DEVELOPMENTS AND CLASSIFICATIONS OF ONLINE SHOPPING BEHAVIOR IN GERMANY

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ABSTRACT

In the field of online shopping, new developments can be identified; e.g. the allowance of product returns (management of product returns) and the ordering and delivery of products from an Internet retailer in the same day (same-day delivery). Our contribution provides a brief overview of these developments (i.e. major trends) and of the advanced e-commerce market (in Germany). Additionally, an empirical investigation of German online shoppers will be used to describe these shoppers as a whole and to classify them into groups with similar purchasing behavior. Our paper will support the selection and addressing of proper target groups.

Keywords: Buyer Groups, E-Commerce, Empirical Investigation, Same-day Delivery

INTRODUCTION

In the past, the importance of shopping using the Internet has increased. Accordingly, Internet retailers have to face several challenges nowadays. Some challenges are more general trends in shopping (e.g. multi- or cross-channel management), and some are special trends in online shopping (e.g. ordering and delivery of products from an retailer on the same day, or same-day delivery), and allowing product returns (management of product returns, see, e.g., Anderson et al., 2009; Foscht et al., 2013; Gilland & Warsing, 2009; Mollenkopf et al., 2007). Here, it is relevant to know which factors will have an impact on the online shopping behavior of certain groups of consumers (e.g., Dholakia & Uusitalo, 2002; Javadi et al., 2012).

In this paper, an overview about the major trends and some best practice examples (Section 2) will be given. In addition (Section 3), the German market of online shopping (i.e. e-commerce) will be described and the question of whether the entirety of online shoppers can be divided into groups with respect to (w.r.t.) similar online shopping behavior will be analyzed. For this division (and thus the classification of online shoppers), the purchase frequency will be used. Our findings (summarized in Section 4) help decision makers in e-commerce to recognize and evaluate current trends in online shopping and to select and address proper target groups.

RECENT DEVELOPMENTS AND BEST PRACTICES

In online shopping, several new delivery-related developments exist today. They can be categorized into three major fields: speed of delivery, time frame of delivery, and management of product returns. They will be described as follows.

Studies have already shown that late deliveries of online shopped products lead to dissatisfaction (e.g. Boyer et al., 2003; Holloway & Beatty, 2003). Thus, many Internet retailers would like to increase the speed of delivery. Therefore, many Internet retailers (especially in the USA and Great Britain) experiment with same-day delivery (SDD) – the order and delivery of goods of an online shop on the same day. For example, since August 2012, eBay in San Francisco has been working on a related pilot project: As a new service and with the help of the application “eBay Now,” buyers should be enabled to order products from retail stores and to have them delivered within fewer hours. Until now, however, such services have been restricted to certain regions. With Tiramizoo (www.tiramizoo.com), a logistics service provider operates in Germany and allows

online shops in the Munich region the delivery of products within three hours.

In addition to speed, the time frame of delivery is also an aspect of focus (e.g., Boyer et al., 2009). For example, Amazon offers delivery between 17 and 21 o'clock on the same day to customers from metropolitan areas with the option of "Evening Express" if the goods are ordered before 11 o'clock in the morning. Fortunately for Internet traders and suppliers in this context, according to US investigations (e.g., of the Boston Consulting Group), customers demonstrate a high willingness to pay for same-day delivery. Also, an investigation of eBay regarding the future of trade showed that 60 percent would buy more products online or mobile if the goods would be delivered on the same day (e.g. Barr, 2013; Utter, 2013).

The third trend is the management of product returns (see e.g. Bower & Maxham, 2012; Petersen & Kumar, 2009). Consumers of fashion goods in online trade have only the possibility to examine products personally or to try them on as soon as the order is delivered. This can result in the whole delivery or parts being sent back after the trial. Here, the technical innovation Augmented Reality offers above all a possibility for fashion retailers to give assistance with regard to the correct fit to the customers in advance. For instance, the enterprise UPcloud from Berlin, Germany (www.upcloud.com) offers a virtual fitting for online shops which is offered in the meantime by about ten online shops in Germany.

INVESTIGATION OF ONLINE SHOPPERS IN GERMANY

The number of online users and sales are still increasing in Germany. Because in 2012 there were about 70.2 million citizens in Germany older than 14 years and the percentage of online users amounts to 74% of the country's population, this means that about 52.2 million people are online. About 74% of these uses the Internet for purchases; i.e. there are about 38.6 million online buyers. Their share and the share of so-called intensive online shoppers (i.e. persons who had at least 10 transactions during the last 12 months over the Internet) are continuously increasing within the last few years (Institut Allensbach, 2012).

Internet retail (i.e. the type of e-commerce with business-to-consumer transactions) is the biggest growth driver in German retail. In 2012 alone, the e-commerce of consumer goods increased to about 33.0 billion euros and had therefore a share of about 8% of the total retail sales. Nearly three quarters of this market volume is gained by suppliers who

do not have their origin in a classical mail-order selling: pure Internet sellers and web shops of bricks-and-mortar retailers and of manufacturers are very prominent in Internet retailing. In addition, the growth of the online sales of classical catalogue sellers is substantial (Institute of commerce research in Cologne, 2013).

However, there are several trends which will affect the retail market in Germany. An already existing trend is multi-channel management, which is still enormously important for stationary retail. Here, current analyses show that there are information-related interactions between web shops and local stores. In 2012, these interactions resulted in an amount of about 32% of purchases in local stores, which are prepared in online shops (Institute of commerce research in Cologne, 2013). The existence of other introduced trends (same-day delivery and management of product returns) in Germany will be analyzed using the data from an empirical investigation.

In January 2013, a survey of Internet buyers was carried out by the E-Commerce Center in Cologne, Germany. The buying behavior and related information was collected using a representative online survey in Germany ($n = 1,000$), Austria ($n = 500$), and Switzerland ($n = 500$). The following analyses use only the German participants (for a broader overview and item description, see also Bruschi & Stüber, 2013).

To improve the understanding of the wishes and needs of online shoppers, the first analysis step of the total sample is enhanced in a second analysis step through the development of a classification. This is a recommended step to avoid the problem with empirical relationships which may be masked by data aggregation while analyzing a sample as a whole (e.g. Hult et al., 2007) and constitutes an advancement of the restrictive classification into web-shoppers and non-shoppers (e.g., Karayanni, 2003).

The following classification is based on the users' purchase frequency (considered within the questionnaire in six categories: at least once a week, once in two weeks, once a month, once in the quarter, once in half a year, once a year, and less). The differentiation is made between persons who buy at least once in two weeks ("frequent buyers", can be seen as heavy users, $n = 111$) and persons who buy less ("non-frequent buyers", can be seen as ordinary users, $n = 889$). In Table 1 some general characteristics of all respondents (column "total sample") and of these two groups (last two columns, here with information about significant differences) are shown.

The frequent buyers differ from non-frequent buyers with respect to age (e.g., they are younger with a mean of 35.0 vs. 40.2 years) and purchase category (e.g., they buy

most “fashion & accessories” instead of “consumer electronics & home appliances”) but they are not different with regard to gender and household net income.

Table 1 General Characteristics and Socio-Demographic Information about the Total Sample as Well as the Classification Based on Purchase Frequency ($\chi^2 \dots \chi^2$ Test (Based on Pearson) about Frequent and Non-Frequent Buyers)

Characteristic	Type	Total sample (n = 1,000)	Frequent buyers (n = 111)	Non-frequent buyers (n = 889)
Age			$(\chi^2 = 23.512, p = 0.000)$	
16-19 years	%	10.0	11.7	9.8
20-29 years	%	20.0	27.9	19.0
30-39 years	%	19.0	27.0	18.0
40-49 years	%	24.0	24.3	24.0
50-59 years	%	17.0	5.4	18.4
60+ years	%	10.0	3.6	10.8
Gender			$(\chi^2 = 0.003, p = 0.955)$	
Male	%	52.0	52.3	52.0
Female	%	48.0	47.7	48.0
Household net income [EUR/month]			$(\chi^2 = 4.258, p = 0.642)$	
< 500	%	6.1	4.5	6.3
500–999	%	10.5	9.9	10.6
1.000–1.999	%	25.6	24.3	25.8
2.000–2.999	%	28.0	29.7	27.8
3.000–3.999	%	15.4	13.5	15.6
4.000–4.999	%	8.4	8.1	8.4
≥ 5.000	%	6.0	9.9	5.5
Purchase category			$(\chi^2 = 20.571, p = 0.024)$	
Fashion & accessories	%	21.9	30.6	20.8
Consumer electronics & home appliances	%	26.9	25.2	27.1
Sports & leisure time	%	7.1	3.6	7.5
Books & media	%	22.8	28.8	22.0
Furniture & fixtures	%	6.1	0.9	6.7
DIY & garden	%	0.7	1.8	0.6
Cars & car accessories	%	2.3	1.8	2.4
Office & writing materials	%	1.7	0.9	1.8
Health & wellness	%	4.6	1.8	4.9
Groceries	%	2.1	2.7	2.0
Drugstore & perfumery	%	3.8	1.8	4.0

In Table 2, selected answers related to product delivery and product returns of the total sample as well as of frequent and non-frequent buyers are summarized. For the speed of delivery, the respondents had to specify how fast they generally wish the delivery of their order (using given scales). The expectations regarding same-day delivery were measured through the importance of the respondents that the delivery of their order arrives on the same day (using a five-point Likert scale with 1 = strongly disagree and 5 = strongly agree). In terms of the rate of returns, the respondents had to indicate how often they send back the order or parts of it if they buy goods (using given scales).

Table 2 Delivery and Product Returns Related Results of the Total Sample as Well as the Classification Based on Purchase Frequency (M...Mean, χ^2 ... χ^2 Test (Based on Pearson), T...T-Test, Each Test about Frequent and Non-Frequent Buyers)

Characteristic	Type	Total sample (n = 1,000)	Frequent buyers (n = 111)	Non-frequent buyers (n = 889)
Speed of delivery			$(\chi^2 = 50.031, p = 0.000)$	
Within one to two hours	%	0.6	2.7	0.3
Within 24 hours	%	18.2	39.6	15.5
Within two to three days	%	66.6	49.5	68.7
Within a week	%	14.0	8.1	14.7
Within more than a week	%	0.6	0.0	0.7
Same-day delivery			$(t = 4.054, p = 0.000)$	
Importance of this delivery	M	2.38	2.78	2.33
Rate of returns			$(\chi^2 = 11.190, p = 0.083)$	
At every order	%	2.2	2.7	2.1
At every second order	%	5.2	8.1	4.8
At every third order	%	7.3	12.6	6.6
At every fourth order	%	5.4	7.2	5.2
At every fifth order	%	3.5	3.6	3.5
Less frequent	%	57.9	54.1	58.4
Never	%	18.5	11.7	19.3

Table 2 identifies that, in total, most of the respondents (66.6%) hope to see the delivery of their order within two to three days. Although this is also most wished within the group of frequent buyers here, a big percentage (39.6%) would prefer to receive their ordered goods within 24 hours as well. Another difference can be identified regarding the

same-day delivery. Here, frequent buyers would like to have this opportunity more than non-frequent buyers, but the mean values are on a relatively low level for both buyer groups. Regarding the rate of returns, most are less frequent product returns (i.e. less than at every fifth order), which is similar for both buyer groups, which demonstrated no significant differences ($p > 0.05$).

CONCLUSION

Altogether it can be identified that a same-day delivery has not this high importance until now. The same is true for product returns. However, there is a positive relationship between the number of purchases and the number of returns. This means that more intensive online shoppers expect these options. Furthermore, the majority of online buyers wish to receive their ordered goods within two to three days. The presently achieved standard is therefore satisfying for most buyers. However, relevant differences exist between the customer groups which can be used for addressing new target groups. For example, frequent buyers which buy mostly fashion items and accessories are interested in faster delivery. Although these buyers do not represent the largest percentage, their numbers will increase within the next few years.

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