

# DESIGN AND DEVELOPMENT OF ONLINE CUSTOMISED CLOTHING MARKETPLACE: A PRELIMINARY STUDY ON CONSUMER PREFERENCES

Sin Ying Ng and Pik Yin Mok

*School of Fashion and Textiles, The Hong Kong Polytechnic University, Hong Kong*

## ABSTRACT

Fashion online shopping has rapidly evolved since the pandemic. Unlike shopping offline, customers cannot physically touch or feel the actual products, therefore, UI design for product information display is fundamentally important for online shopping of fashion. This paper aims to investigate what product information, including product detail image, product display formats, size information, and credibility cues consumers consider when shopping for clothing online by collecting survey responses from 162 respondents. The results show that displaying product in different angles and close-up product details with zoom-in functions are the key product information; displaying clothing on human models with size information, such as size chart, try-on of products on models in different sizes and body shapes and size recommendation tools are also essential. Consumers also valued the credibility cues, such as product review and comment, seller reputation and rating, and photos of products received by customers. The study will be used as a reference to prioritise product information and functions in the design and development of an online customised clothing marketplace platform. It also provides valuable customer insight to fashion brands tech companies and who are assisting brands to launch their e-shops.

## KEYWORDS

Product Information, Online Marketplace, Product Page, Customer Perceptions, Credibility Cues, Online Shopping

## 1. INTRODUCTION

Generation Z (GenZ), a new wave of generation born from 1995 to 2012, has entered workforce with the greatest purchasing power amongst all the generations (Amed et al., 2019, Francis and Hoefel, 2018). This generation shift transforms the consumer landscape which drives fashion brands to formulate new strategies for gaining support from Gen Z consumers who are digital savvy, sustainability-conscious and looking for unique and personalised products (Francis and Hoefel, 2018). Several fashion brands and start-up leverage digital customization approaches to let the consumers purchase highly personalised fashion items and experience the process of clothing bespoke and customisation online. The emergence of digital customisation has been found in various garment categories. Anomalie, a bridal gown start-up since 2016, launched collaborative dress sketch visualizer to enable customers and designer team to co-design their own wedding gown (Anomalie, 2020). Unspun, a custom denim brand, which leveraged 360 degree mobile scanning technology to craft a tailor made jeans, choose denim fabric, thread colour, style and preview 3D finished jeans online (Unspun, 2020). These start-up brands have been supported by huge seed funding resources from investors to undergo advanced digital transformation.

However, a majority of fashion businesses are micro-sized and sole proprietors, including independent designers and tailors (Gorgels et al., 2022, Hollihan, 2021). Some of them might be interested in digital customisation, but they mostly focus on their daily operation to achieve turnover and lack time, manpower, financial resources and technical knowledge to establish and operate their own digital customisation system (Canhoto et al., 2021, Klein and Todesco, 2021).

To address their painpoints, we will design and develop an online customised clothing marketplace for small fashion businesses and consumers to conduct digital customisation and online transactions. This paper aims to understand what product information (e.g. rating, size information, detail and presentation of products) consumers consider when shopping for clothing online by collecting survey responses from 162 respondents mainly from Hong Kong. The investigated results will be used as reference to prioritise important product

information and functions for the design and development of online customised clothing marketplace platform. It also provides valuable customer insight to fashion brands or tech company who assist brands to design their online presence.

## 2. LITERATURE REVIEW

**Online fashion marketplace** is a fashion e-commerce which is normally owned and operated by a third-party service provider. The marketplace gathers a network of sellers and buyers to sell and purchase products or services from each other. For each successful transaction, the third-party platform will charge seller commission fee (Yenipazarli, 2021). Renowned fashion online marketplace platforms from luxury to mass market segments, such as Farfetch, ASOS and Zalora which charges commission with charge from 10% to 30% per sale from brands (ASOS, 2023, Kansara, 2015, Tan, 2020). Oklander and Kudina (2021) highlighted various advantages of marketplace model from seller perspective, including a higher cost-effectiveness to establish online store, higher accessibility to target customers and wider market. From buyer perspective, marketplace could offer a wide selection of products, efficient information screening, product search and comparison.

**Product information:** Marketplace offers a wide range of product selections and consumers have to select the most suitable product amongst all the variety of choices. Product Information in the marketplace is important to tell consumers how the product will look like in the reality even they do not have chance to physically touch or feel the actual products. Consumers might need to rely on the information provided electronically by the online sellers and marketplace to make purchase decision, especially purchasing item that they have not used before. First, product information can build up trust and purchase confidence. The more accurate and detailed product information provided by the sellers, the better understanding of consumers to a product and build up trust, purchase confidence and eventually boost up sales afterwards (Davis, 1989, Hong et al., 2016). Second, a high-quality product information which is SEO-friendly can rank higher in search engines, reach more searchers, and potential consumers. Therefore, it is important for sellers to optimize their product information to drive traffic, conversions and sales. The basic product information of fashion products includes product description, product detail photography, product display formats, size information, statistic, rating and customer feedback. This paper will focus on product detail image, product display formats, size information and credibility cues.

**Product detail images:** In the fashion marketplaces, product details are often shown in image forms to let consumers know how the detail of product looks like. The products are often displayed in different angles (e.g. front, back, side views), close-ups and enlargement and styling with colour and fabric swatches support (Hong et al., 2016, Naegelein et al., 2019, Kim et al., 2007). Some fashion products are displayed on models in different sizes to demonstrate their diversity and inclusion which can catering the need of a large group of consumers (Rhee and Lee, 2021).

**Product display format:** Fashion products are often displayed into two different approaches: product itself and showcasing by models. Products can be flat laid. They can be also displayed in static images featuring mannequin, human model (with or without styling) and short catwalk video with models who strike a pose and turns around less than 20 seconds (Rhee and Lee, 2021, Kim et al., 2007, Naegelein et al., 2019, Bug and Helwig, 2020).

**Size information:** A survey conducted by Mckinsey in 2019 demonstrated 25% return rate on fashion online business channel, and 70% of the returns were attributed by poor fitting or style (Ader et al., 2021). Therefore, size information is crucial for fashion ecommerce. Usually a size chart with detailed measurements for different product sizes (e.g. US2, 4, 6, 8) will be listed on the product page, with some supplementary information, such as try-ons on model in different weights and heights, size comparisons from different brands and size recommendation tools (e.g. size calculator, mobile body measuring technology).

**Credibility cues:** In addition to the information of product details, consumers also take reference on the statistic, rating and customer feedback, namely credibility cues when they make purchase decision. The common statistic product transaction volume, repeat customers of product, seller experience, number of subscribers, number of people who add the item to favourite and number of view history of products. Rating and customer feedback includes seller reputation and rating, review and comment and photo of products received by real customers. Researches have been found that seller reputation and customer reviews

(e.g. e-word of mouth, eWOM) are positively related with trust and purchase intention of customers (Malak et al., 2021, Sulthana and Vasantha, 2019, Cheong et al., 2020, Sa'ait et al., 2016, Kim and Choi, 2012).

### 3. METHOD

Online survey platform system Qualtrics was used for collecting questionnaires from 162 respondents. The survey was distributed in social media platform and communication tool. The survey was divided into six section: (i) online fashion shopping habits, (ii) product detail images, (iii) product display formats, (iv) size information, (v) credibility cues and (vi) demographic information. Multiple choices questions are used to collect the demographic information and online fashion shopping habits. For other questions which involved customers' opinions and judgement of statements, customers were asked to rate based on the 7-point Likert scale (1= strongly disagree to 7 = strongly agree) in order to understand what kinds of product information consumer will consider when they shop online in the fashion marketplace. Table 1 shows the demographic information of respondents. The collected information from the questionnaire was analyzed in Microsoft excel and visualized various types of charts. The Likert rating scale was plotted in a diverging stacked bar (bi-directional bar chart) because this sort of bar style was highly recommended by researchers to graphically display data of each rated scales (Robbins and Heiberger, 2011, Howorko et al., 2018, Heiberger and Robbins, 2014).

Table 1. The demographic information of respondents

Item	Type	Count	%
Gender	Male	63	39%
	Female	99	61%
Age	Under 18	1	1%
	18-25	73	45%
	26-35	63	39%
	36-45	13	8%
	46-55	8	5%
	Above 56	4	2%
Position	Student	57	35%
	Employee	105	65%
Education level	Secondary School	10	6%
	Diploma/ Higher Diploma	19	12%
	Undergraduate	93	57%
	Postgraduate	40	25%
Monthly income	HKD 0-15,000	63	39%
	HKD 15,000-29,999	57	35%
	HKD 30,000-59,999	34	21%
	>HKD 59,999	8	5%
Frequency of purchasing	Twice per month or above	26	16%
	Once every 1-2 months	65	40%
	Once every 3 months	33	20%
	Once every 6 months	24	15%
	Once per year or less	14	9%

Average monthly online	<HKD 500	96	59%
	HKD 500-999	38	23%
	HKD 1,000-1,999	17	10%
	> HKD 2,000	11	7%
Cities / Countries	Hong Kong	138	85%
	Mainland China	3	2%
	Oversea	21	13%

## 4. FINDINGS

### 4.1 Product Detail Images

We found that nearly a half of respondents believe displaying product in different angles is extremely important, followed by displaying close-up product details with zoom-in functions (41%). Previous literatures indicated that the close-up product details, zoom-in functions and displaying in various angles can provide local information-based cues of product quality (e.g. craftsmanship) and materials (e.g. fabrics) (Hong et al., 2016, Naegelein et al., 2019). This information is particularly helpful for respondents to make purchase decision for online shopping.

Respondents believed that colour and fabric swatches are less important product information. Our explanation for this finding is that the close-up details and zoom-in functions already deliver a rich information of product detail, such as the colour and fabric. Therefore, the images of colour and fabric swatches might not be necessary. Figure 1 shows the preferences of product detail images from respondents.

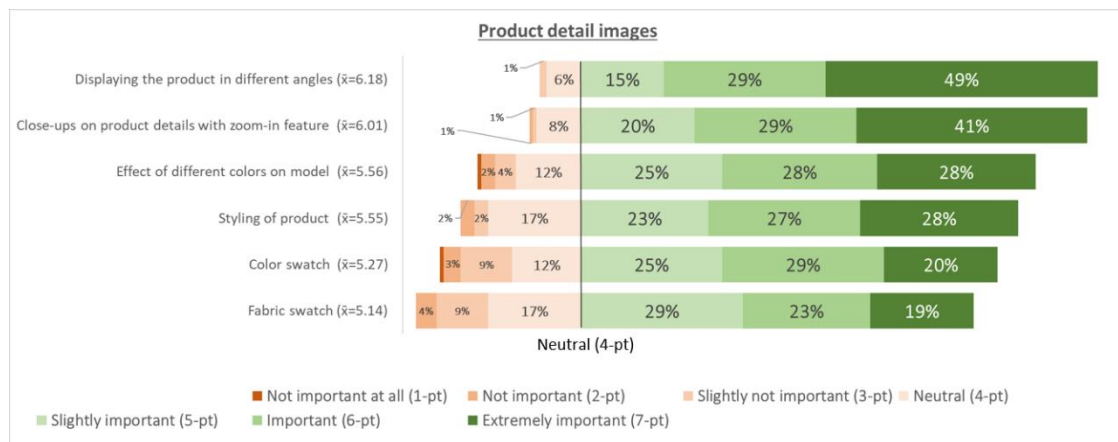


Figure 1. The preferences of product detail image types from respondents

### 4.2 Product Display Formats

Respondents believed that model display (without specific styling) is the most important product display format ( $\bar{x}=5.86$  pt. out of 7 pt.). It can be explained that this is a basic and necessary format to demonstrate how a fashion product is worn by a human body (e.g. the drape and cutting). Figure 2 shows the preferences of product display formats from respondents.

However, it is surprised that respondents believed model catwalk in video is the least important amongst all ( $\bar{x}=4.88$  out of 7 pt.). Previous literatures highlighted the advantages of videos (e.g. catwalk videos) which can demonstrate how a fashion product is worn by a model in motion and movements. It can further enhance online fashion shopping experience and purchase intention of shoppers (Bug and Helwig, 2020, Kim et al., 2007). It can be explained that videos might be attractive feature from the perspectives of consumers but they

might not be the most essential part, comparing with other product display formats (e.g. model and mannequin display). Moreover, catwalk videos might be too fast and hectic without showing detail of product clearly. It is also found that video production is relatively costly and time consuming than other presentation formats (e.g. flat-lay and mannequin display) (Lee and Park, 2014, Bug and Helwig, 2020)

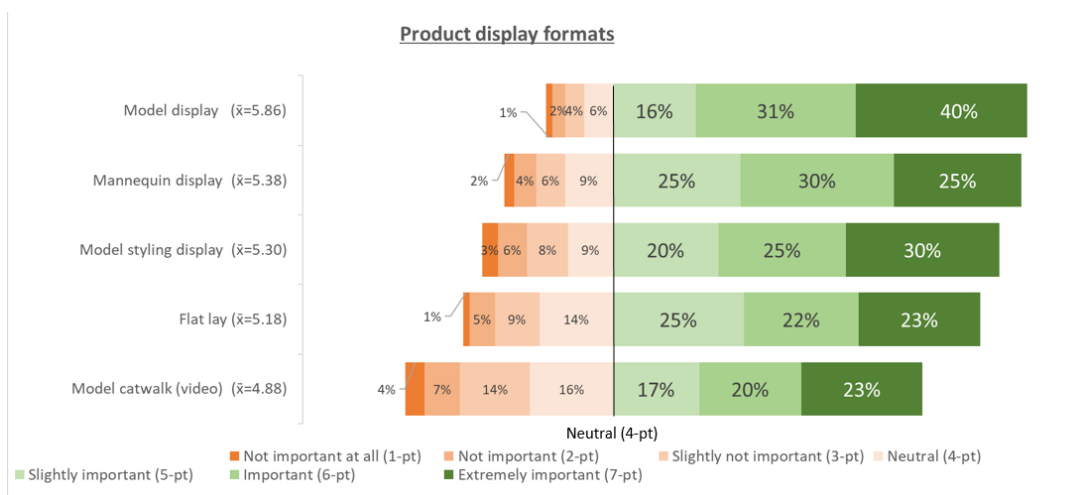


Figure 2. The preferences of product display formats from respondents

### 4.3 Size Information

We found that amongst all the size information, over a half of respondents believe size chart is extremely important (57%), followed by try-on of product on different sizes of models and size recommendation with over 40% of respondents agree those two size information cues are extremely important. It is not surprised that respondents believed size chart is the most important size information for fashion product because it provides numeric information to customers in order to select right size that fits on their body. A few researches highlighted that the lack of size chart will probably results perceived product risk and uncertainty over sizing which might result purchase hesitation (Masoud, 2013, Kim et al., 2006, Ariffin et al., 2018). Therefore, size chart is an essential product size information for online fashion shopping.

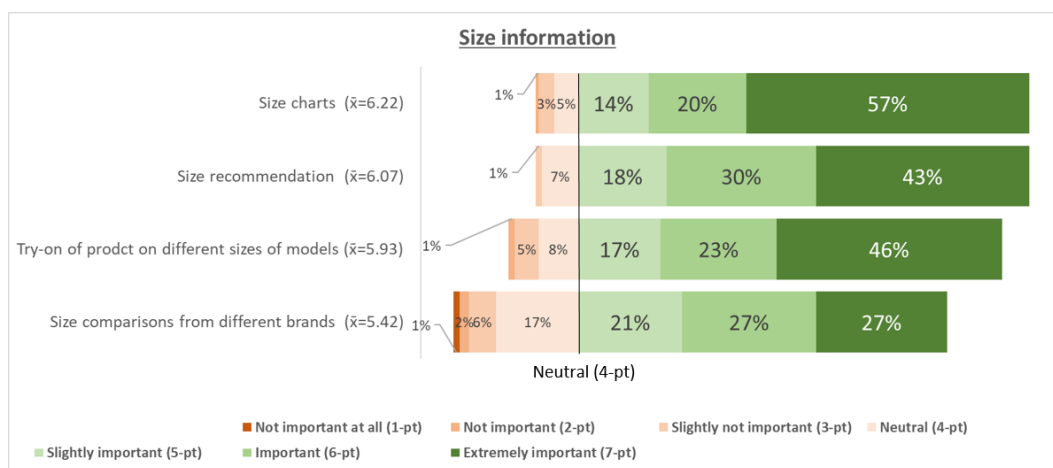


Figure 3. The preferences of size information from respondents

Although size chart is available in most of the online fashion shopping platforms, researchers found that customers are still confused to decide which size of fashion product they should purchase because there is a lack of standardized size chart with size inconsistency amongst brands and countries. Therefore, size

recommendation is necessary to provide size guidance to each individual consumers based on their inputted body measurements (Lasserre et al., 2020, Guigourès et al., 2018). In addition, displaying of product on different sizes and shapes of models enable shoppers to imagine how the products look like on their bodies by taking reference from the photos of models who have similar body shapes and sizes (Rhee and Lee, 2021). Figure 3 shows the preferences of size information from respondents.

#### 4.4 Credibility cues

Besides the intrinsic cues (e.g. colour, design and materials of product itself), credibility cues such as review and ratings, infer insight about product quality in pre-purchase stage. It is found that review and comment, seller reputation and rating and photo of product received by real customer are the top-three important information-based cues to consider from the perspectives of respondents. This finding is consistent with previous literatures which highlighted eWOM (e.g. seller reputation, ratings and customer feedback of products) determines purchase intention and reduces risk perception (Kim and Choi, 2012, Malak et al., 2021, Sulthana and Vasantha, 2019). Figure 4 shows the preferences of credibility cues from respondents. The finding shows that “the number of view history”, “the number of people who add the items to favourite” and “the number of fans and subscribers of seller” are the least important product information and cues amongst all. Our explanation of this finding is that those cues might be more related with “popularity”, rather than “credibility”. A product with more view history might probably due to its high-ranking in search engines with better SEO (Lewandowski, 2013). “The number of people who add the items to favourite” and “the number of fans and subscribers of seller” might not always reflect the product quality (Dias et al., 2021).

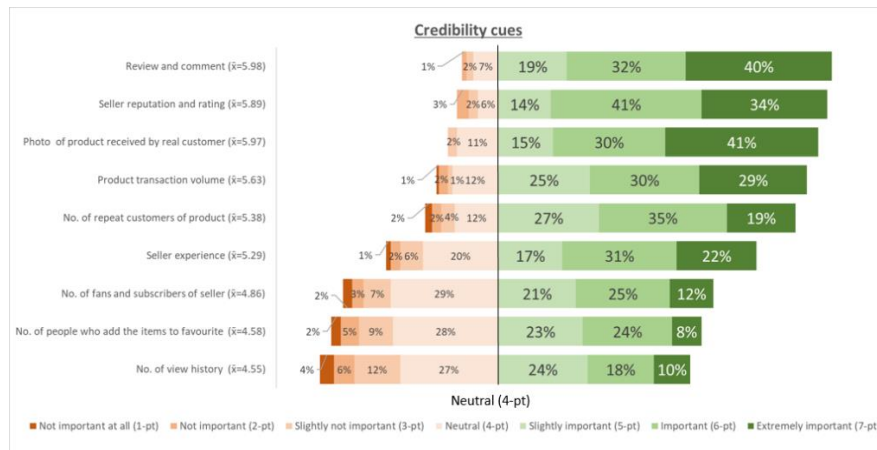


Figure 4. The preferences of credibility cues from respondents

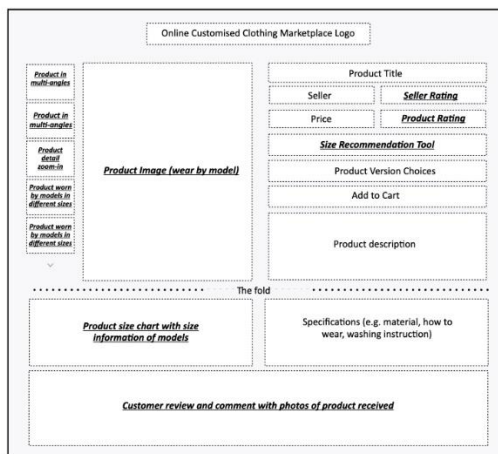


Figure 5. The demographic information of respondents

## 4.5 Online Customized Clothing Marketplace

By taking reference from the survey results, we designed the product page of our online customized clothing marketplace platform featuring essential product information, including images of human models in different size and body shapes who wear the fashion products in multi-angles of view, close-up detail with zoom-in feature of products, size chart, size recommendation, product review and comment, seller rating and photo of products received by customers. We will include measurement data input and clothing customization functions in the nearly future. Figure 5 shows how the overview of product page of our online customized clothing marketplace platform design.

## 5. CONCLUSION

This paper investigated what product information (e.g. rating, size information, detail and presentation of products) and cues customers consider when shopping for clothing online. We found out that displaying product in different angles and displaying close-up product details with zoom-in functions are the key product information for online fashion shopping. Displaying clothing on human models with size information, such as size chart, try-on of products on models in different sizes and body shapes and size recommendation tools are also essential information. Respondents also valued the credibility cues, such as product review and comment, seller reputation and rating, and photos of products received by customers. The investigated results will be used as reference to prioritise key product information and functions for the design and development of online customised clothing marketplace platform. The result also provides valuable insight for tech companies who are developing or running marketplace for online fashion shopping. In addition, some individual fashion brands who are running their fashion ecommerce business might need to decide what kind of product information should provide to customer. The information should be able to meet the need of customers without being overloaded and requiring huge investment (e.g. cost of time and money) This study is a preliminary study with relatively small sample size — only 162 respondents were involved. In the future, we will expand our increase our sample size and cover samples from various countries and cities out of Hong Kong.

## ACKNOWLEDGEMENT

The work described in this paper was supported by the Innovation and Technology Commission of Hong Kong under grant ITP/028/21TP.

## REFERENCES

- Ader, J., Adhi, P., Chai, J., Singer, M., Touse, S. and Yankelevich, H. (2021) 'Returning to order: Improving returns management for apparel companies', *McKinsey*, available at: <https://www.mckinsey.com/industries/retail/our-insights/returning-toorder-improving-returns-management-for-apparel-companies> (accessed 25 May 2021).
- Amed, I., Balchandani, A., Beltrami, M., Berg, A., Hedrich, S. and Rölken, F. 2019. The influence of 'woke' consumers on fashion. *McKinsey & Company*.
- Anomalie (2020) *Don't Settle. Go custom to find your dress soulmate*. Available at: <https://www.dressanomalie.com/design-services> (Accessed: May 24).
- Ariffin, S. K., Mohan, T. and Goh, Y.-N. (2018) 'Influence of consumers' perceived risk on consumers' online purchase intention', *Journal of Research in Interactive Marketing*, 12(3), pp. 309-327.
- ASOS (2023) *ASOS MARKETPLACE*. Available at: <https://m.marketplace.asos.com/help/features-fees>.
- Bug, P. and Helwig, J. (2020) 'Overview of product presentation with moving images in fashion e-commerce', *Fashion and film: moving images and consumer behavior*, pp. 217-241.
- Canhoto, A. I., Quinton, S., Pera, R., Molinillo, S. and Simkin, L. (2021) 'Digital strategy aligning in SMEs: A dynamic capabilities perspective', *The Journal of Strategic Information Systems*, 30(3), pp. 101682.
- Cheong, J. W., Muthaly, S., Kuppusamy, M. and Han, C. (2020) 'The study of online reviews and its relationship to online purchase intention for electronic products among the millennials in Malaysia', *Asia Pacific Journal of Marketing and Logistics*.

- Davis, F. D. (1989) 'Perceived usefulness, perceived ease of use, and user acceptance of information technology', *MIS quarterly*, pp. 319-340.
- Dias, R., Martinez, L. F. and Martinez, L. M. 'How Does the Number of Instagram Followers Influence Brand Attitude: The Role of Purchase Intention, Perceived Product Quality, Referrals, Brand Trust, and Gender'. *Advances in Digital Marketing and eCommerce: Second International Conference, 2021*: Springer, 121-128.
- Francis, T. and Hoefel, F. (2018) 'True Gen': Generation Z and its implications for companies', *McKinsey & Company*, 12.
- Gorgels, S., Priem, M. and Blagoeva, T. M., A Milanese, G (2022) *Annual Report on European SMEs 2021/2022 SMEs and environmental sustainability Background document*: European Commission.
- Guigourès, R., Ho, Y. K., Koriagin, E., Sheikh, A.-S., Bergmann, U. and Shirvany, R. 'A hierarchical bayesian model for size recommendation in fashion'. *Proceedings of the 12th ACM conference on recommender systems*, 392-396.
- Heiberger, R. and Robbins, N. (2014) 'Design of diverging stacked bar charts for Likert scales and other applications', *Journal of Statistical Software*, 57, pp. 1-32.
- Hollihan, C. (2021) 'Post-Brexit, can small be beautiful for UK fashion brands?', *Vogue Business*.
- Hong, L. M., Zulkiffli, W. F. W. and Hamsani, N. H. (2016) 'The impact of perceived risks towards customer attitude in online shopping', *International Journal*, 1(2), pp. 13-21.
- Howorko, L., Boedianto, J. M. and Daniel, B. (2018) 'The efficacy of stacked bar charts in supporting single-attribute and overall-attribute comparisons', *Visual Informatics*, 2(3), pp. 155-165.
- Kansara, V. A. (2015) 'Farfetch's Global Platform Play', *Business of Fashion*.
- Kim, J., Fiore, A. M. and Lee, H.-H. (2007) 'Influences of online store perception, shopping enjoyment, and shopping involvement on consumer patronage behavior towards an online retailer', *Journal of retailing and Consumer Services*, 14(2), pp. 95-107.
- Kim, M., Kim, J. H. and Lennon, S. J. (2006) 'Online service attributes available on apparel retail web sites: an E-S-QUAL approach', *Managing Service Quality: An International Journal*, 16(1), pp. 51-77.
- Kim, S. and Choi, S. M. (2012) 'Credibility cues in online shopping: an examination of corporate credibility, retailer reputation, and product review credibility', *International Journal of Internet Marketing and Advertising*, 7(3), pp. 217-236.
- Klein, V. B. and Todesco, J. L. (2021) 'COVID-19 crisis and SMEs responses: The role of digital transformation', *Knowledge and Process Management*, 28(2), pp. 117-133.
- Lasserre, J., Sheikh, A.-S., Koriagin, E., Bergman, U., Vollgraf, R. and Shirvany, R. 'Meta-learning for size and fit recommendation in fashion'. *Proceedings of the 2020 SIAM international conference on data mining*: SIAM, 55-63.
- Lee, E.-J. and Park, J. (2014) 'Enhancing virtual presence in e-tail: Dynamics of cue multiplicity', *International Journal of Electronic Commerce*, 18(4), pp. 117-146.
- Lewandowski, D. (2013) 'Credibility in web search engines', *Online credibility and digital ethos: Evaluating computer-mediated communication*: IGI Global, pp. 131-146.
- Malak, F., Ferreira, J. B., Pessoa de Queiroz Falcão, R. and Giovannini, C. J. (2021) 'Seller reputation within the B2C e-marketplace and impacts on purchase intention', *Latin American Business Review*, 22(3), pp. 287-307.
- Masoud, E. Y. (2013) 'The effect of perceived risk on online shopping in Jordan', *European Journal of Business and Management*, 5(6), pp. 76-87.
- Naegelein, P., Spann, M. and Molitor, D. (2019) 'The value of product presentation technologies on mobile vs. non-mobile devices: A randomized field experiment', *Decision Support Systems*, 121, pp. 109-120.
- Oklander, M. and Kudina, A. (2021) 'Channels for promotion of fashion brands in the online space', *Baltic Journal of Economic Studies*, 7(2), pp. 179-187.
- Rhee, H.-L. and Lee, K.-H. (2021) 'Enhancing the sneakers shopping experience through virtual fitting using augmented reality', *Sustainability*, 13(11), pp. 6336.
- Robbins, N. B. and Heiberger, R. M. 'Plotting Likert and other rating scales'. *Proceedings of the 2011 joint statistical meeting: American Statistical Association*.
- Sa'ait, N., Kanyan, A. and Nazrin, M. F. (2016) 'The effect of e-WOM on customer purchase intention', *International Academic Research Journal of Social Science*, 2(1), pp. 73-80.
- Sulthana, A. N. and Vasantha, S. (2019) 'Influence of electronic word of mouth eWOM on purchase intention', *International Journal of Scientific & Technology Research*, 8(10), pp. 1-5.
- Tan, Y. S. (2020) *Beauty and skincare e-commerce mobile application with advanced searching module using image processing*. UTAR.
- Unspun (2020) *Unspun // beta testers wanted* <https://beta.unspun.io/> [<https://beta.unspun.io/>]. Available at: <https://beta.unspun.io/> (Accessed: May 24).
- Yenipazarli, A. (2021) 'The marketplace dilemma: Selling to the marketplace vs. selling on the marketplace', *Naval Research Logistics (NRL)*, 68(6), pp. 761-778.