

The use and acceptability of convenience and fast-foods in the food service industry in Scotland

Audrey W. Pepper and Anthony Milson✱

The Queen's College, Glasgow, 1 Park Drive, Glasgow, G3 6LP, U.K.

A questionnaire was circulated at random to six sectors of the catering industry in Scotland. The types of convenience foods used, frequency of use, relative importance of several processing factors and customers' views of catering establishments were studied. Some fifteen ideas for 'new' products are listed, the main requirement being for higher quality products at lower cost. Most caterers feel that customers mainly look for value for money and good presentation.

Key words: acceptability convenience foods fast foods food service industry

Introduction

The dramatic increase in food and labour costs during the last decade, changes in social and economic trends with their resultant effect upon the availability of money for 'eating out' and technological developments in the food and catering industries are having a marked impact upon the nature of the food service industry (Pepper, 1980). Professional caterers are finding it necessary to become more flexible and adaptable in order to meet their own and their consumers' changing requirements both in terms of food quality and food cost. Convenience foods and fast-food systems should continue to develop in most sectors of the catering industry.

Market intelligence reports published by MINTEL during the last ten years (1972, 1975, 1979 and 1982) have provided estimates of the total expenditure on fast-foods in the United Kingdom. In general, there has been an increase in the purchase of take-away meals. In Scotland in 1972, 40% of respondents purchased take-away meals, whereas in 1982, 77% did likewise. MINTEL (1982) suggested that as the economy recovers there will be further expansion in this area.

Fast Foods magazine (Anonymous, 1980) made reference to a survey carried out by Social Surveys (Gallup Poll) Ltd which examined the relative popularity of various meals and drinks within specified categories at various types of catering outlet. *Food and Cookery Review* (Anonymous, 1981) quoted a study by Frost and Sullivan Inc. which suggested that West Germany and the United Kingdom were the fastest growing fast-

food markets in the E.E.C. A growth rate of 109% from 1979 to 1990 was predicted for the U.K.

In a recent paper Richards (1983) made reference to Gallup's current 'British Survey of Eating Out' which indicated a market growth in the snack-meal area from 1% of the main-meal market in 1974/75 to 33% in 1982.

In order to assess the acceptability and use of convenience foods and fast-foods in the food service industry in Scotland, a survey was carried out involving a cross-section of the catering industry. The aim was to examine the types of convenience foods used, the frequency of use, and the relative importance of various criteria related to the use of convenience foods in different types of catering establishments. The results of the survey will provide a useful data-base for the analysis of future developments in Scotland.

Method of investigation

The questionnaire used in the study was piloted by circulating it to 35 members of the catering industry. Three hundred questionnaires were then circulated by mail. Fifty potential respondents from each of the following sectors were selected for the study:

- (1) Employees' food services — industrial and office catering;
- (2) Hotels and restaurants;
- (3) Educational establishments — colleges,

- universities, halls of residence (students over 16 years of age);
- (4) Hospitals — both patient and staff feeding;
- (5) School meals — schools with students under 18 years of age;
- (6) Cafés, etc. — including small outlets, snack-bars, take-aways, and public houses.

Establishments in sectors (1), (2), (3) and (6) were chosen at random using telephone directories. School meals organisers were contacted for distribution of questionnaires to school catering services and District Catering Managers were contacted for distribution to hospitals.

The country (Scotland) was divided into three equally-sized geographical areas for the study, for convenience termed West, East and North. Equal numbers of questionnaires were sent to each of the three areas. The three areas may be defined as follows:

- West* — Strathclyde, Central, Dumfries and Galloway regions; includes Glasgow; population 2.9 million.
- East* — Tayside, Lothian, Fife and Borders regions; includes Dundee and Edinburgh; population 1.6 million.
- North* — Grampian and Highland regions and outer islands; includes Aberdeen; population 0.7 million.

Response rates

The response rates for the six sectors were as follows:

Employees' food services	: 30%
Hotels and restaurants	: 50%
Educational establishments	: 52%
Hospitals	: 76%
School meals	: 60%
Cafés, etc.	: 14%

Overall, 52% of the questionnaires were returned. Of these 91% were completed and most of the remainder were from establishments which had

closed down. The response is considered highly satisfactory for a postal survey.

The geographical response rates were as follows:

West	: 66%
East	: 44%
North	: 28%

The highest proportion was returned from the area in which Queen's College is situated. A geographical analysis of the results is not attempted in this paper.

Of the replies, 62% were completed by females and 38% by males. Most had managerial responsibilities. The age profile of the respondents was:

up to 24 years	: 10%
25 — 34 years	: 36%
35 — 44 years	: 23%
45 — 54 years	: 22%
55 years and over	: 9%

Responses to questions

Number of employees involved in food production

About one-third of the respondents had under 5 or less employees, one-third had over 25 employees, with the other third employing between 6 and 25.

Numbers of employees by sector were as shown in Table 1.

Further analysis of these replies showed that there was no obvious relationship between the use of specific types of convenience foods and the number of employees in the establishment. There was, however, a tendency for the larger establishments to use a cook/chill system less frequently.

Use of fast-food systems

For main courses, 20% of all respondents oper-

Table 1. Number of employees by sector

Sector	5 or less employees (%)	25 or more employees (%)
Employees' food services	50	36
Hotels and restaurants	40	16
Educational establishments	46	15
Hospitals	0	76
School meals	26	15
Cafés, etc.	100	0

ated a fast-food system, (defined in the questionnaire as 'a system which relies upon a minimum or fast preparation, a short holding time and fast service'), 35% did not and 45% a partial system. For sweets, the replies were 13%, 50% and 37% respectively.

Responses by sector were as shown in Table 2.

Types of fast-food used

The types of fast foods served in the several sectors of the industry are recorded in Table 3. Over half of the establishments in all sectors served fish and chips, with no important differences between sectors. Chicken, or pie and chips was served in about half of the establishments in all sectors except hotels and restaurants, where the proportion was about one third. The pattern of use of Indian, Chinese and Italian foods varied across the sector and no proportion was greater than one third. Hotels and restaurants and cafés, etc., made no significant use of any of these ethnic dishes. Burgers and hot dogs were served in about half the establishments in each sector, with the exception of hotels and restaurants where the proportion was about one-third. Soup, sandwiches and rolls were used most frequently in employees' food services and in cafés, etc. (over two thirds in each case), and by half the establishments in the other sectors. About a quarter of the establishments in all the sectors used potato bakes, except educational establishments where the proportion was over one-third. Frozen sweets and desserts were used by one-third of the hotels and restaurants and a quarter of the educational establishments; otherwise usage was low. Pizzas were used by about half the establishments in all the sectors except hotels and restaurants where the proportion was about a quarter.

In response to a question regarding the popularity of fast-foods with customers, the overall responses indicated the following:

- (1) Fish (fried).
- (2) Chips.
- (3) Burgers.

- (4) Pies.
- (5) Pizzas.

Use of convenience foods

The proportions of convenience foods used by respondents may be summarised as follows:

Less than 25%	: 66%
25 — 50%	: 23%
over 50%	: 11%

School meals services used convenience foods the least, 75% of them using less than 25%. Although 67% of employees' food services used less than 25%, 20% used over 75%. No hospitals and only 4% of hotels and restaurants used more than 50% of convenience foods.

The convenience foods that were used most often were, in order of popularity:

- (1) Frozen vegetables.
- (2) Chips.
- (3) Burgers.
- (4) Soup mixes.
- (5) Fish (frozen or pre-prepared).

Factors important in using food materials

Respondents were asked to comment on the importance to their establishment of seven factors regarding food materials. Table 4 records the percentage of respondents who regarded each factor as very or extremely important from a five-point scale of not important, fairly important, important, very important and extremely important.

The importance of food cost was rated particularly highly in hospitals and school meals (virtually 100% of respondents); somewhat less so in educational establishments and hotels and restaurants (about 70%); in cafés, etc., and employees' food services it was regarded as less important (about 55%).

The importance of technical skills were rated

Table 2. Responses by sector

Sector	Main course		Sweet	
	Yes (%)	Partial (%)	Yes (%)	Partial (%)
Employees' food services	20	60	7	60
Hotels and restaurants	24	40	23	35
Educational establishments	19	46	12	42
Hospitals	8	47	5	33
School meals	17	43	12	41
Cafés, etc.	86	14	30	10

Table 3. Proportion (%) of establishments serving various types of fast-foods

	Overall	Employees' food services	Hotels and restaurants	Educational establishments	Hospitals	School meals	Cafés, etc.
Fish and chips	59	67	64	62	55	53	57
Chicken or pies and chips	47	53	28	42	50	57	57
Indian foods	14	6	4	31	21	6	0
Chinese foods	8	6	0	8	21	3	0
Italian foods	15	20	8	27	0	30	14
Burgers and hot dogs	47	47	32	46	47	57	57
Soup, sandwiches and rolls	53	73	60	38	53	47	71
Potato bakes	28	20	24	38	26	27	28
Frozen sweets and desserts	16	6	32	27	13	6	0
Pizzas	41	40	20	58	45	43	28
Others	16						

Table 4. The importance of several factors in the use of food materials

	Proportion (%) of establishments regarding factor as very or extremely important						
	Overall	Employees' food services	Hotels and restaurants	Educational establishments	Hospitals	School meals	Cafés, etc.
Cost	82	57	68	77	97	100	57
Technical skills required to prepare	55	57	46	54	70	53	28
Up-to-date equipment	31	21	25	23	42	40	29
Customer preferences	82	72	96	77	87	83	86
Time taken to produce a product	50	57	58	38	46	52	86
Ease of storage	33	36	25	27	32	43	43
Ease of opening packaging	15	21	8	12	20	20	0

highly by hospitals (70%) and less highly by cafés, etc. (28%); otherwise the responses were in between at about 50%.

The importance of up-to-date equipment was rated higher in hospitals and school meals than in the other sectors but overall was not considered very important.

Customer preference was rated particularly highly in hotels and restaurants (96%) and only slightly less so (about 80%) in the other sectors.

Very few establishments (4%) regarded production time as unimportant. Cafés, etc., rated the time it takes to produce a product very highly (86%) whereas the other sectors rated it only moderately highly (about 50%).

There were no real differences between sectors when judging the importance of ease of storage or ease of opening the packaging. Both factors were the least important of the seven considered overall. The overall responses showed that the

most important factors were considered to be cost and customer preferences (about 87%), followed by technical skills and production time (about 50%), with up-to-date equipment and ease of storage of low importance (about 30%). Ease of opening the packaging was hardly regarded as important at all.

Frequency of use

Respondents were asked how often they used various types of convenience foods. Table 5 records the percentage of respondents who used them either every day or 2/3 times per week from a five-point scale of every day, 2/3 times per week, once a fortnight, once a month and never.

The most frequent use of pre-prepared foods was in the employees' food services and cafés, etc., sectors (about 80%), followed closely by the other sectors (about 60%). Refrigerated, frozen, canned and bottled foods were used frequently by all sectors. Less use was made of dehydrated and cooked/chilled foods.

Table 5. Frequency of use of convenience foods

Type of food	Proportion (%) of establishments using convenience foods at least 2/3 times per week						
	Overall	Employees' food services	Hotels and restaurants	Educational establishments	Hospitals	School meals	Cafés, etc.
Pre-prepared foods	61	79	61	58	67	61	86
Refrigerated foods	78	86	88	79	88	81	100
Frozen foods	85	80	100	92	100	58	100
Dehydrated foods	43	60	39	50	46	40	33
Canned and bottled foods	87	80	83	92	92	93	86
Cooked/chilled foods	39	69	57	50	28	19	83
Basic raw ingredients	98	93	100	100	100	100	100

Most establishments use raw ingredients every day, although 7% of employees' food services indicated that they never used them.

Meat and fish purchases

About 43% of establishments purchased over 100 lb/week (44 kg/week) of beef; for poultry and fish the equivalent proportions were 33% and 30%. Smaller quantities of lamb and pork were purchased with only 17% and 16% of establishments respectively purchasing in quantities over 100 lb/week (44 kg/week).

Some 12% of the respondents had wholly or partially substituted convenience products for meat during the last year. The most frequent substitutions were as follows:

- Pre-prepared frozen or breaded fish instead of fresh fish.
- Dehydrated tinned mince and other meats.
- Cheaper cuts of meat.
- Chicken mince or dice instead of fresh chicken.
- Pre-cooked turkey breasts.
- Frozen mini-steaks and chops.
- Pre-prepared chicken supreme and boeuf stroganoff.
- Chicken rolls.
- Burgers and meat pies.
- Sausages and sausagemeat.

Respondents were asked what new convenience or fast-food products they thought would benefit them in their establishment. The most frequent responses were as follows:

- (1) Reasonably priced boil-in-the-bag products individually portioned, e.g. casseroles, various types of meat dishes, vegetarian dishes.
- (2) High-quality sauces and sweets, including 'Cordon Bleu' sauces.

- (3) A good pizza base mix.
- (4) Packages of cream — assorted sizes.
- (5) Dehydrated minced beef and chicken without the addition of soya protein.
- (6) Vending machines with high-quality products for shift workers.
- (7) A wider scope of frozen fish in the medium price range.
- (8) American burgers in a roll, boxed and frozen ready to cook in a microwave oven, at a realistic price (too high at present).
- (9) More 'Grand Gourmet' dishes.
- (10) A cooked breakfast pack.
- (11) Good savoury pie fillings and vegetarian dishes.
- (12) Portion-controlled convenience foods.
- (13) Sealed products suitable for use in a microwave oven.
- (14) Pre-prepared sandwiches for hot toaster snacks.
- (15) Pre-prepared chips to heat in a microwave oven.

Features of establishment

Respondents were asked what they thought their customers felt were the most important features of their establishment. The results are recorded in Table 6.

The most important features, as judged by the overall and sector responses reaching over 50%, are value for money and attractively served food. The only feature having more than a 75% response was value for money in hospitals. Features having less than a 25% response rate were fast service in hotels and restaurants, and pleasant surroundings and cheerful service in school meals.

Other findings

An open-ended question provided additional information from several respondents. The

Table 6. Proportion of establishments rating various features as important in their establishment

Feature	Proportion (%) of establishments indicating feature important						
	Overall	Employees' food services	Hotels and restaurants	Educational establishments	Hospitals	School meals	Cafés, etc.
Fast service	41	20	46	34	57	43	53
Attractively served food	58	64	50	47	63	71	73
Pleasant surroundings	27	48	7	29	16	57	27
Cheerful service	34	48	23	26	30	71	40
Value for money	65	64	62	82	57	57	53
Cleanliness	45	40	31	55	43	57	53

following general points were made by some respondents.

- (1) A number of establishments, particularly in the hotel and restaurant and public house sectors, commented that their trade tended to rely upon the fact that the food was home-made from fresh ingredients. Some hotels preferred not to use 'fast-foods' but to make their establishments 'different'. A number of hoteliers found some convenience foods too costly to use to any large extent. Some hotels operate two systems: a fast-food system for bar lunches and suppers with a more traditional system for dinners and à la carte menus.
- (2) In the employees' food services sector, some respondents noted that customers prefer good quality meals at a reasonable price.
- (3) Educational establishments situated in rural areas tended to use more fresh produce. One respondent found that students had a preference for basic plain food; another respondent reported that students felt there was too much 'junk' food available in the shops and preferred home-made products, although they preferred quick snack items particularly at weekends. One establishment operating a cook/freeze system was gradually increasing the number of 'home-made' dishes and decreasing the use of manufactured frozen foods. It was pointed out that student catering has to be geared to what they can afford; therefore, the proportion of fast, cheap convenience foods will increase at the expense of fresh raw ingredients, especially meat.
- (4) In the hospital sector, the use of convenience foods tended to be kept to a minimum as equipment and staffing levels were good. One respondent felt that the concept of cook/freeze-cook/chill would be advantageous, utilising convenience foods with traditional items. Another noted that the bulk of fast-food products were used in staff dining rooms,

with convenience foods used equally between patient and staff catering.

- (5) School meals food service systems are at present being reorganised following the Education Act of 1980 and it is too early to provide any definitive information on their attitudes to fast-foods at the present time.

Discussion

The response rate to the questionnaire was well above average for postal survey returns. There was, however, a lower return rate in the café, snack-bar, take-away and public house sector. The highest proportion of returns was from establishments operating with under 5 or over 25 employees involved in food preparation. No correlation was observed between the use of convenience foods and the number of employees involved in food preparation in an establishment. Some 56% of respondents used a full or partial fast-food system for the preparation of main courses, and 50% used a similar system for the preparation of sweets. A small proportion of large establishments use a cook/chill system. Only a small proportion of establishments serve ethnic foods.

Pizzas are popular with young people, reflecting trends in food choice, and so they tended to be chiefly used in educational establishments. Frozen sweets and desserts were used most frequently in hotels and restaurants. Some 90% of all respondents claimed to use less than 50% of convenience foods. Employees' food services were the most variable in this area with 20% using over 75%, and 67% using under 25%.

Fish and chips were the most popular fast-foods with customers; burgers and pies were just below these in popularity. However, frozen vegetables

were the most highly used convenience foods, with chips in second place.

The cost of food and customer preference were rated most highly in most establishments, with cost being particularly important in school meals services and hospitals. Technical skills tended to be rated most highly in the preparation of ethnic foods. There was a variable opinion concerning the importance of up-to-date equipment.

Some 25% of the hotels and restaurants indicated that they never used pre-prepared foods and 52% never used dehydrated foods. A high percentage of establishments do not use a cook/chill system. A high proportion (85%) of all establishments now use frozen foods several times a week. A few (7%) respondents from employees' food services indicated that they never used raw ingredients.

In large establishments more beef was purchased than any other form of meat or fish, with pork and lamb used the least. In smaller establishments, however, there was a much more even distribution of each form of protein. Of the respondents 12% had wholly or partially substituted convenience products for meats during the

last year.

Of the ideas suggested for new product development, the chief response was for a higher quality of convenience foods at an economic cost. A high proportion of caterers felt their clients were mainly looking for value for money and good presentation.

Acknowledgements — The authors acknowledge the help of the following in the preparation of this paper: J. Graham, Computer Analyst, Paisley College of Technology, Dr J. Piggott, University of Strathclyde, Dr R. Roy, The Queen's College, Glasgow and staff of the Economics Division, West of Scotland College of Agriculture.

References

- Anonymous (1980) Traditional catering habits. *Fast Foods* No. 10, pp. 11, 13.
- Anonymous (1981) Fast food sales in the E.E.C. *Food and Cookery Review* 48, 16.
- MINTEL (1972, 1975, 1979 and 1982) Market Intelligence Reports.
- Pepper, A. (1980) The relationship between fast foods and convenience foods — definitions and developments. *Journal of Consumer Studies* 4, 249–255.
- Richards, D. (1983) What the consumer wants and how to provide it. Fast Food Fair Conference and Workshop '83, Brighton, 1983.

About the Authors

Audrey Pepper is a Lecturer and Subject Leader in Food Studies in the Department of Home Economics and Management Studies, The Queen's College, Glasgow. She has a University of Sheffield Certificate in Education (H.Ecs.), is a Paris Cordon Bleu and is at present undertaking a research degree.

Anthony Milson graduated in engineering at Leeds University in 1959 and was awarded a research degree by Sheffield University in 1972. He was Principal Lecturer in Catering Systems Technology and Director of Studies of the BSc Catering Systems course at Sheffield City Polytechnic from 1974 to 1979. He took up his appointment as Vice Principal of Queen's College in 1979.

It is with the deepest regret that the Editor has to record that Mr Milson died suddenly in February, 1984 while this article was in the press.