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# Factors Affecting Omnichannel Buying Online and Return in Store: Evidence From Fast-Fashion Retail

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## Abstract

**Purpose:** We analysed the operations of two synchronised channels by focusing on "buy online and return in store" (BORS) strategies in fast-fashion retail by investigating internal and external factors affecting this omnichannel strategy.

**Design/methodology/approach:**

We apply a combination of techniques to identify the BORS factors. Firstly, a strengths, weaknesses, opportunities, and threats (SWOT) analysis was used to define the operational factors of BORS adoption. We then apply Analytic Hierarchy Process (AHP) to evaluate the factors under four SWOT categories for kids, male and female consumer groups. The factors of BORS were then ranked using the fuzzy VlseKriterijumska Optimizacija I Kompromisno Resenje (Fuzzy VIKOR) approach.

**Findings:** Combining the SWOT, AHP and Fuzzy VIKOR techniques, we identified twenty-one factors in this study. The opportunity that BORS provides for trying in the fitting room for a better convenient shopping experience was ranked as the most important factor, followed by the opportunity to create a loyal customer profile with an easy and well-organised return process. Furthermore, the results reveal that the child consumer group is the most critical of the stated operations factors, followed by male and female consumers.

**Originality:** Our study contributes to the growing literature on the BORS omnichannel strategy, specifically for fast-fashion retail based on consumer needs.

**Practical implications:** We described the operational factors and supported the decision-making system of BORS for each consumer group with a priority ranking to realise effective managerial management for fast-fashion retailers and practitioners.

**Keywords:** BORS, fast-fashion, Fuzzy VIKOR, MCDM, omnichannel, operations management, SWOT-AHP, consumer, retail, e-commerce, decision-making, product returns

**Paper Type:** Research paper

## Introduction

Consumers and businesses are moving to e-commerce ventures (Cao *et al*., 2020) because the world is becoming more digital (Caliskan *et al*., 2021). In the UK, the market share of e-commerce increased from 13.5% in 2014 to 15.2% and 16.8% in 2015 and 2016, respectively (PushOn, 2018). In addition, several retailers now use multichannel retail solutions (Huan *et al*., 2019; Reinartz *et al*., 2019), which combine brick-and-mortar stores and online channels (Ozuem *et al*., 2017; Rezaei and Valaei, 2017). These trends have piqued the interest of consumers as well: Deloitte (2014) reported that 63% of German and British shoppers who spent over £100 used multichannel solutions.

Although store returns enhance customer satisfaction through a smooth shopping experience, they cause managerial challenges. The main problem for retailers is managing the operational costs of the returns. Customer abuse of returns can reduce retailer profitability by 4.3% (Kang and Johnson, 2009). This paper focuses on fast-fashion retail, which has high rates of product returns (Difrancesco *et al*., 2018; Cook and Yurchisin, 2017) and a market characterised by rapid changes (Ovezmyradov and Kurata, 2019). The affordable prices of fast-fashion products encourage consumers to overbuy online (Fares and Lebbar, 2019); on the downside, clothes' colour, knit, and fit cannot be controlled during online purchases, necessitating an efficient physical return channel.

This topic is worth researching, given the need for physical returns after online purchases. For example, in Spain, where consumers demand a communication and interaction channel, omnichannel account for 40% of the market (Lorenzo-Romero *et al*., 2020). KPMG (2016) reported that 23% of fashion customers intend to return their online purchases. These trends make combining online and physical flows into one channel highly profitable. According to BoF and McKinsey's (2020) findings, the presence of a physical store in a new market increases online sales by 20–25%. These promising numbers make "buy online and return in store" (BORS), a compelling omnichannel strategy.

Thus, our work is motivated by the increasing interest in omnichannel retail (Song *et al*., 2019). There is a mounting interest in omnichannel involvement by both practitioners and researchers. This study focused on a single omnichannel strategy dealing with online purchases and physical returns, i.e., BORS, to provide clear insights and identify the implications (Huang and Jin, 2020; Lorenzo *et al*., 2020).

Recent studies (Huang and Jin, 2020; Lorenzo-Romeo *et al*.,2020; Alaei *et al*., 2020) analysed the BORS strategy from the perspective of supply chain processes and spill-over impacts. However, these studies lacked decision-making support to help fast-fashion retailers determine their omnichannel management priority. Given this context, we summarise our research questions as follows.

RQ1: What are the internal and external factors affecting the BORS omnichannel strategy in fast-fashion retail?

RQ2: What is the ideal ranking of these factors for prioritising operations decisions while overcoming the threats and weaknesses of physical returns?

To answer these questions, we used strengths, opportunities, weaknesses and threats (SWOT), fuzzy VlseKriterijumska Optimizacija I Kompromisno Resenje (VIKOR), and analytic hierarchy process (AHP) integrated methods. The SWOT analysis identified internal and external factors affecting the BORS strategy. The AHP was used due to its analytical power of pairwise comparison. The combination of SWOT-AHP has been used in recent literature (e.g., Solangi et al., 2019; Kaymaz et al., 2021). For example, Fares and Lloret (2022) recently utilised this approach to identify agility factors pertinent to retail maturity management, focusing on post-COVID-19 management investigation. The fuzzy VIKOR, also known as the compromised ranking method, is used to find a compromised solution to the fuzzy multi-criteria problem. Existing studies have shown that combining these approaches provides more accurate ranking results (Opricovic, 2011; Solangi et al., 2019; Fares and Lloret, 2023).

The results indicate that trying in the fitting room for a better convenient shopping experience was ranked as the most important factor, followed by the opportunity of creating a loyal customer profile with an easy and well-organised return process. Further, among consumers, the child demographic is the most critical group for omnichannel fast-fashion retailing, followed by males and females. We compare the results of this study with those reported in the existing literature by performing a sensitivity analysis to demonstrate the robustness of the proposed decision-making system. The qualitative mining of operational factors helps identify the implications for practitioners in fast-fashion retail by describing and prioritising the internal and external operations adaptations to be conducted on the processes as per expert feedback and literature validation.

The main contribution of this study is identifying the relationship between customer demand in terms of omnichannel BORS and the internal operational and managerial challenges. It is crucial to determine customer expectations and business constraints to establish an omnichannel in fast-fashion retail. The findings can help fast-fashion retailers overcome the threats and weaknesses of physical returns following online sales by exploiting the relevant opportunities and strengths.

The remainder of this paper is organised as follows: Section 2 presents the theoretical background and literature review; Section 3 describes the methodology; Section 4 presents the case study; Section 5 outlines and discusses the results; and finally, Section 6 concludes the paper.

## Theoretical background and literature review

Although "offline" and "online" were once considered separate, opposing concepts, modern markets combine the two in forms such as "buy-online-and-pickup-in-store" (Xu *et al*., 2021); this ease of shopping accelerates product returns and exchanges. These emerging consumer engagement and purchase patterns continually drive retail firms to seek new and improved strategic management goals considering omnichannel. Accenture's (2018) market

research shows that 85% of the surveyed retailers adopted at least one omnichannel. As a result, retailers often plan to develop a retail business infrastructure that can handle BORS services in response to consumer needs. For example, *Zara* popularly employs the BORS strategy (Mosquera *et al*., 2019), which offers the primary advantage of efficiently managing returns (Huan *et al*., 2019).

Omnichannel retailing has triggered the interest of researchers. Recent literature includes Solem et al. (2023) work, where they used a qualitative exploratory design with in-depth interviews of Generation Z customers and retail firms were used to provide insights into the dynamic capabilities necessary for obtaining omnichannel retailing. Pereira et al. (2023) explored impulse buying as a consumer behaviour outcome in omnichannel retail through the stimulus-organism-response theory. In addition, Zonghuo et al. (2023) developed a stylised model to explore omnichannel coupon promotion strategies considering consumers' time sensitivity in redeeming coupons. Furthermore, Chen et al. (2023) explored the effect of channel integration quality on consumer responses within omnichannel retailing. The authors investigated the influence of channel integration quality on consumer perception and response from the individual customer perspective.

*Omnichannel factors*

Our literature review first considered omnichannel's internal and external operational factors in fashion retail. Most extant studies performed qualitative mining to reveal interactions with consumer experience. A major observation from this literature is that omnichannel requires a holistic business connection to integrate multiple channels; our study builds on this by discussing the obtained SWOT operations and correlating them with those reported in the existing literature. Researchers have worked extensively to find the driving factors that help turn multiple channels into omnichannel. The digital transformation of this century has played a catalytic role in this change. For example, Aiolfi and Sabbadin (2019) confirmed the value created for consumers through Retail 4.0; Alexander and Kent (2020) and Karadag and Erdogmus (2020) analysed the influence of this change on the purchasing journey from the consumer's perspective. These findings reveal the importance of technology in consumer experience, especially in omnichannel. Such changes require both internal changes and exchange upgrades in retail process management.

External influences on shopper behaviour have been studied previously. For example, Kang (2017) defined "rooming" and "web rooming" as online consumer behaviours associated with the omnichannel. Mosquera *et al.* (2019) also identified such clusters of omni-shoppers, while Silva *et al.* (2020) identified market segments in apparel retail that helped brands manage their channel strategy. Cabihiosu (2020) assessed the opportunities and strengths of logistics strategies among competitors; however, they limited their sample to small and medium-sized enterprises (SMEs).

In addition, other studies have focused on the internal operations management of omnichannel. Based on a sample of department stores, Kent *et al.* (2016) identified touch points in developing and integrating an omnichannel strategy. Ovezmyradov and Kurata (2019) presented a model to track order size by analysing holding costs and out-of-stock

fashion products, which was later extended by Yang and Zhang (2020), who investigated the relationship between ship-to-store and quick response.

Nevertheless, these above-mentioned studies do not directly enhance the decision-making process; the literature on decision-making offers key insights to decision-makers working in different operations. For example, Mishra *et al.* (2020) presented a general literature review of consumer decision patterns in omnichannel retail. Sodero and Rabinovich (2019) established a decision-making system based on a demand profile not specific to omnichannel. Lynch and Barnes (2020) addressed this limitation by examining decision-making in omnichannel purchases from a consumer perspective. While the literature on this topic remains limited, the available studies are too generic to explore decision-making in omnichannel strategies. Prabhuram *et al.* (2020) evaluated the network configuration of performance distribution for omnichannel; they claimed that their study was the first to apply a multi-criteria decision-making system.

Although few studies offer insights into the overall analysis of return policies (Alaei *et al*., 2020) and BORS management (Huang and Jin, 2020; Mandal *et al*., 2021; Kong *et al*., 2020), they neglect fast-fashion retail. The consumption of fast-fashion products has been increasing because of their short lifecycle (McNeill and Moore, 2015; Bianchi and Birtwistle, 2012; Degenstein *et al*., 2020). This rapidly evolving market is driven by affordable prices (Jung and Jin, 2014), with hedonistic consumers increasing purchasing demand (Wiederhold and Martinez, 2018) because consumers consider clothing a way to express their personalities (Weber *et al*., 2017).In addition, the literature fails to differentiate between children, male, and female consumer demographics, despite there being different purchasing patterns between young female and male consumers and followers (Morgan and Birtwistle, 2009; Workman and Studak, 2006). Our research indicates a limited understanding of the decision-making system for managing a BORS strategy in fast-fashion retail. Thus, the rankings of multi-criteria decision-making are crucial for effective action management (Kumar *et al*., 2021).

*BORS strategy*

Huang and Jin (2020) analysed BORS from a supply chain perspective and found it more commonly applied among competing retailers; this strategy is useful for fast-fashion retail because it is not a monopolistic market. They argue that retailers should make their operations more efficient by improving staff, warehouse, and returns process management to make BORS profitable. Similarly, Lorenzo-Romero *et al.* (2020) focused on the supply side of the omnichannel in fashion retail in Spain; they highlight the merging of offline and online shopping experiences into one channel, a comparatively new trend for consumers. This change from "duality" to "synergy" through an integrated omnichannel has attracted considerable attention in market research. Other studies have identified key management themes in cross-channel management (Alaei *et al*., 2020) and buying online and picking up in-store (Kong *et al*., 2020), while others have focused on BORS supply chain management (Huang and Jin, 2020) and decision-making support for products (Mandal *et al*., 2021).

While these studies holistically explore decision-making support, there are fewer studies on decision-making in consumer groups, especially given how gender differences, among

other factors, affect purchase behaviour (Cox and Dittmar, 1995). We believe that the features of omnichannel operations and associated managerial decisions in apparel and fast-fashion operations are yet to be explored, and their understanding is crucial for retailers (Bell *et al*., 2014). Once these features are defined, management can design and implement more effective actions (Kumar *et al*., 2021).

**Methodology**

We first defined the BORS strategy's internal and external operational factors (see Figure 1 for the workflow of our method). This approach uses the SWOT analysis to identify the internal and external factors for managing the omnichannel BORS strategy in fast-fashion retail. Then, the Fuzzy VIKOR analysis is performed to assess the criticality level of the internal and external environments. Finally, we integrate the AHP analysis to rank the respective operation levels of the consumer demographic segment, i.e. children, males, and females.

[Figure 1 here]

*Fuzzy VIKOR*

The VIKOR method was used by Opricovic (1998) to find an optimal solution; its main principle is to find the solution with the largest distance from the positive ideal solution (Akram *et al*., 2021). The steps of Fuzzy VIKOR are described as follows (Opricovic, 2011; Liu *et al*., 2012; Kazancoglu *et al*., 2021):

Step 1: Forming the decision-making group

Step 2: Aggregating the fuzzy rating of the experts:

$$x_{ij} = \{x_{ij1}; x_{ij2}; x_{ij3}; x_{ij4}\}, \quad (1)$$

where

$$x_{ij1} = \min \{x_{ijk1}\}, \quad (2)$$

$$x_{ij2} = \frac{\sum x_{ijk2}}{k} \quad (3)$$

$$x_{ij3} = \frac{\sum x_{ijk3}}{k}, \quad (4)$$

$$x_{ij4} = \max \{x_{ijk1}\}. \quad (5)$$

In the same way, we aggregate the weights

Step 3: We defuzzified the matrix to crisp values using the formula used by Ramavandi *et al*. (2021).

$$\text{Defuzz}(x_{ij}) = \frac{-x_{ij1}x_{ij2}+x_{ij3}x_{ij4}+\frac{1}{3}(x_{ij4}-x_{ij3})^2-\frac{1}{3}(x_{ij2}-x_{ij1})^2}{-x_{ij1}-x_{ij2}+x_{ij3}+x_{ij4}}. \quad (6)$$

Step 4: Calculating the fuzzy best value $\widetilde{f_j}^*$ and fuzzy worst value $\widetilde{f_j}^-$.

$$\tilde{f_j}^* = \max_i \tilde{x}_{ij}, \quad (7)$$

$$\tilde{f_j}^- = \min_i \tilde{x}_{ij}. \quad (8)$$

Step 5: Calculating$\tilde{d}_{ij}$.

$$\tilde{d}_{ij} = \frac{(\tilde{f_j}^* - \tilde{x}_{ij})}{(\tilde{f_j}^* - \tilde{f_j}^-)}. \quad (9)$$

Step 3: Calculating$\tilde{S}_i$ and $\tilde{R}_i$which indicates the separation of the $i^{th}$alternative from $\tilde{f_j}^*$ and $\tilde{f_j}^-$ respectively, while$w_j$is the weight of the respective criterion.

$$\tilde{S}_i = \sum_{j=1}^{m} w_j * \tilde{d}_{ij}, \quad (10)$$

$$\tilde{R}_i = \max_j w_j * \tilde{d}_{ij}. \quad (11)$$

Step 4: Knowing that$v$ is the weight of the maximum group utility, and (1- $v$ ), the weight of an individual target.

We assume here that$v$ =0.5.

$$\tilde{R}^* = \min_i \tilde{R}_i, \quad (12)$$

$$\tilde{R}^- = \max_i \tilde{R}_i, \quad (13)$$

$$\tilde{S}^* = \min_i \tilde{S}_i, \quad (14)$$

$$\tilde{S}^- = \max_i \tilde{S}_i, \quad (15)$$

The $\tilde{Q}_i$ value is found as follows.

$$\tilde{Q}_i = \frac{v(\tilde{S}_i-\tilde{S}^*)}{(\tilde{S}^- - \tilde{S}^*)} + \frac{(1-v)(\tilde{R}_i-\tilde{R}^*)}{(\tilde{R}^- - \tilde{R}^*)}, \quad (16)$$

If the next two conditions are valid, the best solution is indicated by the minimum of $\widetilde{Q}_i$–.

1. $Q(A^{(2)})$-Q($A^{(1)}$)≥ DQ. (17)

Where DQ = 1/(J-1), while J is the number of alternatives.

2. $A^{(1)}$ is the best solution considering $\widetilde{S}_i$ and $\tilde{R}_i$ values.

If one of the conditions is not satisfied, the following compromise solutions are suggested.

-Alternatives$A^{(1)}$and $A^{(2)}$ if only condition 2 is not satisfied,

or,

- Alternatives $A^{(1)}$, $A^{(2)}$ , ...,$A^{(M)}$if condition 1 is not satisfied.

$A^{(M)}$ is determined by the relation Q($A^{(M)}$)-Q($A^{(1)}$< DQ for maximum M (the positions of these alternatives are 'in closeness').

*SWOT-AHP*

SWOT is a strategic analysis tool that assesses a strategy's strengths, weaknesses, opportunities, and threats based on internal and external factors (Bas, 2013). It helps practitioners develop strategies and define relevant factors influencing the internal process and external market. However, this process does not provide a significant decision driver and requires strong decision-making support (Garcia *et al*., 2011; Garcia *et al*., 2013; Lloret *et al*., 2009).

The AHP employs expert judgment to evaluate the effect of criteria based on managerial experiences in decision-making systems (Shi *et al*.,2008; Govindan *et al*.,2017). In AHP, a hierarchical structure is built between the criteria and sub-criteria (Chin *et al*.,1999) for pairwise comparison between different criteria, sub-criteria, and alternatives. The combined SWOT-AHP method can evaluate qualitative and quantitative data by listing SWOT factors and then prioritising them within a multi-criteria decision-making system.

**Case study**

We asked experts to define the factors of operations management using SWOT and the subsequent AHP rankings during interviews (see Table I). The experts were selected based on their accumulated knowledge and industry experience. We selected seven experts with an average of 15 years of experience, of which 10 years were in fast-fashion retail; these experts included buyers, retailers, and hypermarket directors.

The interviews followed a structured form with open-ended questions to describe operational factors. Qualitative analysis revealed insights about the topics of concern until semantic saturation was attained (Wilson, 2003). All experts were guaranteed anonymity and confidentiality (Longhurst, 2003). Closed questions were used for fuzzy VIKOR and AHP weightings. For that purpose, 5 experts were surveyed (Table II). Appendix 1 illustrates the linguistic variables used.

[Table I here]

[Table II here]

## Results and discussion

*SWOT analysis results and discussion*

Table III lists the SWOT analysis's 21 internal and external operational factors. For the group of experts, we define 21 prospective operational factors associated with retailers and consumers. We began with the management and consumer elements for each SWOT analysis section. Next, we considered all operational factors that interacted with the BORS strategy, as described below.

[Table III here]

*Factors of Strength*

The S1 factor describes how the BORS strategy helps decrease the brand's logistics costs (Hu *et al*., 2002; Jack *et al*., 2010; Piyachat, 2017), especially the reverse logistics. The company has to ensure its transportation, tracking, and all other related operations costs if the return is managed online.

The S2 factor describes how visiting a store (Rese *et al*., 2019; Rey-García *et al*., 2018) for a return can increase store sales. For example, under a good visual merchandiser, the return can be switched to a product exchange; further, consumers might be attracted to complementary or additional items, such as accessories.

The S3 factor refers to the control of returns by retail store staff. Normally, sales assistants ask consumers the reason for returning a product; such operations are redundant in omnichannel. However, a fast-fashion brand can obtain meaningful insights about consumer experience and needs (Kim *et al*., 2018; Bruce and Daly, 2006) that can improve operations by reporting to retail store managers and operations teams.

The S4 factor describes how the BORS strategy strengthens the brand's e-commerce turnover. Online purchases encourage consumers to increase their cart size (Liu *et al*., 2013; Jeffrey and Hodge, 2007), especially if they know they can physically return an item anytime.

The S5 factor emphasises the network of physical stores to consumers. Consumers may become loyal to the store and thus increase the store's network by visiting the closest physical stores and interacting with friendly customer service (Guzmán *et al*., 2009; Birtwistle *et al*., 1999).

The S6 factor is the quality of the return experience. If the return is managed online, delays may occur because of third-party logistics (Lieb *et al*., 1993; Wang and Abareshi, 2018), the hassle of filling out online forms and dealing with other processes that may be time-consuming for the consumer. Physical returns allow consumers to control their time, in addition to the benefit of a quick refund.

*Factors of weaknesses*

The W1 factor refers to the switching costs (Li *et al*., 2018; Chen *et al*., 2018) for physical and online operations. It is associated with tracking items on the channels, the reason for return, and data storage on the system, all of which are analysed to improve operations.

The W2 factor focuses on one of the main challenges in physical retail stores, given the "one piece" or "fragmented" products. When returns are sent to physical stores, consumers expect to find all sizes, colours, and models. When a consumer likes a product in the physical retail store but does not find their size or colour, this dissatisfaction can harm store reliability, which can lead to out-of-stock costs(Martino *et al*., 2016; Choi, 2013).

The W3 factor is the consumers' habitual online shopping, even when they are uncertain of their choice and take physical returns for granted. Such generous return policies promote excessive online purchases (Oghazi *et al*., 2018).

The W4 factor relates to consumers needing returned products or similar products. Substitution of products within the store's assortment (Ovezmyradov and Kurata, 2019) is crucial to fast-fashion retailers. After visiting the physical store and looking for an alternative, consumers will likely be dissatisfied with any unavailability.

The W5 factor focuses on the physical retail store presence in the consumer's area. Retail consumers' first selection criterion is geographical proximity (Vyt*et al*., 2017). Although BORS encourages more online shopping, the brand could lose potential clients who live outside the store's area.

*Factors of opportunities*

The O1 factor focuses on recovery after the consumer returns a product. Quick responsiveness enables direct human interaction to solve consumer problems. In addition, the physical store environment plays a crucial role in consumers' emotional responses and behaviours (Kumar and Kim, 2014).

The O2 factor describes how physical contact can be an opportunity for customised consumer services. Face-to-face immediate communication lets store staff provide more details about the product's textile features. Close consumer relationships create high consumer lifetime values (Parise *et al*., 2016).

The O3 factor aims at physical contact between the consumer and the product before purchasing an alternative or making a return. For example, the consumer can be directed to the fitting room to check the outfit, as fitting room impressions in physical stores affect brand image (Seo and Fiore, 2016).

The O4 factor emphasises greater consumer convenience, wherein consumers can explain the issue with the product to be returned, e.g. issues with size, fit (Seram and Kumarasiri, 2020; Mandal *et al*., 2021), colour, and texture, which cannot be controlled through online purchases.

The O5 factor refers to the opportunity to increase consumer satisfaction in the omnichannel return process. Greater cross-selling opportunities lead to greater consumer loyalty (Melero *et al*., 2016).

*Factors of threats*

The T1 factor focuses on busy operating hours during the physical return process, possibly involving waiting in line (Liang, 2013). Rush hours in physical retail stores occur after working hours, especially during holidays and weekends.

The T2 factor is the transportation expense (MohdSatar *et al*., 2019) of consumers visiting the physical store for a return, especially if the store is located at a distance.

The T3 factor describes how direct contact can create a negative impression of the fast-fashion brand if the store staff are rude (McKenzie, 2006). In addition, consumers are often frustrated by the waste of time when travelling to the physical store to return a product that takes seconds to purchase online. The growing dissatisfaction can harm the brand's image if the store staff is not sufficiently skilled to address these scenarios and turn a good return into a potential purchase.

The T4 factor emphasises market competitiveness, such as through home pickups. For instance, Amazon provides a free-return collection service for products. However, a physical return may seem less attractive to the consumer if the fast-fashion brand does not have this option.

The T5 factor refers to busy and crowded physical stores. Online purchasing indicates the consumer's profile; they prefer a quick purchasing lead time. In addition, a store's physical layout significantly affects the retailer's brand image (Chang *et al*., 2015). Thus, consumers expect smooth services and uncrowded places when visiting a physical retail store.

*Fuzzy VIKOR results and discussion*

Appendix 2 illustrates the aggregated matrix defuzzified. The best and worst solutions are shown in appendix 3. S*, S-, R* and R- calculations are shown in appendix 4. Finally, the ranking of the factors is illustrated in appendix 5. Our results, combined with the findings of Alexander and Cano (2020), emphasise the role of physical stores in omnichannels because it creates a live experience with the human connection within retail sales. Further, Bèzes (2019) emphasises modernising stores through integrated technology for a better omnichannel consumer experience. Xu and Cao (2019) emphasise the relevance of optimal in-store inventory management for omnichannel networks by focusing on franchise networks. Hence, the multi-aspect endorsement of internal store operations is crucial for successful BORS omnichannel management.

The experts believed that potential profits and growth of fast-fashion businesses through this omnichannel strategy are more promising than any potential risk from external threats. Further, the literature emphasises how omnichannel synchronises consumer interactions and creates a better shopping experience (Chen *et al*., 2018). Chakraborty and Chung (2014) argued that real-time information access assigned to consumers with technological advances increases interest in omnichannels, which is in agreement with the findings of Simone and Sabbadin (2017), who suggested that advances in internet technologies support the integration of both physical and online channels. Further, Wojciechowski and Hadas (2018) found that the best opportunity of implementing an omnichannel concept is by improving the marketing strategy through focused monitoring of consumer behaviour.

The experts felt confident that fast-fashion retail could leverage untapped markets by adopting BORS; business assets were emphasised as potential hurdles. In correlation with the previous literature on omnichannel strengths, Chopra (2016) stated that providing a wide product range at low cost is the biggest strength of online channels. However, some retailers argue that omnichannel adoption may increase operations management complexity, making supply chain management one of the main challenges (Aiolfi and Sabbadin, 2019).

*AHP results and discussion*

We outline the pairwise comparisons associated with AHP evaluation (Table IV). The weights were obtained from the average ranks provided by experts in the focus group. The assessments of the 2nd and 3rd levels are shown in Table V. The weighting of the lowest level is described in Table VI.

ap[Tables IV and V and VI here]

Figure 2 shows the SWOT factors ranking of consumer segments, i.e. males, females, and children. When analysed separately, the ranking of internal (Figure 3) and external (Figure 4) operational factors are the same. The most critical consumer group for the operational factors are children, followed by males and females; therefore, we induced an appropriate set of inferences to be considered. First, with the sizing and online measurement tools, the BORS strategy should be very flexible for child consumers. Brands should clearly define the texture while providing high-quality pictures of the knitted items with picture-zooming capabilities. Further, they must provide detailed descriptions that meet parental expectations for their child's comfort. During a return, the physical stock available in the retail store should include the range accessible online, allowing parents to find suitable alternatives for an exchange. Finally, stores should consider installing fitting rooms, especially during sales seasons, such as the back-to-school season.

[Figure 2 to 4 here]

Regarding male consumers, brands should focus on complementary products such as accessories. Men spend less time shopping, which leads them to avoid stores using the BORS model. Stores should thus focus on accessories that do not require fitting rooms for time-sensitive consumers. In addition, there should be clear visual merchandising of men's products

in stores. Most male consumers know their size but ignore the fit, such as "slim," "normal," and "large," which may confuse them.

Finally, store staff should be trained to deal with female consumers returning a product. Here, the focus should be on complimentary products, which have a higher appeal for women. The technical knowledge regarding the textile and fibres and their awareness of the "lines" and "styles" available in the physical retail store can help sales assistants ensure smooth returns and even encourage consumers to buy more products conveniently. We trust that the rigorous management of the BORS omnichannel can enhance brand competitiveness in fast-fashion retail. Consumer satisfaction and loyalty will improve if the omnichannel is customised according to market requirements.

These results support the findings in the literature; i.e. the highest ranking of strengths in the SWOT analysis shows that allowing the consumer to return a product from a different channel enables cross-sales and offers more convenience (Yadav *et al*., 2017). The child demographic is ranked the highest because it reflects issues for infant and child products, such as correct shoe sizes, given how active children are (Zakaria, 2014). In adults, gender differences affect purchasing behaviour (Cox and Dittmar, 1995). Men purchase more products online than women (Seock and Bailey, 2008), which possibly implies that BORS models should focus on women, especially when the literature shows that women have lower satisfaction with their bodies. This is reflected in their apparel product acceptance in terms of fashion and fit (Labat and Delong, 1990).

*Sensitivity analysis*

We conducted a sensitivity analysis to validate the results and assess the robustness of this study. We changed the input parameters and investigated how the output changed accordingly. Table VII shows the variations of pairwise comparisons handled within the AHP analysis. Table VIII shows the sensitivity analysis results. Ten cases corresponding to different scenarios were analysed for comparison. For example, in case 1, the rankings of "internal and external factors for choosing the consumer group" and "opportunities and threats for external factors" are varied. In each case, two comparisons were drawn to evaluate the effect on overall prioritisation.

[Tables VII and VIII here]

Although the weights were changed slightly through the weighted calculations, the results clearly show that factor rankings retain the same positions. In addition, the consumer group rankings remained constant. Hence, the sensitivity analysis confirmed the robustness of the study's methodology.

## Conclusion

There are numerous challenges to creating omnichannel strategies that meet the needs of fashion consumers seeking customised services (Alexander and Kent, 2020). This study created a decision support system for retail brands seeking to develop an omnichannel. The ranking of operational factors showed that internal operational factors are more important

than external ones. Further, strengths are more important than weaknesses, while opportunities are more important than threats. In addition, we found that children are the most critical consumer group in all factors, followed by men and women. Finally, the sensitivity analysis validated the robustness of the factors and consumer groups. We suggest that retail managers in fast fashion should systematically leverage internal processes, especially with returns. Management should focus on good store cover, consumer service excellence, and consumer segments of children and men. We note some additional insights below.

*Managerial implications*

This paper supports the practical implications of Yeh et al. (2020), which enhance movement from the multichannel to the omnichannel in retail. Further, the paper emphasises the internal strategy of fashion retailers for BORS management, which is in line with customer demand by providing decision-makers with a roadmap to prioritise their actions according to consumer preferences. Furthermore, recommendations are provided to fast-fashion retailers to customise the BORS service based on the consumer group served while dealing with differences between men, women, and child groups.

Covid-19 has caused a global supply chain disruption (Sharma et al. 2021), and therefore, it has accelerated online purchasing for consumers. Hence, omnichannel adoption is recommended to help shift to a productive shopping experience when stores are closed while ensuring the option of physical returns. Therefore, fast-fashion retailers must implement digital transformation technologies to leverage e-customer relationship management (CRM). In addition, cloud sales platforms can give retailers a holistic real-time view of sales and e-commerce key performance indicators.

*Theoretical implications*

A set of theoretical implications can also be obtained. This paper contributes to knowledge of the omnichannel BORS strategy from operations management perspectives. Furthermore, it supports the literature that deepens the understanding of business-to-business digital process coordination (Zhu et al. 2021). This can help stimulate researcher interest towards investigating other omnichannel strategies. In addition, while using AHP, this paper contributes to the existing literature on multi-criteria decision-making. Furthermore, the findings support the understanding of the consumer perception of BORS in fast-fashion retail, which remains limited in existing literature in such a quick-responsive market.

The proposed study approach is generic and applicable to similar retail fields and industries. However, the results are unique and cannot be generalised to other fields because they were not tested. Furthermore, the theoretical implications are correlated with the culture and local customer habits that may differ among geographical regions. Given this context, the replication of this study in a country where retail stakeholders share another perspective about their customer behaviour should be necessary to validate the stated factors and their ranking.

*Limits and future scope*

Our study has some limitations. First, although experts in the' experts' group have a substantial experience in fast-fashion retail, and the sample size was too small, a larger sample can yield more factors. In addition, the majority of the experts involved are from Morocco. Future work can involve experts from different countries reflecting different consumer cultures. In addition, the patterns of fast-fashion customer demand have been influenced following the COVID-19 pandemic. Future work can focus on omnichannel within the resilience management of customer demand (Fares et al., 2022).

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| | |
|---|---|
| SWOT Analysis | Identifying the internal and external factors of BORS strategy in fast fashion retail |
| Fuzzy VIKOR | Ranking the SWOT factors |
| AHP | Ranking the SWOT sub-factors |
| Sensitivity analysis | Testing the robustness of the results |

**Figure 1.** Methodology workflow

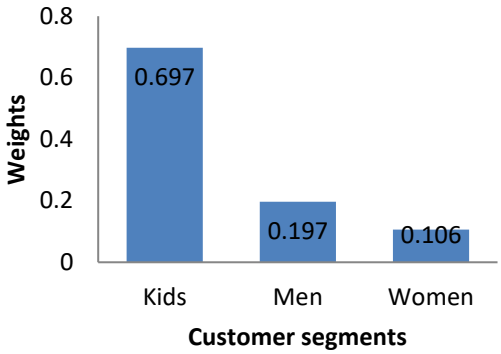


**Figure 2.**Weights and rankings of customer segments for internal and external operations factors.

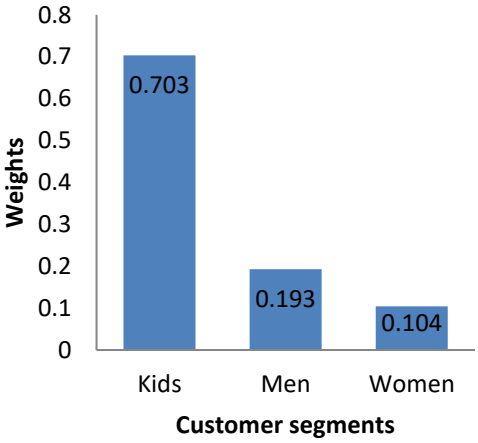


**Figure 3.**Weights and rankings of customer segments for internal operations factors.

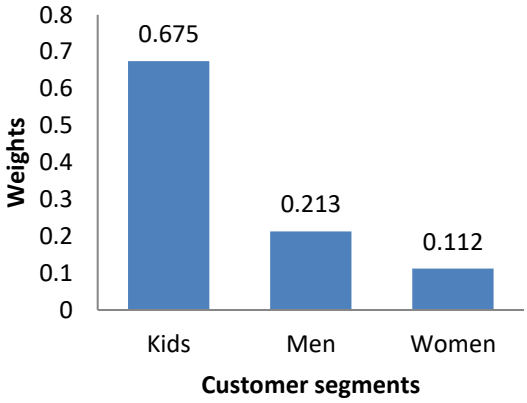


**Figure 4.**Weights and rankings of customer segments for external operations factors.

**Table I.** Details of experts for SWOT and AHP questionnaire

| Expert | Department | Years of experience | Years of experience in fast fashion retail |
|---|---|---|---|
| 1 | Operations/Supply chain | 21 | 9 |
| 2 | Operations/Supply chain | 20 | 15 |
| 3 | Operations | 17 | 12 |
| 4 | Supply chain | 14 | 14 |
| 5 | Operations | 14 | 7 |
| 6 | Operations | 11 | 10 |
| 7 | Operations/Supply chain | 10 | 5 |

Table II: Details of experts for Fuzzy VIKOR ranking

| Experts | Total number of years of experience | Department | Position |
|---|---|---|---|
| 1 | 18 | Operations | Store Manager |
| 2 | 15 | Sales | Store Manager |
| 3 | 5 | Retail | Section manager |
| 4 | 13 | Operation | Retail Manager |
| 5 | 15 | Sales | Département Head |

**Table III.** SWOT analysis of the operational factors of the BORS omnichannel strategy in fast fashion retail.

| Strengths | Weaknesses | Opportunities | Threats |
|---|---|---|---|
| **S1:** No return logistics costs<br>**S2:** Increasing retail store sales<br>**S3:** Control of returns by the retail store staff<br>**S4:** Increasing web-store turnover<br>**S5:** Increasing physical store network<br>**S6:** A good return experience | **W1:** Cost lines of crossing channels<br>**W2:** Possibility of fragmented products<br>**W3:** Return rate increase<br>**W4:** No suitable alternative for the customer in the retail store<br>**W5:** Availability of a shop in the customer's city | **O1:** Quick physical responsiveness<br>**O2:** Store sales team to provide more personalised service to the customer<br>**O3:** Try fitting room<br>**O4:** Convenience<br>**O5:** Creating loyal customer profiles with an easy and well-organised return process | **T1:** Queuing during rush hours and seasonal events<br>**T2:**Cost of moving to the closest retail store<br>**T3:**Non-educated staff harming the company's image; customer never tries the retailer again<br>**T4:** Some competitors can arrange the return of products by arranging a home pickup<br>**T5:** Some customers avoid going to crowded places |

**Table IV.** AHP weights

| Compared impacts | Expert 1 | Expert 2 | Expert 3 | Expert 4 | Expert 5 | Expert 6 | Expert 7 | Average | Rounded value |
|---|---|---|---|---|---|---|---|---|---|
| internal factors to external factors | 2 | 4 | 1 | 5 | 6 | 7 | 4 | 4.142857 | 4 |
| strengths to weaknesses | 4 | 8 | 2 | 8 | 8 | 7 | 7 | 6.285714 | 6 |
| opportunities to threats | 2 | 8 | 1 | 8 | 7 | 7 | 8 | 5.857143 | 6 |
| kids to items to man items (for strength impact) | 8 | 8 | 2 | 8 | 7 | 7 | 5 | 6.428571 | 6 |
| kids to items to women items (for strength impact) | 4 | 3 | 2 | 5 | 3 | 7 | 4 | 4 | 4 |
| man to items to women items (for strength impact) | 2 | 2 | 2 | 4 | 1 | 4 | 4 | 2.714286 | 3 |
| kids to items to man items (for weakness impact) | 8 | 8 | 2 | 8 | 7 | 8 | 5 | 6.571429 | 7 |
| kids to items to women items (for weakness impact) | 4 | 4 | 2 | 5 | 4 | 7 | 5 | 4.428571 | 4 |
| man to items to women items (for weakness impact) | 2 | 3 | N/A | 4 | 8 | 4 | 4 | 4.166667 | 4 |
| kids to items to man items (for opportunity impact) | 2 | 8 | 2 | 8 | 5 | 3 | 4 | 4.571429 | 5 |
| kids to items to women items (for opportunity impact) | 4 | 5 | 2 | 5 | 5 | 2 | 4 | 3.857143 | 4 |
| man to items to women items (for opportunity impact) | 2 | 3 | 2 | 4 | 5 | 5 | 2 | 3.285714 | 3 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| kids to items to man items (for threat impact) | 8 | 3 | 2 | 8 | 9 | 4 | 2 | 5.142857 | 5 |
| kids to items to women items (for threat impact) | 4 | 5 | 1 | 5 | 1 | 3 | 4 | 3.285714 | 3 |
| man to items to women items (for threat impact) | 2 | 7 | 1 | 4 | 1 | 5 | 2 | 3.142857 | 3 |

**Table V.** Aggregate pair-wise and weights for second and third levels.

| | Internal factors | External factors | Internal strengths | Internal weaknesses | External opportunities | External threats | Inconsistency |
|---|---|---|---|---|---|---|---|
| Internal factors | 1 | 4 | | | | | 0.00 |
| External factors | 0.25 | 1 | | | | | |
| Internal strengths | | | 1 | 6 | | | 0.00 |
| Internal weaknesses | | | 0.16 | 1 | | | |
| External opportunities | | | | | 1 | 6 | 0.00 |
| External threats | | | | | 0.16 | 1 | |

**Table VI.** Aggregate pair-wise and weights for the fourth level.

| | Kids | Men | Women | Inconsistency |
|---|---|---|---|---|
| *Strengths* | | | | |
| Kids | 1 | 6 | 4 | 0.24 |
| Men | 0.16 | 1 | 3 | |
| Women | 0.25 | 0.33 | 1 | |
| *Weaknesses* | | | | |
| Kids | 1 | 7 | 4 | 0.42 |
| Men | 0.14 | 1 | 4 | |
| Women | 0.25 | 0.25 | 1 | |
| *Opportunities* | | | | |
| Kids | 1 | 5 | 4 | 0.19 |
| Men | 0.2 | 1 | 3 | |
| Women | 0.25 | 0.33 | 1 | |
| *Threats* | | | | |
| Kids | 1 | 5 | 3 | 0.28 |
| Men | 0.2 | 1 | 3 | |
| Women | 0.33 | 0.33 | 1 | |

**Table VII.** Variation of pair-wise comparison for the sensitivity analysis.

| | Current case | Case 1 | Case 2 | Case 3 | Case 4 | Case 5 | Case 6 | Case 7 | Case 8 | Case 9 | Case 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Internal factors to external factors for choosing the customer group | 4 | **5** | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Strengths to weaknesses for internal factors | 6 | 6 | **7** | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Opportunities to threats for external factors | 6 | **7** | 6 | **8** | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Kids group to men group for strengths | 6 | 6 | 6 | 6 | **5** | 6 | 6 | 6 | 6 | 6 | 6 |
| Kids group to women group for strengths | 4 | 4 | **5** | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Men group to women group for strengths | 3 | 3 | 3 | **2** | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Kids group to men group for weaknesses | 7 | 7 | 7 | 7 | **6** | **5** | 7 | 7 | 7 | 7 | 7 |
| Kids group | 4 | 4 | 4 | 4 | 4 | **5** | 4 | 4 | 4 | 4 | 4 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| to women group for weaknesses | | | | | | | | | | | |
| Men group to women group for weaknesses | 4 | 4 | 4 | 4 | 4 | 4 | **3** | 4 | 4 | 4 | 4 |
| Kids group to men group for opportunities | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Kids group to women group for opportunities | 4 | 4 | 4 | 4 | 4 | 4 | 4 | **5** | 4 | 4 | 4 |
| Men group to women group for opportunities | 3 | 3 | 3 | 3 | 3 | 3 | **1** | 3 | 3 | **2** | 3 |
| Kids group to men group for threats | 5 | 5 | 5 | 5 | 5 | 5 | 5 | **4** | 5 | 5 | **3** |
| Kids group to women group for threats | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | **6** | **5** | 3 |
| Men group to women group for | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | **5** | 3 | **1** |

| threats |
|---|

**Table VIII.** Sensitivity analysis results.

| | Actual weights | | Case 1 | Case 2 | Case 3 | Case 4 | Case 5 | Case 6 | Case 7 | Case 8 | Case 9 | Case 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Operations factors | Internal | **0.8** | 0.833 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| | External | **0.2** | 0.167 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| | Strengths | **0.857** | 0.857 | 0.875 | 0.857 | 0.857 | 0.857 | 0.857 | 0.857 | 0.857 | 0.857 | 0.857 |
| | Weaknesses | **0.143** | 0.143 | 0.125 | 0.143 | 0.143 | 0.143 | 0.143 | 0.143 | 0.143 | 0.143 | 0.143 |
| | Opportunities | **0.857** | 0.875 | 0.857 | 0.889 | 0.857 | 0.857 | 0.857 | 0.857 | 0.857 | 0.857 | 0.857 |
| | Threats | **0.143** | 0.125 | 0.143 | 0.111 | 0.143 | 0.143 | 0.143 | 0.143 | 0.143 | 0.143 | 0.143 |
| Customer group | Kids | **0.697** | 0.698 | 0.711 | 0.701 | 0.680 | 0.695 | 0.700 | 0.700 | 0.698 | 0.700 | 0.695 |
| | Men | **0.197** | 0.196 | 0.191 | 0.182 | 0.211 | 0.200 | 0.185 | 0.196 | 0.197 | 0.192 | 0.197 |
| | Women | **0.106** | 0.106 | 0.098 | 0.117 | 0.108 | 0.105 | 0.116 | 0.104 | 0.104 | 0.108 | 0.108 |

# Appendices

## Appendix 1: linguistic variables

| | Fuzzy number | | | |
|---|---|---|---|---|
| Very poor (VP) | 0 | 0 | 0.1 | 0.2 |
| Poor (P) | 0.1 | 0.2 | 0.2 | 0.3 |
| Medium poor (MP) | 0.2 | 0.3 | 0.4 | 0.5 |
| Fair (F) | 0.4 | 0.5 | 0.5 | 0.6 |
| Medium good (MG) | 0.5 | 0.6 | 0.7 | 0.8 |
| Good (G) | 0.7 | 0.8 | 0.8 | 0.9 |
| Very good (VG) | 0.8 | 0.9 | 1 | 1 |

## Appendix 2: Aggregated matrix defuzzified

| | S | W | O | T |
|---|---|---|---|---|
| | 0.509078 | 0.208276 | 0.562308 | 0.157083 |
| S1 | 0.520952 | 0.077778 | 0.077778 | 0.077778 |
| S2 | 0.595676 | 0.077778 | 0.077778 | 0.077778 |
| S3 | 0.424444 | 0.077778 | 0.077778 | 0.077778 |
| S4 | 0.724086 | 0.077778 | 0.077778 | 0.077778 |
| S5 | 0.725455 | 0.077778 | 0.077778 | 0.077778 |
| S6 | 0.681818 | 0.077778 | 0.077778 | 0.077778 |
| W1 | 0.077778 | 0.62 | 0.077778 | 0.077778 |
| W2 | 0.077778 | 0.469268 | 0.077778 | 0.077778 |
| W3 | 0.077778 | 0.607273 | 0.077778 | 0.077778 |
| W4 | 0.077778 | 0.5 | 0.077778 | 0.077778 |
| W5 | 0.077778 | 0.714545 | 0.077778 | 0.077778 |
| O1 | 0.077778 | 0.077778 | 0.543148 | 0.077778 |
| O2 | 0.077778 | 0.077778 | 0.541905 | 0.077778 |
| O3 | 0.077778 | 0.077778 | 0.767901 | 0.077778 |
| O4 | 0.077778 | 0.077778 | 0.68 | 0.077778 |
| O5 | 0.077778 | 0.077778 | 0.737255 | 0.077778 |
| T1 | 0.077778 | 0.077778 | 0.077778 | 0.779524 |
| T2 | 0.077778 | 0.077778 | 0.077778 | 0.650909 |
| T3 | 0.077778 | 0.077778 | 0.077778 | 0.671667 |
| T4 | 0.077778 | 0.077778 | 0.077778 | 0.66062 |
| T5 | 0.077778 | 0.077778 | 0.077778 | 0.703636 |

## Appendix 3: Best and worst solutions

| | | | | |
|---|---|---|---|---|
| f*j | 0.725455 | 0.714545 | 0.767901 | 0.779524 |

| | | | | |
|---|---|---|---|---|
| f-j | 0.077778 | 0.077778 | 0.077778 | 0.077778 |

## Appendix 4: S*, S-, R* and R- calculations

| | | | |
|---|---|---|---|
| S* | 0.874437 | R* | 0.509078 |
| S- | 1.308695 | R- | 0.562308 |

## Appendix 5 : Ranking

| S | R | Q | Rank |
|---|---|---|---|
| 1.088407 | 0.562308 | 0.746362 | 10 |
| 1.029674 | 0.562308 | 0.678738 | 9 |
| 1.164263 | 0.562308 | 0.833702 | 11 |
| 0.928743 | 0.562308 | 0.562527 | 7 |
| 0.927667 | 0.562308 | 0.561288 | 6 |
| 0.961965 | 0.562308 | 0.600779 | 8 |
| 1.259393 | 0.562308 | 0.943234 | 13 |
| 1.308695 | 0.562308 | 1 | 21 |
| 1.263556 | 0.562308 | 0.948028 | 14 |
| 1.298643 | 0.562308 | 0.988426 | 17 |
| 1.228469 | 0.562308 | 0.907629 | 12 |
| 1.057564 | 0.509078 | 0.210851 | 4 |
| 1.058578 | 0.509078 | 0.212017 | 5 |
| 0.874437 | 0.509078 | 0 | 1 |
| 0.946059 | 0.509078 | 0.082464 | 3 |
| 0.899408 | 0.509078 | 0.028751 | 2 |
| 1.279662 | 0.562308 | 0.966571 | 15 |
| 1.308452 | 0.562308 | 0.99972 | 20 |
| 1.303805 | 0.562308 | 0.99437 | 18 |
| 1.306278 | 0.562308 | 0.997217 | 19 |
| 1.296649 | 0.562308 | 0.98613 | 16 |