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Icing the Cake: A Lifestyle-based Benefit and Preference Analysis on Online Grocery Shopping

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Germany has not kept pace with the global development of online grocery shopping (OGS) and despite a pandemic-related increase remains on a moderate level. This phenomenon may reflect infrastructural benefits of stationary retailing, personal and household preferences, and perceptions of OGS services. To this end, this study investigates the determinants of OGS benefit perception addressing the interconnection between personal and household benefits and situational conditions based on qualitative data analysis. Data in three consumer lifestyle segments are gathered from a total of twelve German consumers. The study's theoretical structure resorts to the theory of planned behaviour (TPB) to cluster beliefs and assess the impact of situational conditions. The study's findings reveal large knowledge gaps and different individual preferences in service usage across the groups. We then reflect these preferences in the circumstances of the pandemic. We propose that retailers should increase advertising and consumer education efforts in some consumer segments while enhancing service transparency to consolidate consumers' trust. On a mid-term level, further structural investments will be necessary to successfully compete in the future and serve a perspectively growing market.

1. Introduction

As of 2018, almost every second customer in Germany indicated an interest in buying food online (Donath 2018), yet the current share of revenue in the segment remains at a mere 2.0 percent in 2020 (HDE, 2021, p. 8). To add some more context: The overall market volume of online commerce in Germany is estimated at EUR 577 billion of which EUR 204 billion relate to the food segment as of 2020 (HDE, 2021, p. 8). At the same time, the segment is expanding at an annual growth rate of almost 60 percent from 2019 to 2020 (HDE, 2021, p. 9) outpacing the overall e-commerce performance (estimated at 17 percent for 2021; HDE, 2021, p. 6). This renders OGS an economically attractive market segment prone to dedicated marketing activities and a fruitful research area to study adoption patterns of digitalisation within the complex category of food products. Despite a tremendous increase in demand during the COVID-19 pandemic, OGS was not able to move out of its niche position in Germany.

OGS services in Germany are mainly operated via home delivery by pure online market participants (e.g., Amazon) and stationary retailers (e.g., REWE) supplementing their existing offline channel (Piroth, Rüger-Muck, & Bruwer, 2020). The slow OGS adoption in Germany may depend on various country / culture-specific factors: Germany records the highest supermarket density in Europe (Nielsen, 2018, p.

215), fairly liberal opening hours, and its consumers largely agreeing to be "happy with the status quo" of grocery retailing (Seitz, Pokrivčák, Tóth, & Plevný, 2017). Dannenberg, Fuchs, Riedler, and Wiedemann (2020) however, pointed out the infrastrastructual weaknesses of OGS, particularly in rural areas, and van Droogenbroeck and van Hove (2017) highlighted household-level analysis as food shopping is found to be influenced by the individual household set-up.

Hereinafter, this study explores the perceived advantageousness of OGS services for three specific archetypal customer segments. We understand perceived advantageousness as the moment where a consumer may be inclined to completely substitute their stationary food shopping via online channels. Many researchers have conducted qualitative research in OGS with different methodological approaches (Elms, Kervenoael, & Hallsworth, 2016; Hand, Dall'Olmo Riley, Harris, Singh, & Rettie, 2009; Piroth, Rüger-Muck, & Bruwer, 2020; Ramus & Nielsen, 2005; van Droogenbroeck & van Hove, 2020a, 2020b). This study's methodological set-up is grounded on earlier research successfully applying qualitative measures in countries such as Denmark and the UK (Hand et al., 2009; Ramus & Nielsen, 2005). This article concludes with recommendations to retailers to adequately attract and market to these consumer segments to increase the overall accessibility of OGS services. To our knowledge, it is the first study that combines individual advantageousness and strives to show the value of in-depth data and interpretation stems from its ability to contextualize quantitative research and illustrate "everyday" consumer behaviour in online food shopping, generating actionable advice to practitioners.

2. Literature review and research questions

Preference analysis has been performed within OGS since the early market developments (Jukka, Jukka, Timo, & Kristiina, 1998; Morganosky & Cude, 2000, 2002; Raijas & Tuunainen, 2001), given its implications for customer segmentation. For instance, Wilson-Jeanselme and Reynolds (2006, p. 539) recommend "a segmentation of consumers based on understanding their expressed preferences as opposed to more traditional segmentation methods" as consumer groups may be similar in certain preferences despite their differing characteristics. Brand, Schwanen, and Anable (2020) argue that there is no "average online grocery shopper" due to heterogeneity in consumer preferences. Many of these advantages can be linked to targeting consumer segments such as mobility-impaired customers, the elderly and disabled (Jukka et al., 1998; Seitz et al., 2017), time-savvy families, and "double Income no Kids" households (Raijas & Tuunainen, 2001). These groups seem to particularly benefit from OGS services; however, they face different individual obstacles, as shown by van Droogenbroeck and van Hove (2017) when comparing personal and household-level adoption of OGS services. This can be easily illustrated using the example of its distributional set-up. Retail operates online food purchases via two main distributional approaches: click-and-collect and home delivery. The individual benefit of, and subsequent satisfaction with OGS service usage is found to be trip (Chintagunta, Chu, & Cebollada, 2012) and shopping mode (Nilsson, Gärling, & Marell, 2017) dependent. The two distribution approaches have been shown to generate different consumer values across customer segments (Vyt, Jara, & Cliquet, 2017). Previous studies agree on convenience and time-saving as primary determinants of OGS service usage (Morganosky & Cude, 2000; Picot-Coupey, Huré, Cliquet, & Petr, 2009; Raijas & Tuunainen, 2001; Ramus & Nielsen, 2005; Seitz et al., 2017).

The individual benefit of OGS service offerings seems related to a consumer's personal preferences and situational conditions. Many quantitative studies focus on the assessment of individual OGS usage motivation (Hansen, 2008; Hansen, Møller Jensen, & Stubbe Solgaard, 2004; Piroth, Ritter, & Rueger-Muck, 2020); however, OGS adoption may be "related (at least in part) not to personal but to household characteristics" (van Droogenbroeck & van Hove, 2017, p. 258). The authors argue that ability and motivation may not necessarily coincide as a (tech-savvy) household may be able to resort to OGS but refrains from doing so as long as one person in the family can do the grocery shopping in-store (ibid.). However, the very same household set-up has a potentially higher advantage in using click-and-collect service offerings related to "research online, buying offline" customer segments (Vyt et al., 2017, p. 146) and has the potential to substitute in-store grocery shopping. Different value predispositions and benefits have been illustrated by various levels of advantageousness when comparing the impact of socio-demographic attributes on a personal (e.g., age, income) and household level (e.g., household

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size, the existence of dependent children) (Hansen, 2005; Hiser, Nayga, & Capps, 1999; Hui & Wan, 2009). These phenomena are in line with previous findings on changing situational conditions (such as changes in job or family configuration and health issues) as initial triggers of OGS usage (Hand et al., 2009). These triggers affect the beneficial predisposition of the service by altering the personal and/or household advantageousness. Preference-based consumer segmentation analysis has received increasing attention in the literature, including cluster analysis (e.g. Brand et al., 2020). Studies on consumer segmentation in OGS generally find three to five cluster solutions. Hand et al. (2009, p. 1213), for instance, propose a three-cluster solution with a health-and-kids-focused segment, highlighting the influence of situational conditions in the adoption process.

Consumer and market segmentation and their success potential have arisen as topics of interest in the literature (Jukka et al., 1998; Shea & Zivic, 2011). Wilson-Jeanselme and Reynolds (2006, p. 539) highlight the importance of the interaction between, and the attributional combination of, consumer expectancies toward OGS.

Hence, we propose the following research questions (RQ):

RQ1. How do consumer target segments differ in their individual knowledge?

RQ2. How do consumer target segments differ in their individual benefits?

RQ3. Which relational (personal, household) conditions influence individual perceptions of the benefits?

The next section will explore the theoretical framework used to examine consumer beliefs and benefit perceptions of OGS services.

3. Materials and methods

3.1 Theoretical Framework

Ramus and Nielsen (2005) apply the Theory-of-Planned-Behaviour (TPB) approach as introduced by Ajzen (1991) to evaluate consumer beliefs amongst users and non-users of OGS services in Denmark and the UK based on focus group data. They translate the attitude, social norm, and perceived behavioural control dimensions from the TPB construct to an outcome, normative, and control beliefs, respectively. Attitude describes the individual perception of a specific behaviour's advantageousness, social norm reflects the pressure to perform a certain behaviour, and perceived behavioural control describes the individual capabilities to perform a given behaviour (Ajzen, 1991; Ajzen & Fishbein, 1980).

Ramus and Nielsen (2005, p. 348) report that "*experienced and inexperienced internet shoppers did not differ very much in their pool of stated outcome and control beliefs*" and a "remarkable overlap in positive and negative beliefs (…)" toward OGS was reported. TPB is grounded on the argumentation that attitude, social norm, and perceived behavioural control constitutes one´s individual intention to use a service, proposing that intention may result in behaviour. However, Donath (2018) shows that even though almost 50% of German consumers state the intention to use OGS, the actual usage rate is drastically low. In this article, we argue that both situational conditions and household characteristics influence the OSG usage intention and behaviour (see Figure 1).

TPB approaches are a common methodology in OGS research and have found application in both qualitative (Kureshi & Thomas, 2019; Ramus & Nielsen, 2005) and quantitative (Hansen et al., 2004; Hansen, 2008; Piroth, Ritter, & Rueger-Muck, 2020; Troise, O'Driscoll, Tani, & Prisco, 2021) research set-ups.

3.2 Approach and Procedure

Following Ramus and Nielsen (2005), we propose an exploratory design for focus group sessions in which participants were able to freely express their experiences and expectations with OGS. Krueger (1994) found that participants were more willing to share their experiences in homogenous groups. We created such groups based on their socio-demographic features and living situation but adopted different views (in line with the above-mentioned score) on the matter, enabling some controversy in the discussions. We also followed suggestions by Freitas, Oliveira, Jenkins, and Popjoy (1998, 12f.) to include strangers and balance groups in terms of gender.

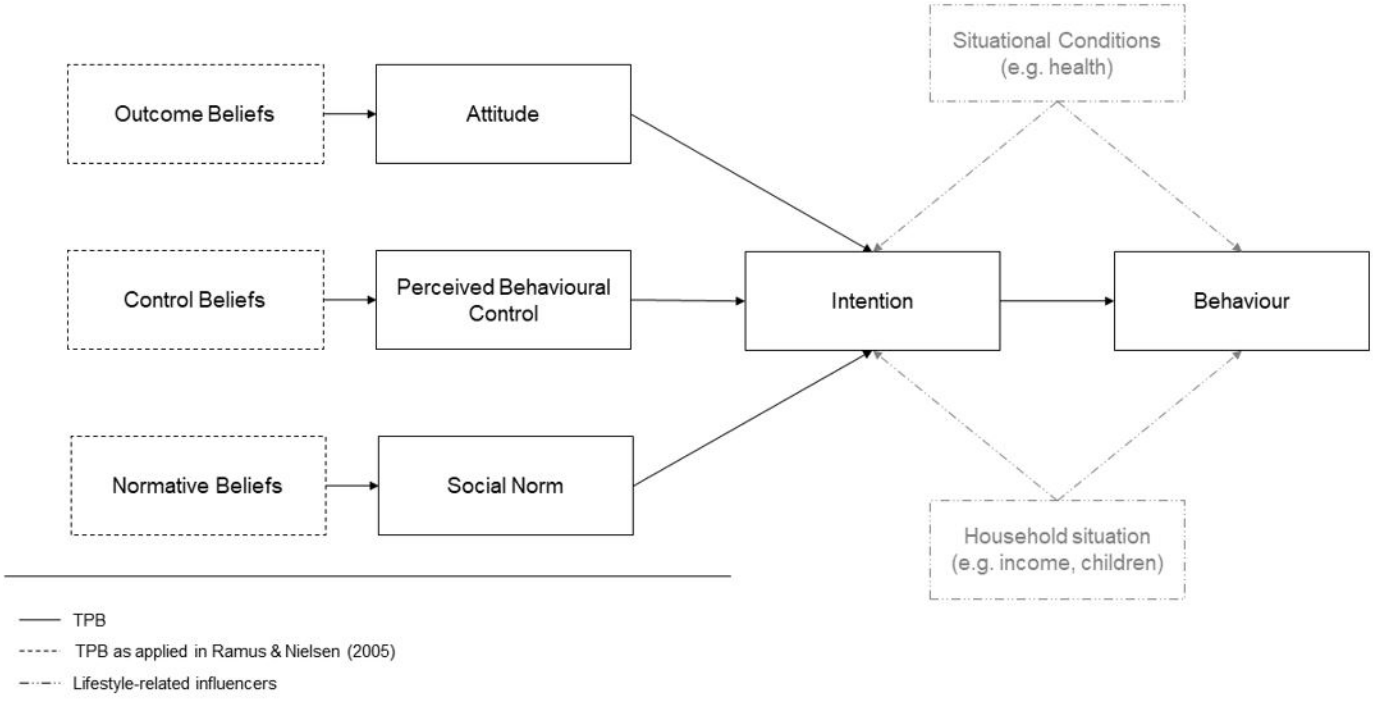

Figure 1. Theoretical Framework

This study used single (D. L. Morgan, 1996) mini focus groups (Kamberelis & Dimitriadis, 2011) with dual moderation (Krueger & Casey, 2015). Each focus group's session duration and group size were set between one and two hours for four participants, in line with academic recommendations (Krueger, 1994; D. Morgan, 1997; Vaughn, Schumm, & Sinagub, 1996). Each focus group discussion was sequenced as follows:

- A short introduction to the topic via video presentation;
- Participants shared their previous experience with OGS services in an open discussion;
- Participants evaluated their most crucial preferences and benefits as well as obstacles and concerns with the service in an open discussion;
- Each session concluded with participants sharing their expectations for future OGS activity and usage intention.

The moderation of the focus group was based on a lightly structured questionnaire. We only resorted to the guidelines when the discussion came to an end to provide enough conversational space for the participants. All focus group sessions were recorded using a multidirectional table microphone and then transcribed. Participants were encouraged to freely share their OGS experiences, individual preferences, and expectations with the group as all data were anonymized to comply with data privacy concerns. We provided coffee and light refreshments to create a welcoming and relaxing atmosphere during the sessions.

3.4 Data Analysis

We facilitated transcript-based qualitative content analysis using MAXQDA Vers. 2020 (Verbi GmbH). All transcripts were coded based on the TPB framework by two researchers; the remaining issues on unclear and inconclusive coding were discussed and resolved among the involved scholars. Each dimension of beliefs was first reviewed within each focus group session and then across group sessions.

3.5 Participant Selection

Participants were selected based on their suitability for the study by answering an online pre-study questionnaire distributed to 98 people via e-mail at a research facility in Southern Germany. Suitability was

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assumed if the participant had a) prior purchasing experience with OGS and b) a notable opinion towards the matter. Using a scoring approach (five-point scale ranging from "strongly like it" to "strongly dislike it"), potential participants were classified into three distinct groups based on similar living conditions (e.g., household set-up) but different opinions toward OGS. A total of 22 replies were received, and 12 participants finally agreed to partake in the study. The low overall return rate may be explained by the relatively long duration of the sessions and an overall lower interest in OGS services in Germany. Their opinions were measured for a second time at the end of the session to account for, and report changes in opinion induced by the focus group session itself. Seitz et al. (2017) and Jukka et al. (1998) identified and discussed three consumer segments of OGS users that underline a consumer life-cycle approach to adoption research. All three identified segments were shown to have an interest in OGS usage (Seitz et al., 2017, p. 1251) and were, therefore, used in this study.

3.6 Focus Groups

Young consumers with urban and suburban lifestyles were included in the first focus group, referred to as Young Professionals (YP). The average age in this group was 24 years (*SD=1.87*), and the gender ratio was 50%. Most participants (75%) lived in a flat arrangement with a domestic partner, while one participant lived in a flatshare. The living location of all participants could be described as urban and suburban. The group generally had a positive opinion toward OGS, and the conversation share was equally distributed within the group (*range=6.97%*). The YP group had an average household income of approx. EUR 2,000 per month. In terms of education, two participants had finished apprenticeships, one had completed general qualifications, and one participant was working as a foreman. Besides the foreman, all three participants were enrolled as students.

The second focus group consisted of four female participants between 33 and 50 years old (*M=38 years; SD=7.4*) in different family arrangements (two with more than one child, two with one child, one as a single parent). They lived in mixed locations and had fairly diverse opinions toward OGS. This group earned slightly more than the younger group, EUR 2,050.40 per month, and will be referred to as Family (F).

The third focus group had an average age of 58.25 years (*SD=2.17)* and a gender ratio of 50%. Both the living situation and location varied across participants. The average household income in the group was approximately EUR 2,700 per month, and the mindset toward OGS could be described as indifferent for the group (with two participants in favour and two against). In terms of education, this group could be described as above average (with three participants with an academic background). As the term Best Ager has been largely recognized in the German literature and linguistic area, this group was referred to as BA. However, the terms silver surfer, golden ager, and over 50´s are used more or less synonymously in the literature. The complete socio-demographic characteristics of the study's participants are summarized in Table 1 alongside the conditions of each focus group session.
Table 1. Descriptive Statistics of Participants and Session Conditions

All participant names were anonymized to ensure data privacy. The full anonymized transcripts in German are available upon request. All focus group sessions took place in early to mid-2018.

3.7 Focus Group Sessions

The intensity of the focus group discussions varied across sessions (Table 1). We also reported that four participants changed their opinion toward OGS during the focus group sessions. The majority of those who changed their mind was in the BA focus group, indicating problematic opinion leadership within the group (Marg, 2014). Three of the four participants who changed their minds left the discussion with a more favourable opinion toward OGS (see Table 1), hinting at potential gaps in consumer knowledge and awareness, as well as the crucial influence of peers (Piroth, Ritter, & Rueger-Muck, 2020; Ramus & Nielsen, 2005).

4. Results

The first part of this section provides the descriptive analysis of the focus group data and the dimensions that will subsequently be supplemented with a qualitative assessment. The largest sections of the focus group discussion related to outcome beliefs and motivational aspects of the OGS service usage. Within this dimension, we were able to extract six thematic

sub-sections that showed striking similarities with the reported data structure in Ramus and Nielsen (2005). As expected, the importance of the motivational aspects varied across target segments. For instance, younger consumers were more concerned with OGS pricing levels, while elderly consumers perceived the charges to be adequate for the added convenience. The findings were then divided into subsections for each belief dimension, for which detailed consumer remarks are reported.

4.1 Outcome Beliefs

Six distinct groups of outcome beliefs regarding the usage of OGS services were identified:
1) Convenience and ease of life;
2) Shopping experience and enjoyment;
3) Pricing and cost;
4) Social responsibility and sustainability;
5) Product range and service availability;
6) Impulsiveness.

Convenience and ease of life. Across all focus groups,

Table 1. Descriptive Statistics of Participants and Session Conditions

Participant / Session	Age	Gender[a]	Net Household Income in €	Household Configuration[b]	Living Location[c]	Att[d] (Pre)	Att[d] (Post)	Speaking Contribution[e] (in percent, incl. mod.)
Hannah, YP	24	F	1,001 – 2,500	C	U	+	+	18.42
Ben, YP	23	M	2,501 – 4,000	FS	U	-	-	14.80
Emma, YP	27	F	< 1,000	C	SU	+	+	19.41
Jonas, YP	22	M	1,001 – 2,500	C	U	+	+	18.42
Mia, F	38	F	1,001 – 2,500	SP	SU	++	++	6.98
Amelie, F	50	F	1,001 – 2,500	F	SU	+	+	12.56
Anna, F	31	F	1,001 – 2,500	SP	U	--	++	16.74
Emily, F	33	F	2,501 – 4,000	F	SU	0	+	21.40
Elisabeth, BA	61	F	2,501 – 4,000	C	SU	-	-	21.96
Wolfgang, BA	58	M	1,001 – 2,500	S	U	+	++	23.51
Ida, BA	55	F	2,501 – 4,000	F	RU	-	+	8.53
Peter, BA	59	M	> 4,000	F	SU	+	-	20.41

Notes:
[a] Gender: M = Male; F = Female.
[b] Household situation: S = Single; FS = Flat Share; C = Couple flat (no children); F = Family with one or more children; SP = Single parent.
[c] Living location: U = Urban, SU = Suburban, RU = Rural.
[d] Attitude was measured before the session (pre) and shortly after the session had taken place (post). A total of four changes in attitude have been registered and are highlighted in bold font. Ratings: ++ = very positive (+2); + = somewhat positive (+1); 0 = indifferent (0); - = somewhat negative (-1); -- = very negative (-2).
[e] Speaking Contribution of each participant. Moderation to be included for 100 per cent.

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ease of life aspects was perceived to be crucial, with convenience being the primary influencer. All focus groups saw significant advantages in delivering groceries, particularly heavy goods (such as beverages), to the doorstep. In this context, the wide range of deliverables was highlighted using the example of *Flaschenpost*, a German online retailer invested in the sole distribution of beverages. All groups agreed that OGS improved the convenience and shopping experience at busy times. All groups perceived OGS as particularly relieving to young families or lone parents in their daily life routines. A BA group participant stated: "*I am temporarily mobility impaired and live on the fifth floor; so, why should I do the carrying myself?*" (Wolfgang, BA). All groups highlighted the utility of OGS to maintain autonomy in specific situations (e.g., sickness and job changes) or in the advanced age. In terms of timesaving, YP and BA groups perceived OGS to be only partially viable. The YP group argued that the full potential of timesaving would only be realized through same-day delivery, reflecting a preference for flexible shopping options.

Shopping experience and enjoyment. Both YP and BA groups described grocery shopping trips as "relaxing" (Wolfgang, BA; Emma, YP) and associated them with positive emotions. Wolfgang, BA stated: "*I actually enjoy going food shopping, (…) and just pray for a bit.*" F and BA focus groups emphasized social interaction during grocery shopping, while this aspect played a marginal role for the YP group. While group F preferred social interaction, the BA group perceived OGS as potentially threatening toward social interaction. Wolfgang, BA illustrated this aspect using the example of the Home Depot delivery systems: "*I would not even have to keep in with the neighbours anymore. I would not like that.*"

Pricing and cost. Cost appeared to be the most crucial issue for the YP group. They would be more likely to use OGS in the absence of additional charges, while BA consumers were easily willing to accept the extra costs: "*For me, the additional five euros are easily worth it as I save myself the struggle of shopping*" (Wolfgang, BA). YP participants described their willingness to pay the extra charge as circumstantial:

"*When I had stressful times during work, I was in no mood for grocery shopping, so I had it delivered. I still go to the supermarket mostly, though, because I do not want to spend the extra money on fees.*" (Ben, YP)

"*(…) if you buy in bulk, for a party or with your flatshare, where the costs are shared, it is not too bad*" (Jonas, YP)

Lower price sensitivity was observed in all focus groups for special products that were difficult to obtain (e.g., specialties) or had to be imported from abroad.

Social responsibility and sustainability. The BA group significantly differed from the YP and FS groups in this respect. BA participants strongly emphasized the need for social responsibility with OGS. They perceived it to cause the demise of rural stores, providing poor working conditions for OGS employees (specifical drivers), and adopting unclear data collection policies. Participants in the BA group were also more likely to support local farms and shops (such as bakeries, among others). The YP and FS groups perceived OGS as positive in terms of the potential for innovative companies to successfully address niche markets (Emma, YP), thus resulting in future job creation. The sustainability aspect, consisting of the sub-themes of packaging, wastage, and energy footprint, was also addressed. While the BA group did not seem to be worried about the packaging material, both groups agreed on a severe problem with packaging waste:

"*What I found to be negative was that you are left with a lot of packaging material.*" (Ben, YP)

A potential solution for this issue was discussed in the YP group, where service offerings were preferred, as they were believed to facilitate recycling, and pick up of the used packaging material. However, the needed appointments decreased the advantageousness of this solution drastically.

The BA and YP groups agreed on the importance of reducing grocery wastage, and the energy footprint was of similar importance for both groups. They discussed the possibility to pool trips to stores, especially in rural areas:

"*In this village live (…) probably fifty people and they all drive to the market one by one. It would be economi-*

cally beneficial if only one van would do the trip, right?" (Hannah, YP)

Product range and service availability. Product variety, niche products, and local shopping options were discussed. The BA and YP groups showed very different perceptions of OGS and stationary retailing, providing insights into the different levels of consumer knowledge:

"*The online store has a way larger assortment range.*" (Jonas, YP)

"T*he spectrum of products you have in a shop, (…) you just do not have that online.*" (Elisabeth, BA)

All groups agreed on the easier availability of niche products via OGS, such as "*special Whiskey for a tasting*" (Wolfgang, BA), and innovative concepts within these niche segments, such as "sustainable meat from an innovative company" (Peter, BA). The F focus group was affected by availability in a slightly different way. The group found that the high supermarket density restricted the relative advantageousness of OGS: "*It is just easier for me to go to the store than to start up my laptop*" (Anna, F); "*I cross like ten grocery stores on my way home from work*" (Mia, F). The YP and BA groups highlighted the relevance of OGS for rural areas with weaker infrastructure; however, Ida, BA, criticized the weak market coverage: "*Especially because all the markets that offer this service [OGS] are not close to me so they do not deliver to me.*"

Impulsiveness. All participants perceived OGS as a particularly structured and planned approach toward grocery shopping that reduced impulsive buying and helped consumers educate themselves about the product range:

"*When I buy groceries online, I check my storage as I order. (…) With stationary grocery shopping, I always end up buying 15 items I did not need but forgetting about the five I did need.*" (Hannah, YP)

"*(…) that I just browse through the assortment a little bit more aware and able to inform myself and compare products.*" (Hannah, YP)
However, this decrease in impulsive buying was not necessarily seen as desirable. Both YP and F groups argued that, with OGS, the potential for "*spontaneous*" (Mia, F) and "inspired" (Jonas, YP) shopping would decrease. Jonas, YP argued: "*I always go to the supermarket and let myself get inspired with the products they offer.*"

4.2 Control Beliefs

We identified two distinct beliefs regarding individual control over the service usage:

1) Confidence in service and product quality;
2) Transparency and flexibility.

Confidence in Service and Product Quality. In three focus group sessions, product and service quality were the most likely determinants of OGS service usage. The F group held higher quality expectations toward OGS: "*I am way pickier when I ordered online compared to when I bought the products myself (Mia, F).*" Both the BA and YP groups were convinced that online grocers delivered equal or even higher product quality than in-store to avoid dissatisfied customers. BA and YP groups allocated similar importance to the haptic inspection of groceries before the purchase. Another largely discussed topic within F and YP groups was the return of mistakenly delivered or damaged products and the associated effort. Participants expressed their need for adequate online customer service, at least similar to the service offered by physical shops. OGS retailers' product replacement policies elicited mixed feelings:

"*When they did not have the beer I ordered, they sent a similar one that I ended up enjoying just as much.*" (Jonas, YP)

"*I would just prefer them to credit my money instead of an alternative product that I might not like.*" (Emma, YP)

All groups agreed that online grocery retailers had superior knowledge and means for ensuring cooling with the distribution chain, even under unusual conditions such as "*midsummer time*" (Emily, F).
All three focus groups agreed on the importance of choosing short time windows for the delivery to en-

[1] If the originally requested item is not in stock, OGS retailers occasionally replace the item with a more or less similar alternative.

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sure flexibility. "*That would be stressful for me – if I had to commit to being home from 9 to 5 like with a craftsman. I do not like committing to such long-time frames.*" (Hannah, YP). Amelie, F highlighted the impact of having kids: "*It has to be there on time. There is no point in saying they will deliver at seven, I have three kids, and they are all hungry (…). If the food then arrives at nine, I still need to cook.*" All groups agreed that the order reliability needed to be assured. In terms of product quality, the groups differentiated between perishable and non-perishables. For perishables, the YP and F groups argued that the online goods were not as fresh as in offline stores. They did not trust the retailer with choosing the "*right*" (Ben, YP) goods. These factors were not considered essential for non-perishables; however, general scepticism toward the product quality remained. The YP group argued that wrong expectations on the product quality could be the result of euphemistic product presentation on the website. "*I like to see the goods before I buy (…)*" stated Hannah, YP, highlighting the need for haptic validation before the purchase. All groups agreed that packaging material should only be used to provide a stable cool chain and preserve the integrity of the goods:

"*Just for tomatoes (…), you need special packing materials to ensure that you actually receive tomatoes - not passata.*" (Jonas, YP)

Transparency and flexibility. The flexibility issue was not distinguishable by further sub-themes. All focus groups felt constrained by a long delivery time and the necessary planning attached to OGS purchases:

"*Personally, I feel limited if I know that the grocery delivery is coming, and I cannot do anything else for that time frame.*" (Anna, F)

"*When I order groceries online, I am kind of stuck with eating them, but what if I do not fancy noodles two days after the delivery?*" (Jonas, YP)

The BA focus group was least concerned about availability in general but criticized the earlier closing hours at local and rural stores, a problem that OGS could potentially solve: "The bakery in my village closes at 12, so it is just hard luck" (Ida, BA). At the same time, the BA group showed the most significant knowledge gaps regarding the delivery timing options.

4.3 Normative Beliefs

Regarding normative beliefs held in the focus groups, we identified one main belief: Referral and information exchange. All groups highlighted two main peer groups involved in the OGS usage decision process: household members were named as the primary group and family, friends, and colleagues as secondary information sources. The YP group expressed their willingness to refer OGS services to relevant peer groups, mainly elderly family members incapable of or limited in conducting their grocery shopping. "*We educated my grandparents to use it, however, ended up doing the ordering for them, but they still handle the delivery, so it is still less work overall*" (Hannah, YP). Similar beliefs were expressed by the F group. Participants in both groups were, to some degree, involved in the caretaking and grocery shopping of elderly family members. The recommendations of OGS services for elderly consumers seemed particularly relevant as they decreased the necessary effort for all involved parties.

5. Discussion

In this section, we would like to discuss our findings with regard to the proposed research questions. First, we were curious to see whether there were knowledge gaps between the target segments (RQ1). This can be confirmed given that, we found varying levels of knowledge across the groups. Knowledge gaps were found regarding the possibility to select time slots for the delivery, the price levels, product range, and availability, and the potential delivery of goods that could not be purchased via a different retailing channel (e.g., specialties). These knowledge gaps were differently distributed across the focus groups. While young participants were sceptical about the price level and "*right*" choice of products offered by the retailers, elderly consumers argued that retailers could not afford to not meet their quality expectations.

Regarding RQ2 we found similar belief structures across the target segments (see also table 3). General trust was observed toward the technology and services across all groups; however, specific preferences were found across living situations and household characteristics, as suggested by van Droogenbroeck and van Hove (2017). Elderly consumers emphasized the social interaction associated with the shopping experience, while this aspect did not play a vital role for

the YP and F focus groups. The integration of social interactivity (e.g., via social and task-oriented chatbots) within online food delivery environments has been investigated, indicating an effect of these bots on perceived social presence and enjoyment (Cicco, Silva, & Alparone, 2021). Some researchers have proposed designs to address user behaviour in OGS using neuro-economical approaches (Benn, Webb, Chang, & Reidy, 2015). Similar studies on social interaction might explain actual behaviours within OGS shops, allowing retailers to tailor their service offering toward different consumer demands. While OGS was perceived to be reducing impulsive buying patterns in this study, Munson, Tiropanis, and Lowe (2017) found that most items in OGS baskets resulted from "*disruptive activities*" such as using the search bar or interacting with the retailers' promotional content. This study's findings mostly confirm earlier research by Ramus and Nielsen (2005), as we found strong support for both security and social interaction beliefs.

In RQ3 we questioned which individual circumstances on a household level would affect benefit perception. We found that those younger consumers while living in the city, and therefore having higher accessibility to the service, may not be inclined to use the service due to higher costs. Elder consumers report low accessibility as a result of their rural living circumstances. Participants in family set-ups were inclined to use the service, however, due to regular commuting they had a number of options to use stationary shopping. We also replicated previous findings on the crucial importance of situational factors (Hand et al., 2009) as all groups emphasised usage during difficult circumstances (such as illness, etc.).

Many of the considered success factors in this study were strongly affected by the COVID-19 pandemic, that increased demand for OGS services on a global scale. With long queues in front of supermarkets due to customer traffic limitations and impulsive

Table 2. Beliefs across consumer segments.

	YP	F	BA
Outcome Beliefs			
Convenience and Ease of Life	✓	✓	✓
Shopping Experience and Enjoyment	✓	✓	✓
Pricing and Cost	✓		
Social Responsibility and Sustainability	✓		✓
Product Range and Service Availability	✓	✓	✓
Impulsiveness	✓	✓	
Control Beliefs			
Confidence in Service and Product Quality	✓	✓	✓
Transparency and Flexibility	✓	✓	
Normative Beliefs			
Referral and information exchange	✓	✓	

Notes:

YP = Young Professionals, F = Family Situation, BA = Best Ager.

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stockpiling behaviour in the early stages of the pandemic, OGS services in Germany were fully booked for weeks ahead. These developments highlight the necessity of local food structures, particularly in rural areas. The Dutch company Picnic successfully operates such a "milkman" principle in some areas in North Rhine-Westphalia. Dannenberg et al. (2020) doubt that the COVID-19 pandemic fundamentally transitioned food retail in Germany, despite opening a "window of opportunity".

5.1 Theoretical Implications

As mentioned above, this study confirmed earlier findings that applied qualitative in-depth data analysis to OGS usage adoption and motivation (Hand et al., 2009; Ramus & Nielsen, 2005) for a sample of German consumers. We were able to replicate a similar belief structure as in the Ramus and Nielsen (2005) study with regard to the overall TPB structure. Qualitative data analysis might further contribute to this research area, adopting cross-cultural and ethnographic approaches (Elms et al., 2016). Further quantitative and qualitative research in this area is required. The presented findings should also be enriched with changes in consumer perception and behaviour due to the pandemic.

5.2 Practical Implications

Online grocery retailing should focus on increasing transparency, especially in the delivery process and the choices of products. While most retailers offer the possibility to limit the delivery time frame, it is unclear why live tracking options are not enabled in OGS services, as this would drastically increase transparency and scheduling abilities for consumers. Similar systems operate at online food ordering services (such as Lieferando). This study confirmed the findings by Ramus and Nielsen (2005) in terms of the social interaction of OGS; however, this aspect was mainly stressed by elderly consumers. Therefore, we recommend using customer feedback and evaluation options and potentially integrating social media pages to allow consumers to engage in social interaction online. Other online communities may help facilitate necessary infrastructure and/or inspiration.
This aspect highlights the importance of connected databases across platforms and may be of particular interest for pure online players, as they already possess the necessary digital infrastructure. Retailers should leverage the general appreciation toward OGS service offerings by precisely informing consumers about these offerings and filling the existing knowledge gaps. While the influence of situational factors remains crucial, this aspect can be addressed by advertising and marketing strategies, as well as concepts aimed at improving rural delivery coverage. In the light of demographic changes and sudden surges in demand (as illustrated in the light of the COVID-19 pandemic), this aspect is of importance and future relevance for the adoption of OGS in Germany.

5.3 Limitations and Future Research Recommendations

We conducted three focus group discussions to evaluate the opinions and reasoning behind the behaviours of consumers in the German eGrocery market. The main limitations of this study lie in its small sample size and geographical restrictions. Since OGS is not as accessible in rural areas or small cities as in large cities, our focus group assessments may be biased. Furthermore, this study is limited due to its relatively low overall return rate of the considered participants. As the COVID-19 pandemic marks a potential shift in OGS perception that may also affect our findings, as data was collected prior to the pandemic. However, it appears that many of the stated benefits may very well have increased in importance as a result of shopping restrictions and overall higher caution when going out for grocery shopping.

To understand possible cultural differences between consumers, we recommend international focus groups and quantitative validation to address this large usage disparity. Research on OGS usage adoption should also include measuring perception at the individual level. Previous studies have already addressed this topic by investigating the influence of consumer values (Hansen, 2008), personality traits (Piroth, Ritter, & Rueger-Muck, 2020), and neuro-economic applications on OGS (Benn et al., 2015). Combining different approaches may help deepen the current understanding of the various determinants of OGS behaviours.

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Data availability statement

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