

THE VALUE OF 'SAME DAY' LOGISTICS IN E-TAILING: A REVIEW OF CONSUMER PREFERENCES

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INTRODUCTION

Research presented in this paper is part of a broader investigation into same-day logistics, examining the issues from customer, retailer and carrier perspectives. Employing a mixed methods approach, the initial qualitative research carried out in 2015, involved expert interviews with 4 carriers, 4 shippers and a technology service provider (TSP). The research revealed that 'same day' B2C represents a considerable challenge to the industry (Lasisi et al., 2015). Historically, 'same day' parcel delivery has been an established courier practise for time critical parcels at local, national or international level, but, at a costly rate. In these predominantly B2B transactions, it is not the cost of freight that is expensive to the customer, but the cost of not having the parcel. The interviewees noted that market is changing, and that 'same day' has become an evolving B2C business competitive strategy amongst large e-tailers. More recent press reports bear this out, suggesting that that 'same day' order fulfilment is becoming available as a standard, rather than bespoke, service to customers (see for example Telegraph online, 2016). Surprisingly, the interviewees also reported, back in 2015, that they were unaware of any pressure from customers for a 'same day' delivery service, although they did believe that there would be high patronage if 'same day' parcel delivery became affordably available to customers. Carriers were concerned that they did not possess such logistics capability. The Shippers interviewed also believed that there would be no desperate need for 'same day' delivery until it becomes commonplace, and, moreover that most of their carriers render effective 'next day' delivery services.

In this paper we report on quantitative research that aims to discover, to what extent 'same day' is required by customers, and how much they would be prepared to pay for the service?

SELECTED LITERATURE REVIEW

At the beginning of the research project, in 2014, very little academic literature addressed the development of 'same day' logistics. The researcher instead relied on publications addressing issues in parcel services, express logistics, e-tailing, collaboration and innovation, and it was this literature that has helped to develop the research questions that have informed the broader research project. More recently, there has been a flurry of articles which explicitly address the role of logistics in e-tailing, the development of 'same day' logistics, and customer perspectives on modes of delivery.

The role of logistics in e-tailing

According to Sandberg (2013), retail businesses have recently started to see logistics as a primary source of 'sustainable competitive advantage'. He argues that retail businesses, like manufacturers, have become flow oriented to the extent that "superiority in logistics is decisive for the outperformance of competitors and contributes to overall company profitability and growth." In similar vein, Fernie and Sparks (2014) have explained that retail logistics has transformed with time, and that retailers have become the 'captain' that pilots the entire business flow, focusing on efficiency and effectiveness, through the adoption of quick response and by reducing inventory levels. Commenting specifically on competitive forces in e-tailing, Lin and Lee (2009) argue that success in e-tailing now relies on logistics, i.e. delivery information, delivery speed, cost and reliability.

The development of 'same day' logistics

According to Taniguchi and Thompson (2014), E-commerce has transformed retail logistics to the extent that customers now want parcels delivered at the earliest possible time, to their desired location and at the lowest possible price. They argue that same day delivery is taking over the market, most especially in America, Europe, and Asia where .dot net stores are offering free delivery whilst also investing in 'same day' delivery services. They add that Amazon is setting the pace in the 'same day' delivery market, and that other major retailers have started responding. Examples include eBay Now, Walmart, Nordstrom and Sears' 'same day' delivery services in the US. In Japan, where customers are accustomed to parcel delivery time criticality as a result of assured next day delivery by the major parcel delivery companies like Yamato and Sagawa, this has resulted in customers making speed delivery one of their key loyalty factors. In reaction to this, Japanese e-retailers have included 'same day' delivery in their competitive strategies.

Customer perspectives on modes of delivery

Writing on urban logistics, Savelsbergh and Woensel (2016) argue that the e-retail market has made the desire for speed one of their major competitive strategies, the result of which has been to make 'same day' parcel delivery a growing competitive strategy that has gone beyond just 'same day' to even hourly delivery (the 1 to 2 hour option). Although they add that even though e-tailers are investing in the same day delivery strategies, end consumers are not willing to pay an extra premium, as many of them do not necessarily require such delivery speed.

Miyatake et al. (2016) have focused on how technology has influenced Japanese consumers' attitudes to shopping. Since consumers are unable to use items purchased online immediately, their study considered travel and delivery time as consumers' costs. They explain that in order to motivate and drive customer loyalty, e-retailers have demanded speed delivery from carriers. A survey was conducted to show reasons why consumers choose online shopping, the findings of which are summarised in Table 1. Miyatake et al. (2015) report that most delivery costs from large online retailers are already included in the product cost, and appears to consumers as free delivery and, as a result, online consumers in Japan get most of their parcels delivered without additional cost, and yet comparable to the brick and mortar price. They carried out price comparisons of online shopping versus traditional shopping, and also compared the costs carried by e-retailers compared to bricks-and-mortar retailers. The comparisons reveal that consumers end up spending less, while e-retailers also achieve lower overall costs.

Reason for shopping via the internet	Percentage response
It allows me to buy things regardless of stores' business hours	58%
I don't want to spend the time and money it takes to go to the store	47%
It allows me to easily compare various goods	45%
It allows me to compare prices	42%
It allows me to buy things that only a few stores carry	38%
It allows me to read reviews written by other purchasers	15%
A variety of payment methods are available	13%
I don't have to listen to the sales clerks' sales pitches	11%
Other	7%

Table 1: Customer online shopping reasons. Source: Miyatake et al. (2015)

They therefore concluded that the favourable outcome of the comparison for e-retailers could help to explain the increase in the online retail.

RESEARCH QUESTION AND INITIAL HYPOTHESES

The main purpose of the research was to discover: to what extent 'same day' is required by customers, and how much they would be prepared to pay for the service?

These questions are explored statistically by means of the following hypotheses:

- H1. Delivery speed has become a major factor for customers' repeated patronage/loyalty in recent times.
- H2. Online customers will only pay a premium for 'same day' delivery of parcels where significant importance is attached, e.g. for a time critical gift like a birthday present.

The first hypothesis was developed from the literature review, whereas the second was based on the findings of earlier qualitative research involving 13 industry experts (Lasisi et al, 2015).

METHODOLOGY

The research focuses on the delivery preferences of UK online shoppers. There are 39.3 million adults in the UK (Office for National Statistics, 2015), 78% have access to the internet, and 76% of whom shop online, giving a population of 22.7m. In order to achieve a confidence interval of 95% with a 3% margin of error, the target sample size was set at 1068. An online questionnaire was designed, piloted and refined. A convenience approach to sampling was employed, with the survey administered via social media using snowballing (Byman and Bell, 2003), and via email groups, leading to an eventual sample size of 1194.

Descriptive statistics have been employed to evaluate the sample composition. The initial hypotheses H1 and H2 were further clarified through the development of 'null' and 'alternative' hypotheses. As the survey data was ordinal and non-parametric, hypothesis testing was conducted using Kruskal Wallis in SPSS, with the Mann Whitney U test employed to determine points of significance in simple comparisons.

In the process of analysing the data, 7 further hypotheses (H3-H9) emerged (also clarified as 'null' and 'alternate'), with the Games-Howell test employed to determine points of significance for those tests involving multiple comparisons.

FINDINGS

Sample composition

Tables 2, 3 and 4 indicate the gender, age and employment status of the sample. Compared to the general UK population, women are slightly over represented, as are people in the lower age ranges, and people in employment. However, the research is focused on online shoppers, rather than the population as a whole, and the composition of the online shopping population is unknown. Further analyses will be undertaken to account for any bias due to sample composition.

	Frequency	Percentage
Male	570	47.7
Female	624	52.3
Total	1194	100.0

Table 2. Gender distribution of sample

Age range	Frequency	Percentage	Valid percentage	Cumulative percentage
18-24	127	10.6	10.8	10.8
25-34	409	34.3	34.6	45.4
35-44	261	21.9	22.1	67.5
45-54	242	20.3	20.5	88.0
55 and over	104	8.7	8.8	96.8
'I prefer not to say'	38	3.2	3.2	100
Total responses	1181	98.9	100	
No response	13	1.1		
Total	1194	100		

Table 3. Age distribution of sample

Employment status	Frequency	Percentage	Valid percentage	Cumulative percentage
Employed	622	52.1	52.5	52.5
Self-employed	212	17.8	17.9	70.4
Seeking employment	46	3.9	3.9	74.3
Home maker	79	6.6	6.7	81.0
Out of work and not seeking employment	57	4.8	4.8	85.8
Student	85	7.1	7.2	93.0
Retired	49	4.1	4.1	97.1
Unable to work	34	2.8	2.9	100.0
Total responses	1184	99.2	100	
No response	10	0.8		
Total	1194	100.0		

Table 4. Employment status

Respondents were also asked whether they shopped online, and 9 answered 'no'. In view of the research focus, the researcher decided to exclude these questionnaires from the sample, bringing the sample size down to 1185.

Testing the initial hypotheses

Survey findings related to Hypothesis 1 are included in Table 5.

How important would you rate delivery speed on your purchase decision?	How often do you shop online?			Total/ Perc	Mean
	Once a month or less	2-5 times a month	More Often		
Unimportant	57	9	4	70 (6.0)	1.24
Neither Important nor Unimportant	41	34	12	87 (7.4)	1.67
Important	194	346	476	1016 (86.6)	2.28
Total	292	389	492	1173 (100)	2.17

Table 5. Online shopping frequency and delivery speed importance

H1 was tested at a significance of 0.05 via null and alternative hypotheses. The alternative hypothesis that "frequent online shopping increases the desire for delivery speed" was accepted.

Some of the survey findings related to Hypothesis 2 are included in Table 6. The question is inviting respondents to consider how much they would be prepared to pay for 'same day' delivery once the service has become common practice.

How much would you be prepared to pay for same day delivery in the following scenarios?-A regular parcel, assuming same day commonplace	How often do you choose express (next day) delivery?			Total	%	Mean
	Once a month or less	2-5 times a month	More Often			
<£5	642 (64.7%)	220 (22.2)	60 (6.0%)	992	(87.2)	2.17
£5	105	48	18	171	(15.0)	2.36
£10	24	8	6	38	(3.3)	2.50
£20 or more	3	3	1	7	(0.6)	2.71
Total	774	279	85	1138	(100)	2.22

Table 6. Price sensitivity towards 'same day' services for a regular parcel

Null and alternative hypotheses were tested as before, and the null hypothesis: "Irrespective of customers' desire for express delivery, they won't pay a high premium for the 'same day' delivery of a regular parcel once 'same day' is commonplace", was accepted.

Table 6 reveals that of each frequency category, <£5 has higher preference over other price options, i.e. 87.2% of customers, irrespective of their desire for express delivery, will pay <£5 for the same day delivery of a regular parcel. This therefore implies a low preference for 'same day' courier services, and unwillingness to pay a high premium, regardless of the delivery speed.

The parcels of ‘significant importance’ aspect of Hypothesis 2 was further explored through another question, as shown in Table 7.

How much would you be prepared to pay for an item costing £100 that you need urgently, e.g. a gift for a special friend whose birthday is the next day?	How often do you choose express (next day) delivery?			Total	%	Mean
	Once a month or less	2-5 times a month	More Often			
<£5	83	12	9	104	(9.2)	1.98
£5	301	60	12	373	(32.9)	2.01
£10	298	177	49	524	(46.2)	2.38
£20 or more	93	28	12	133	(11.7)	2.28
Total	775	277	82	1134	(100)	2.21

Table 7. Price sensitivity towards ‘same day’ services for a parcel with significant importance attached

Null and alternative hypotheses were tested as before, and the null hypothesis: “With attached importance, customers who give preference to express delivery will pay a relatively high premium for ‘same day’ courier services,” was accepted. The results in Table 7 indicate that, with attached importance to a parcel, a sizable proportion of customers will pay £5 and £10 for ‘same day’ delivery.

Testing the emerging hypotheses

The survey also explored questions relating to the influence of geography, gender, propensity to travel for parcel pick-up, and preferences for home delivery over alternatives. A number of comparison tests were conducted employing null and alternative hypotheses. The findings are shown in Table 8.

No.	Null hypothesis	Outcome of test	Alternative hypothesis	Outcome of test
4	Geographical location will influence customers’ courier price decision.	Rejected	Geographical location will not influence customers’ courier price decision.	Accepted
5	Gender difference does not influence online shopping attitude.	Accepted	Gender difference influences online shopping attitude	Rejected
6	Gender distribution plays equal role on online shopping frequency.	Accepted	Gender distribution does not play equal role on online shopping frequency.	Rejected
7	Residential address location will influence travel distance to pick up parcel.	Rejected	Residential address location will not influence travel distance to pick up parcel	Accepted
8	Customers will give preference to alternative delivery type over home delivery.	Rejected	Customers won’t give preference to alternative delivery type over home delivery	Accepted

Table 8. Exploration of emerging hypotheses

Hypothesis 4 explored geographical differences in terms of: city centre, city suburbs, town and countryside, and it was perhaps surprising that the type of location had no bearing on customer preferences for delivery speed. Testing of Hypotheses 5 and 6 reveal that gender exerts no influence on either delivery speed preference or online shopping frequency. These findings also help to dispel concerns about gender bias in the sample. Testing of Hypothesis 7 reveals that the distance shoppers are prepared to travel for pick-up is unaffected by their type of location (city centre, suburbs, town or countryside). Testing of Hypothesis 8 indicates a preference for home delivery over alternatives, e.g. click and collect arrangements.

Survey findings concerning delivery mode

Customers will give preference to shippers whose carriers are able to give reliable update as regards parcel delivery time (tracking information).

Early evening is revealed as the favoured delivery time, even with variation in employment status.

The ability to reschedule parcel delivery time and place will influence customers' patronage level.

DISCUSSION

The survey indicates that the desire for speedy delivery increases with on-line shopping frequency. This is unsurprising, as frequent online shopping is inevitably a substitute for visits to the store, where product availability is generally immediate. This finding may be good news for Logistics Service Providers, since it implies more business. However, the second major finding is that although customers have a strong desire for speedy delivery, they are not willing to pay a significant premium for the service. This finding is in line with the 2015 Ofcom report, which revealed that 56% of respondents consider free delivery to be important when choosing a retailer. Taken together, increasing on-line shopping volumes coupled with a customer preference for free/inexpensive delivery implies increasing demand for low cost express parcel services, but does not explain the reported growth in low cost 'same day' services (Telegraph online, 2016). To understand this development, it is necessary to refer back to the logistics triad. As demand for 'same day' cannot be attributed to either carriers or customers for regular purchases, it may be concluded that it is the shippers (online retailers) that are driving this development. This could be seen simply as a new competitive dynamic amongst retailers. Retailers have always competed on product availability (amongst other dimensions of customer service), but within the landscape of multi-channel and omni-channel retailing (Verhoff et al., 2015), product availability is facilitated as much by logistics services as it is by inventory management and store location. For online retail 'pure players', the customers' propensity to substitute online for in-store purchases is significantly affected by the availability of speedy and low cost home delivery service.

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