DO SHOPPERS AVOID SERVICE DELAY?

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ABSTRACT

Times of shopping are habitual for many people; 61% of principal shoppers claim to shop on the same day each week and 67% on the same hour. Most shoppers state that they can shop at different times but give reasons for their chosen times that reflect external constraints such as nearness to the weekend and the pattern of work. Supermarket users who dislike waiting at the checkout use busy shopping times as much as those who are tolerant of checkout delay. Shoppers who state that they often avoid busy shopping times only do so to a limited degree. This evidence is consistent with the confirmation model of consumer satisfaction. Checkout delay and congestion are expected and shoppers learn to tolerate these conditions with little arousal and therefore little behavioral outcome. These results help us to understand the nature of habitual consumption.

INTRODUCTION

Demand variation has some benefits; Sasser (1976) has noted that off-peak periods are useful for staff relaxation, cleaning, restocking, training and maintenance but it remains true that too little demand means that resources are under-used and profitability is reduced, while at other times an excess of demand causes congestion and reduces the quality of the service offered. This is an inevitable consequence of the transitory nature of the service product which is consumed as it is produced (Regan, 1963) and makes the study of demand variation an important part of service research.

Fluctuations in demand invite two types of response from management. One is to adjust the supply of the service to the changing level of demand. Retail managements do this on a regular basis by opening and closing checkouts to fit the daily and weekly patterns of demand. The second response, more in keeping with the marketing approach, is to try to control demand; in some services this is achieved using reservations or price differentials but there is limited scope for such methods in supermarkets.

The time of use of retail outlets has received some attention from researchers; Table 1 shows grocery expenditure by day of the week for the USA and for Britain. Americans spread expenditure more evenly over the week than the British. This is partly because supermarket opening on Sunday is patchy in Britain.

Table 1
Total Spend on Groceries by Day of the Week

	Kahn and Schmittlein (USA)*	Nielsen (UK) (UK)**
	%	%
Monday	12	10
Tuesday	12	11
Wednesday	13	12
Thursday	16	19
Friday	17	24
Saturday	16	21
Sunday	13	03

* The Kahn and Schmittlein study is based on IRI data gathered during 1984-5.
** The Nielsen data applies to the 4 weeks ending March, 1992.

Time of use over the day has been studied in Cardiff by Uncles (1985); his data show that stores are busier late morning and in the early evening, particularly on Thursday and Friday. We lack information on customers' reasons for shopping at particular times and the extent to which their days and hours of shopping are regular habits. And there appears to be no investigation of the elasticity of demand in the face of congestion. If substantial numbers of people avoid congestion in supermarkets it seems likely that still more customers can be encouraged to do so by using appropriate information and promotion; if few

people avoid congestion we need to identify the non-volitional factors that control the time of shopping.

It is difficult to draw any clear inference from theory about whether people avoid congestion; researchers such as Oliver (1989) have pointed out that consumption outcomes which meet expectations are unarousing and therefore have little impact on behavior. Oliver wrote of **tolerating** outcomes that are disliked but expected and waiting at the supermarket checkout fits this description for many people in Europe and North America. From other points of view a current experience that is disliked may cause people to change, either because of reinforcement or through a conscious decision.

Following from this analysis we need to know:

1. How demand in supermarkets fluctuates over the day and over the week.

2. The extent to which time of supermarket shopping is habitual.

3. Whether people who dislike delay and congestion shop at different times in order to avoid these problems. Also the conditions for conscious decision, i.e., whether:
   - people think they can save time by shopping at quiet times?
   - they are free to shop at other times?
   - they dislike checkout delay?
   - they know when the quiet times are?

4. The reasons given by customers for their time of shopping.

THE STUDY

An earlier mail survey (East, Lomax and Willson, 1991) had shown some evidence that people who disliked waiting were under-represented in the busy period in the morning. This evidence of peak time avoidance was suggestive and a further study of supermarket shopping was required using a larger sample. The new survey also included a direct question asking whether respondents deliberately avoided busy times.

The new survey was based on 2121 addresses drawn from the telephone directories of England and Wales. Questionnaires were sent out in the last week of February, 1992. In the third week of March a follow-up letter with another questionnaire was sent to all those who had not responded. Most questionnaires were received from respondents in the week after they were sent out but a few arrived as late as May. In total 1108 usable returns were obtained and the analysis was conducted on the first 1100.

At the head of the questionnaire was a request that it be filled out by the person most responsible for shopping in the household and 72% of respondents were women. The returns reflected the general population levels of employment, age composition and household size quite closely; the detailed procedure, questionnaire and demographic composition of returns are described in a working paper (East, Lomax, Willson and Harris, 1992).

MEASURES AND RESULTS

How Does Demand Fluctuate?

It was not feasible to ask about all shopping trips so investigation focused on the main shopping trip. Respondents made 1.7 supermarket visits per week; Nielsen (1992) shows that expenditure on a secondary grocery trip (to convenience stores and supermarkets) is about one third that on the main trip so the method chosen is likely to have covered most supermarket expenditure.

Respondents were asked: "Taking the last seven day period that you went to a supermarket on what day did you spend the most?"

This was followed by: "And on this day at what time did you arrive at the supermarket?"

Table 2 shows the hours and days when these primary trips occurred. The demand on stores is very uneven; the busiest 20% of shopping hours takes 46% of all trips while at the other extreme the least busy 20% of shopping hours accounts for 6% of all trips. Table 2 shows, as expected, that Friday is most popular and that Monday, Tuesday and Wednesday are much less busy than the end of the week.

There were two main periods of high demand over the day: the first is a morning peak, highest at 10-11am, and this varies with daily demand; the second period is the early evening peak which

Table 2
Main Shopping Time on Different Days of the Week
Number of Cases (Study 3)

Time	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Totals
Before 9am	2	4	0	8	5	10	0	29
9-10am	15	21	17	28	24	27	4	136
10-11am	18	17	17	42	34	29	6	163
11-12pm	13	9	15	31	32	16	4	120
12-1pm	4	3	11	12	16	18	2	66
1-2pm	5	6	7	16	23	13	2	72
2-3pm	9	12	15	18	28	14	2	98
3-4pm	3	11	5	12	25	14	2	72
4-5pm	3	4	7	18	19	5	1	57
5-6pm	4	4	10	24	36	7	0	85
6-7pm	4	6	15	27	34	3	0	89
After 7pm	2	1	2	7	13	0	0	25
Totals:	82	98	121	243	289	156	23	1012

appears on Thursday and Friday and is not apparent on Monday, Tuesday and Saturday. There is also evidence of a small rise in demand in the 2-3pm period.

The Extent To Which The Time Of Supermarket Shopping Is Habitual

The questions about shopping habit were: "Do you usually do your main supermarket shopping on one particular day of the week?" and "Do you usually go to the supermarket more often at a particular time of day?"

Agreements were 61% and 67% respectively, showing a high incidence of habit. In aggregate the usual shopping times given by these habitual shoppers were very close to the main trip frequencies. We also tested the agreements between habit and main trip at the individual level; 88% of respondent took their main supermarket trip on their usual day and 67% at their usual time; these figures should be compared with chance likelihoods of about 20% and 10% respectively and show that claimed habit is well supported by reported practice.

Do People Try To Avoid Checkout Delay?

Do They Think That They Can Save Time? Two items in the questionnaire asked about the checkout delay expected at busy and quiet times. Mean expected delays of 10.8 and 4.4 minutes were obtained showing that there was an possible incentive for those who disliked waiting to go at quiet times.

Table 3
Main Advantage of Shopping at Quiet Times

	%
Less waiting at checkout	55
Easy to get around store	36
Fits with other activities	5
Easy parking and travel	4
Base	1047

Table 4
Main Disadvantage of Shopping at Quiet Times

	%
Not enough checkouts open	43
Wrong time for other activities	17
Food stale/Shelves empty	17
Hard to get there then	13
No money then	5
Cannot meet friends	2
Can't get food home quickly then	2
Base	963

Another question asked about the main advantage of shopping at quiet times. Table 3 shows that reduced checkout delay was the main attraction. It was also clear from Table 4 that some checkout delay in quiet periods was expected and could act as a disincentive to shopping at that time.

Are They Free to Shop at Other Times? A second pair of items asked those with habitual times of shopping whether they could easily shop at other times. 80% could easily change the day and 71% could easily change the hour. Those who were full-time employed were somewhat less free and reported figures of 69% and 57% while for the rest (called 'flexible' in the Tables) the figures were 85% and 79%. These data show that people do have substantial opportunity to shop at

different times though this freedom is reduced by employment.

Do They Dislike Checkout Delay? A further item asked: "How do you feel about having to wait at the checkout in your supermarket?" We found wide variation in the attitude to delay; the percentages were:

	%
Don't mind	21
Mind a little	31
Dislike it	35
Strongly dislike it	13

These were regrouped for analysis; the first two responses (52%) were called the 'Waiting tolerant' group and the remaining 48% the 'Dislike waiting' group.

No Avoidance of Checkout Delay. Tables 5 and 6 split the day and hour analyses of shopping by the employed/flexible criterion; comparing the totals (in bold) Table 5 shows that employed people make more use of Friday, Saturday and Sunday than the flexibles. Table 6 shows that the early evening peak is created by employed people while the morning peak is created largely by the flexible people. In brief employed people shop later in the day and later in the week than the flexibles.

While it is quite clear that these employed and flexible groups have different patterns of shopping there is no evidence from the χ^2 tests that dislike of waiting at the checkout has any effect on either the day or the hour when people go to supermarkets. In Table 5 the probability that columns 2 and 3 come from the same population is .63 and that columns 5 and 6 come from the same population is .58; in Table 6 the corresponding figures are .54 and .94. We conclude that time of shopping is unrelated to dislike of waiting at the checkout.

Do Shoppers Lack Knowledge of Quiet Times? It might be argued that people do try to avoid checkout delay but that they have little idea when this is. Some check on this is provided by four questions asking about the day/hour the respondent thought that supermarkets were most and least busy. Tables 7 and 8 and show that respondents had good judgement about how busy and quiet the days were but simplified the picture for hours of the day in comparison with Table 2.

Table 5
Day Use of Supermarkets by Full-time Employed and Flexible Shoppers

Day	Employed			Flexible		
	All	Dislike waiting	Waiting tolerant	All	Dislike waiting	Waiting tolerant
	%	%	%	%	%	%
Monday	6	6	7	9	8	10
Tuesday	6	8	4	11	11	11
Wednesday	9	8	10	14	16	13
Thursday	19	21	18	27	26	27
Friday	33	32	33	26	25	27
Saturday	23	23	23	12	12	11
Sunday	4	3	5	1	2	0
Base	348	182	166	659	303	356
χ^2 prob of column difference		.63			.58	

Table 6
Use of Supermarkets by Full-time Employed and Flexible Shoppers by Hour of the Day

Time	Employed			Flexible		
	All	Dislike waiting	Waiting tolerant	All	Dislike waiting	Waiting tolerant
	%	%	%	%	%	%
Before 9am	3	3	4	3	3	2
9-10am	7	8	5	17	18	17
10-11am	10	10	11	20	19	20
11-12pm	7	4	10	15	14	15
12-1pm	5	5	5	7	8	6
1-2pm	6	7	4	8	7	8
2-3pm	9	9	8	11	11	11
3-4pm	7	9	5	7	8	7
4-5pm	9	10	9	4	3	4
5-6pm	16	15	18	4	4	4
6-7pm	18	17	19	4	3	4
After 7pm	3	4	1	2	2	3
Base	350	184	166	663	306	357
χ^2 prob of column difference		.54			.94	

Table 7
Day Supermarkets Thought Busiest and Least Busy

Day	Busiest	Least Busy
	%	%
Don't know	9	18
Monday	1	42
Tuesday	0	16
Wednesday	1	12
Thursday	7	1
Friday	44	0
Saturday	38	1
Sunday	0	11
Base	1044	1042

Table 8
Time Supermarkets Thought Busiest and Least Busy

Time	Busiest	Least Busy
	%	%
Don't know	25	25
Before 9am	1	24
9-10am	2	17
10-11am	12	3
11-12pm	12	1
12-1pm	7	3
1-2pm	4	4
2-3pm	5	6
3-4pm	3	4
4-5pm	5	2
5-6pm	13	2
6-7pm	9	1
After 7pm	3	8
Base	1044	1048

In a survey of this sort it is impossible to compare predictions with local conditions but the large proportion of 'Don't Knows' for time of the day estimations of shopping activity suggests that many people have little idea when shops are busy and quiet during the day. From these findings we cannot rule out the possibility that people would shop at quieter times during the day if they were better informed but the fact that they do not use their knowledge of day of the week congestion makes this unlikely.

Do People Claim to Avoid Congestion? There remains one further analysis relating to avoidance of congestion. The questionnaire contained a direct question: "Do you deliberately avoid supermarket shopping when you know that it is busy?" The responses were:

	%
No	20
Yes, sometimes	41
Yes, often	39

The respondents in the first two categories were grouped (as 'Non-avoiders') and compared with the third (Avoiders). Tables 9 and 10 show that the 'Avoiders' are more likely to shop earlier in the week and before 10am though the effect is small. These data fit the evidence from Tables 7 and 8 that shoppers see the quiet times as early in the day and early in the week.

Table 9
Day of Supermarket Use by Those Who Say They Do and Do Not Avoid Busy Times

Day	Employed			Flexible		
	All	Non-avoiders	Avoiders	All	Non-avoiders	Avoiders
	%	%	%	%	%	%
Monday	6	4	12	9	8	11
Tuesday	6	6	6	11	7	16
Wednesday	9	8	11	14	14	15
Thursday	19	21	16	27	26	28
Friday	32	33	30	27	30	22
Saturday	23	24	20	12	15	7
Sunday	4	4	5	1	1	1
Number	347	238	109	659	377	282
v^2 prob of column difference	.1			.0001		

Reasons For Shopping At Particular Times

Table 11 shows that the dominant reasons given for the usual day of shopping are that it is near the weekend, the day the respondent is not working, that money is received on that day or that the store is less busy then. This shows that relatively few shoppers claim to shop when they can meet friends or avoid checkout delays; most

Table 10
Time of Supermarket Use by Those Who Say They Do and Do Not Avoid Busy Times

Time	Employed			Flexible		
	All	Non-avoiders	Avoiders	All	Non-avoiders	Avoiders
	%	%	%	%	%	%
Before 9am	3	1	8	3	2	3
9-10am	7	5	9	18	13	24
10-11am	10	11	8	19	21	17
11-12pm	7	9	2	15	17	11
12-1pm	5	5	5	7	8	6
1-2pm	6	7	4	7	6	9
2-3pm	9	9	8	11	11	10
3-4pm	7	7	8	7	7	8
4-5pm	10	9	10	4	5	2
5-6pm	16	18	14	4	4	4
6-7pm	18	18	20	4	3	4
After 7pm	2	1	5	2	3	1
Base	349	239	110	664	383	281
χ^2 prob of column difference		.01			.02	

Table 11
Reasons For Shopping on This Day

	%
Near weekend	34
Day not working	21
Wages/pension day	18
Supermarket less busy	16
Open late	5
Shelves better stocked	2
Meet friends	2
Food fresher	2

Table 12
Reasons For Shopping at This Time

	%
Supermarket less busy	28
Fits in with other shopping	28
Can leave work then	15
On route to/from work	12
Fits in with school run	7
Easier parking	6
Meet people for lunch/tea	2
Get 'sell by' discounts	2

people imply that their behavior is in response to external pressures rather than reflective planning. Table 12 shows that avoidance of congestion is an important factor for time of day shopping which is also constrained by work and by the need to fit in supermarket shopping with other shopping.

Table 13
Main Reason Given For Usual Day For Supermarket Shopping By Shopping Day (Number of Respondents Citing Reason)

Reason	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Totals
Near weekend	1	0	3	65	118	24	0	211
Day not working	8	4	5	13	12	80	4	126
Wages/pension day	10	15	8	51	31	6	0	121
Supermarket less busy	24	19	38	16	7	1	1	106
Open late	0	1	1	11	12	2	1	28
Shelves better stocked	1	0	2	5	5	3	0	16
Meet friends	0	4	4	3	0	2	0	13
Food fresher	1	1	2	1	3	1	0	9
Totals	45	44	63	165	188	119	6	631

Tables 13 and 14 show (for habitual shoppers) how the main reasons for day and hour of day shopping vary with the time of shopping. People are motivated to avoid congestion from Monday to Wednesday, on Thursday the receipt of pay/pensions and the proximity of the weekend dominate, on Friday it is the nearness of the weekend and Saturday it is the day people are not working. Over the day we see early peaks for avoiding congestion, easy parking and the school run which are followed later in the morning by fitting in with other shopping; in the early evening the shopping is work related. This analysis gives us more assurance that the reasons cited by respondents are real reasons but in a survey of this nature we cannot prove that the reasons given are causes of behavior.

Table 14
Main Reason Given For Usual Hour of Supermarket Shopping By Shopping Hour (Number of Respondents Citing Reason)

Time:	-9 am	9 | 10	10 | 11	11 | 12	12 | 1	1 | 2	2 | 3	3 | 4	4 | 5	5 | 6	6 | 7	7+ pm	Tot
Super less busy	7	54	25	18	11	7	20	6	7	10	18	10	193
Fits other shopping	1	21	55	36	10	12	15	17	10	6	10	2	195
Can leave work then	0	0	0	5	10	4	4	3	14	23	27	8	99
On work route	5	2	2	0	1	4	4	4	10	27	22	3	84
Fits school run	1	19	14	3	2	1	4	1	0	0	2	0	47
Easier parking	4	12	5	2	1	2	5	3	1	2	5	1	43
Meet peop lunch/tea	0	0	0	2	3	2	5	0	0	0	0	1	13
Get discounts	0	0	2	0	0	1	2	0	1	1	2	1	11
Totals:	18	108	104	67	40	33	60	35	43	69	86	28	691

DISCUSSION

Shopping Times And Consumer Loyalty

The study showed that the time of shopping was habitual for about two thirds of the respondents. Such habits are consistent with other regularities in consumer behavior; people have habits about **what** they purchase, i.e., brand loyalty (Massey, Montgomery and Morrison 1970; Ehrenberg, 1972, 1988), and **where** they purchase it, i.e., store loyalty (Cunningham, 1962; Charlton, 1973; Wrigley and Dunn, 1984; Kau and Ehrenberg, 1984; Uncles and Ehrenberg, 1987 and Mason, 1991). The work reported here has now shown that people are habitual about **when** they purchase. This means that a large part of service demand fluctuation is an aggregate effect of individual time loyalties.

Explaining Shopping Times

We found that the conditions for conscious decisions to avoid waiting lines were met, i.e., there were people who disliked waiting lines, thought they knew when the stores were quiet, thought they would save time if they went then, and were able to change from their usual shopping time; despite these findings the research disclosed no evidence that those who disliked waiting lines took any steps to avoid them. There was some congestion avoidance among those who claimed to avoid busy times but most of these people used stores at the same times as those who did not make this claim. Most shoppers did not appear to make explicit decisions.

We think that purchase habit provides the main explanation of purchase, much of which is repetitive; habit accommodates the different forms of loyalty that we observe and it is also consistent with **having reasons** for actions since it is difficult to maintain a repeated behavior without generating reasons. Our results showed that people gave specific reasons for the times of their shopping; these reasons are not rehearsed each time a purchase is made but can be called to mind on questioning.

One explanation why people do not avoid congestion is that expected events create little arousal and therefore little effort to seek them again if pleasant, or to avoid them if they are unpleasant. In the absence of arousal people may not even notice experiences such as checkout delay and are unlikely to give it much thought, or to complain. This **confirmation model** (Oliver, 1989) decouples behavior from active control and is quite consistent with a habit model in which behavior is set mainly by external factors.

Influencing Shopping Times

Rational choice and habit models lead to rather different expectations about the scope for change. Clearly people **could** shop at other times but will they? Our evidence shows that many people shop at regular times and that their practice is supported by reasons which usually reflect aspects of their environment and pattern of living. Such evidence suggests that changes in shopping time will not easily be achieved. Stores cannot change the day that people are paid or the time when their children go to school. Short-term promotions may alter some shopping times but any changes are likely to revert when the promotion ends; this is

the evidence that we find with sales promotions (Totten and Block (1987). Some change may be achieved by permanent improvements in the quality of off-peak shopping such as regular inducements, better stocking and no checkout delay, and by advertising the times and advantages of the off-peak periods but communications must break through the barrier presented by habit.

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