Retail format selection in on-the-go shopping situations

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A R T I C L E   I N F O

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A B S T R A C T

Consumers patronize different store formats to purchase products. Prior literature describes store and format choices for big, multi-item shopping baskets, but limited insights determine consumers' unique shopping routines when they seek to buy just one or a few items while on the go. Such shopping situations might affect consumers' format selections for both search and experience goods. This study uses multi-attribute utility theory to develop a framework, tested with a scenario-based experiment. For search goods, a format's economic utility (price level, speed) is more important; its functional utility (quality, variety) and psychological utility (atmosphere, service) become less important considerations. Furthermore, the tolerable range of formats is larger for search goods. The level of on-the-go purchase and consumption frequency moderates these effects. Therefore, this research helps to clarify what drives consumers' format selections in on-the-go shopping situations, with useful managerial insights for how retailers can compete in the growing on-the-go market.

1. Introduction

Food to go and convenience are considered to be ubiquitous megatrends in food and beverage consumption, as evidenced by the variety of channels—such as convenience stores, food service restaurants, and coffee shops—found in all major Western metropolitan areas (Ipsos, 2018). Accordingly, the market share of small-format retailers, such as convenience stores, continues to grow due to their appeal to consumers who shop “little and often” and need “food/beverages on the go,” often at the expense of larger formats such as hypermarkets (IGD, 2018; Nielsen, 2015; PMA, 2017). In the U.S. alone, nearly 155,000 convenience stores accounted for $550 billion in annual sales (NACS, 2017), “one of the fastest growing grocery retail sectors globally” (Skoda, 2017, “Here to stay,” para. 2). In particular for on-the-go shopping for food and beverages, consumers are offered a wide choice among a variety of formats (Ramran-Disfani, Mantrala, Izquierdo-Ysta, & Martinez-Ruiz, 2017) such as coffee shops, fast food restaurants, and even discounters. Consumers select these different formats depending on the product category that they seek (Nielsen, 2015) and thus their shopping situation (Dellaert, Arentze, & Timmermans, 2008; Van Kenhove, de Wulf, & van Waterschoot, 1999).

Existing literature on retail (format) patronage choices mainly considers the following situation-specific variables: different products (Dellaert et al., 2008), task descriptions (Van Kenhove et al., 1999), and basket sizes (Bell, Ho, & Tang, 1998; Hunneman, Verhoef, & Sloot, 2017; Reutterer & Teller, 2009; Thelen & Woodside, 1997). It also provides significant insights related to large, multi-item shopping baskets. However, few studies address different shopping situations such as on-the-go scenarios (see Table 1). Findings about drivers of retail patronage choices in large-basket situations do not necessarily apply to on-the-go situations, because consumers’ practices and preferences differ across these settings (Hunneman et al., 2017). When they are on the go, for example, consumers are unlikely to produce a shopping list (Bell et al., 1998) or proceed through as many decision-making stages before selecting a format (Balasubramanian, Raghunathan, & Mahajan, 2005; Valentini, Montaguti, & Neslin, 2011). On-the-go purchases and needs represent lower financial risk (Sweeney, Soutar, & Johnson, 1999) but greater urgency to consumers (Hunneman et al., 2017; Reutterer & Teller, 2009). On-the-go situations also trigger decision and shopping processes that reduce transaction costs (Bell et al., 1998; Reutterer & Teller, 2009). Consumers on regular shopping trips aim to minimize transaction costs, whereas consumers pursuing urgent purchases display more flexibility when satisfying their needs (Emmelhainz, Stock, & Emmelhainz, 1991). Such situation-specific behavior becomes relevant when investigating the format selection and the tolerable range of formats that a consumer is willing to turn to. Format selections differ for more frequent shoppers too, such that those who are more familiar with shopping feel minimal risk but are also less...
<table>
<thead>
<tr>
<th>Source</th>
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<th>Format</th>
<th>Basket size</th>
<th>Product category</th>
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<tr>
<td>Miller and Ginter (1979)</td>
<td>Not specified</td>
<td>Hospitality – fast food</td>
<td>Store attributes</td>
<td>Store (brand) choice</td>
<td>Shopping situations</td>
<td>- 950 fast food users</td>
<td></td>
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<tr>
<td>Thelen and Woodside (1997)</td>
<td>Supermarket</td>
<td>Multi-item -- small and large</td>
<td>Grocery and other fast-</td>
<td>Store attributes</td>
<td>Store choice</td>
<td>- 401 household representatives</td>
<td></td>
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</tr>
<tr>
<td>Bell et al. (1998)</td>
<td>Supermarket</td>
<td>Variable – measured by SKU</td>
<td>Fixed and variable cost of</td>
<td>Store visits</td>
<td>None</td>
<td>- Shopping basket purchase history of 520 households</td>
<td></td>
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<tr>
<td>Van Kenhove et al. (1999)</td>
<td>DIY stores</td>
<td>Not specified – different per</td>
<td>DIY products</td>
<td>Store attributes</td>
<td>Store choice</td>
<td>- Qualitative: visitors of a DIY store, semi-structured interviews</td>
<td></td>
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<tr>
<td>Popkowski Leszczyc and Timmermans (2001)</td>
<td>Convenience, specialty &amp; general merchandise store</td>
<td>Multi-item – large &amp; small shopping strategy dependent</td>
<td>Mixed – food and non-food</td>
<td>Store attributes</td>
<td>Shopping strategy (one vs. multi-stop trip; format)</td>
<td>None</td>
<td>- 405 students</td>
<td></td>
</tr>
<tr>
<td>Dellaert et al., 2008</td>
<td>Not specified</td>
<td>Not specified – shopping context dependent</td>
<td>Mixed (grocery and apparel)</td>
<td>- Shopping context</td>
<td>None</td>
<td>- Experiments incl. semi-structured interviews</td>
<td></td>
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<td>Brynjolfson, Hu, and Rahman (2009)</td>
<td>Internet and catalog channel</td>
<td>Not specified</td>
<td>Apparel (women)</td>
<td>- Shopping decision alternatives</td>
<td>None</td>
<td>- 7 million transaction data of 1 million customers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reutterer and Teller (2009)</td>
<td>Supermarket, hypermarket, discount store</td>
<td>Multi-item – small and large</td>
<td>Grocer and other fast-moving consumer goods</td>
<td>Store format attributes</td>
<td>Store choice behavior</td>
<td>None</td>
<td>- Data on local market structures</td>
<td></td>
</tr>
<tr>
<td>Hunneman et al. (2017)</td>
<td>Not specified</td>
<td>Multi-item – small and large</td>
<td>Grocer and other fast-moving consumer goods</td>
<td>Store attributes</td>
<td>Store satisfaction</td>
<td>Shopping trip type</td>
<td>- 408 household representatives</td>
<td></td>
</tr>
<tr>
<td>Our study</td>
<td>7 formats for on-the-go consumption</td>
<td>Single item</td>
<td>Grocer for on-the-go consumption</td>
<td>Shopping situation (product type)</td>
<td>Store format attributes, format selection</td>
<td>Purchase and consumption frequency</td>
<td>- 514 customers</td>
<td></td>
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</tbody>
</table>

responsive to marketing (Choudhury, Dumm, & Karabanna-Evaristo, 1999; Valentini et al., 2011). Thus, in on-the-go situations in general, as well as depending on the product category, consumers might select formats that differ from their conventionally preferred options.

To address this research question, the current study investigates how two different on-the-go shopping situations might influence retail format selections. A search good, relative to an experience good, might alter the importance of various format attributes that provide functional, economic, or psychological utilities, and thus determine format selection. With this prediction, the current study seeks to make three contributions: First, to advance retail patronage literature, we develop a framework that captures six determinants of format selection, which proved inadequate (Arnold, 1999; Valentini et al., 2011). Thus, in on-the-go situations in general, as responsive to marketing (Choudhury, Dumm, & Karabanna-Evaristo, 1999; Valentini et al., 2011). This is surprising given the growing importance of convenience stores carry narrower assortments, whereas hypermarkets carry wider ones (Messinger & Narasimhan, 1997; Mitchell, 1998). Traditionally, retailers have widened their assortments to enable consumers to find their preferences (Bhatnagar & Ratchford, 2004) or to optimize their time by combining purchases of different categories in one-stop shopping situations (Popkowski Leszczyc, Sinha, & Sahgal, 2004). More recently, research also recognized how wide assortments can trigger choice overload, with potentially negative effects (Gourville & Soman, 2005). Finally, price is a key format selection criterion (Arnold et al., 1996; Blut et al., 2018), and stores and formats differ in their applied pricing strategies (Bhatnagar & Ratchford, 2004). The price level can even trigger visits to a retail store that is less convenient (Woodside & Trappey, 1992), and the importance of price rises with basket size (Van Kenhove et al., 1999).

With regard to service-related attributes, the expected speed of the service and wait time strongly affect store patronage intentions (Grewal, Baker, Levy, & Voss, 2003). Because many consumers feel time pressures and engage in the “pursuit of efficiency-producing behaviors” (Pan & Zinkhan, 2006, p. 232), speed and the time costs of shopping are relevant criteria for retail format selections (Dellaert et al., 2008; Messinger & Narasimhan, 1997). Bloemer and de Ruyter (1998) also suggest that the general service level, as manifested in personalized services and extended opening hours, can enhance shoppers’ motivation and ability to judge the retailer and its stores positively overall. Retail services enhance the shopping experience and thereby influence consumer patronage decisions (Blut et al., 2018). The atmosphere consists of visual, aural, olfactory, and tactile variables (McGoldrick, 2002), including music, crowd density, and temperature. Shoppers use these atmospheric cues to evaluate retailers and make inferences about their overall performance (Baker et al., 2002). Therefore, the format’s atmosphere influences retail images (Bloemer & de Ruyter, 1998) and store patronage (Blut et al., 2018; Grewal et al., 2003).

Including six attributes in the framework is in line with previous research that indicates that consumers’ format selections depend on as few as three to five attributes (Woodside & Trappey, 1992). These attributes also represent the most relevant components of a store’s image and thus influence patronage behavior; however, product-related attributes are core, and service-related ones are more peripheral (Mazursky & Jacoby, 1986). Previous research offers some foundation but does not specify which attributes are most relevant in on-the-go shopping situations. This is surprising given the growing importance of

### Characteristics of the selection process

<table>
<thead>
<tr>
<th>Characteristics of the selection process</th>
<th>Typical example</th>
<th>Implications for quality, risk perception, and mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Search goods</strong></td>
<td>... can be evaluated without interacting with the product through second-hand information</td>
<td>Often national-branded, manufactured products such as a Coke or a Mars bar</td>
</tr>
<tr>
<td><strong>Experience goods</strong></td>
<td>... require interaction with the product, potentially through someone’s senses</td>
<td>Often non-branded, freshly prepared products such as a freshly prepared coffee or salad</td>
</tr>
</tbody>
</table>

Fig. 1. Selection, risk, and quality perception for search & experience goods.
on-the-go shopping and consumption for retailers (Fig. 1).

2.2. Search and experience goods

In contrast to existing research on format selection (see Table 1), we investigate the importance of the aforementioned six attributes depending on the shopping situation rather than on a more abstract and general level. This is important since the shopping situation strongly influences consumer behavior (Belk, 1974; Blut et al., 2018; Miller & Ginter, 1979). Situation specificity refers to all the factors that have demonstrable, systematic effects related to a time, place, and task of a selection, rather than the format or consumer variables (Belk, 1974). For research into consumers’ format selections to be meaningful to managers, the findings must reflect the precise situational context from the consumers’ perspective (Dellaert et al., 2008), because “the concept of situation becomes managerially important if ... relative strengths and weaknesses differ by situation” (Miller & Ginter, 1979, p. 111).

Previous literature has mainly focused on larger baskets and weekly shopping trips (see Table 1 and Bell et al., 1998; Dellaert et al., 2008; Popkowski Leszczyc & Timmermans, 2001; Valenti et al., 2011), whereas research on small baskets is rare (Reutterer & Teller, 2009; Thelen & Woodside, 1997). There are few studies investigating the role of product types in the context of channel and format selection. Product types, such as search and experience goods, have shown to impact consumer behavior. This typology is based on the extent to which consumers feel that they need to directly experience and interact with the goods to assess their quality. Search goods can be evaluated without interacting with the product through second-hand information, whereas experience goods require interaction with the product by potentially using someone’s senses (Huang, Lurie, & Mitra, 2009; Weathers, Sharma, & Wood, 2007). Thus, purchasing experience goods presents a higher risk than purchasing search goods (Mainy & Dass, 2014). Retailers and manufacturers aim to lower purchasing risk by branding their products, thus making the purchase predictable. A high brand equity represents the aforementioned second-hand information, which lowers purchasing risk and transforms an experience good into a search good (Srinivasan & Till, 2002). Consumers have shown themselves to be less concerned about a retailer’s reputation when buying nationally branded products, since the quality of the product will be less dependent on the retailer (Ekelund, Mixon, & Ressler, 1995).

2.3. On-the-go shopping situations and frequency

On-the-go purchases and consumption have become more frequent, and thus understanding consumers’ format selections for few items and the impact of the shopping situation on purchase behavior has become vital for retailers (Ipsos, 2018). However, most research on format selections focuses on situational attributes that relate to trips for larger, multi-item baskets such as major or weekly shopping trips (see Table 1 and Bell et al., 1998; Dellaert et al., 2008; Popkowski Leszczyc & Timmermans, 2001; Valenti et al., 2011). Few studies investigate smaller baskets (Reutterer & Teller, 2009; Thelen & Woodside, 1997) or selection criteria that relate to the basket size for different tasks.

In addition to literature not having captured small-basket shopping situations very well, it has not captured very frequent shopping trips very well either. Most research on retail patronage uses the frequency of visits over time to one particular retailer, i.e., loyalty (e.g., Blut et al., 2018). However, for some categories—including groceries—consumers’ store loyalty is rather limited (Popkowski Leszczyc, Sinha, & Timmermans, 2000). Our study focuses on format selection across formats and retailers; thus, we are interested in the frequency of the behavior in general and not the frequency of visiting a particular retailer. This is important because shopping frequency has shown to matter in other contexts. For example, Van Kenhove et al. (1999) show that for regular (but large-quantity) purchases, price is more important than in various other situations, whereas store design and assortment play relatively minor roles. Thelen and Woodside (1997) show that for daily, more frequent shopping trips, the proximity of the store to the home is more important than for large (less frequent) stock-up trips. This suggests the need to clarify the impact of purchase frequency on format selections.

2.4. Multi-attribute utility theory and defining the tolerable format range

Multi-attribute utility theory (Wallenius et al., 2008) proposes that a decision maker who chooses between alternatives evaluates them according to the expected utility of the outcomes. The set of alternatives can be small and finite or large and infinite, such that the former results in a choice problem and the latter in an optimization problem. Every decision also creates the risk of a poor choice of an alternative that is high in costs and low in benefits, with low overall utility (Conchar, Zinkhan, Peters, & Olavarrieta, 2004). The utility evaluation is based on various criteria (Wallenius et al., 2008) and thus comprises different forms, including functional (or performance), economical (or financial), and psychological utilities (Sweeney et al., 1999). Functional utility in on-the-go consumption settings pertains to the core functions of the retail store or product, such as selling a certain type of product. Economic utility relates to (not) wasting money and/or time. Psychological utility for on-the-go consumption implies a feeling of (dis)satisfaction with the store or the product (Jacoby & Kaplan, 1972; Sweeney et al., 1999).

In turn, the anticipated utility has two components: the importance of each utility level and its probability (Conchar et al., 2004). A low utility level might be very unlikely but very severe (e.g., food contaminated with bacteria, leading to serious illness) or likely but not very severe (e.g., a product being out of stock). Therefore, according to multi-attribute utility theory, a person chooses the alternative that is either the most preferred optimal option or else good enough to terminate the decision process (Wallenius et al., 2008). To reduce their risk of suffering a low utility level, consumers thus estimate its probability and its severity, and seek some tolerable level (Conchar et al., 2004; Mitchell, 1998). As described above, the different product types relate to different levels of risk, because in contrast to experience goods, search goods can be evaluated without interacting with the product (Huang et al., 2009; Weathers et al., 2007).

These theoretical arguments can be applied to retail format selections regarding buying either search or experience goods, which involve decisions in which consumers consider multiple variables related to the retailer and the product (e.g., atmosphere and price), then make a choice based on the expected utility (Noble, Griffin, & Weinberger, 2017). In a shopping situation that creates an immediate demand for a certain product (Hunneman et al., 2017), consumers realistically face a finite set of options, limited by the physical availability of formats and the proximity of stores at the time that the urgent need occurs, such as convenience stores, supermarkets, or forecourt stores. Therefore, format selection in on-the-go consumption represents a choice problem (Dellaert et al., 2008). The focus on immediate/urgent on-the-go consumption is relevant because the decision-making patterns likely differ in these cases. Theory suggests that consumers might choose retail formats that are not optimal but rather that are tolerable. However, previous research mainly looked at the format selection of one format in isolation rather than in comparison with other formats (see Table 1). In turn, it is important to understand the underlying mechanisms (Conchar et al., 2004) and investigate what bandwidth is considered “tolerable” depending on the shopping situation (i.e., product type) and how it relates to retail format attributes.

As discussed previously, retail format attributes (quality, variety, price, atmosphere, service level, and speed) should affect consumers’ anticipated format utility: The quality and variety of the assortment relate to functional utility—according to whether or not the product performs according to expectations (Jacoby & Kaplan, 1972; Kushwaha & Shankar, 2013), or is (not) available and thus can(not) achieve its purpose. The price and speed of service define the required consumer
resources in terms of time and money, so they can produce economic utility that influences format selection (Jacoby & Kaplan, 1972). Finally, service and atmosphere are linked to psychological utility, in that they have the potential to tarnish the experience (Jacoby & Kaplan, 1972; Kushwaha & Shankar, 2013). Fig. 2 depicts this framework and the hypothesis.

Format utility or different format attributes may also differ in importance, depending on the product category (Dholakia, 2001; Ekelund et al., 1995). The extent to which consumers feel that they need to directly experience and interact with a good to evaluate its quality (i.e., search versus experience goods; Huang et al., 2009; Weathers et al., 2007) impacts the importance of different format attributes. This is because when it comes to branded food products—classified as search goods in this research—consumers will be less concerned with the reputation of a retailer (Ekelund et al., 1995) since they feel that less risk is attached to this purchase (Maity & Dass, 2014). This is in line with Alfnes, Rickertsen, and Ueland (2008), who found that consumers perceive unprocessed and semi-processed food (often unbranded and experience goods) to be associated with greater utility risk than processed food (often brands and search goods), because the control mechanisms imposed in mass food production and the strategic goals of branding in reducing pre-purchase risk (Heiman & Muller, 1996) lead to very low variability in quality.

Consumers can reduce the chances that they suffer low utility to some tolerable level by applying different risk-mitigation strategies (Mitchell, 1998; Wallenius et al., 2008) such as searching for information, postponing and contemplating, relying on brands or retailer images, and avoiding alternatives with low utility (Derbaix, 1983; Sheth & Venkatesan, 1968). Few on-the-go consumption situations trigger strategies that demand high transaction costs such as a high effort to search for information (Bell et al., 1998). Instead, the most likely strategies for consumers on the go are relying on brands and/or relying on retailer images to avoid low utility alternatives. To capture these two strategies, the proposed model compares purchase situations for a search good, in which case the product brand serves as a signal and thus risk reducer for consumers, with purchase situations for an experience good, in which consumers will rely more on the retailer’s image (Ekelund et al., 1995) and as such avoid frequenting certain format alternatives, which are detailed subsequently.

2.4.1. Functional utility

Branding in fast-moving consumer goods (FMCG) sectors informs consumers about expected product attributes (Erdem & Swait, 1998) so that consumers can reduce the chances of low utility levels by relying on brands (Sheth & Venkatesan, 1968). However, perceived risk is higher for experience goods than for search goods because the probability of an unwanted outcome is lower for search goods (Maity & Dass, 2014). Because a brand represents a search attribute, buying brands should be associated with higher utility levels (Sheth & Venkatesan, 1968). In a retail format selection context, when consumers seek to buy a search good (e.g., bottled water, soft drinks), the danger of a low utility level is minimal. In contrast, if they want to buy an experience good (e.g., freshly prepared coffee) with more service components, the potential of low functional utility increases, so this format attribute becomes more important.

2.4.2. Economic utility

Price acts as an indicator of quality for consumers (Zeithaml, 1988). Search attributes inform consumers about expected product quality (Erdem & Swait, 1998), therefore when they can rely on a search attribute as an indication of expected product quality, they do so; if search attributes are less available, price becomes more important as a quality indicator (Zeithaml, 1988). Thus, price might be more important for experience goods than for search goods. Furthermore, on-the-go shopping situations usually do not trigger activities that demand high transaction costs (Bell et al., 1998); for example, long expected wait times decrease consumers’ likelihood of selecting a certain store (Grewal et al., 2003; Teller, Kotzab, & Grant, 2011). When consumers buy search goods, the price and waiting time that they must invest to make their purchases are clear sacrifices, thus they likely aim to minimize both by carefully selecting the retail format. For an experience good with more service components (e.g., a flavored hot coffee, personalized and freshly prepared on site), the price and having to wait instead become part of the experience, signaling its quality. Thus, consumers of experience goods might not select a retail format with the goal of minimizing these factors to the same extent. That is, a low price and speedy service (economic gains) may be less important to the retail format selection of consumers buying experience goods for their on-the-go consumption.

2.4.3. Psychological utility

The atmosphere of a retail format is another key cue that consumers use to evaluate retailers and make inferences about their overall performance (Baker et al., 2002). Similar to the reasoning for price as a quality indicator (Zeithaml, 1988), atmospheric cues should have less impact for search goods because the search attributes, not the retail outlet, have signaling power (Erdem & Swait, 1998). For soft drinks or bottled water, store-based retailers function mainly to make products

![Fig. 2. SAU-FS framework: situation–attributes–utility–format selection.](image-url)
available by selling and promoting them in stores. To create competitive advantages, retailers might enhance their service level and provide distinctive services that are difficult to imitate, which require complex, difficult managerial efforts. For example, managers must train staff to provide a high level of personal service, customize products, or prepare them on-site. For experience goods that already involve a higher service component, the retailer can thus influence the value created (Watson, Worm, Palmatier, & Ganesan, 2015). The potential of a low utility level, due to choosing a suboptimal retail format, increases when consumers are seeking products with substantial service components. Similarly, research on convenience and specialty goods shows that for low-effort convenience goods, the retailer's service quality is relatively unimportant (Pan & Zinkhan, 2006). Therefore, when buying search goods, the atmosphere and service level may be less important criteria for retail format selections.

H1a. To select formats in an on-the-go consumption situation, functional format utility is less important for consumers who buy search goods as opposed to experience goods.

H1b. To select formats in an on-the-go consumption situation, economic format utility is more important for consumers who buy search goods as opposed to experience goods.

H1c. To select formats in an on-the-go consumption situation, psychological format utility is less important for consumers who buy search goods as opposed to experience goods.

Formats differ in the utility that they deliver to consumers (Choudhury et al., 1999). Expected utility reflects evaluations of the anticipated costs and benefits of each format (Sweeney et al., 1999). Among the many formats available to consumers (Hunneman et al., 2017), the most relevant ones for on-the-go purchases include small supermarkets, discount stores, convenience stores, and specialty stores (Bhamangara & Ratchford, 2004; Popkowski Leszczyc et al., 2004; Reutterer & Teller, 2009; Watson et al., 2015).

According to multi-attribute utility theory, decision makers choose either the optimum or a good-enough option (Wallenius et al., 2008). The optimal format is the one with the highest expected utility, reflecting the combined importance of the three utility dimensions, spanning the six store attributes and the expected performance of different formats. When one attribute (e.g., price) is very important to a consumer, it influences the format selection more than other criteria (e.g., variety), so the format's expected performance regarding this criterion (e.g., price, value of a format) influences the format choice to a greater extent.

However, because on-the-go shopping situations rarely trigger in-depth considerations (Bell et al., 1998), a shopper might not engage in the effort to find the retail format with the highest expected utility but instead accept a format that is good enough (Wallenius et al., 2008)—that is, within a “tolerable range.” These tolerable ranges should differ, depending on whether consumers buy search goods that they can evaluate in advance or experience goods that evoke more risk because they can only be evaluated after consumption (Maiti & Dass, 2014; Nelson, 1970). In turn, for search goods, the actual product should provide the main indicator of quality, and the format attributes become less important. Retailers mainly need to make products available to consumers, so the formats and their attributes become largely interchangeable. For search goods, the tolerable range of the retail format selection should thus be wider. In contrast, for experience goods, the retailer exerts a higher influence on the product—and product risk is higher—so consumers might fear low utility levels, such that they develop a narrower tolerable range of store formats. Formally,

\[ H_2. \text{Consumers shopping for search goods while on the go have a wider tolerable range of retail formats than those shopping for experience goods.} \]

Finally, retail format selection also depends on consumer attitudes, preferences, and past patronage behavior and intentions (Blut et al., 2018; Fox et al., 2004; Valenti et al., 2011). For example, someone with less frequent exposure to on-the-go purchase (and consumption) occasions—who thus displays a lower degree of behavioral loyalty toward on-the-go formats and is less familiar with the retail environment—is more challenged by making their format selections (Blut et al., 2018; Valenti et al., 2011). By contrast, shoppers who more regularly engage with purchases on the go and thus have a better knowledge of retailers or formats experience less uncertainty in their selection decisions (Choudhury et al., 1999). Therefore, frequent on-the-go shoppers can evaluate a retail format's potential utility at a lower cost and with less risk. In turn, they should be less affected by the shopping situation (search/experience good) compared to infrequent shoppers, leading to a wider tolerance range that makes them more willing to depart from an optimal retail format.

H3. The impact of the shopping situation (search versus experience good) on the tolerable range of retail formats for on-the-go consumption is stronger for frequent on-the-go shoppers.

3. Methodology

3.1. Experimental design, manipulation, and sample

To test our framework, we used a vignette-based experiment embedded in a self-administered online questionnaire. To operationalize on-the-go shopping situations with different risk levels (Maiti & Dass, 2014), the scenarios refer to a search good that can be evaluated before the purchase (bottled water or a soft drink) and an experience good that can only be evaluated after its purchase (freshly prepared hot drink; Nelson, 1970). Generally, both products are available in the suggested retail formats of the chosen retail market. In the empirical setting for this study, both types of products tend to feature manufacturer brands (e.g., Evian, Coca-Cola, Starbucks, Segafredo, Lavazza, etc.). However, the water/soft drink has more search attributes related to the manufacturer brand, whereas the hot drink features fewer search attributes and more experience attributes because it is prepared in the store by staff members.

We developed the questionnaire and experimental manipulation on the basis of prior literature and in collaboration with four wholesale managers who have expertise in on-the-go shopping markets and who work with different retail clients operating various store formats. To ensure that the survey respondents understood the context of on-the-go food shopping, the questionnaire started with questions about their probability of encountering such shopping situations (e.g., buying bottled water, snacks, soft drinks, or coffee to go). Then in the experimental manipulation, a scenario asked respondents to imagine buying either a branded, prepackaged drink (search good) or a freshly prepared hot drink (experience good). A manipulation check (three items, adapted from Chaudhuri, 1998, \( \alpha = 0.772 \)) confirms that risk perceptions for the search good were lower than those for the experience good (\( M_{\text{experience}} = 2.87, M_{\text{search}} = 2.37, p < .01 \)). The measure of on-the-go purchase and consumption frequency used a five-point scale, borrowed from Benoit, Schaefers, and Heider (2016, \( \alpha = .848 \); see the Appendix).

A professional market research firm recruited the sample, and 514 German-speaking consumers completed the questionnaire. The market research firm was instructed to use quotas to achieve representation of the overall population in terms of age and gender. The average age in the sample is 42.2 years, and 54.6% are women.

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1 The sample size was \( n = 514 \) for all analyses except for assessing the impact of risk on zone of tolerance, where we had 85 missing values because the combined utilities reported did not add up to 100.
3.2. Dependent variables

This study includes two dependent variables: (1) the importance of functional, economic, and psychological format utilities when selecting a format; and (2) the tolerable range of formats. In line with prior literature (Blut et al., 2018; Fox et al., 2004; Valentini et al., 2011), we used the six previously described retail format attributes and linked them to three utility categories: functional (quality and variety), economic (price and speed), and psychological (service and atmosphere; Fig. 2). To start, we measured the importance of the utility components by asking respondents to allocate 100% across all six attributes. The test of \( H_{2a} - H_{2e} \) used two items to measure functional utility \((r = -0.192, p < .01)\), two items to measure economic utility \((r = -0.245, p < .01)\), and two items to measure psychological utility \((r = 0.370, p < .01)\). We evaluated the impact of the search versus experience good manipulation on the importance of these utility dimensions. Then, to test \( H_2 \) and \( H_3 \), we sought to capture the tolerable range of retail formats from which consumers would be willing to purchase. Thus, we applied our proposed SAU-FS framework in several steps, as detailed in Fig. 3. We first developed a list of relevant formats for on-the-go shopping, based on available market share data from different industry sources. The wholesale experts reviewed this list and confirmed seven formats: supermarkets, discounters, bakeries, forecourt stores, corner shops, fast food stores, and coffee shops. Next, to calculate the (weighted) expected utility of each format, we asked the respondents to evaluate this expected attribute utility with regard to the retail attributes (quality, variety, price, speed, service, and atmosphere) on seven-point scales anchored by “very negative” (1) and “very positive” (7). We subsequently weighted the expected utility by the importance of each attribute, as specified by respondents (100 points distributed across all dimensions and for all formats). This step enabled us to calculate the weighted expected utility of each of the seven formats.

To derive the tolerable range of retail formats, for each respondent we calculated the difference between the format with the highest weighted expected utility (optimal format) and the format with the lowest weighted expected utility that they still visited for the manipulated product within the previous four weeks, indicating that it was “good enough” (see Fig. 4). The four-week, concrete time limit helps enhance the validity of the results, because when studying situation specificity, more specific time frames yield more reliable results (Goldsmith, Freiden, & Eastman, 1995). For example, for respondent A, the coffee shop had the highest expected utility, but A also indicated buying a coffee in the bakery and fast food store in the previous four weeks. The format with the lowest expected utility marks one end of the tolerable range, and the optimal format is the other end. Formats that the respondents did not choose fall outside this tolerable range.

4. Results

The tests of the hypotheses rely on both multivariate analyses of variance (MANOVA) for \( H_{2a} - H_{2e} \) and analyses of variance (ANOVA) for \( H_2 \) and \( H_3 \). The search good versus experience good manipulation is the independent variable (IV); the format utility dimensions and format selection are dependent variables (DV). The results in Table 1 indicate that for search goods, functional and psychological format utilities are less important considerations for retail format selection (cf. experience goods), in line with \( H_{2a} \) and \( H_{2c} \). Conversely, economic utility is more important for format selection for search goods compared with experience goods, confirming \( H_{2b} \) as well. Turning to \( H_2 \), we find that the tolerable range of formats for a search good purchase is significantly wider than that for an experience good purchase \((M_{\text{search}} = 128.05; M_{\text{experience}} = 99.13; p < .01)\). This interesting finding suggests that consumers are more particular about their selection of format when they perceive the purchase as riskier, because it has fewer search attributes. In line with this interpretation, respondents in the experience good condition considered 2.168 formats on average, whereas those in the search good condition indicated having visited significantly more formats, at 2.579 \((F = 3.943; p < .05)\). Finally, we assessed whether the impact of the consumption situation (search good versus experience good) on the tolerable range of formats was moderated by consumers’ on-the-go purchase and consumption frequency. The marginally significant moderation of experience is in line with \( H_3 \) \((p < .1, F = 1.583)\). We also note two significant main effects of the search/experience good manipulation \((p < .01, F = 8.947)\) and purchase frequency \((p < .01, F = 2.408)\). Less frequent shoppers have considered 1.94 formats in the past, compared with the 3.44 formats \((p < .01, t = 16.891)\) considered by more frequent shoppers.

5. Implications

5.1. Implications for theory

5.1.1. Impact of the shopping situation on retail format selection

This study addresses a persistent literature gap regarding consumers’ format selections for more immediate, on-the-go shopping trips. In so doing, it contributes to the literature on retail format selection in general (Blut et al., 2018) and the impact of the shopping situation on format selection in particular (Van Kenhove et al., 1999). We find clear evidence that format selection depends on the shopping situation. By testing these aspects in an on-the-go shopping situation, we complement findings obtained with larger baskets (Bell et al., 1998; Messinger & Narasimhan, 1997), which require consumers to go through various decision stages before selecting a retail format (Balasubramanian et al., 2005; Valentini et al., 2011).

5.1.2. Conceptualization of situational impacts on format selection

Complementing work by Blut et al. (2018), we contribute to retail patronage literature by developing a conceptual framework in which the shopping situation affects the importance of retail format attributes, linked to three utility dimensions: quality and variety (functional), price and speed of service (economic), and the atmosphere and service (psychological). We argue that format selection is an outcome of a decision process. It reflects the degree to which shoppers perceive the capability of a format and its utility to fulfill their expectations. We name the proposed framework SAU-FS, to highlight the situation–attributes–utility–format selection elements.

5.1.3. Consumption situation and format utility dimensions in format selection

Departing from Van Kenhove et al. (1999), this research expands the current understanding of the impact of the shopping situation associated with the product category and on-the-go consumption. We test whether purchasing a search or experience good affects which utility dimensions are most important for selecting a format. The findings reveal that for search goods, functional and psychological format utilities are less of a concern for shoppers when choosing a format.

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\(^2\) While functional risk is highest when quality and variety are most important, and economic risk is highest when price and convenience are most important, we note a negative correlation between the two items to measure functional utility and the two items to measure economic utility. This suggests that customers make trade-offs between quality and variety (functional risk) as well as between price and convenience (economic risk).

\(^3\) To validate the results, we replicated the experiment with another product category relevant to on-the-go consumption: snacks. A pre-packaged snack such as a chocolate bar, ice cream, or salty snack served as the search good \((n = 127)\); a freshly prepared snack such as a filled roll, salad, or hot snack was the experience good \((n = 126)\). The results similarly support the hypotheses. These results are available on request.
whereas economic utility is more important. When buying search goods, consumers do not fear that the channel will influence their quality, so the atmosphere and service become negligible. Previous research similarly indicates that for low-effort convenience goods, people overlook retail service quality (Pan & Zinkhan, 2006). We also complement Bell et al.’s (1998) studies of large baskets and reveal that the danger of low economic utility (losing money or time) is more important for search goods, for which consumers seek to avoid high transaction costs such as those imposed by waiting in line.

5.1.4. Shopping situations and tolerable ranges
Consumers patronize ranges of formats, and the number of formats that they consider differs across shopping situations. For search goods, consumers consider a wider range of formats. Take this example: When consumers look to buy a Coke, they would be willing to visit 2.65 formats on average, but if they were trying to purchase a fresh potentially personalized coffee, they would consider only 2.14 formats. For search goods, a considerable number of consumers still visit their third-most preferred format, but they would not expand their consideration set this far if they wanted to buy an experience good. We can thus conclude that consumers who buy experience goods are willing to accept higher transaction costs to access their preferred format.

5.1.5. Role of the on-the-go purchase and consumption frequency
We investigated how experience might affect format selection. Adding to Choudhury et al.’s (1999) findings, we show that increased on-the-go shopping frequency widens the number of formats considered across different shopping situations. For search goods, a more frequent shopper considers a wider range of retail formats than less frequent on-the-go shoppers do.

5.2. Managerial implications
5.2.1. Understanding on-the-go shopping
Store-based retailers must understand not just their customers but also their specific shopping situations. With such an understanding, they can make more informed investment decisions with regard to how to improve store attributes and marketing instruments such as costly services, infrastructure elements such as checkout areas, and store atmospheres. Increasing service levels tends to be a costly undertaking, so retailers must determine whether those investments are likely to pay off; if the retailers mainly sell search goods, such as branded FMCGs,
they might instead prioritize offering favorable prices, speedy service, and simpler layouts rather than higher service levels or more comfortable atmospheres. However, for experience goods, psychological utility provided by a high service level and appealing atmosphere is more important (Table 2).

### 5.2.2. Changing positioning requires changing priorities

Many retailers that offer products for immediate consumption have adjusted their assortments to offer more health-oriented, fresh products, reflecting societal trends (Benoit et al., 2016). Our research informs these retailers that when they change their positioning, they also need to change their priorities related to the overall offering. For traditional assortments to support immediate consumption—such as those featuring prepackaged, branded products—the price level and speedy service are most important. If the assortment shifts toward healthier, often freshly prepared assortments, other criteria become more important—such as the atmosphere, service level, and assortment variety.

### 5.2.3. Importance of time and money

In on-the-go shopping situations, buying a search good increases the importance of economic utility. For retailers, especially those that operate a variety of formats, it means that consumers likely have different tolerances for waiting times and price levels—depending on the products they buy and not just on personal factors like situational time pressures or (more general) time consciousness and price sensitivity. For experience goods, consumers are more accepting of transaction pressures or (more general) time consciousness and price sensitivity. For experience goods, consumers are more accepting of transaction pressures or (more general) time consciousness and price sensitivity.

### 5.2.4. Competitive landscape

For search goods, consumers consider a wider range of competitors, such that even the most preferred retailer competes with 1.65 other formats on average. For experience goods, the preferred retailer needs to compete with only 1.14 other formats. This link is even more pronounced for more frequent on-the-go shoppers. For retailers, shoppers with the highest overall frequency of on-the-go purchases may be their most disloyal customers. Instruments like loyalty cards could work to counteract these effects and might influence how consumers ultimately select a certain type of format.

### 6. Limitations and further research

Several limitations of our study suggest avenues for further research. We operationalize on-the-go shopping situations with different product types (bottled water/soft drinks and freshly prepared hot drinks). We also replicate the results for two additional search and experience goods (pre-packed snacks and freshly prepared snacks). However, our empirical focus is limited to two types of search products and two types of experience products. Thus, future research could investigate consumers’ format selections of other food, non-food items, and beverage product categories—thereby comparing search products (low risk) and experience products (high risk) within each product category. The shopping situation is highly relevant for food items, prompting our focus on store-based grocery formats. Further research could include other product categories and formats such as online or hybrid formats like click and collect. Our online experiment refers to format selections over the previous four weeks, such that we do not capture the availability of formats at the moment that the need arises, which is a gap that should be addressed by further research. The main dependent variable compares the tolerable range of formats in two shopping situations, which suggests interesting insights into the different importance of format attributes; continued research might use conjoint analysis to reveal customer segments on the basis of these format selections. Finally, our empirical setting includes only developed retail environments with high store density and advanced retail infrastructure. Replication studies could look into developing environments.

### Acknowledgments

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### Appendix A. Experimental setting and survey items

#### Introduction and framing

This study investigates how and where you buy and consume food or drinks on the go (e.g., drinks, bars, filled rolls, or an entire meal). When on-the-go consumption is mentioned in the following questionnaire, it is referring to situations in which you are on your way home or to work and buy something to eat/drink promptly while you are still on your way. It can also refer to when you stop while you are on your way somewhere during leisure time to grab a snack/drink that you consume while on your way.

This means that we do not want to investigate situations of “normal” restaurant visits, in which you deliberately travel to a restaurant for this purpose. We also do not want to investigate the consumption of meals in staff canteens or cafeterias provided by employers or educational institutions. Also, we do not include shopping situations in which you do your weekly grocery shopping or use home delivery/take-away from some restaurant.

We are interested in your personal choice and your experience. There is no right or wrong answer, so please answer as honestly as possible.
Experimental manipulation of search good versus experience good

You are on the go (to work, home from work, or during leisure time) and want to buy a bottle of water or a soft drink for immediate consumption. You are on the go (to work, home from work, or during leisure time) and want to buy a hot drink, like coffee or tea, for immediate consumption.

Survey items

Manipulation check risk: Please imagine the above situation, in which you consume ____ (repeat product from introduction), and rate the following statements (7-point scale, very low - very high, α = .772):

| What are the chances that there will be something wrong with products bought for on-the-go consumption? | 2.56 (1.46) |
| What are the chances that you stand to lose money if you consume a product to go? | 3.49 (1.78) |
| What are the chances that you are taking a risk with the bought product? | 2.49 (1.48) |

Attribute importance: Please imagine the above situation, in which you consume ____ (repeat product from introduction). Which of the following aspects is important to you? Please allocate 100 to the following six aspects:

<table>
<thead>
<tr>
<th>Functional utility</th>
<th>Economic utility</th>
<th>Psychological utility</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>% Quality of the assortment</em></td>
<td><em>% Price level</em></td>
<td><em>% Service</em></td>
</tr>
<tr>
<td>25.97 (16.56)</td>
<td>19.47 (11.58)</td>
<td>8.66 (7.46)</td>
</tr>
<tr>
<td><em>% Variety of the assortment</em></td>
<td><em>% Quick shopping</em></td>
<td><em>% Atmosphere</em></td>
</tr>
<tr>
<td>14.97 (11.58)</td>
<td>20.59 (16.14)</td>
<td>6.08 (6.29)</td>
</tr>
</tbody>
</table>

Format selection: Please imagine the above situation on the go and try to remember the last four weeks. Please indicate all the providers that you have visited to buy ____ (repeat product from introduction):

| _Small supermarket (e.g., REWE To Go) (SM)_ | _Discount (e.g., Aldi, Lidl) (DI)_ |
| _Corner shop (CO)_ | _Forecourt store at petrol station (FS)_ |
| _Bakery (BA)_ | _Fast food restaurant (e.g., McDonald’s, Subway) (FF)_ |
| _Coffee shop (e.g. Starbucks, Segafredo) (CS)_ | _None of these providers_ |
| .48 (.50) | .27 (.45) |
| .49 (.50) | .42 (.49) |
| .23 (.42) | .36 (.48) |
| .23 (.42) | .02 (.14) |

Expected utility of format: Please imagine the above situation, in which you consume ____ (repeat product from introduction). Try to remember all the experiences with the below retail formats, and evaluate the experience (7-point scale, very negative – very positive, mean (standard deviation)):

<table>
<thead>
<tr>
<th>Quality of the assortment</th>
<th>Variety of the assortment</th>
<th>Price level</th>
<th>Speedy shopping</th>
<th>Service</th>
<th>Atmosphere</th>
<th>SM</th>
<th>DI</th>
<th>BA</th>
<th>FS</th>
<th>CO</th>
<th>CS</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.67 (1.11)</td>
<td>5.80 (1.19)</td>
<td>5.23 (1.31)</td>
<td>4.91 (1.36)</td>
<td>4.77 (1.32)</td>
<td>4.68 (1.34)</td>
<td>4.95 (1.44)</td>
<td>4.96 (1.44)</td>
<td>5.11 (1.19)</td>
<td>4.95 (1.19)</td>
<td>4.96 (1.36)</td>
<td>4.07 (1.47)</td>
</tr>
<tr>
<td>5.91 (1.06)</td>
<td>5.23 (1.34)</td>
<td>4.18 (1.50)</td>
<td>5.27 (1.19)</td>
<td>5.60 (1.06)</td>
<td>5.45 (1.13)</td>
<td>4.72 (1.42)</td>
<td>5.43 (1.39)</td>
<td>4.37 (1.35)</td>
<td>3.85 (1.47)</td>
<td>3.74 (1.39)</td>
<td>4.31 (1.61)</td>
</tr>
</tbody>
</table>

On-the-go purchase and consumption frequency: Please indicate how much you agree/disagree with following statements (5-point scale, very negative – very positive, α = .848)

When I’m out and about, I regularly buy something to eat or drink along the way.
When in the future, I will continue to regularly buy something to eat or drink along the way.

<table>
<thead>
<tr>
<th>SM</th>
<th>DI</th>
<th>BA</th>
<th>FS</th>
<th>CO</th>
<th>CS</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.09 (1.36)</td>
<td>3.60 (1.29)</td>
<td>3.42 (1.25)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

References
