

Portuguese Household Food Expenditure: 1990, 1995 and 2000

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1. Introduction

Household demand for food is related to the level of income, food prices, preferences and demographic variables like family size, population and age structure. As income rises, the share devoted to food becomes smaller. Extra income is used for other goods rather than food and diet becomes more diverse and devoted towards premium and higher quality products.

Socio-demographic changes such as smaller household size, greying population, increasing proportion of working women, changes in values and lifestyles, concerns about the health and safety of food products as a result of more product information and better education, are all influencing food consumer behaviour. It can also be added the recent food scares and the media effect. All these mentioned factors have a considerable impact on household wants and needs with respect to food products, implying significant differences amongst households.

The aim of this work is to highlight major trends of Portuguese household food expenditure, and in its components - food at home (FAH) and food away from home (FAFH) - in 1990, 1995 and 2000. These trends are analysed considering socio-economic variables such as region, level of income, age and literacy level of the head of the household. Furthermore, an attempt is made to identify expenditure trends in some food groups, particularly meat and its main substitutes, as this work is included in a broader project¹, therefore the more in depth look at these goods.

The information used, provided by the Household Budget Survey (Inquérito aos Orçamentos Familiares, INE) and undertaken in the years of 1989/90, 1994/95 and 2000, with a

Abstract

The aim of this work is to highlight the major trends of Portuguese household food expenditure in 1990, 1995 and 2000. Food expenditure trends per food groups are examined taking into account household food expenditure at home, and away from home, and based on different variables. Results suggest that income, education and age are influencing changes in Portuguese food spending behaviour. The pattern observed in Europe in terms of an increasing trend towards food away from home can also be confirmed for Portugal.

Résumé

Le but de ce travail est de montrer les principales variations des dépenses alimentaires des ménages portugais pendant les années 1990, 1995 et 2000. On examine les dépenses d'un foyer par groupe d'aliments, en considérant la consommation à la maison ou à l'extérieur, en tenant compte de plusieurs variables. Nos résultats suggèrent une influence des revenus, de l'éducation, et de l'âge sur le comportement des dépenses alimentaires portugaises. L'augmentation des consommations hors de la maison, déjà observée en Europe, est confirmée au Portugal.

sample of approximately 12 thousand households in each year, is a rich source of information on spending patterns of Portuguese households. These data base, expressed in terms of average annual expenditures per household, provides information in aggregate terms. Therefore a descriptive analysis is undertaken allowing for the identification of major patterns in Portuguese food expenditure, and in

its two components (FAH and FAFH), throughout the nineties.

The main research questions to be analysed can then be expressed as: (i) do household food expenditure patterns tend to become more similar as time goes by? (ii) are we assisting in Portugal to an increasing trend towards FAFH, following the general tendency across Europe? and (iii) what happens in terms of expenditure per food products?

2. Background

The most recent published information shows that household level of real net income, in Portugal, increased by 38% between 1990 and 2000 (INE, 2002). With rising income different attributes are relevant in food choice, as the influence of intangible factors become more important than price as major drivers in purchasing decisions (Fearne and Bates, 2000; von Alvensleben, 1997; Ray and Hughes, 1994). Meulenberg and Viaene (2000) suggest that consumer demand for quality is more sensitive to income changes than demand for food (in quantity terms). Nevertheless, income and prices still continues to be significant factors influencing the Portuguese household food budget (Barreira and Vicente, 2001).

According to Stewart and Yen (2004), household production theory postulates that consumption costs include prices

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¹ Project AGRO 422: "A quality policy for the beef sector in Portugal: production systems, consumer tastes and preferences".

as well as time allocated to food preparation, eating, and cleaning up after the meal. Therefore, the consumer has to make a choice, whether to spend time and prepare food at home (FAH) or to go for food away from home (FAFH). Nayga (1996) argues that the higher the proportion of time wives spend in the labour market, the higher the family's expenditures on prepared food and FAFH.

Saving time and effort, namely convenience, seems to be taking a significant place in consumer food choice and behaviour (Brunso et al., 2002). Consumers are turning to more convenient and processed foods, which are, in fact, more added value products,

hence avoiding extra effort devoted to preparing food (Gracia and Albusu, 2001). Convenience for consumers represents an effort that she/he has to make in preparing the food, so for her/him it is not only saving time, but also saving mental and physical energy (Brunso et al., 2002).

Some results suggest that with more labour participation of the household members there may be less time available for meal preparation, so households with working managers are more likely to transfer "time spent for household production to time spent for leisure" (Byrne et al., 1998).

In the European Union, as a consequence of the increase in working women, and reflecting the higher demand for convenience, we assist to a higher demand for ready to eat meals and eating away from home (Gracia and Albusu, 2001), though the magnitude of this effect will be greater for food away from home as argued by Nayga (1996). A positive correlation between the proportion of working women and consumption of frozen foods was confirmed by Steenkamp (1997), and between working women and time saving, since women are still the main family planners (Gracia and Albusu, 2001). Similar conclusions are reached by Manrique and Jensen (1998), Jensen and Yen (1996) and Yen (1993). In Portugal, we assisted, between 1990 and 2000, to a 16% increase in the number of working women, who accounted, in 2000, for 45% of the total labour force (INE); therefore this might have implied a change in the consumption patterns.

Household size plays an important role in food expenditure, as shown by the fact that smaller ones spend more on FAFH (Stewart and Yen, 2004). Average Portuguese household size is slightly decreasing, from 3.1 heads per household in 1990 to 2.8 in 2000 (INE- Inquérito aos Orçamentos Familiares).

Household composition and age of the meal planner seem to be other important factors in food spending: "households with older meal planners and young children appear to display reduced levels of FAFH expenditure" (Mihalopoulos and Demoussis, 2001).

Portuguese population grew by 4% from 1990 to 2000, but with a decrease of young people aging less than 14 (-20%) and a growth of elderly aging 65 and over (29%), while the age group between 15 and 64 grew only slightly (7%). Some authors argue that with aging populations less

potential consumers for FAFH can be expected (Blisard et al., 2002). Nayga (1996) showed that families with older wives tend to spend more on food prepared at home than other households.

Older consumers tend to eat a lesser amount of food and to have a lower energy intake in their diets. Very often this is linked to health concerns and they tend to eat more fruits and vegetables and less fat (Gracia and Albusu, 2001; Harris and Blisard, 2002; Nayga, 1995). Nayga and Capps (1995) also pointed out that age plays a significant role in fish and shellfish consumption, both at home and away from home, and that these products' sales should be targeted to the elderly. On the opposite, other studies suggest that there is no difference between the food consumption pattern of elderly people and the other age groups, apart from the fact that they generally need lesser amounts of food (Senauer, 1991).

Consumers tend to understand and integrate information with increasing literacy levels. Several studies showed that the level of literacy is an important factor in FAFH and prepared food (Nayga, 1996; Stewart and Yen, 2004; Mihalopoulos and Demoussis, 2001). Sabates et al. (2001) found that educational attainment does influence food expenditure, in the way that higher education levels have a positive impact on expenditures, which may imply an increase in the demand for food quality.

Level of literacy, measured in years of schooling, is rising in Portugal. The proportion of Portuguese population with "high"² level of literacy has increased in Portugal (from 6% in 1991 to 11% in 2001), particularly evident in women. Therefore, it can be expected a higher demand for FAFH in Portugal, though some studies found education variables to be insignificant (Meulenberg and Viaene, 2000; Yen, 1993).

Changes in values, defined by Meulenberg and Viaene (2000) as "mental representation of important life goals that consumers are trying to achieve", and changes in lifestyles defined by Engel et al. (1995) as "patterns in which people live and spend time and money", have a great impact on food consumption and, consequently, on food expenditure. Heilig (1993) suggested that three major trends of food preferences are related to changing values and lifestyles, namely, the shift from traditional food towards finer, industrially produced food; the elimination of the seasonal cycle in food consumption; and, finally, the move towards "exotic" food, influencing the higher demand for convenience in shopping, cooking and consumption (quoted in Meulenberg and Viaene, 2000).

Studies looking at regional effects on households food expenditure have shown that household location "has an impact on both FAH and FAFH expenditures", reflecting differences in tastes, preferences, prices, tax structure, lifestyle, advertising, etc. (Manrique and Jensen, 1998; Byrne et al., 1998).

In the light of this literature review, the analysis of major

² High" level of literacy includes those with a Bachelor or higher degrees.

trends in Portuguese household food expenditure, in its two components - FAH and FAFH -, is undertaken, for three moments in time (1990, 1995 and 2000).

3. Changes in Food expenditure in Portugal

Food expenditure is defined here as the result of FAH and FAFH expenditures. FAH³ is considered to be composed of six food groups: meat products; fishery products; milk, cheese and eggs; fruits; vegetables; and other food products⁴. FAFH is defined as the summation of expenditure on “commercial” (restaurants and cafés) and “non-commercial” foodservices (canteens). Data was adjusted using the Consumer Price Index⁵, base 2000 (INE, 2002), which allowed us to examine and evaluate trends in real terms.

Share for food in total household spending has declined from 39% in 1990 to 27% in 2000, possibly explained by the increase in the net disposable income during the period 1990-2000⁶. This is not surprising and confirms the fundamental principle of economics, widely known as Engel's law implying that the increase in income brings forth a less than proportionate demand for all food products or, in other words, that the proportion of income spent on food products declines as income rises (Ritson, 1988).

Concerning the period 1990 - 2000, food spending in real terms has decreased by 7% in Portugal, resulting from a high decrease in FAH (18%) and a 24% increase in FAFH (Table 1).

Table 1. *Food Expenditure of Portuguese Household: 1990 - 2000.*

Component	1990 €	1995 €	2000 €
Food expenditure	4047	3859	3745
Food at home (FAH)	3026	2691	2478
Meat	958	810	716
Fish	461	423	436
Milk, cheese and eggs	358	326	317
Fruits	232	204	194
Vegetables	285	264	237
Other food products	732	665	578
Food away from home (FAFH)	1021	1168	1267
Restaurants and Cafes	942	1027	1136
Canteens	81	140	132

Source: Authors calculations from Inquérito aos Orçamentos Familiares, INE.
Values deflated by the Consumer Price Index, base 2000 (INE, 2002).

³ It should be mentioned that expenditure on drinks is not included in FAH. Therefore some reserve should be taken in the analysis since expenditure on FAFH includes that item.

⁴ Other food products include: Cereals and products based on cereals; Oils and fats; Sugar and other food products. Further separation of the food groups was undertaken when necessary.

⁵ Total excluding Housing for Continent.

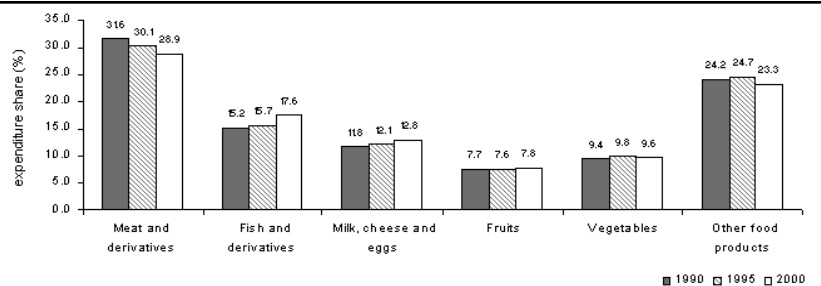
⁶ It should be noticed that for the samples used, between 1990 and 2000, real net income increased by 38% (INE, 2002).

⁷ Other meat includes: Sausages, dried, salted or smoked meat and derivatives, conserves and other fresh, chilled and frozen meats

FAH accounted for 75% of food expenditure in 1990 and for 66% in 2000. Therefore one can conclude that Portuguese households spending behaviour are going through some changes: food as a necessity and expenditure on basic goods seems to be getting smaller. The rise of net income level might constitute a stimulus for consumers to turn to other goods, making path to other important components of life.

FAFH, once languished and thought to be a luxury, is increasing its share in total food spending, from 25% in 1990

Graph. 1. *Share of Food Groups in FAH Expenditure in Portugal*



Source: Authors calculations from Inquérito aos Orçamentos Familiares, INE

to 34% in 2000. This trend is in accordance with what has been happening in Europe (Gracia and Albusu, 2001; Meulenber and Viaene, 2000; Mihalopoulos and Demoussis, 2001; Manrique and Jensen, 1998), as mentioned in the literature review (Background Section).

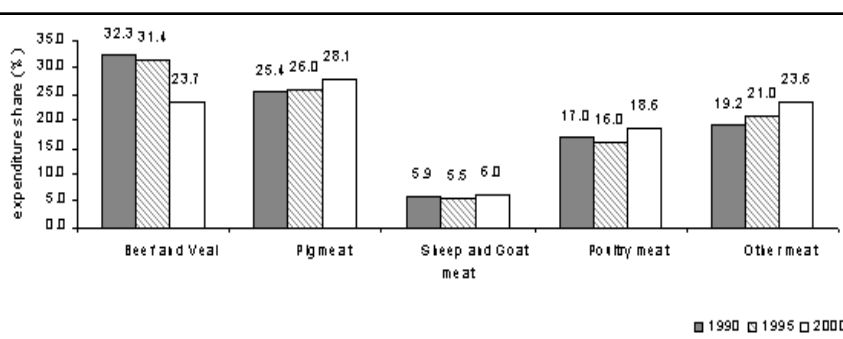
Breakdown of FAH in different food groups shows that meat, fish and other products, account for the higher proportion of households' food expenditure. The weight of the fish group is not surprising. Portugal is the EU member state with the highest consumption of fish, as pointed out by Banovic et al. (2004) and Barreira and Duarte (1997). Concerning the period 1990 - 2000, meat expenditure in real terms, had the highest decline (-25%) and fish the lowest (-5%) (Table 1).

In Graph 1, the shares of the food groups in FAH expenditure are shown. A closer look to the fish group shows that its share has been increasing (15% in 1990 to 18% in 2000). This slight increase in fish share might be filling the place left by meat (share of 32% in 1990 and 29% in 2000). Barreira and Duarte (1997) have shown that fish is a substitute for the meat group. Another group that has also increased its share is milk, cheese and eggs.

It is worth mentioning what has happened with the different types of meat included in the meat group⁷. All meat groups increased their shares in meat expenditure apart from beef and veal, particularly between 1995 and 2000, from 31% to 24%, respectively (Graph 2). This can be explained not only by the price effect but also by the health concerns due to the BSE crisis that took place in 1996, as confirmed by Barreira and Vicente (2001).

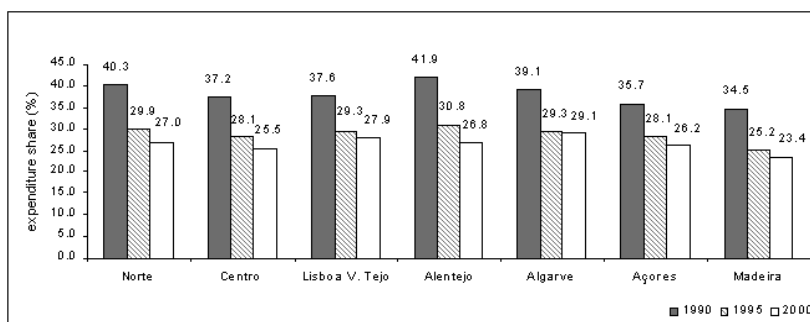
On average, Portuguese households spent, in 2000, 28%

Graph 2. Share of Different Types of Meat in Meat Expenditure in Portugal



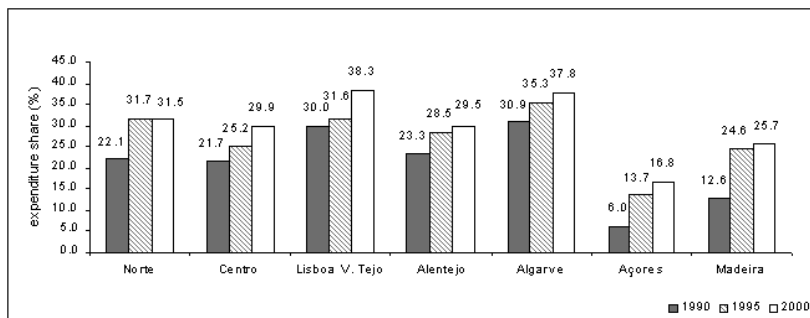
Source: Authors calculations from Inquérito aos Orçamentos Familiares, INE.

Graph 3. Share of Food in Total Expenditure by Region in Portugal



Source: Authors calculations from Inquérito aos Orçamentos Familiares, INE

Graph 4. Share of FAFH in Food Expenditure by Region of Portugal



Source: Authors calculations from Inquérito aos Orçamentos Familiares, INE

of their total meat spending on pig meat, 24% on beef and veal, 19% on poultry, 6% on sheep and goat, and 24% on other meat.

These changing patterns that took place in Portugal, for the period under analysis, are in accordance with the studies covered in the literature review, following the general tendency across Europe towards food away from home. According to Gracia and Albisu (2001) food consumption in the European Union can be outlined as follows: i) a decrease in the proportion of food expenditure, ii) total food consumption (in quantity terms) at the maximum level, iii) "shift in the food consumption structure", and iv) an in-

crease in the proportion of expenditure allocated to FAFH.

In the following sections an attempt is made to explain these changes based on different variables that were available for the data used: regional location of the household, income level, age and literacy level of the head of the household.

4. Socio-economic and demographic variables and food expenditures

4.1 Regional patterns

As mentioned in the literature review, regional location of the household may influence food expenditure. Portuguese regions represent one pantone of different characteristics. Whilst in 1990, share of food in total expenditure showed some differences across regions (Alentejo with the highest share), in 2000 these differences were less clear (Graph 3).

As shown in Graph 4, the share of FAFH in food expenditure, is higher for the more developed regions, Lisboa V. Tejo and Algarve, and substantially lower for the two outermost Portuguese regions, Açores and Madeira, as expected.

Though the figures on which the analysis per food groups is based are not included in the text, some results are mentioned whenever considered relevant. Hence, the analysis of the shares per food groups by region shows that in 2000, meat expenditure was slightly higher in Norte and Centro, and fish expenditure in Algarve and Lisboa V. Tejo.

Concerning beef and veal and for the same year (2000), another thing that should be pointed out is that households in the region of Norte affect 30% of their total meat spending on beef, while those from Alentejo affect only 7%. This difference can be explained by the quantities consumed and also by the price

of meat, since in the region of Norte, veal is consumed in greater quantities than beef, while the opposite occurs in households of Alentejo, with veal in general having a higher price than beef.

The main point to be retained is that although food expenditure share tends to be similar within Portugal, when it is disaggregated in its two components, FAFH and FAH, and this last one divided per food group, there are regional differences (in lifestyle, values, taste, preferences, information, etc.) that clearly influence food consumption patterns, confirming the findings of Manrique and Jensen (1998) and Byrne et al. (1998).

4.2. Food expenditure and level of income

Share for food in total expenditure has been decreasing with the level of income, accounting, in 2000, for 38% in those households with the lowest level of income, and 24% in households with the highest level of income.

For all income levels, share of food on total expenditure has been declining throughout the times. If we consider the middle-income class, we can see that this share was 41% in 1990, decreasing to 30% in 2000. It should be highlighted that the decline is more accentuated in the lower income levels. This might indicate a slight tendency towards similarity between income classes.

Higher participation of women in the labour market implies a higher income level of the household as well as a higher opportunity cost of time, which is in accordance with what has been mentioned in the literature review. In what concerns FAFH, its share increases as the level of income increases (Graph 5). Besides, in the period covered, higher increases have taken place in the lower income levels.

The share of meat in FAH expenditure was, in 2000, higher for “high” and “very high” income levels (both 30% in 2000), while share for fish was slightly higher for the “very high” income levels (19% in 2000).

Worth mentioning is that though the share for meat products increases as income increases, share for vegetables decreases. Ritson (1988) argues that with higher incomes, consumers tend to substitute staple foodstuffs (such as bread, potatoes and rice) switching to higher quality (and higher priced) varieties within the broad food groups (meat, fish, fruit and vegetables). We would then probably expect an increasing proportion of vegetables spending as income rises; nevertheless, it should be kept in mind that the group of vegetables includes potatoes and cabbages, which are very important in the Portuguese diet.

In the light of the above-mentioned results, one can argue that whilst fish has a generalised level of consumption, the meat and the vegetables groups are affected by the level of income. Therefore income is still highly significant in Portuguese consumption patterns as confirmed by Barreira and Duarte (1997).

4.3. Food expenditure and age

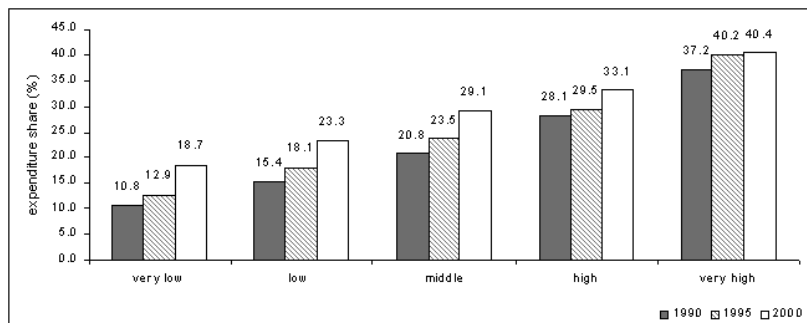
The variable “age group of the head of the household” is important, as it gives an idea of the average age of the remaining household members, and also of its composition. The age group 30-64 is linked to bigger households and with a higher heterogeneity in terms of its members` age. As we do not have information on household composition, the age group will be used in the analysis.

According to the different age group of the head of the

household, food spending, in proportionate terms, is higher for those aging 65 and over, though experiencing the highest decline (43 % in 1990 to 30% in 2000).

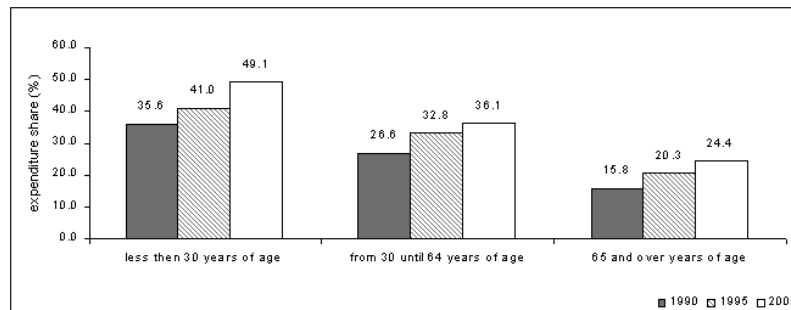
Younger households tend to eat more away from home as confirmed by the proportion of their spending on FAFH (Graph 6).

Graph 5. Share of FAFH in Food Expenditure by Level of Net Income in Portugal



Source: Authors calculations from Inquérito aos Orçamentos Familiares, INE

Graph 6. Share of FAFH in Food Expenditure by Age in Portugal



Source: Authors calculations from Inquérito aos Orçamentos Familiares, INE

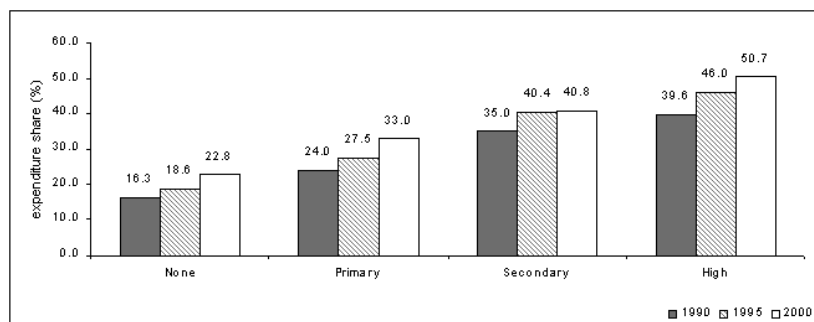
During the period under analysis, households aging 65 and over tended to have higher shares of FAFH spending on fish, fruits and vegetables, but lower share on meat and milk thus confirming other studies mentioned in the literature review, such as Gracia and Albisu (2001), Blisard et al. (2002), Nayga and Capps (1995) and Nayga (1995).

Hence, consumption patterns in Portugal seem to be influenced by composition of the household and age of its members.

4.4. Food expenditure and level of literacy

Regarding food spending by different literacy level of the household head, share of food in total expenditure decreases as the level of literacy increases (in 2000 households with the lowest literacy level had 34% and households with the highest literacy level had 19%). For the decade under analysis, the highest decline, in real terms, was in those households with the lower literacy level (no studies). These results are not surprising as the level of literacy should be highly related with the net income level and age of the head of the household.

Graph 7. Share of FAFH in Food Expenditure by Literacy Level in Portugal



Source: Authors calculations from Inquérito aos Orçamentos Familiares, INE

Considering FAFH, its share increased significantly with the literacy level as expected (Graph 7). This confirms other authors' results, though some argue that there is no significant relationship (see Background Section).

Analysis of different food groups shows that the share of milk, cheese and eggs, is higher for households with higher literacy levels. The same behaviour is reached when analysing expenditure patterns based on age level. On the other hand, share for vegetables declines with the literacy level, probably due to the same reasons given in Section 4.2, as a similar behaviour was found when basing the analysis on income level.

5. Conclusion

The objective of this work was to examine and to evaluate food expenditure trends in Portuguese households, taking into account socio-economic and demographic factors, affecting the level of spending on both FAH and FAFH.

Food expenditure of the Portuguese households in real values, concerning the decade 1990-2000, has decreased and its share in total household expenditure has significantly decreased. In 2000, this share was lower, the higher the income level of the household, the higher the literacy level and the lower the age of the head of the household. Throughout the period covered, these differences tend to be less pronounced.

During this decade, FAH decreased while FAFH has increased substantially. The analysis of food expenditure according to different variables characterising the households, confirms that the higher share of FAFH occurs in households located in more developed regions, with higher income and literacy levels, and with lower age of the head of the household.

Throughout the decade the differences found on FAFH share by income level have become less evident but more accentuated when considering the age of the household head.

Considering the different food groups it should be mentioned that the meat group declined its share in FAH spending while fish and "milk, cheese and eggs" group, have increased their shares.

Overall, it seems that different consumption patterns can

be identified when looking at the different food groups per variable; namely, regional differences, which are highly related with the respective consumption habits, and age differences, which are related with different needs and health issues. So, further research should be undertaken in order to have a clear view on what actually influences Portuguese household spending behaviour. This requires the use of a disaggregated database, on individual household level.

In conclusion, Portuguese households appear to start favouring food away from home and leisurely eating-out occasions, so further research on food expenditure may also be undertaken in depth between the FAFH and prepared food as well as in terms of meal-type and type of eating facility.

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