	0.0	0.2	0.0	0.0	-0.1	2.5	0.0	0.0	0.0	0.0	0.0	2.4	2.2	0.0	0.0	-0.1	0.0	1.6	0.7			
20. Miscellaneous services	1.7	0.2	0.0	0.4	0.0	0.1	1.0	2.3	-0.2	0.0	0.0	0.0	0.0	2.5	0.6	0.3	0.0	-0.3	0.0	-1.8	2.3			

T=Total Change, D=Demographics, E=Employment, B=Budget Level, I=Budget Inequality, P=Price Effects, S=Substitution & Preferences.

Table A1: Continued

Country	FR							UK							DE							
Period	1980-1995							1980-1998							??? ??? ??? ??? ??? ??? ???							
	T	D	E	B	I	P	S	T	D	E	B	I	P	S	T	D	E	B	I	P	S	
Non-Durable Goods and Services																						
1. Food and non-alcoholic beverages	-5.5	-0.7	0.1	-4.0	0.0	-3.1	2.2	-8.7	-1.8	0.2	-3.2	0.6	-2.3	-2.1								
2. Alcoholic beverages and tobacco	0.0	-0.2	0.0	-0.6	0.0	0.8	-0.1	-1.8	-0.2	-0.1	-0.2	0.0	2.9	-4.3								
3. Clothing and footwear	-2.9	-0.1	0.0	0.3	0.0	0.1	-3.2	-1.3	0.2	-0.1	0.7	-0.1	-4.5	2.6								
4. Private transport goods	-0.1	-0.4	-0.2	0.8	0.0	-1.2	0.9	1.0	0.2	0.1	0.7	-0.1	-1.5	1.6								
5. Furnishing and appliances	-1.5	-0.1	0.1	0.8	0.0	-0.2	-2.2	1.1	0.0	0.0	0.0	0.0	0.0	1.0								
6. Entertainment goods	1.6	0.1	0.0	0.9	0.0	-1.2	1.7	0.6	0.0	0.0	0.0	0.0	-0.4	1.0								
7. Personal Goods	0.2	0.0	0.0	0.2	0.0	-0.1	0.1	0.3	0.0	0.0	0.0	0.0	0.6	-0.3								
8. Home energy	0.0	0.3	-0.1	-1.1	0.0	-0.3	1.2	-0.2	0.1	-0.1	-0.8	0.1	-1.1	1.4								
9. Food and beverages away from home	1.1	0.2	0.0	1.5	0.0	2.2	-2.9	1.8	0.3	-0.1	0.6	-0.1	1.6	-0.5								
10. Holiday Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.2	0.0	0.4	-0.1	0.8	-0.2								
12. Household services	-0.1	0.2	0.0	0.7	0.0	0.5	-1.5	0.0	0.3	0.1	0.5	-0.1	0.4	-1.1								
14. Personal services	0.0	0.2	0.0	0.2	0.0	0.4	-0.8	0.0	0.1	0.0	0.1	0.0	0.5	-0.6								
15. Public transport services	1.3	0.0	0.1	0.1	0.0	0.1	1.0	-0.3	0.1	-0.1	0.0	0.0	0.3	-0.6								
16. Private transport services	3.9	0.2	-0.3	-0.1	0.0	2.8	1.4	2.5	0.2	0.1	0.7	-0.1	1.9	-0.3								
17. Communication services	0.7	0.1	0.0	-0.2	0.0	-0.6	1.3	1.4	0.1	0.1	0.1	0.0	-1.3	2.4								
19. Entertainment services	1.4	0.0	0.0	0.4	0.0	-0.3	1.4	1.4	0.0	-0.1	-0.1	0.0	1.3	0.3								
20. Miscellaneous services	-0.2	0.1	0.0	0.1	0.0	0.2	-0.6	1.0	0.3	0.1	0.6	-0.1	0.7	-0.6								

Table A2: Averages over countries of the estimated changes. Yearly Changes, in %-points

Non-Durable Goods and Services	Total Change	Demo-graphics	Employ-ment	Budget Level	Budget Inequality	Price Effects	Substitution & Preferences
1. Food and non-alcoholic beverages	-0.41	-0.08	-0.05	-0.11	-0.03	-0.12	-0.13
2. Alcoholic beverages and tobacco	-0.06	-0.01	-0.01	-0.01	0.01	0.04	-0.07
3. Clothing and footwear	-0.04	0.00	0.00	0.02	0.00	-0.05	-0.04
4. Private transport goods	-0.03	0.00	0.01	0.01	-0.02	-0.10	0.06
5. Furnishing and appliances	0.00	0.00	0.01	0.00	0.00	0.00	-0.02
6. Entertainment goods	0.03	0.00	0.01	0.01	-0.02	-0.02	0.04
7. Personal Goods	0.02	0.00	0.00	0.00	0.00	0.01	0.01
8. Home energy	-0.01	0.01	-0.02	-0.01	0.00	0.00	0.00
9. Food and beverages away from home	0.13	0.01	0.02	0.02	0.03	0.08	0.02
10. Holiday Services	0.03	0.02	0.00	0.01	0.00	0.01	0.00
12. Household services	0.01	0.01	0.01	0.02	0.00	0.02	-0.06
14. Personal services	0.01	0.00	0.00	0.00	0.00	0.01	-0.02
15. Public transport services	0.00	0.00	0.00	0.00	0.00	0.01	0.00
16. Private transport services	0.09	0.00	0.00	0.02	0.03	0.09	0.03
17. Communication services	0.07	0.01	0.00	0.01	-0.01	0.01	0.06
19. Entertainment services	0.07	0.00	0.00	0.00	0.00	0.03	0.05
20. Miscellaneous services	0.08	0.01	0.00	0.01	0.00	-0.01	0.06
Non Durable Goods (1-8)	-0.59	-0.09	0.00	-0.13	0.01	-0.25	-0.14
Services (9-20)	0.59	0.09	0.00	0.13	-0.01	0.25	0.14

APPENDIX B: COMMODITY CLASSIFICATION, DESCRIPTION

Expenditures excluding savings related insurances such as a life insurance. The durable categories that are lumped into one durable goods category are: Purchase of cars and bikes, Furnishing, Appliances, Books, newspapers and computer, Audio and video equipment, Toys and hobbies, and Holiday goods.

Commodities Groups

1. Food and non-alcoholic beverages at home

Includes bakery products, potatoes, fruit, vegetables, oil & butter, meat, fish, milk products and spices.

2. Alcoholic beverages and tobacco

Excludes beverages away from home (see 9.)

3. Clothing and footwear

Includes sport-wear and clothing accessories such as a belt, a watch, jewelry and a handbag.

4. Private transport goods

Includes bikes, car purchase, fuel and excludes repairs.

5. Furnishing and appliances

Includes, Furnishing, insurance, cutlery, fridge (excludes detergents, see 11.).

6. Entertainment goods

Computer, audio-video equipment, musical instruments, pets, camping, photography, camcorder.

7. Personal goods

hairblower, electric shaver, toiletries

8. Home energy

Includes gas, electricity and water.

9. Food and beverages away from home

Excludes expenditures made during holidays.

10. Holidays services

Includes all expenditures made during holidays or weekend outings both domestic and abroad. Tours, Insurances

11. Housing

Rent or rental value, service and maintenance costs (also of the heating system or other sunk equipment)

12. Household services

Servants wages, mainly the cleaning maid, and window cleaner, Childcare, Launderette,
Repairs of footwear, clothing, household equipment

13. Health goods and services

Includes reimbursements as negative expenditures, in particular the basic health insurance
and medicines.

Health care, mainly payments to optician

Includes health insurance premium

Self-medication, eyeglasses or contacts, hearing-aid, medicines

14. Personal services

Hairdresser and beauty parlor

15. Public transport services

Includes taxi, (Bus, train, train, metro). (plane in the US)

16. Private transport services

Repairs to vehicles, Parking fees, Insurance, road tax, Driving lessons.

Coding: $g16 = g16a + g16b + g16c$;

17. Communications services

Telephone and mail.

18. Education and training services

Tuition fees

19. Entertainment services

Music and dance lessons, sport-rental, contributions to societies, entrance fees of, e.g.,
cinema.

20. Miscellaneous services

Insurances, Donations

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Output

Ronald Schettkat and Lara Yocarini (Jan. 2003)

DEMPATEM in Perspective. State of the Art in the Analysis of Structural Changes.

Book in preparation:

The US-European gaps in Demand and Employment

Wiemer Salverda and Ronald Schettkat, ed.

Working Papers: (See list below)

LIST OF WORKING PAPERS

Working papers are downloadable at <http://www.uva-aias.net/lower.asp?id=194>

1. **John Schmitt**, Estimating Household Consumption Expenditures in the United States using the Interview and Diary Portions of the 1980, 1990, and 1997 Consumer Expenditure Surveys
2. **Laura Blow**, Household Expenditures Patterns in the UK
3. **Adriaan Kalwij & Wiemer Salverda**, Changing Household Demand Patterns in the Netherlands: Some Explanations
4. **Javier Ruiz-Castillo & María José Luengo-Prado**, Demand Patterns in Spain
5. **Marijke van Deelen & Ronald Schettkat**, Household Demand Patterns in West Germany: 1978-1993*
6. **Francois Gardes & Christophe Starzec**, Household Demand Patterns in France 1980-1995
7. **Francois Gardes & Christophe Starzec**, Income Effects on Services Expenditures
8. **Adriaan Kalwij & Steve Machin**, Changes in Household Demand Patterns: A Cross-Country Comparison
9. **Laura Blow, Adriaan Kalwij & Javier Ruiz-Castillo**, Methodological issues on the analysis of consumer demand patterns over time and across countries
10. **Mary Gregory & Giovanni Russo**, The Employment Impact of Differences in Demand and Production Structures
11. **Ronald Schettkat (Research Assistance: Joep Damen)** Demand Patterns and Employment Structures, An Aggregate Analysis
12. **Andrew Glyn, Wiemer Salverda, Joachim Möller, John Schmitt, Michel Sollogoub** Employment differences in services the role of wages, productivity and demand
13. **Ronald Schettkat & Wiemer Salverda**, Demand Patterns and Employment Growth Consumption and Services in France, Germany, the Netherlands, the United Kingdom and the United States Concluding Summary