

## Factors Shaping Expenditure on Food-Away-from-Home in Irish and UK Households





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# Factors Shaping Expenditure on Food-Away-from-Home in Irish and UK Households

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## Summary

Factors influencing consumer spending in two sectors of the food-away-from-home (FAFH) market (quick-service e.g. takeaways, and full-service e.g. restaurants) were analysed using national household expenditure survey data. Different variables affect expenditure in the two sectors in different ways. Income has a greater effect on expenditure in the full-service sector than in the quick-service sector. Similarly households that are health-conscious indicate a greater preference for full-service meals while households which place more value on time (and therefore are more convenience-oriented) indicate a greater preference for quick-service. Households of a higher social class and those with higher education levels also appear to favour full-service expenditure. In addition, younger, urbanised households favour quick-service meal options. The results emphasise the merits of analysing different sectors within the FAFH market separately.

## Introduction

Over the last decade, the Irish economy has experienced significant growth in incomes, household expenditure and labour force participation as the economy has converged toward the level of European neighbours such as Britain. As a result, the percentage of total food expenditure spent on food-away-from-home (FAFH)<sup>1</sup> now constitutes an increasingly important share of Irish food expenditure; it reached 23% in 1999 and is rapidly approaching the EU average. Rising incomes together with increased household expenditure and increased labour force participation, particularly that of women, are all believed to have contributed to this growth. However, consideration of the equivalent figures for the EU average (35%) and the US (about 50%) indicates significant potential for further growth. The aim of this study is to analyse, for the first time, the factors fuelling demand for FAFH in Ireland. Previous studies analysing the determinants of FAFH in Europe have tended to focus on the entire market with little regard given to the diversity of the specific sectors considered in this study, namely quick-service (fast-food and take-away) and full-service (hotel and restaurant meals). Here, given the diversity of outlets within the foodservice sector, a disaggregated approach is taken, with the two largest components of this industry, the quick-service and full-service sectors, analysed separately. In this report, a comparative analysis of FAFH expenditure in the UK will also be undertaken and the factors determining expenditure on both quick-service and full-service meals by both Irish and UK households will be analysed separately.

The UK market is at a more mature stage of development than its Irish equivalent and one of the chief rationales for this analysis is that it should assist in projecting future growth in the Irish FAFH market. Bord Bia (2004) valued the Irish foodservice industry at €3.7 billion, as against €3.5 billion in 2003 while the most recent valuation is €5.7 billion (Mintel, 2007). The UK foodservice industry was valued at €31.1 billion in 2004, making it the largest single employer in the UK food chain with some 1.5 million employees (DEFRA, 2007) and it has been estimated that the industry will reach a value of £51 billion by 2012 (Lewis, 2006).<sup>2</sup>

<sup>1</sup> In keeping with most other studies in this area this paper classifies foods 'at home' and 'away from home' based on where the food was prepared or obtained, not where it was consumed (Lin *et al.* 2001).

<sup>2</sup> In this study FAFH is limited to meals prepared or obtained from commercial facilities solely.

## Data and Methods

The Irish data used in this report are variables extracted from the 1994/5 and 1999/2000 Household Budget Surveys (HBS) collected by the Central Statistics Office (CSO) of Ireland. The survey is conducted as a random representative sample covering 7,877 and 7,644 Irish households in 1994 and 1999 respectively. The UK data used are variables extracted from the 2001/2 and 2002/3 annual Expenditure and Food Surveys (EFS) collected by the Office for National Statistics and the Department for Environment, Food and Rural Affairs in the UK. The sample contains 7,473 and 6,927 households in 2001 and 2002 respectively. After excluding observations with incomplete information for household characteristics, the reported samples for the Irish HBS are 7,721 and 7,526 households for 1994 and 1999 respectively.<sup>3</sup> The corresponding figures for the UK are 7,464 and 6,924 households in 2001 and 2002 respectively.

Recent Irish studies of food expenditure patterns have indicated that the demand for convenience and health awareness are two competing factors influencing expenditure decisions in this area (Newman *et al.*, 2001; 2003) and both factors are modelled in this analysis. Health awareness is proxied by expenditure on tobacco, a product with known health risks, while the demand for convenience is proxied by the number of workers in each household, a measure of each household's opportunity cost of time. A variable was also used to distinguish commuter households. It is expected that the demand for convenience is the primary factor driving quick-service expenditure while full-service expenditure is fuelled by the demand for pleasure or leisure, since full-service dining can use up considerable time, potentially as much as home meal preparation (De Boer *et al.*, 2004). Across international studies, FAFH has, in general, been found to have lower nutritional quality than food prepared at home (Burns *et al.*, 2001; Guthrie *et al.*, 2002) though this finding primarily relates to the quick-service sector rather than full-service (Binkley, 2005). A primary assumption of this report is that there exists a health-convenience trade-off with regard to FAFH expenditure. Higher educated, higher social class, higher income households and households with higher levels of health awareness are assumed to favour full-service over quick-service.

<sup>3</sup> The 1994/5 and 1999/2000 HBS are hereafter referred to as 1994 and 1999 while the 2001/2 and 2002/3 EFS are referred to as 2001 and 2002. While a survey was conducted in 2004/05, the dataset is not yet available.

A review of the FAFH literature, and preliminary analysis, demonstrated the importance of using a two-step framework using models such as the double hurdle model. In the first stage of the model, the factors influencing households' decisions to participate in the consumption of FAFH are modelled while in the second stage, the factors determining the level of observed expenditure are considered. Due to data limitations, the same set of variables could not be used in the Irish and UK analyses. The estimation procedure included retaining statistically significant variables in each step of the double hurdle model. All the dependent and independent variables used in this paper are described in Table 1. These include economic variables and socio-economic characteristics of the household manager and of the household.<sup>4</sup>

<sup>4</sup> The household manager is the person directly responsible for the majority of household tasks including meal preparation.



**Table 1: Description of the variables used in the analysis**

<i>Dependent Variable</i>	<i>Description</i>
Quick-service	Per capita average weekly expenditure on quick-service (€)
Full-service	Per capita average weekly expenditure on full-service (€)
<i>Independent Variables</i>	
Income	Proxied by per capita average total weekly household expenditure (€)
Income2	Income squared (€)
Age	Age of household manager (1-8)
Age2	Age squared
Hhold	Number of persons in the household
Hhold2	Household size squared
Workers	Number of persons in gainful employment outside the home
Singleage	Single * Age
<i>Discrete Variables</i>	
Education <sup>a</sup>	<p>Secondary = 1 if highest level of education completed was Leaving Certificate education.</p> <p>Tertiary = 1 if highest level of education completed was Third Level education.</p> <p>Base category = highest level of education completed was less than Leaving Certificate.</p>
Education <sup>b</sup>	<p>1 = Household manager left school at age 17 or over.</p> <p>0 = Household manager left school before the age of 17</p>
Social Class	<p>Social<sup>1</sup> = 1 for household manager categorised as higher professional, lower professional, employer or manager, 0 otherwise</p> <p>Social<sup>2</sup> = 1 for household manager categorised as salaried employee and non-manual workers, 0 otherwise</p> <p>Base category = household manager categorised as manual worker, farmer, other agricultural worker or fisherman</p>

**Table 1: Description of the variables used in the analysis...continued**

<i>Dependent Variable</i>	<i>Description</i>
Ethnicity <sup>b</sup>	Non-white = 1 if household manager is Black, Asian or of Mixed Race. Base category = household manager is White
Single, married	Single = 1 for single-adult household with or without children, 0 otherwise Married = 1 for married couple with or without children, 0 otherwise Base category = households with 2 or more adults with or without children
Oldkids <sup>a</sup>	1 = Children aged 14-18 present 0 = No children aged 14-18 present
Oldkids <sup>b</sup>	1 = Children aged 5-18 present 0 = No children aged 5-18 present
Youngkids <sup>a</sup>	1 = Children aged less than 14 present 0 = No children aged less than 14 present.
Youngkids <sup>b</sup>	1 = Children aged less than 5 present 0 = No children aged less than 5 present.
Commuter	1 = A Household member is employed outside the home and incurs higher than the mean level of travelling expenses 0 = Household members are not in employment or do not incur higher than the mean level of travelling expenses
Homeowner	1 = Household owns their own home. 0 = Household does not own their own home
Urban <sup>a</sup>	1 = Urban household 0 = Rural household
Regional dummies <sup>b</sup>	Northern = Household is located in the North of England including Yorkshire, Merseyside and the North East. Mideast = Household is located in the East and West Midlands and Eastern counties of England Welsh = Household is located in Wales Scot = Household is located in Scotland

**Table 1: Description of the variables used in the analysis...continued**

<i>Dependent Variable</i>	<i>Description</i>
Nosmoke	<p>NI = Household is located in Northern Ireland            Base category = Household is located in the South of England including London.</p> <p>1 = Household spends nothing on tobacco during the survey period            0 = Household spends a positive amount on tobacco during the survey period</p>
Credit	<p>1 = Household possesses at least one credit card            0 = Household possesses no credit cards</p>
Seasonal dummies	<p>Spring = 1 if expenditure occurred in Spring, 0 otherwise            Summer = 1 if expenditure occurred in Summer, 0 otherwise            Autumn = 1 if expenditure occurred in Autumn, 0 otherwise            Base category = expenditure occurred in Winter</p>

<sup>a</sup> Used in Irish dataset solely. <sup>b</sup> Used in UK dataset solely

## *Results*

Results for the quick-service sector are presented first, for both Ireland and the UK, followed by results for full-service for both Ireland and the UK. Under both sub-headings, results for participation, i.e. likelihood of expenditure, are presented first followed by expenditure, i.e. level of expenditure in the event of participation, as different factors are believed to influence these two stages.

## Quick-service

Many variables have similar results in the participation stage in both the Irish and UK analyses (See Table 2). For example, as income increases expenditure is more likely in both Ireland and the UK. The age of the household manager has a significant and negative effect on the likelihood of participating in both the Irish and UK quick-service sectors, supporting the hypothesis that older household managers are less likely to eat away from home than younger households. As the number of workers increases (the proxy for the household's opportunity cost of time), the likelihood of expenditure increases in the quick-service sectors in both Ireland and the UK in each survey year. Household managers that are highly time-pressured are assumed to be more likely to frequent FAFH outlets than other households. Household size has a positive effect on participation in both the Irish and UK surveys but at a decreasing rate. This gives credence to the argument that larger households benefit from economies of scale in home meal preparation. While the education variable is defined differently in the Irish and UK analyses, the results demonstrate that households with higher education levels are less likely to spend money in the quick-service sector in each country. Furthermore, the results indicate that married couples and households with high levels of health awareness are less likely to spend money in the quick-service sector in both Ireland and the UK, although the 2001 results for both variables are insignificant. The presence of older children increases the likelihood of expenditure in the quick-service sector. As children become older and more independent, they are more likely to consume quick-service products.

Differences emerge with the variable for single-adult households. This variable has a negative effect on participation in the Irish quick-service sector in both 1994 and 1999 while in the UK results the variable has a positive effect in both 2001 and 2002. The UK result is as expected given that the benefits of home meal preparation diminish in single-adult households, while the Irish result is contrary to expectations. It is thought that the Irish result is due to an age effect within single-adult households (i.e. single pensioners). Irish households in urban areas are found to be more likely to participate in the quick-service market than other households. It is likely that towns will have a higher proportion of quick-service outlets than rural areas due to their large populations. The Irish results also indicate that homeowners are less likely to spend money on quick-service than renters. There is also some evidence that households headed by household managers of the highest social class, *Social1*, and households with credit cards, are less likely

than other households to spend money in the quick-service sector, as significant results are found in 1994 and 1999 respectively. The commuter variable has a positive and significant effect on the likelihood of expenditure in the quick-service sector in the UK in both 2001 and 2002. This result could be interpreted as a further demand for convenience by commuters. In the UK results, in both 2001 and 2002, the *Youngkids* variable has a significant negative effect on determining participation in quick-service expenditure which could reflect the importance of the family meal for households with younger children. In addition, the *Non-white* variable has a negative effect on participation in the quick-service sector in the 2001 results, indicating that non-white households are less likely to participate than other households.

Regarding the expenditure stage results (i.e. level of expenditure once the decision has been made to incur some expenditure) (See Table 3), income also has a positive and significant effect on quick-service expenditure for both Ireland and the UK, but at a decreasing rate in each set of results with the exception of 2002. These results indicate that quick-service expenditure may be viewed as an inferior good<sup>5</sup> by households with higher incomes. Household size has a negative effect on the level of Irish quick-service expenditure in 1994 and on the level of UK quick-service expenditure in 2002. This could be explained by an income effect: that is, for a given level of total household income, per-capita income will be lower in larger households reducing the amount spent on FAFH. Each education variable, with the exception of *Secondary* in 1994, has a negative effect on quick-service expenditure. This indicates that while these households are less likely to participate, they also spend less than other households. Being a single-adult household in Ireland has a positive effect on quick-service expenditure in both 1994 and 1999. While single Irish households are less likely to participate than other households, when they do, they spend more. In the UK analysis, a positive effect is observed in the 2001 quick-service results. The health awareness variable also has a significantly negative effect on both Irish and UK quick-service expenditure in each survey year. This is despite the fact that the UK quick-service sector is at a more mature stage of development than its Irish equivalent.

<sup>5</sup> Demand for an inferior good decreases as income increases, unlike for a normal good for which the opposite applies.

As with the results of the likelihood of expenditure stage, some variables affect the level of expenditure stage in each country in different ways. For example, as the age of the household manager increases in Ireland, the level of expenditure decreases. However, in the UK as age increases so too does the level of expenditure on quick-service. The Irish results indicate that the urban variable has a positive and significant effect on quick-service expenditure in both survey years. There is also some evidence that households headed by household managers of the highest social class spend less on quick-service products than other households. In both 2001 and 2002, being a married couple has a negative effect on UK quick-service expenditure. These households are assumed to value the importance of the family to a greater extent than others and accordingly be more likely to prepare food at home. Furthermore, in 2001 and 2002, being a UK household with young children also has a negative effect on UK quick-service expenditure. This result may also be linked to the importance of the family meal for these households. The *Non-white* variable has a negative effect on quick-service expenditure in both 2001 and 2002. This result indicates that while non-white household managers are less likely than others to buy quick-service products, when they do, they spend more than other households. Stewart and Yen (2004), projecting future trends in the US FAFH market, determined that increases in the non-white population were more likely to benefit the quick-service sector relative to full-service. Further work is needed to clarify whether a similar effect is occurring in either Ireland or in the UK. There is also some significance for the regional and seasonal variables that control price differences in the absence of price data.

The results indicate that the most likely consumers of quick-service products in both countries are younger and larger households with lower levels of education and health knowledge. In Ireland, residents of urban areas are also more likely consumers of quick-service products, while households of a higher social class are less likely. In the UK, commuters and single-adult households are also among the more likely consumers, while households with younger children and ethnic households are less frequent consumers. Thus, the core-market for quick-service products consists predominantly of younger, working, urbanised households with lower levels of income, education and health awareness with the demand for convenience a strong driver.

**Table 2: Irish and UK Participation Stage Results for Quick-service Expenditure**

<i>Variables</i>	<i>1994 Quick</i>	<i>1999 Quick</i>	<i>2001 Quick</i>	<i>2002 Quick</i>
Income	+sig	+ sig	+ sig	+ sig
Age	- sig	- sig	- sig	- sig
Workers	+sig	+ sig	+ sig	+ sig
Hhold	+sig	+ sig	+ sig	+ sig
Hhold2	- sig	- sig	- sig	- sig
Secondary	insig	- sig	-	-
Tertiary	- sig	- sig	-	-
Education	-	-	- sig	- sig
Non-White	-	-	- sig	insig
Social1	- sig	insig	insig	insig
Single	- sig	- sig	+ sig	+ sig
Married	- sig	- sig	insig	- sig
Oldkids	+ sig	+ sig	+ sig	+ sig
Youngkids	insig	insig	- sig	- sig
Commuter	insig	insig	+ sig	+ sig
Homeowner	- sig	- sig	insig	insig
Urban	+ sig	+ sig	-	-
Nosmoke	- sig	- sig	insig	- sig
Credit	insig	- sig	insig	insig

**+/- indicated direction of influence; sig/insig = significant/insignificant**



**Table 3: Irish and UK Expenditure Stage Results for Quick-service Expenditure**

<i>Variables</i>	<i>1994 Quick</i>	<i>1999 Quick</i>	<i>2001 Quick</i>	<i>2002 Quick</i>
Income	+ sig	+ sig	+ sig	+ sig
Income2	- sig	- sig	- sig	insig
Age	- sig	- sig	+ sig	insig
Age2	+ sig	insig	- sig	insig
Hhold	- sig	insig	insig	- sig
Hhold2	+ sig	insig	Insig	+ sig
Secondary	insig	- sig	-	-
Tertiary	- sig	- sig	-	-
Education	-	-	- sig	- sig
Social1	- sig	insig	insig	insig
Non-White	-	-	+ sig	+ sig
Single	+ sig	+ sig	+ sig	insig
Married	insig	insig	- sig	- sig
Youngkids	insig	insig	- sig	- sig
Urban	+ sig	+ sig	-	-
Nosmoke	- sig	- sig	- sig	- sig
Scot	-	-	+ sig	+ sig
NI -	-	-	+ sig	+ sig
Autumn	+ sig	insig	insig	insig

**+/- indicated direction of influence; sig/insig = significant/insignificant**

## Full-service

The results for the likelihood of expenditure decision (See Table 4) show that Irish and UK households with higher incomes, a larger household size and homeowners are more likely to spend money in the full-service sector than other households. The result for income is in accordance with many previous studies: as households earn more income, they purchase more leisure activities including dining amenities. The effect of household size is believed to support the argument that the probability of purchasing increases with more persons in the household. The influence of home ownership is likely to be an indication that the social aspect of full-service dining is a significant attraction for home owners but may also be evidence of a wealth affect. Similar to the results for quick-service, the number of workers, the proxy for the household's opportunity cost of time, is positively related to participation i.e. as numbers increase expenditure increases. While quick-service facilities could be considered the most attractive facility for time-constrained households, full-service facilities provide a form of leisure and represent a transfer from time spent on household chores to leisure time. The commuter variable has a positive effect on participation in both survey years of the Irish and UK analyses. Frequenting full-service restaurants represents a transfer of time spent on household chores to leisure time which helps explain this result. In addition, households with credit cards were found to be more likely to frequent full-service restaurants than other households in each year of both the Irish and UK analyses. In contrast, being a married couple has a negative effect on participation in the sector in both years of the Irish analysis and in 2001 in the UK. This may reflect the importance of the family meal for married couples.

While many variables described above have similar effects in both analyses, differences are apparent also. Higher educated household managers are more likely to participate in the full-service sector in Ireland in the 1994 study but this effect is not found in the 1999 results or in the UK analysis. Irish household managers with higher social class are found to be more likely to participate in the full-service market, as the *Social1* variable has a positive effect in both 1994 and 1999, while *Social2* had a positive effect in 1994. Similar to the education results, these variables were insignificant in the UK results. Being an Irish urban household has a positive effect on full-service participation in the 1994 results solely. Being a single-adult household in Ireland has a negative effect on participation in 1994 but is insignificant elsewhere. The presence of

older children has a negative effect on participation in the UK full-service sector, which likely reflects cost constraints, in both 2001 and 2002. Furthermore, the age variable also has a significantly negative effect on participation in the UK full-service sector in both 2001 and 2002. However, the variable has no effect on the Irish participation decision.

Regarding the expenditure stage results (See Table 5), income has a positive and significant effect on full-service expenditure in both years of the Irish and UK analysis, which is as expected. The age variable has a negative effect on full-service expenditure in both the Irish and UK results in each survey year while the age2 variable indicates that this relationship is not constant across all ages. The overall trend in these results appears to indicate that both quick-service and full-service expenditure declines with age in both Ireland and the UK and that household managers do not switch from quick-service to full-service expenditure as they age. Household size has a negative effect on full-service expenditure in both countries across all survey years. This result is largely as expected and could also be explained by an income effect similar to that outlined for quick-service expenditure. The Irish 1994 results for the *Social1* variable indicates that households with managers of a higher social class spend significantly more on full-service than other households. Similarly, the *Social2* variable also has a positive and significant effect on full-service expenditure in 1994. While neither variable is significant in the 1999 results, both variables have significant and positive effects on full-service expenditure in both years of the UK study. Full-service dining can be viewed as a form of leisure activity and in this analysis, higher social class households appear to substitute time spent on household chores for leisure time. Unlike the results for quick-service expenditure, health awareness does not have an effect on the likelihood of spending in the full-service market. However, the variable has a positive and significant effect on the level of full-service expenditure once the decision to participate has been made in each survey year. This may reflect the linking of quick service consumption with obesity and other health issues while the full-service sector has not undergone the same level of negative attention. The commuter variable also has a positive and significant effect on full-service expenditure in both survey years of the UK analysis and in the Irish 1994 results. In addition, households with credit cards were found to have a positive effect on full-service expenditure in both years of the Irish analysis and in the 2002 UK results. There is also some significance for the regional and seasonal dummy variables that control for price variations across regions and months.

Being a single-adult household has a positive effect on full-service expenditure in both years of the Irish analysis. This result suggests that while single-adult households are less likely than others to participate in the full-service sector, when they do, they spend more than other households. The variable has no effect in the UK results, however. Being an Irish urban household has a negative effect on full-service expenditure in 1994 and 1999, suggesting that urban households spend less than rural households on full-service. This may be a result of competition between outlets in urban centres making prices lower than in rural areas and the fact that full-service outlets are likely to be the sole FAFH outlet in many rural areas. A similar result was found in a Greek FAFH total market analysis (Mihalopoulos and Demoussis, 2001). Neither education variable has a significant effect on Irish full-service expenditure but the education variable has a positive and significant effect on full-service expenditure in the 2001 UK results. Higher educated households were assumed to favour full-service over quick-service and this result appears to give credence to this hypothesis. Being a married couple has a significant negative effect on full-service expenditure in both years of the UK analysis but has no significance in the Irish results. This again may be reflective of the importance of the family meal for these households.

The more likely consumers of full-service products appear to be younger households with higher levels of education, health awareness and social class as well as homeowners and commuter households. Households with a high opportunity cost of time are more likely to participate in either sector of the FAFH market than other households and certain households appear to substitute time spent on household chores for leisure time i.e. full-service dining, again consistent with economic theory.

**Table 4: Irish and UK Participation Stage Results for Full-service Expenditure**

<i>Variables</i>	<i>1994 Full</i>	<i>1999 Full</i>	<i>2001 Full</i>	<i>2002 Full</i>
Income	+ sig	+ sig	+ sig	+ sig
Age	insig	insig	- sig	- sig
Workers	+ sig	+ sig	+ sig	+ sig
Hhold	+ sig	+ sig	+ sig	insig
Hhold2	insig	insig	- sig	insig
Secondary	+ sig	insig	-	-
Tertiary	+ sig	insig	-	-
Education	-	-	insig	insig
Non-White	-	-	- insig	- insig
Social1	+ sig	+ sig	insig	insig
Social2	+ sig	insig	-	-
Single	- sig	insig	-	-
Married	- sig	- sig	- sig	-
Oldkids	insig	insig	- sig	- sig
Commuter	+ sig	+ sig	+ sig	+ sig
Homeowner	insig	+ sig	insig	+ sig
Urban	+ sig	insig	-	-
Credit	+ sig	+ sig	+ sig	+ sig

**+/- indicated direction of influence; sig/insig = significant/insignificant**

**Table 5: Irish and UK Expenditure Stage Results for Full-service Expenditure**

<i>Variables</i>	<i>1994 Full</i>	<i>1999 Full</i>	<i>2001 Full</i>	<i>2002 Full</i>
Income	+ sig	+ sig	+ sig	+ sig
Age	- sig	- sig	- sig	- sig
Age2	+ sig	+ sig	+ sig	+ sig
Hhold	- sig	- sig	- sig	- sig
Hhold2	insig	+ sig	insig	+ sig
Secondary	insig	insig	-	
Tertiary	insig	insig	-	-
Education	-	-	+ sig	insig
Social1	+ sig	insig	+ sig	+ sig
Social2	+ sig	insig	+ sig	+ sig
Single	+ sig	+ sig	-	-
Married	insig	insig	- sig	- sig
Commuter	+ sig	insig	+ sig	+ sig
Urban	- sig	- sig	-	-
Scot	-	-	insig	insig
NI	-	-	+ sig	+ sig
Nosmoke	+ sig	+ sig	+ sig	+ sig
Credit	+ sig	+ sig	insig	+ sig
Summer	insig	insig	insig	+ sig
Autumn	+ sig	+ sig	+ sig	+ sig

**+/- indicated direction of influence; sig/insig = significant/insignificant**

## Conclusions

This paper analyses the factors determining quick-service and full-service FAFH expenditure in Ireland and the UK. The key result of this paper has been, while acknowledging the continuing importance of traditional variables such as income, the identification of a health-convenience trade-off when deciding whether or not to consume FAFH expenditure. The results suggest that different variables influence expenditure in each sector in different ways, highlighting the necessity of analysing different sectors separately. The demand for convenience is a strong driver of quick-service expenditure and there is also a health-convenience trade-off. It appears that the quick-service sector is perceived less favourably from a health perspective than the full-service sector. Health awareness significantly reduces the likelihood of participation and reduces the amount of expenditure on quick-service but no similar effect is observed for full-service. At the same time, the results indicate that increasingly time-pressed households, which demand greater convenience as a result, are the more likely consumers at quick-service outlets. Time-pressed households, even those with high levels of health awareness, are increasingly more likely to consume FAFH at quick-service outlets. The core-market for quick-service products appears to consist of younger, working, urbanised households with lower levels of income, education and health awareness. The demand for pleasure is a driving force of full-service expenditure, which is seemingly viewed as a social event. Households with higher levels of income, social class, health awareness and education indicate a preference for full-service meals together with homeowners and commuters.

There is no evidence that older managers favour full-service over quick-service, though it appears that at higher income levels there is a preference among this group for full-service dining. Furthermore, larger households appear to benefit from economies of scale in household production and are less likely to consume FAFH in either outlet. Given the current demographic trends in Ireland towards smaller household sizes and, in particular, the growth of a young adult working urbanised population, the prospects for FAFH, particularly quick-service, appear buoyant at present. The impact of increased health awareness may impinge on growth in this sector in the future but at the same time this provides encouragement for the full-service sector given their apparently favourable perception from a health perspective. Both sectors must work to develop a favourable healthy image to maintain their growth in the future. Overall, these findings have positive implications for the future growth of both sectors of the FAFH market in Ireland.

## *Recommendations to Industry*

The full-service sector appears to have a comparative advantage over the quick-service sector with regard to health perception in that the sector appears to be portrayed in a positive light. The full-service sector and food companies supplying them must strive to maintain this perception while the quick-service sector must aspire to creating healthier meal options to negate its apparent negative image from a health perspective. Food companies supplying this sector should take this into account when developing new products. Of course, in itself, full-service dining can be viewed as a form of leisure and time-stressed households favouring leisure over household production is consistent with household economic theory. One caveat here is that healthier and convenient segments of the Irish quick-service sector, such as sandwich and juice bars and coffee shops, are not included in the 1994 or 1999 HBS. However, these segments are included in the UK quick-service analysis and the results indicate that the UK quick-service sector retains a negative perception from a health perspective regardless. The Irish Heart Foundation's Happy Heart Catering Award and other such programmes must be expanded to promote awareness in the foodservice industry of healthier and more nutritious meal options. Food suppliers must also be educated in this regard to ensure there are no problems with regard to the supply chain in getting access to both healthier ingredients and healthier products. Moreover, there is a need for a greater input from institutions such as the Food Safety Promotion Board to educate consumers about healthy options. Nonetheless, these initiatives need to be realistic and acknowledge consumer demand for convenience, both in terms of time and energy savings.



## *Future Research*

While the data used in this paper are the most recently available in an Irish context, it is difficult to make predictions about Irish households' future FAFH expenditure patterns on the basis of data from 1994 and 1999. This was the main rationale for conducting an analysis of the UK FAFH industry given that the UK industry is at a more mature stage of growth than its Irish equivalent. It is expected that the share of food expenditure on FAFH will have risen considerably and that the share of FAFH from quick-service will also have shown significant growth. New data will give a more complete picture of the effect of the Celtic Tiger years on FAFH expenditure with rising incomes, increasing female participation in the labour force, the growth in commuting and expanding urbanisation all fuelling growth in the market. Additionally, it is to be hoped that it will be possible to analyse healthy and convenient segments of the quick-service sector such as juice and sandwich bars and coffee shops. Another factor that must be analysed in the future is the impact immigration is having on the FAFH market, which may favour the quick-service sector over full-service as suggested in the results. Subsequent analysis of this sector should attempt to combine nutritional diary data and expenditure data from the HBS to gain a complete picture of the health effects of quick-service and FAFH expenditure. Subsequent analysis should also endeavour to create additional variables to proxy the effect of health awareness on FAFH expenditure. Combining a study of this nature with data on nutrition would likely assist the analysis.

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