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Eriksson, N, & Stenius, M. (2023). What do regular online grocery shoppers want from online grocers going forward? Suggestions for service quality improvements, *Procedia Computer Science*, Volume 219, 201-210

**DOI:** <https://doi.org/10.1016/j.procs.2023.01.282>

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CENTERIS – International Conference on ENTERprise Information Systems / ProjMAN – International Conference on Project MANagement / HCist – International Conference on Health and Social Care Information Systems and Technologies 2022

## What do regular online grocery shoppers want from online grocers going forward? Suggestions for service quality improvements

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### Abstract

Online grocery shopping has become significantly more popular amid the Covid-19 pandemic. That said, the online grocery market in many European countries is still taking shape and further service developments are needed to meet consumers' changing and increasing expectations. Based on an analysis of 412 regular online grocery shoppers' suggestions for service quality improvements, eight categories of improvements were identified. Ranked according to the frequency by which they were mentioned, the top four categories were: (1) broad and specialized assortment, (2) delivery time and flexibility, (3) lower delivery costs and more pricing options, and (4) the user interface and search efficiency. The study contributes relevantly to a better understanding of what the online grocery retailers should prioritize in their service development to meet the changing expectations of a crucially important customer segment, the regular shoppers. Implications for online grocers and limitations of the study are discussed.

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Peer-review under responsibility of the scientific committee of the CENTERIS – International Conference on ENTERprise Information Systems / ProjMAN - International Conference on Project MANagement / HCist - International Conference on Health and Social Care Information Systems and Technologies 2022

*Keywords:* online grocery shopping; e-service quality; eCommerce; consumer expectations.

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## 1. Introduction

Online grocery shopping has been growing rapidly in many countries amid the Covid-19 pandemic. While its share of the total grocery market in Europe is still rather modest, McKinsey [21] expects the growth to continue in the mid-term, translating into a share of 20% by year 2030. In some leading markets this may even go up to 30 percent of all food-at-home purchases [21]. More cautious views have also been expressed [7]. The European food and grocery retail market is a two trillion-euro business [12, 19] suggesting that while the online grocery market is still in its infancy, the growing segment presents tremendous opportunities (and risks) for grocery retailers going forward. That said, building dark stores and developing delivery infrastructures is expensive and the business is presently hard to make profitable [21]. Various new service concepts are nevertheless brought to the market and a continuous development is taking place. A critical question for those with a vested interest in the market is: how will the offering of services develop and what are the services that fuel adoption of online shopping? Understanding this has great implications for retailers. One group of relevant informants is the present customers, especially those, who routinely and regularly buy groceries online. They have experience of the services and can reasonably articulate their needs and expectations, and where the present services may currently fall short of such expectations. The classic concept of service quality by Parasuraman et al. [25] is precisely about this: customers perceptions of how well the services provided meet their needs. Similarly, Grönroos [11] suggests that any potential gap between the expected and perceived service should be bridged. We argue, in accordance with Olsson et al. [24] that an in-depth understanding of customer expectations is critical for understanding the consumer perspective in grocery service development.

In retail the perceived quality is a mix of both product and service quality [13]. By providing an excellent shopping experience throughout the whole buying process, including the after sales services, the perceived service quality increases customer satisfaction [38]. E-service quality, in turn, is defined as “consumers’ overall evaluation and judgement of the excellence and quality of e-service offerings in the virtual marketplace” [30]. When it comes to online retail quality, some of the in-store affordances are not present. For instance, the customers cannot feel and select perishable items [2] or they cannot interact with the sales staff or other customers. They also lack the stimulus provided by the store atmosphere [43]. At the same time the online channel provides benefits over in-store shopping, and customers have expectations of such experiences. Prior studies suggest that customer service and for instance the web experience contribute to a positive customer experience [34]. What we know less about are the wishes and expectations of regular online grocery shoppers, the ones that have been buying their groceries online for a longer time. What is it that they wish from their online grocers going forward? Few studies to date seem to focus on service quality aspects, customer satisfaction and consumer experiences of online grocery shopping and how online grocery shopping services could be improved. According to Singh [32] there is a need for bottom-up studies that can generate a holistic view of consumer experiences regarding online grocery shopping.

This study aims to fill the gap and investigate regular online shoppers by asking them about their suggestions for service improvements for online grocery shopping in Finland. The online grocery market in Finland is at early stages but compares well with similar other markets, such as the other Nordic markets. Furthermore, the study contributes to the discussion on service quality and customer satisfaction of online grocers, and provides concrete suggestions for service development.

The study is structured as follows. First, the concept of service quality is presented and prior relevant studies in digital retail and online grocery shopping are discussed. Second, data collection and the procedures of the content analysis are discussed. Third, the results are presented and discussed. Finally, conclusions, limitations and future research are proposed.

## 2. Service quality and customer experience in online grocery shopping

Surprisingly few studies have investigated customer expectations, or the similar concept of service quality, in regard to online grocery shopping. We will approach the topic theoretically by looking into the concept of e-service quality (e-SQ) by Parasuraman et al. [27] and introduce some empirical studies into service quality within digital retail. We will also present prior research into customer satisfaction and customer experience in online grocery shopping, as customer satisfaction seems to reflect fulfilled expectations in many other retail segments (see meta-analysis by Blut

*et al.* [5]). Known predictors of online shopping are also likely to tell us something about customer experience and therefore some central findings from such research are also presented.

Service quality commonly refers to any perceived gaps between customer expectations and perceived service offering [11, 25]. Dimensions of service quality have been successfully captured by the SERV-QUAL scale developed by Parasuraman [25] to measure service quality in a retail outlet. To accommodate for shopping online, Parasuraman *et al.* [27] went on to develop the E-S-QUAL scale to capture the components of service quality in the digital retail business. Four components of e-service quality were identified: (1) efficiency, (2) system availability, (3) fulfillment, (4) privacy. Efficiency refers to easy and speedy use of a well-structured website whereas system availability implies no technical hitches while using the system. Fulfillment refers to item availability and delivery reliability, and privacy to safety as regards personal information. To address the full scope of e-SQ, responsiveness to service failures, compensation and contact were added for those encounters when a situation gone wrong needed rectifying, measured by the E-RecS-QUAL subscale [27]. Earlier work by Dabholkar [6] had established similar dimensions of e-service quality capturing some of the same ideas (ease of use, speed of delivery, reliability) but also included enjoyment and control as distinct attributes. Whereas customer satisfaction is sometimes thought more transaction related, service quality refers to a more global judgment of the service excellence provided, which, however, may reflect accumulated experiences of satisfaction or dissatisfaction [26] (for discussion see [17]).

Studies into e-service quality in retail reflect to some extent the type of consumer goods or service provided, but in general a relationship between service quality and customer satisfaction has been established [e.g. 13, 17], in some studies extending further to customer loyalty [e.g. 23]. While the measures vary to some degree, several studies suggest that the website usability/experience, similar to efficiency in the E-S-QUAL scale of Parasuraman *et al.* [27], is an important component of e-service quality, often more important than other aspects, regardless of the type of retail goods [e.g. 17, 36]. Vakulenko [39] further established that the last mile experience, which is similar to fulfillment in the E-S-QUAL scale [27], mediated the relationship between website experience and customer satisfaction. This suggests that the website and delivery experiences are generally very important for customer experience. A recent meta-analysis by Blut *et al.* [5] indicates that four components underlie e-service quality: website design, customer service, fulfillment and privacy, but that their role for e-service may differ in different industries, among other aspects. A subsequent study by Blut [4] using an American sample, and another by Rita [29] in an Indonesian sample lent further support to these findings. Rita [29] found that each of website design, fulfillment and privacy shared independent variance with overall e-service quality, which in turn was rather strongly associated with both customer satisfaction and customer trust.

Few studies have specifically investigated e-service quality in online grocery shopping. One exception is the study by Muhammad *et al.* [22] which established that system availability and privacy concerns predicted adoption of online grocery shopping with Malaysian customers. That said, related concepts of customer satisfaction and customer experience have been investigated in a number of studies. Several studies have found that product availability and assortment contribute to customer satisfaction [16, 18, 37]. The best predictor of customer satisfaction in the study by Ali & Naushad [1] was, in turn, perceived product quality, whereas convenience, value for time and data security were weakly associated with customer satisfaction. Singh and Söderlund [34] found that especially the brand experience (positive emotions and sensations), but also the overall web experience and customer service contributed to the overall experience, which again was associated with customer satisfaction. A qualitative study by Singh [32] suggested that customer satisfaction and repurchase intentions are predicted by frictionless - easy, fast, economic, and efficient – process and pleasurable customer experience in the form of visual appeal and enjoyment. Similarly, Sreeram *et al.* [37] also found that enjoyment was important. Their study also found some support for economic value. The mixed findings suggest that rather little is known of e-service quality and customer satisfaction, or moderators between them, in online grocery shopping.

Adoption of online grocery shopping may in itself reflect customer satisfaction. Studies investigating factors underlying adoption suggest that at least time saving and convenience [3, 43, 31], website experience/ease [42], reliability in delivery [41, 10], relative advantage [43] and smooth recovery from service failure [41]. Some studies indicate that risks relating to product quality [43], or delivery related issues [10] may be concerns for shopping groceries online, representing situations where there already is a gap between perceptions and expectations. The findings of studies are quite mixed, which may partly result from different measures used or different contexts. They

may also reflect different preferences among different customer groups, as suggested by Frank & Peschel [10], who identified three customer groups with distinctly different preferences.

The above review suggests that rather little is yet known of customer expectations in online grocery shopping. This study explicitly investigates expectations and improvement suggestions of existing regular online grocery shoppers.

### 3. Data collection and analysis procedure

This study focuses on experienced regular online grocery shoppers, whom we believe are in the best position to provide information on how the services provided meet their present expectations (e-service quality), and how they would like these services to improve going forward.

The data was collected through a survey with 412 Finnish consumers in February 2022 belonging to an online panel of Suomen OnlineTutkimus covering all the major areas of Finland. The screening criteria for participation in the survey were (1) to have at least six months of regular online grocery shopping experience and (2) an online grocery purchase frequency of at least once per month. The respondents reported a diverse selection of preferred online grocers, but a clear majority preferred the two largest grocery chains in Finland, K chain and S chain. This is no surprise as the two chains together hold a market share of more than 80% in the Finnish grocery market [28]. The sample is evenly distributed between gender and includes a wide distribution of age and occupation. See Table 1. Previous studies have shown that a wide range of Finnish consumers shop for groceries online [8].

The respondents were asked, among other things, to answer an open-ended question “How would you like the online grocery business to develop?”. A similar content analysis procedure to that by Klepek & Bauerová [15] was performed on the responses received, as follows. First, we familiarized ourselves with the 412 answers by reading through them. All “can’t say” and missing answers (128 in total) were excluded. Of the remaining 284 answers 26 indicated satisfaction with the existing services of the e-grocers as they are. Typical responses were “The online grocery stores are very good already and do not need to be changed”, “I’m satisfied” and “I think it works very well”. These we also excluded from further analysis. At the end 258 respondents making suggestions for improvements were included in final sample. See Table 1 for the demographic characteristics of the sample ( $n=258$ ) and observe that the distribution aligns well with the total survey sample ( $N=412$ ).

Next, we generated the first-order codes to gain a better understanding of the content of the suggestions. Of the 258 responses 68 had multiple suggestions for improvements, and thus the sample provided 326 suggestions for improvements in total. The analysis was conducted as follows. Each answer was coded manually. After the initial coding of the data, the codes were revisited and revised based on improved insight into the data. In total 30 first-order codes were created. Some ideas were mentioned only once, but they were nevertheless included as separate codes as they generated valuable information for improvements. Based on similarities and logical relationships between the 30 codes, the first-order codes were aggregated into eight second-order categories and labeled to capture the first-order codes included in the category. See Table 2 for the eight labeled categories and the descriptions of the underlying first-order codes. The categorization and labeling of the final eight categories were to some degree influenced by previous studies into online grocery shopping.

Finally, the eight categories were ranked according to the frequency by which they were mentioned. See Table 3 for the results.

### 4. Results

Table 2 shows the description of the first-order codes and the labels of the second-order categories created in the content analysis. The frequency by which the single first-order codes were mentioned can also be found in Table 2. The ranking of the categories, based on the total frequencies, is presented in Table 3.

The results suggest that “broad/specialized assortment” together with “delivery time and flexibility” were mentioned an almost equal number of times. They were the most frequently mentioned improvements, mentioned by more than half of the respondents, and accounting for over 40% of all suggestions when added up. When it comes to a broader product range, many suggestions were made of the types of product desired. These included special dietary requirements, organic and vegan products, ready-made meal-kits etc. Furthermore, many suggested an overall broader and more varied online grocery assortment. Certain products desired, such as alcohol and tobacco, are subject to

Table 1. Total sample (N=412) and the sample with suggestions (N=258).

Variable	N=412		N=258	
<b>Gender</b>				
Male	198	48.1%	131	50.8%
Female	212	51.5%	127	49.2%
Other	2	0.4%	0	0.0%
<b>Age</b>				
18-30	83	20.1%	56	21.7%
31-40	85	20.6%	46	17.8%
41-50	98	23.8%	58	22.5%
51-60	74	18.0%	53	20.5%
60+	72	17.5%	45	17.4%
<b>Occupation</b>				
Student	20	4.9%	14	5.4%
Unemployed	31	7.5%	20	7.8%
Part-time working	32	7.8%	22	8.5%
Full-time working	236	57.3%	147	57.0%
Pensioner	75	18.2%	47	18.2%
Home moms/dads	11	2.7%	4	1.6%
Other	7	1.7%	4	1.6%
<b>Online grocery shopping frequency</b>				
At least once a week	99	24.0%	61	23.6%
At least every second week	152	36.9%	102	39.5%
At least once a month	161	39.1%	95	36.8%
<b>Experience of online grocery shopping</b>				
> 6 months	257	62.4%	155	60.1%
Before the corona pandemic	155	37.6%	103	39.9%
<b>Preferred online grocers</b>				
Conventional store/chain with online service: K chain, S chain	285	64.3%	176	68.3%
Pure online retailer: Kauppahalli24, Oda	3	0.7%	2	0.8%
Food surplus services: Fiksuruoka, Matsmart etc.	70	17.0%	43	16.7%
Meal-kit services: Ruokaboksi, Feelia etc.	8	1.8%	7	2.7%
Platform delivery services: Wolt market, Foodora market	8	1.8%	4	1.6%
Others	18	4.4%	6	2.3%
Can't say / missing	40	9.7%	20	7.8%

restrictions in Finland, and cannot be included in online grocery deliveries. There also seems to be a need for faster and more flexible deliveries. More time slots for deliveries (e.g. on weekends) and more pick-up points were mentioned.

The categories “lower delivery costs and more pricing options” (rank 3) and “better product price and deals” (rank 5) refer to the economic value of grocery purchases, possibly suggesting that the same deals as in-store are presently not available, or perceived not to be available online, and that the delivery costs are an important consideration. These categories together make up 28% of all improvement suggestions and were mentioned by 36% of respondents.

Table 2. Description of categories and first-order codes.

Category	Description of first-order codes (number of responses)
Broad/specialized assortment	A broader and more varied assortment of products in general (45)
	More ethnic products (2)
	More special dietary requirements (gluten-free, sugar-free etc.) (8)
	More ready-made food and recipe suggestions (4)
	A wider selection of organic and vegan products (5)
Delivery time and flexibility	Alcohol and/or tobacco products (6)
	Faster deliveries (37)
Lower delivery costs and more pricing options	More time windows for deliveries (e.g. on weekends) and more pick-up points (30)
	Cheaper home delivery / picking costs in general (47)
	More offers on home delivery prices if the order is of a certain size (1)
	Cheaper home delivery, taking advantage of morning and evening discounts (1)
Interface and search efficiency	Delivery charges could have a fixed annual price / subscription fee (2)
	The platform is stiff and slow e.g. smoother application / website (25)
	Reduction of manual steps e.g. smarter shopping basket features and integrations with recipes (4)
	Clearer product groupings such as low sugar, gluten free, low salt (3)
	The search function could be easier to use e.g. better key words to find the products faster and not spend so much time browsing (11)
Better product price and deals	Search criteria more diverse e.g. one could search for products based on the colour or pattern of the package (5)
	Overall better deals and lower product prices (32)
	Offers more visible (2)
Quality of picked products	More value-based offers and bonuses (6)
	Careful attention to due dates (6)
	Product freshness e.g. the quality and accuracy of fruits and vegetables (5)
Communication in picking phase	Sensitivity with replacements and packaging e.g. it should make sense with the replacements and similar products in the same boxes (9)
	Better considerations of the messages written by the customer to the store (3)
	Live chat or phone call e.g. to exchange ideas for replacements with collector (10)
Sustainability of delivery and packaging materials	Better information on inventory balance (6)
	Considerations of sustainability and ecology issues in general (4)
	The packaging materials (e.g. other than plastic bags) and recyclable boxes for regular customers (5)
	Reduce emissions from transport (1)

The interface and the search efficiency (rank 4) was mentioned 48/326 times suggesting that the websites or applications are not presently optimal. The quality of picked products was not a major concern for many, mentioned only 20/326 times. More communication in the picking phase was desired by 19/326. Sustainability of delivery and packaging materials was mentioned, albeit not by many.

Table 3. Ranking of the eight improvement suggestion categories.

Category ranking	Frequency (% of 258* and % of 326**)		
1. Broad/specialized assortment	70	27.5%	21.5%
2. Delivery time and flexibility	67	26.0%	20.6%
3. Lower delivery costs and more pricing options	51	19.8%	15.6%

4. Interface and search efficiency	48	18.6%	14.7%
5. Better product price and deals	41	15.9%	12.6%
6. Quality of picked products	20	7.8%	6.1%
7. Communication in picking phase	19	7.4%	5.8%
8. Sustainability of delivery and packaging materials	10	3.9%	3.1%

\* Number of respondents with improvement suggestions \*\* Number of improvement suggestions

## 5. Discussion

The results suggest that a broad and specialized assortment together with delivery flexibility are very important elements of e-service quality for experienced regular online grocery shoppers. This suggests that those who regularly make their grocery shopping online, would like to be able to obtain all or most of the items they desire and fit the delivery flexibly into their lives, without disruption to their other plans or obligations.

The importance of product assortment aligns with prior studies conducted elsewhere [e.g. 16, 18, 37]. In addition to just generally desiring a broader assortment, some respondents in this study also listed ideas for expanding the product range by special dietary requirements, organic and vegan products, and ready-made meal-kits. These are very concrete ideas and it is possible that more varied and tailored approaches as regards the overall product offering, and how it is presented to customers or targeted at certain segments, may further enhance e-service quality.

Importantly, the results clearly suggest that some respondents perceive the present choice as limited and that a greater choice of groceries is available in conventional stores. Alternatively, they are not aware of all the products offered online, or cannot find them, which could be a usability issue as regards the website, also an item on the list of improvements.

The delivery flexibility was also high on the list of improvement suggestions. This may suggest that some grocers are not presently able to provide necessary flexibility but it may also simply be an indication of how important it is for families to be able to fit the delivery into their other plans. The importance of the last mile has been identified in a recent study by Vakulenko et al. [39] as an important predictor of customer satisfaction in retail. Specifically, within online grocery shopping, the studies by Anshu et al. [41] and Singh & Söderlundh [34] raise the delivery experience as an important aspect of the customer experience. Frank & Peschel [10] also identified a customer group (“price-oriented”) that stressed the importance of delivery correctness and speed. Delivery related concerns prevent some from adopting online grocery shopping, as suggested by Klepek & Bauerová [15].

The two categories “lower delivery costs and more pricing options” and “better product price and deals” express concern over the economic value of buying groceries online, which is not surprising as price is a key cue in grocery retailing [9]. The categories (added up) were mentioned by 36% of the respondents suggesting that the total cost of groceries is a concern. Klepek & Bauerová [15] found that unwillingness to pay for delivery can be a deal breaker for shopping groceries online. According to McKinsey [20] two thirds of American shoppers are willing to pay a premium online but only to some extent.

Moreover, the real delivery and product price may be hard for consumers to estimate or compare as some online retailers provide low or no delivery fees but can charge more for the goods instead making the total shopping basket more expensive, while others do the opposite. Others again might offer some type of bonus systems generating discounts and long-term economic value over time for the customer. Most respondents proposed cheaper home delivery and/or picking costs and better deals and prices in general, but a few respondents also suggested better use of different pricing options such as annual subscription fees, dynamic pricing based on delivery demand during the day or order sizes and more value-based offers and bonuses. Provision of options such as payment options have been identified as important elements in the perceived retail service quality [6, 35]. This suggests that pricing policies are important aspects to consider when developing better online grocery services. Furthermore, it might be difficult to pass on some operational costs (such as picking and delivery costs) to customers, or at least to the most price sensitive customer groups.

The results further suggest that there is room for improvement in the “interface and search efficiency”. The importance of usability and web experience has been established in prior studies to improve online grocery shopping experiences [42, 32, 34]. Clear improvement suggestions by the respondents were smoothness of the application or



website, such as reduction of manual steps and clearer groupings of products, and for the search function better key words and more diverse search criteria. The effort to navigate and find products should be essentially lower online than in conventional stores to generate concrete added value to the shopper [33]. Also, voice search and other types of smart interface solutions could be interesting development areas for Finnish retailers.

The “quality of picked goods” was not a consideration for many of the regular experienced customers. Only 7.8% in the sample mentioned this as an area of improvement. Considering how important a concern the product quality and especially the quality of perishable goods is in prior studies [e.g. 15, 43] especially among non-adopters, it seems not to be much of an issue for regular clients. It is plausible that the grocers, especially the market leaders, are aware of this concern and have paid special attention to quality control in this respect. Careful attention to due dates, product freshness and sensitivity with replacements and packaging were typical suggestions for improvement regarding the quality of picked products.

Some of these regular customers (7.4%), however, wished for more communication in the picking phase. Possibility to a live chat or phone call with the collector, better information on inventory levels and better considerations of customers’ written messages to the store were as well clear improvement objects for picking. Similar issues have been highlighted in prior studies [e.g. 32, 34]. It is possible that personalized customer care is particularly important for some customers, as suggested by Frank & Peschel [10], who found that “cautious customers” desired such service. “Humanizing” online grocery retailing by providing a phone call from a real person conducting the picking might generate higher customer satisfaction, especially in critical product replacement situations. A better mapping of critical products for the customer could be valuable for online retailers.

Although it was not mentioned by many, “sustainability of delivery and packaging materials” might be an important weak signal for retailers. This category included improvement suggestions such as more sustainable solutions for packaging materials and transport emissions. According to McKinsey [21] consumers, regulators and investors are increasingly concerned about sustainable solutions. Thus, sustainability aspects of online grocery shopping must be added to the discussion on e-service quality and customer satisfaction in online grocery shopping.

Whereas many prior studies have emphasized perceived risks, such as protection of personal and credit card information risks, online retail service quality [e.g. 13, 27, 1], no improvement suggestions were related to such issues in this study. Further, no one mentioned order cancellation or returns as an issue for improvement. Singh & Söderlund [34] identified that these aspects affect customer experience and customer satisfaction in online grocery shopping. It is possible that the regular Finnish online grocery shoppers are generally quite satisfied with how the grocers are handling these issues in this market place. However, from the total quality perspective risks should not be neglected.

## 6. Conclusion, limitations and future research

As earlier concluded, rather little is yet known of customer expectations of online grocery shopping. Furthermore, the findings regarding predictors of customer satisfaction or customer experience, or even online shopping adoption, are quite mixed. E-service quality appears quite unstudied in this domain. Therefore, the study at hand contributes relevantly by explicitly asking a large sample of regular experienced customers on a specific market, what they wish going forward. We have assumed that this client group represents an important group of informants since they have accumulated experience of many encounters over a longer period of time. Not surprisingly, but yet importantly, the study suggests that the product assortment along with flexible delivery services are highly important for online grocery shoppers. Furthermore, the web experience can be improved and the economic value continues to be important. Product quality is not a major concern for experienced customers suggesting that relevant quality controls are mainly in place. Personalized customer care may be a way to differentiate from competitors, or it may be something to offer for certain customer groups. Sustainable packaging and delivery, while mentioned only by a few, may present an important weak signal for the retailers, and may grow stronger going forward.

The second conclusion is that the content-analysis approach can be an effective way to identify areas of service improvements. Many service quality and customer satisfaction studies are conducted by using surveys with ready measures. In this study we instead let the respondents “speak” and provide their own open-ended suggestions for improving online grocery shopping. A similar content-analysis approach was conducted by Klepek & Bauerová [15] when studying non-adoption of online grocery shopping.

The results are primarily limited to the Finnish market as they reflect the context, the stage of development of the market, internet use and technical literacy of the people, and other culture specific aspects. The ranking order of the service improvements may reflect these. Furthermore, 68.3% of the respondents preferred the two largest grocery chains on the market, and therefore the service improvements suggested may primarily be applicable to these large chains. According to McKinsey [20] the click & collect services are the most popular in some online grocery markets such as France while in the UK the next day deliveries are the most popular. In Finland the mix is quite even [40], which serves as an example of how the service expectations and standards may differ in different countries. Therefore, it would be valuable to conduct similar studies in other countries and markets.

We have argued for the use of regular experienced shoppers as informants of customer expectations going forward. It is of course possible that customers are not the most innovative thinkers when it comes to future developments. That said, we posit that the regular customers represent the most important group of customers at the moment, and they are the best informants of whether and to what degree the present services meet their present expectations.

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