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Online grocery shopping: the influence of situational factors

Online grocery
shopping

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Abstract

Purpose – This paper seeks to understand the triggers which influence the adoption (and the discontinuation) of online grocery shopping. Specifically, the research aims to establish the role of situational factors in the process of adoption.

Design/methodology/approach – A two-step research process is employed. First, exploratory qualitative research is carried out, with the purpose of gaining an in-depth understanding of consumers' online grocery shopping behaviour. This is followed by a large-scale quantitative survey extending the findings of the qualitative research and validating the role of situational factors in instigating the commencement (and discontinuation) of online grocery buying. Cluster analysis is used to segment consumers based on the importance of specific types of situations.

Findings – Both qualitative and quantitative results establish the importance of situational factors, such as having a baby or developing health problems, as triggers for starting to buy groceries online. Many shoppers are found to discontinue online grocery shopping once the initial trigger has disappeared or they have experienced a problem with the service.

Practical implications – While situational factors are beyond a marketer's control, they could be used as a basis for marketing communications content and target advertising, for instance, by using magazines directed at new parents.

Originality/value – The importance of situational factors as triggers for the adoption of online grocery shopping suggests an erratic adoption process, driven by circumstances rather than by a cognitive elaboration and decision. The adoption of online shopping seems to be contingent and may be discontinued when the initiating circumstances change.

Keywords Internet shopping, Consumer behaviour, Cluster analysis

Paper type Research paper

Introduction

According to Keynote (2007), "the UK is considered to have one of the world's most developed Internet grocery industries". Yet, while the online food and grocery market is reported to have grown by almost 34 per cent in 2006, online grocery purchases are estimated to still account for only 1.6 per cent of total UK grocery sales (Keynote, 2007). In contrast, overall internet sales in the same year accounted for as much as 10 per cent of all retail sales (*BBC News*, 2008). Mintel (2007) conclude that online shopping for food remains a niche market.

The fast growth rate of the online grocery market presents a challenge for supermarket chains competing for share, in terms of balancing their online and offline investments. A better understanding of the triggers which influence the adoption (and the discontinuation) of online grocery shopping is vital for the strategic management of this sector, both in the "more developed" UK market and elsewhere.



Shopping for groceries online is arguably a discontinuous innovation (Hansen, 2005), requiring a significant change in behaviour (see Robertson, 1967): online shoppers forfeit the social interaction of offline shopping and the potential to evaluate groceries prior to purchase. For online grocery shopping to develop beyond its current “niche” size, retailers need to understand not only what triggers consumers to change their purchase behaviour, but also the extent to which their online shopping experience reinforces the adoption process.

Previous research pertaining to internet grocery shopping has focused on comparing online and offline purchase behaviour in terms, for instance, of brand loyalty (e.g. Danaher *et al.*, 2004), shopping behaviour (e.g. Andrews and Currim, 2004), the importance of brand names (e.g. Degeratu *et al.*, 2000); and consumers’ perceptions of the advantages and disadvantages of shopping online for groceries (Ramus and Nielsen, 2005). Another important stream of research has examined the consumer traits of internet shoppers, either in terms of their general shopping orientation (e.g. Brown *et al.*, 2003), their web-usage-related lifestyle (Breneman *et al.*, 2005), or psychographic characteristics (Barnes *et al.*, 2007). Additionally, Rohm and Swaminathan (2004) developed a typology of internet grocery shoppers based upon their motivations for shopping online.

The aim of our research is to identify triggers for the adoption and discontinuation of online grocery shopping. Specifically, the objective of this study is to establish the role of situational factors in the process of adoption of online grocery shopping behaviour. This knowledge will assist online retailers in their customer recruitment and retention efforts.

Our research makes a significant contribution to the literature by extending knowledge of online purchase behaviour beyond the much researched influence of consumer traits, assessing the impact of situational factors and their role as triggers for the adoption of online grocery shopping. Bandura (1977) highlighted the importance of contextual factors, including the social, situational, and temporal circumstances under which events occur in shaping the cognitive appraisal of the causes and consequences of one’s behaviour. Yet, situational factors have often been ignored in research on consumer behaviour and the adoption of innovations, with rare exceptions (e.g. Dabholkar, 1996; Dabholkar and Bagozzi, 2002, in the general context of the adoption of technology based self-service). The framing of much of the existing literature implies that the adoption of grocery shopping is a once-off process, but our findings suggest that this is a misconception. The importance of situational factors as triggers for the adoption of online grocery shopping suggests an erratic adoption process, driven by circumstances rather than by a cognitive elaboration and decision. The adoption of online shopping seems to be contingent and may be discontinued when the initiating circumstances change.

From a managerial perspective, uncovering the importance of situational factors as triggers for consumers to start (or to stop) online grocery shopping enables e-retailers to target segments of consumers in relevant predicaments or life-states and will help them to take more appropriate, proactive steps to improve retention rates.

The paper is structured as follows. First we review the literature relevant to the adoption process of online (grocery) shopping and theories relevant to our study, highlighting the gap pertaining to the study of situational factors. In the next section we discuss the sampling frame and data collection procedures for the first, qualitative,

stage of the research and present our analysis and findings. This is followed by the method and findings of the second, quantitative, stage. Finally, we discuss the implications of the overall findings for theory and practice.

Conceptual framework

Our research aims to identify the triggers for the adoption and discontinuation of online grocery shopping relate to the literature on the adoption of innovations in general and of internet shopping in particular. Social cognitive theory informed the specific objective of uncovering the role of situational factors.

The process of adoption

Robertson (1967) classifies innovations as continuous, dynamically continuous and discontinuous. Crucially, discontinuous innovations not only involve the adoption of a new product, but also cause buyers to significantly alter their behaviour patterns. Using Robertson's typology, shopping online for groceries can be classified as a discontinuous innovation, because there is a significant change in behaviour: selecting grocery items from a list on a web page instead of choosing items on display on a supermarket shelf. This is particularly relevant for fresh produce such as meat, fish, fruit and vegetables, which are rich in sensory attributes (e.g. Morganosky and Cude, 2000; Geuens *et al.*, 2003). The changes in behaviour patterns that mark discontinuous innovations suggest that the process of adoption for these innovations may be lengthier, and possibly more problematic, than for continuous or dynamically continuous innovations.

Furthermore, consumers' perceptions of the characteristics of an innovation affect its rate of adoption (Mahajan *et al.*, 1995; quoted in Verhoef and Langerak, 2001). According to Rogers (1983), the five characteristics of relative advantage, compatibility, complexity, divisibility and communicability influence the rate of adoption of an innovation. In the context of the adoption process of online grocery shopping, Verhoef and Langerak (2001) investigated the effects of perceived relative advantage, compatibility and complexity on consumers' intentions to purchase groceries online. Their research showed that consumer perceptions of the relative advantage and compatibility of electronic grocery shopping positively influenced the intention to adopt online grocery shopping. Perceived convenience emerged as a potentially decisive factor in determining consumers' perceived relative advantage and compatibility of electronic grocery shopping. Moreover, as expected, consumers' perceptions of the complexity of electronic grocery shopping had a negative influence on their online grocery intentions.

The focus on intentions is a major limitation of Verhoef and Langerak's (2001) findings. In contrast, Hansen's (2005) research investigated both experienced and inexperienced online grocery consumers. Hansen's findings suggest that US adopters of online grocery shopping attached higher compatibility, higher relative advantage, more positive social norms and lower complexity to internet grocery shopping, not only compared with consumers who had never bought anything on the internet, but crucially, also compared with consumers who had purchased other goods/services on the internet, but not groceries.

Hansen's findings are significant for several reasons. Firstly, they indicate that online shopping is not adopted *per se*, but in connection with specific product

categories. This is consistent with Brown *et al.*'s (2003) findings that the product category, rather than the shopping orientation of the individual, was a significant determinant of online shopping.

Therefore, acceptance of and familiarity with internet technology do not appear to be sufficient antecedents of the adoption of online shopping; other factors instigate the behaviour changes involved in online shopping in particular consumption categories.

For example, Davis *et al.* (1989, p. 987) note that self-efficacy "is one of the major factors theorised to underlie intrinsic motivation". Putting together Hansen's (2005) and Davis *et al.*'s (1989) findings, we infer that consumers who have already purchased groceries online have an enhanced assessment of their own self-efficacy or ability to perform this behaviour. This enhanced assessment affects the higher compatibility and relative advantage, the more positive social norms and the lower complexity that these consumers attribute to internet grocery shopping, compared with other internet shoppers. This inference is consistent with Bandura's (1977, p. 205) claim that "experiences based on performance accomplishments produce higher, more generalised and stronger efficacy expectations than [...] vicarious experience".

Furthermore, according to Bandura's (1977) Social Cognitive Theory, contextual factors, including the social, situational and temporal circumstances under which events occur, have an impact on how self-efficacy is cognitively appraised. The suggestion of a continuous reciprocal interaction between the environment in which an individual operates, his or her own cognitive perceptions (self-efficacy and outcome expectations) and behaviour, suggests that situational factors need to be investigated as prompts for the adoption of online grocery shopping.

Situational factors and the adoption of online shopping

Many studies have sought to identify the individual personality or psychographic traits which correlate with the adoption of new technologies in general and of internet shopping in particular. This has resulted in many typologies of internet shoppers (e.g. Brengman *et al.*, 2005; Brown *et al.*, 2003; Childers *et al.*, 2001; Fenech and O'Cass, 2001; Sénécal *et al.*, 2002). Additionally, Rohm and Swaminathan (2004) developed a typology of online grocery shoppers based upon their motivations for shopping online. Shopping motivation was found to interact with the product category in affecting the online purchase frequency of various categories of internet shoppers (convenience shoppers, variety seekers, balanced buyers).

However, many of these studies have evaluated the influence of personality traits on intentions to purchase online, rather than actual behaviour. Yet, as discussed in the previous section, experiences based on performance accomplishments produce higher, more generalised and stronger efficacy expectations (Bandura, 1977).

Furthermore, situational factors are usually ignored in consumer behaviour research, both in general and in the specific contexts of the adoption of technology and of internet shopping. As noted, there has been an assumption that adoption is a rational and enduring decision.

However, those authors who do acknowledge the role of situational factors suggest that these may be very important in the understanding of the process of adoption. Engell and Blackwell (1982) and Dabholkar and Bagozzi (2002) note that situational factors may *prevent* a consumer from adopting a new product (or technology), even if he/she possesses the "right" consumer trait. Hence Dabholkar and Bagozzi's (2002,

p. 197) suggestion that “researchers need to understand the consequences of various situational factors (and their interactions) so that managers can plan to avoid negative situational influences, whether in-store or online”.

Two studies have considered the influence of situational factors in the context of home and online shopping. Gillett (1976) found that in-home shopping was often motivated by specific needs or circumstances, such as avoiding an extra trip to pick up a needed item. More recently, Morganosky and Cude (2000) noted that convenience was a particularly relevant motive when there were situational constraints such as ill health or the presence of small children in the household. This suggests that situational factors may be important in shaping and reinforcing online shopping motivations.

Methodology

The research was in two stages. First, we conducted exploratory qualitative research, (Study 1), with the purpose of gaining an in-depth understanding of what motivates consumers to start shopping online for groceries and the extent to which their online shopping experience encourages them to continue or to stop online grocery shopping. Following the qualitative research, we designed and implemented a large-scale quantitative survey (Study 2), in order to extend the findings of the qualitative research and to validate the role of situational factors in instigating the commencement or discontinuation of online grocery buying. Cluster analysis was used to uncover specific triggers for particular groups of consumers.

Study 1: Qualitative research

Research design of Study 1

The qualitative research consisted of focus groups with both current and lapsed online grocery shoppers. Four 90-minute focus groups were held with eight people in each group. The 32 respondents had all bought groceries online regularly, although some had subsequently lapsed. All were heavy users of the internet and most had access to broadband either at home and/or work. All respondents lived in Greater London, were over 25 years old and represented a broad mix in terms of age, occupation and family life stage. They were recruited on the internet by a professional recruitment agency and received £35 as an incentive for attending the groups. The four groups were purposefully recruited to include consumers buying groceries online with different frequency:

- female regular buyers;
- female “mixed” light and regular buyers;
- male “mixed” light and regular buyers; and
- female light and lapsed buyers.

Regular buyers were defined as those who shopped online for groceries once a month or more, with light buyers shopping less than once a month. The inclusion of a male group reflects their relative importance in the market; men account for one third of online grocery shopping (Verdict, 2004). The focus groups were led by an experienced moderator. All groups were tape-recorded; the tapes were transcribed by a professional audio-typist. Data analysis took place in two stages. First, the group moderator analysed the transcripts using paper coding and a thematic approach, producing a

report and presentation. In a further, supplementary analysis, the transcripts and tapes were analysed by an analyst who coded the research brief, transcripts and the research report using Qualrus software. The use of computer assisted qualitative data analysis software (CAQDAS) enabled a more comprehensive analysis of our data, providing additional and more detailed findings (for full details of the qualitative analysis, see Robinson *et al.*, 2007).

Main findings of Study 1

Starting and stopping online grocery shopping. Situational factors appeared to be the key triggers for starting online grocery shopping. Many respondents described lifestyle changes that had led them to start online grocery shopping. These included moving house, breaking a limb, getting a job or changing jobs, having a baby, leaving work, working late, working at home, children leaving home, elderly parents dying, getting a dog, and getting a car:

My sister has just had a baby and she shops online (female light/regular buyer).

I broke my back four years ago, so it was then (female regular buyer).

I broke my arm (female regular buyer).

For some, moving house to an area where their usual supermarket brand did not have a physical presence had triggered shopping in the “virtual” store. Others had been influenced by advertising such as leaflets, coupons, TV ads, banners and air miles.

Significantly, situational factors appeared to be important triggers not only for starting but also for diminishing the frequency of shopping online for groceries or for stopping altogether, particularly when the initiating situation had reverted back to normal. For example:

I had elderly parents, and it saved me having to go to the supermarket all the time, I'd order on the Internet and it would get delivered to them but they have passed away now so I don't use it as often (female light/regular buyer).

A friend of mine had a hip replacement ... and she did all her shopping online for a few months so it is very useful in that respect (female light/regular buyer).

Another significant finding was that almost all respondents continued to shop in off-line stores for groceries, in tandem with their online purchases. Some enjoyed shopping in supermarkets and found the online browsing experience less satisfactory, as they did not come across interesting new items and offers in the same way as when shopping in the store. Whether groceries were bought more often online rather than offline depended on situational variables.

The online grocery shopping experience. Overall, internet grocery shopping was regarded as a chore rather than a pleasure, much less interesting or fun than “surfing the web”, gambling, or buying products such as CDs, books and holidays.

A number of areas of concern were raised: many respondents felt that their online grocery providers could not be trusted to be reliable because products were regularly omitted from the delivery. Substitute items were often considered unsuitable and there was an awareness of differences in service quality between orders supplied from the warehouse or from a local store:

I have given up expecting to get what I've ordered (female regular buyer).

If you are relying on a delivery coming and they don't deliver it, you have to go out anyway so that defeats the object of buying online (female light/regular buyer).

Unsatisfactory deliveries and incorrect orders were the main cause of complaint and were given as the main reason for discontinuing online grocery shopping. Some respondents considered a two-hour delivery slot too long and many complained about late deliveries:

I find delivery quite stressful because you are anticipating them coming and I find that quite stressful. The longer I have to wait the worse it gets, I just get more and more stressed (female light/regular buyer).

Other worries raised by respondents included bad picking and packing of goods and there were concerns about perishables being too near to sell-by dates or not being kept properly chilled in delivery vans.

Conclusions of Study 1

The results of the qualitative study indicate that situational factors are important triggers not only for starting but also for diminishing the frequency of shopping online for groceries or for stopping altogether. Overall the findings suggest that the online mode of shopping for groceries is discretionary: it may be abandoned when a particular trigger disappears or because consumers are unhappy with service, but equally, it may be restarted as changing life events create new triggers. Furthermore, online grocery shoppers continued to shop in traditional grocery stores.

In the second stage of the research, a postal survey was used to quantify and amplify the findings from Study 1.

Study 2: Survey

Research design of Study 2

The findings of Study 1 informed the construction of a questionnaire, which covered a wide range of issues such as the frequency of shopping online for groceries, the reasons for choosing a particular provider and attitudes towards grocery shopping in general and online. This paper focuses on the analysis of questions relating to the adoption process for online grocery shopping.

In total, 20 statements describing situational variables believed to prompt online shopping and 18 reasons for stopping were derived from the qualitative research. Respondents were asked to evaluate each statement against a five-point scale where 1 denoted "not applicable/no influence", 2 = "weak influence", 3 = "moderate influence", 4 = "strong influence" and 5 = "very strong influence". A five-point scale was considered appropriate: using a seven- or nine-point scale could have made the question appear more difficult to answer and a larger number of categories would assume that the respondents are able to finely discriminate between the levels of influence each of the 20 reasons given had on their behaviour.

After a pilot study with 40 respondents, the final questionnaire was posted to a sample of 5,000 names, randomly extracted from a commercial list of online grocery shoppers[1]. Our decision to adopt a postal survey seems counter-intuitive as our study focuses on internet use. Even if a sampling frame of e-mail addresses were available, there would be reasons to prefer a postal survey. As Bryman and Bell (2007) note,

response rates for online surveys tend to be lower than for comparable postal surveys (see also Grandcolas *et al.*, 2003; Lozar Manfreda *et al.*, 2008). An e-mail survey requires access to bulk-mailing facilities and risks introducing additional sampling error through e-mails inviting participation in the survey being blocked by spam filters (Malhotra and Birks, 2007). In our study, 1,327 questionnaires were returned (a response rate of 27 percent); of these, 1,128 were valid (had ever used the internet for grocery shopping). In order to assess our sample, we compared the MOSAIC groups represented in our sample to the national distribution (Table I).

Our sample provides a reasonably good match to the UK population in terms of MOSAIC categories, although the two largest categories (Symbols of Success and Happy Families) are slightly over-represented, whilst those in the Municipal Dependency category are under-represented.

Over 50 percent of respondents were relatively new to buying groceries online, having started within the last three years; 65 percent had last shopped online for groceries in the last month or more recently. Significantly, when asked to indicate the proportion of total spend on groceries allocated to online, supermarkets, and other stores, respondents allocated 46 percent to internet grocery shopping, 41 percent to supermarkets and 13 percent to others stores. This is in line with the findings of Study 1, i.e. that internet and supermarket shopping are not mutually exclusive.

Main findings of Study 2

Triggers for starting to shop online. Of the 1,128 responses we received, 908 completed the question related to situational triggers for starting online shopping. The respondents were asked to indicate the level of influence that each particular situational variable (e.g. mobility problems) had on their decision to start buying groceries online (the 20 variables are shown in Table II). We subjected these 908 responses to hierarchical cluster analysis using Ward's method in SPSS to determine whether there were identifiable groups of grocery shoppers in terms of the decision to begin buying online. The increases in the agglomeration coefficient suggested that there were five clusters; however, these were found to overlap considerably. Results of

Table I.
MOSAIC profile of the
data set

Mosaic group	Frequency	Sample Percentage	National (percent)
Missing (no ID number)	12	0.90	–
A. Symbols of success	166	12.51	9.62
B. Happy families	179	13.49	10.76
C. Suburban comfort	219	16.50	15.1
D. Ties of community	192	14.47	16.04
E. Urban intelligence	98	7.39	7.19
F. Welfare borderline	48	3.62	6.43
G. Municipal dependency	56	4.22	6.71
H. Blue-collar enterprise	116	8.74	11.01
I. Twilight subsistence	36	2.71	3.88
J. Grey perspectives	114	8.59	7.88
K. Rural isolation	90	6.78	5.39
Unclassified	1	0.08	–
Total	1,327	100	100

	Cluster 1 mean	Cluster 2 mean	Cluster 3 mean	η^2	Online grocery shopping
Mobility problems	1.1659	4.3806	1.3000	0.730	<div>1213</div>
Health problems	1.2749	4.2839	1.3750	0.620	
Shopping too tiring	2.0774	3.2387	2.1333	0.090	
Had a baby	1.1422	1.0774	4.1750	0.680	
Changed family circumstances	1.5608	1.7355	3.9917	0.300	
Avoid shopping with children	1.6193	1.3226	3.8750	0.320	
No time to shop	3.0727	2.0000	3.3917	0.090	
Wanted more convenience	3.3365	3.1419	3.6750	0.010	
Wanted more flexibility	3.0521	2.7871	3.3333	0.010	
Avoid shops	2.4123	2.2000	2.5667	0.005	
No car	2.1722	2.4516	1.6000	0.020	
Recommendation	1.8025	1.6968	1.6250	0.003	
Got broadband	1.7441	1.6581	1.6083	0.002	
Got internet connection	1.7235	1.9484	1.5167	0.009	
Changed working hours	1.4787	1.1935	1.3250	0.010	
Got PC for first time	1.4360	1.5484	1.2417	0.007	
Started working	1.3223	1.1032	1.1833	0.010	
Changed job	1.3191	1.0452	1.0583	0.020	
Moved house	1.2433	1.2194	1.7917	0.040	
Got a pet	1.0948	1.1935	1.0583	0.005	
Notes: Cluster 1 (“no reason”), $n = 633$; cluster 2 (“health”), $n = 155$; cluster 3 (“kids”), $n = 120$; total, $n = 908$					Table II. Situational variables influencing decision to start online grocery shopping

the three-cluster solution are presented here as these give the clearest picture. To determine whether differences between the clusters were significant, we used an effect size measure, η^2 , which can be derived from ANOVA results as the ratio of the sum of squares between groups to the total sum of squares. We used this measure in preference to performing one-way ANOVAs as our large sample size rendered the ANOVA test too sensitive (differences in responses too small to be of practical use were found to be statistically significant). The larger the value of η^2 , the greater the difference between the clusters; as a rule of thumb, 0.01 is a small effect, 0.06 is a medium effect and 0.14 can be considered a large effect (Cohen, 1988). The mean scores for each of our 20 statements for each cluster are given in Table II.

Convenience and Flexibility were fairly important to all three clusters (mean ≈ 3). With the exception of Convenience, Flexibility and No time to shop, Cluster 1 recorded low means on every statement. This cluster is the largest of the three we found, with 633 respondents, and would seem to represent a “no real reason” cluster, whose members are unable to explain what motivated them to start. An alternative explanation may lie in the distribution of the responses to each question; some were distinctly bimodal, suggesting that some were very important to a few people, but unimportant to the majority. The second and third clusters are more clear-cut. Health problems (mean = 4.28), Mobility problems (mean = 4.38) and Shopping being too tiring (mean = 3.23) had the strongest influence on the second cluster. The third cluster records high means for Changed family circumstance (mean = 3.99), Had a baby (mean = 4.17) and Avoiding shopping with children (mean = 3.87). Somewhat surprisingly, Recommendation appears to have played little role in the decision to start shopping for groceries online.

Triggers for stopping to shop online. A total of 460 respondents answered a question relating to their reasons that had influenced their decision to discontinue online shopping at some time. The 18 variables that had influenced the decision to stop online grocery shopping were also subjected to hierarchical cluster analysis, and again a three-cluster solution was again preferred on the grounds of ease of interpretation (see Table III).

As before, we found one cluster recording low means on every variable (a similar cluster was found when the number of clusters was increased). Preferred to shop in stores (mean = 3.49), Found better prices in store (mean = 2.59) and Delivery charges too high (mean = 2.71) were important to stopping Cluster 2. Members of this cluster could be more closely identified with hedonic shoppers, rather than utilitarian shoppers (see Childers *et al.*, 2001) in that they would seem to derive some benefit from shopping in stores.

Problems with internet orders (mean = 3.78), Problems with internet deliveries (mean = 3.49) and Concerns about product quality (mean = 3.17) were important to stopping cluster 3. Members of this cluster are perhaps more risk averse and/or more demanding, less prepared to put up with problems; faced with an occasion when the service did not meet expectations, they switch back to offline shopping.

Discussion

Situational factors have usually been ignored in consumer behaviour research, both in general and in the specific contexts of the adoption of technology and of internet shopping, despite strong suggestions from theory (Bandura, 1977) of a continuous

	Cluster 1 mean	Cluster 2 mean	Cluster 3 mean	η^2
Preferred to shop in stores	1.5150	3.4876	2.3302	0.37
Delivery charges too high	1.9571	2.7107	2.6604	0.06
Found better prices in store	1.2790	2.5950	1.9057	0.21
Problems with internet orders	1.3777	1.5702	3.7830	0.53
Problems with internet deliveries	1.2318	1.4215	3.4906	0.49
Concerned about product quality	1.4077	1.9917	3.1698	0.28
Preferred to have social contact when shopping	1.3262	2.1570	1.4245	0.12
Concerned about internet security	1.1459	1.4628	1.7170	0.08
New store opened nearby	1.2017	1.6612	1.4245	0.05
Internet connection too slow	1.2961	1.3388	1.7642	0.04
Internet shopping too complicated/difficult	1.2103	1.2727	1.5849	0.04
Got a car	1.4421	1.0992	1.1226	0.04
Family circumstances changed	1.7382	1.2810	1.3962	0.03
Stopped working	1.3605	1.1322	1.0943	0.02
Moved house	1.3262	1.0496	1.2453	0.02
Changed working hours	1.2189	1.1074	1.2264	0.005
Did not have internet connection	1.4034	1.2562	1.3302	0.003
Changed job	1.1416	1.1074	1.1509	0.00

Notes: Cluster 1 ("disinterested stopper"), $n = 233$; cluster 2 ("prefer offline"), $n = 121$; cluster 3 ("internet problems"), $n = 106$; total, $n = 460$

Table III.
Variables influencing
decision to stop online
grocery shopping

reciprocal interaction between the environment in which an individual operates, his or her own cognitive perceptions and consequent behaviour. Our study aimed to start filling this gap in the literature.

The qualitative research carried out in Study 1 uncovered the importance of situational factors and life events in particular (e.g. having a baby, health problems) as the trigger for starting online grocery shopping. Crucially, the results of Study 1 also indicated that the decision to shop online for groceries may be reversed when the initiating situation no longer applies. Furthermore, Study 1 highlighted that online grocery shopping may be discontinued also as a consequence of frustrations and negative experiences with the service. For some, the experience of purchasing groceries online was less enjoyable than purchasing other products on the internet or less satisfactory than shopping in supermarkets.

These results were confirmed in Study 2. The key finding from the cluster analysis is the importance of situational factors in the decision to start buying groceries online for two distinct clusters. Similarly, two clusters (stopping Cluster 2 and Cluster 3) had stopped purchasing groceries online because dissatisfied with certain aspects of the service or with the experience as a whole.

Our research makes a number of significant contributions to the understanding of the adoption process of internet grocery shopping.

Our findings suggest that, at least in some circumstances, the adoption of innovations may not follow the process postulated in the relevant literature (e.g. Rogers, 1983). The results of Study 1 indicate that online grocery shoppers do not undertake a pre-adoption evaluation of the characteristics of the innovation in terms of relative advantage, compatibility and complexity (e.g. Verhoef and Langerak, 2001), before deciding whether to start shopping for groceries online. Rather, the adoption decision is changeable and influenced by the changes in needs prompted by a new situation or circumstance.

The results of Study 2 confirm the importance of situational factors as triggers of adoption for at least two clusters. Similarly, two clusters are influenced by situational and performance triggers in their decision to discontinue online grocery shoppers.

The significance of a specific situation as a trigger for the adoption of internet shopping has important implications. First, being driven by circumstances rather than by a cognitive elaboration and decision process, the adoption of online grocery shopping may be an erratic process. Second, for some consumers at least, the adoption decision triggered by a specific situational factor is easily reversed when the situation changes again and the initial trigger disappears. This finding indicates that even the convenience associated with online grocery shopping is dependent upon the situation or circumstance, in contrast with Verhoef and Langerak's (2001) suggestion of perceived convenience as a decisive factor in determining consumers' perceived relative advantage and compatibility of electronic grocery shopping. Furthermore, situational factors related to the reliability of the service provided, both in terms of delivery and the price, quality and range of the goods on offer greatly affect the evaluation of online grocery shopping and the decision of whether or not to revert to shopping in stores.

Our findings that many consumers discontinue the online mode of shopping whenever the initial trigger disappears or when they are dissatisfied either with specific or with general aspects of the experience suggest that the process of diffusion

of the online grocery innovation by no means follows the smooth and continuous path suggested by some traditional definitions of adoption and the associated mental and behavioural processes: "Adoption is defined as the process by which an individual becomes committed to continue use of an innovation. Adoption includes not just the act of buying a new product but also includes the mental and behavioral sequence through which consumers progress, potentially leading to acceptance and continued use" (Engell and Blackwell, 1982, p. 382).

In contrast, the adoption decision of online grocery shopping seems to be re-evaluated frequently and consequently post-adoption evaluation appears crucial to the decision of whether to continue with or to drop the innovation. This is consistent with Gillett's (1976) suggestion 30 years ago that in-home shoppers are not a captive market.

Overall our findings suggest that the adoption of the online mode of shopping is complementary to buying in stores, rather than substitutive. Reverting back to the traditional mode of shopping is easy because most consumers never cease completely to shop in traditional stores. This may also help to explain the "niche" size of the UK online grocery market, even though it is considered to be the most advanced in the world.

Managerial implications

The combined findings of the two studies have important implications for online grocery providers and potentially for other e-retailers.

The results of the first cluster analysis in Study 2 suggest that, besides increased convenience and flexibility, the main motives for starting online grocery shopping lie beyond the retailers' control and relate more to shoppers' personal circumstances. However, while situational factors are beyond a marketer's control, they could be used as a basis for marketing communications content and target advertising, for instance, by using magazines directed at new parents or a promotion in conjunction with estate agents for people who have recently moved.

As suggested by the findings of Study 1, retaining online grocery customers can be a challenge for e-retailers, particularly when the original cause for starting to shop online disappears. The good news is that at least some of the other triggers for stopping online grocery shopping, i.e. those relating to the quality of the service offered (stopping cluster 3, Study 2), are potentially controllable by retailers, either through minimisation of errors in deliveries, or through service recovery activities. However, other online grocery shoppers (stopping cluster 2, Study 2) seem to find the whole experience of shopping online inferior to the experience of shopping in stores and have therefore stopped purchasing groceries online. This may be more difficult for retailers to act upon, although changes in situational factors may render these consumers more susceptible to the convenience benefits of internet grocery shopping.

Existing providers should concentrate on service quality issues, particularly in terms of delivery and should consider improvements to web sites to make the online grocery shopping experience easier, more stimulating and rewarding for customers. This is very important, as Study 1 suggests that the decision to shop online is frequently re-evaluated, creating tangible opportunities for conversion by online providers. Online grocery providers should also monitor use frequency to identify drop-outs and actively target them with promotional offers. Finally, incentives to start, or restart, online grocery shopping should be offered, with targeting based on different life events, for example, the birth of a child or a health crisis.

Final considerations

The start/stop pattern of the online grocery shopping adoption process and the complementary rather than the substitutive nature of online grocery shopping have not been noted in any previous research. However, these findings make an important contribution to both theory and practice. Furthermore they are factors that may explain why even the most developed online grocery market in the world is still very small. Researchers may want to generalise this to other adoption processes, for instance the use of the internet for other purposes, e.g. internet banking, and the use of mobile phones.

Note

1. The list was purchased from Acxiom Ltd; its primary source is lifestyle questionnaires completed with guarantee registration forms for consumer durables.

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