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**Research Article** 

# Marketing Technologies and its Effect towards Online Purchasing Behaviour of Fashion Consumers in Malaysia

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#### Abstract

Leveraging existing literature, this paper reviews the factors that affect the online purchasing behaviour of fashion consumers in Malaysia. It aims to deduce the effect that various technologies have on fashion consumption and the drivers of the changes in consumer behaviour. The approach taken builds on existing frameworks for categorising technologies as processes, products, and services and then analyses the effect of the different marketing technologies on fashion consumption in Malaysia. The ability of the young middle class to earn more money and experience global fashion trends are key drivers of the change in their consumption behaviour. The outcome is an increased need for exciting experiences when shopping, and higher fashion tastes which can be attributed to the ever-increasing trends in technological innovations.

#### **Keywords**

Marketing Technologies, Online Marketing, Consumer Behaviour, Fashion Consumption, Marketing in Digital Era.

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# Introduction

According to Rathnayaka (2018), a typical consumer in the digital era is less tolerant, frequently experimenting, and less loyal. This usually results in companies incurring considerable costs to acquire customers only to lose them later. Technology in the form of easy access to various online products, increased internet penetration, and other factors such as busy schedules are some of the reasons for consumers' impatience nowadays. However, that same technology can and has been leveraged by marketers to improve consumers' consumption of products. Today, 98% of fashion brands have social media accounts, especially Instagram, to promote their company. They also use the medium as a key tool for marketing (Park, 2021).

Social media, smartphones, and e-commerce platforms such as Amazon, have changed the purchasing patterns of consumers (Kochar, 2021). Online services have become widely used for many purposes, with the most significant one being the rapid increase in online shopping. As the world becomes more connected, technology has become the go-to media for connecting consumers to the products they wish to purchase. (Yunos, and Abdul Lasi, 2020)

With technology, consumers can look up prices and related information with minimal effort when shopping online. They can explore the demand and reliability of a fashion product based on reviews, feedback, and ratings. They can make better buying decisions by analysing and comparing several brands while considering cost, colour, and quality (Kim, 2020; Ahmad, 2020). Kochar (2021) further extended this consumer power to improved bargaining opportunities and a better customer-brand relationship for consumers. For example, the ability to track a package or parcel online keeps the consumer updated and allows them to interact with the brand directly.

Technology has also enabled individual consumers to become brands that influence the purchasing decisions of other consumers. Accordingly, such individuals are called fashion influencers. The concept, known as the Megaphone Effect, is described by McQuarrie (2014) as having induced a new consumer behaviour pattern. It plays out as an individual or celebrity sharing their fashion style, taste, experiences, and scustomisation via blogs, vlogs, or other online interactive media with the public (other individual consumers), thereby acquiring a following from a mass audience (Tapalaga, 2019). An example is the case of Zalora's live streaming workout challenge (MajlesiRad et al., 2021). According to Kim (2019), consumers who feel that the brand or the fashion influencer reflects their personality are more emotionally connected to the brand and are 52% more valuable.

On the other hand, waiting in a long queue is detrimental to the consumption of fashion. When customers wait in a long line to enter a crowded fashion store, they become enraged and frustrated (Park, 2014). However, online shopping fixes this issue. In a survey of marketing professionals and researchers (n = 270), Ascend2 (2020) ranked a list of emerging technologies with the most positive effect on the relationship between a brand and its consumers. The top three technologies they identified are (1) Real-time Marketing, (2) Analytics and Artificial Intelligence (AI)<sup>1</sup>, and (3) Customer Data Platforms (CDPs). Harvard Business Review (2014) listed seven marketing technologies as essential for generating online leads. Analytics appeared in the list, followed by Conversion Optimization, Email Marketing, Search Engine Marketing, Remarketing, Mobile marketing, and Marketing automation. The list, however, left social media out, citing that social media was important for engagement and for promoting a brand's content but not necessarily for lead generation. Khan et al. (2014) did not agree entirely with that. They concluded that brand awareness and other dimensions of brand equity, strongly affects the purchase intention of Malaysian consumers in the fashion industry. In addition, according to Forbes Insights and Weber Shandwick (2012), more than half of a brand's awareness and general reputation comes from its online sociability. This implies that social media is an enabler of digital technologies. This review adds to the existing literature by using a marketing lens to analyse the effect of various technological innovations on how Malaysians consume fashion.

# Methodology

While drawing on the categories of technological innovations and the various marketing technologies defined by extant studies, the methodology adopted is based on Afuah (1996) and

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Kogabayev and Maziliauskas (2017). Afuah (1996) proposed a framework to scategorise the technological innovations of the fashion industry, and Kogabayev and Maziliauskas (2017) simplified it into three categories as follows: Technological product innovation, process innovation, and service innovation (see Table 1). We then pick each category and examine the factors that affect fashion consumption in Malaysia based on the different marketing technologies such as Real-time Marketing and Artificial Intelligence. The advantage of this framework is that it justifies our selection of technologies to review using secondary data from previously published studies.

Kogabayev and Maziliauskas (2017) referred to Technological Process innovations as the addition of new procedures or methods to a brand's activities, such as work and information flow and how to attract more customers. The following technologies are grouped as processes: Real-time marketing, Mobile Commerce and Social Networking, Conversion Optimisation, Email Marketing, Search Engine Marketing, and Remarketing. Product and service innovations are innovative products and/or services designed to meet specific market demand. Technologies grouped under the Product category are Analytics, CDPs, and Supply Chain Technology. Services are Al, VR, AR, or Mixed Reality, and Voice assistance.

While the categories are as distinct as possible, some technologies blur the boundaries. For example, a chatbot that provides round-the-clock assistance and responds to queries provides an AI Service to consumers. But it is also a product. This is the case for other technologies categorised under Service. Hence, the Service category appears in this review as 'Product and Service'.

#### Table 1:

A summary of the categories of technologies and their respective marketing technologies

Category of Technology	Technology	End-user
Process	Real-time marketing	Consumers
	Marketing automation	Marketers
	Mobile Commerce and Social Networking	Consumers
	Online Shopping	Consumers
	Mobile Marketing	Consumers
	Conversion Optimisation	Marketers
Product	Email Marketing	Consumers
	Search Engine Marketing	Consumers
	Remarketing	Consumers
	Analytics	Marketers
	Customer Data Platforms (CDPs)	Marketers
	Supply Chain Technology	Consumers
Product and Service	AI	Consumers
	Chatbot	Consumers
	Machine Learning	Marketers
	VR, AR, or Mixed Reality	Consumers
	Voice assistance	Consumers
Source: Harvard Business Re Sana Commerce (2020).	eview (2014); Kogabayev and Maziliauskas (2017)	); Ascend2 (202

#### Process

#### **Real-Time Marketing**

Real-time marketing allows fashion brands to promote their position in the industry. It sutilises channels like social media, emails, SMS, and online advertising campaigns to communicate spersonalised content to the appropriate target audience and learn more about them in the process. Most brands usually plan their marketing campaigns around ongoing events as the objective is to connect with audiences in real-time.

Rathnayaka (2018) reported that consumers react positively to engaging marketing movements like insightful social media and industry trends, challenges, and events that offer scustomised and



instant price reductions

#### Mobile Commerce and Social Networking

E-commerce is the backbone of mobile and online shopping, and it advances day-by-day especially in Malaysia's fast-growing smart manufacturing economy. According to the Malaysian Communications and Multimedia Commission, Internet traffic has been observed to arise from more than 20 million to a total of about 30 million in 2018 alone (Harizan et al., 2021). The numbers almost doubled in 2020 because of the COVID-19 pandemic lockdown, formally known as Movement Control Orders (MCO), and later in the year during Ramadan.

In the 2020 State of Fashion report, BOF and McKinsey (2020) estimated Southeast Asia's apparel sector worth USD 50 billion. Southeast Asia is composed of 11 countries, including Malaysia and Indonesia. Although Indonesia has one of the largest economies in Southeast Asia, Malaysia has consistently ranked higher than Indonesia in terms of modernity and overall global perceptions (U.S. News Best Countries rankings 2021). More consumers in the middle class of the regions are beginning to experience an increased disposable income. With Malaysia having a higher modernity score than Indonesia, more Malaysian consumers are developing luxurious fashion tastes. This change in interests and the exponential increase in online shopping points to one conclusion, i.e. There is a fashion demand spike through e-commerce businesses across Malaysia. And it is driven by the changes in the young middle class's taste due to increased exposure to global fashion brands and more disposable income.

In addition to the spike in the consumption of fashion and clothing through online platforms, both Lazada Malaysia and Shopee also recorded a jump in sportswear and outdoor apparel sales. Research conducted by Leong (2021) through surveys found that sdigitisation of retail stores increased customer interest and the desire to purchase the product. Hence, it acts as an essential mode of attracting a customer. Furthermore, the desire to buy products online was more for sdigitised sportswear rather than luxurious fashion brands. Consumers, particularly teens in Malaysia, are young and extensively use technology such as the Internet to make purchases. They are also more brand conscious, more active in apparel shopping, and are fashion influencers.

However, a survey conducted by Harizan et al. (2021) reported that many shoppers still prefer physically being present at a store merely to look at a product up close before purchasing. This is also the case for sportswear consumers, where although the sdigitisation of sportswear retail stores increased customer interest and their desire to purchase the product, consumers still want to test the product through in-store treadmills and other equipment (CB Insights, 2021). For some consumers, testing in-store increases the reliability of the product and its quality. Experiential retail using poll plugins are a possible way to solve the problem. Forbes (2012) found that 80% of consumers in the United States base their purchasing choices on advice and recommendations from friends. With poll plugins, consumers can create a poll on a specific product and receive feedback from friends regarding their experience using the product.

Social networking and advances in mobile technology have also influenced marketing models. For example, the famous Attention, Interest, Desire, and Action (AIDA) advertising effect model that highlights the steps consumers take while acquiring goods or services (Hassan et al., 2015), has been replaced by the new Attention, Interest, Search, Action, Share (AISAS) marketing model (Xu et al., 2017). Xu et al. (2017) scriticised the simplicity of the AIDA and how it doesn't fit into today's marketing behaviour like online shopping. They recommended alternatives and variations like AIDTSCAS (Action, Interest, and Desire; Trust, Search, Confidence; Action and Satisfaction), NAICDASSE (Need, Attention, and Interest; Confidence, Design, and Action; Satisfaction, Share, and Evaluation).

According to the Fashion Adoption Theory, consumers have psycho-social motives such as expectations, change, and values (Baker, 2019) for buying fashion products. For example, Malaysians are predominantly Muslims who require a special type of clothing in terms of modesty. The theory also states that a consumer's identity that makes them stand out, like sex, body shape, and appearance, is a motivator for purchasing a particular product (Baker, 2019). Individuals have different chic, formal, classic, or retro styles, so the brand that matches their look is more important to the consumer (Kim, 2019). Therefore, consumers who are more enthusiastic and involved in fashion trends are more likely to use the Internet for browsing and searching. It involves effective and convenient customisation such as name, colour, and size, which evokes positive emotions. (Ghazalle and Lasi, 2021)

Local brands like Zalora, Shopee, and Auction use interactive and attractive tools such as videos, images, animations, hashtags, audio, and links to evoke positive emotions in consumers and increase market value. When customers search and browse and find the journey enjoyable and useful, they experience positive emotions such as happiness. Making the page more personal and cognitively interactive by sharing personal experiences, thoughts, and journeys is also helpful in evoking positive feelings (Park, 2021).

#### Conversion Optimisation, Email Marketing, Search Engine Marketing, Remarketing

Conversion soptimisation is a marketing tool that fashion brands employ on their website. It involves engaging website traffic through interactive visuals and prompts with the end goal of converting these target audiences into, at least, subscribers of the brand's newsletter.

After getting the audiences to subscribe to the newsletters about the brand's product and other information, sharing personalized personalised and constructive content follows. This is where efficient and targeted email marketing comes in. Take Estee Lauder, for example. A study on the marketing trends in Asia reported fashion newsletter engagement has drastically reduced over the years (Clara, 2016). However, Estee Lauder still managed to accumulate engagement hits by strategically exploiting the full potential of its email marketing power. The fashion brand even reduced the bounce rate of its newsletters from about 20% to less than 2% (Clara, 2016).

Apparel brands also use search engine marketing (SEM) or pay-per-click (PPC) to boost the prominence of their web portals and online stores and generate traffic and sales in search engine results pages (SERPs). This digital marketing strategy tool can either be paid for as in Google AdWords and Bing Ad or used for free by sutilising search engine soptimisation (SEO). Most consumers frequently use search engines to research and shop for fashion products online, and SEM simply leads them to soptimised websites as top results.

The results of SEM are also manifested in fashion remarketing. Remarketing or retargeting is when ads of previously visited websites show up randomly on other web portals you frequent. However, remarketing is not random. For example, Zalora partnered with RTB House, a media retargeting firm, to serve spersonalised ads to customers who shop on its online store (McEleny, 2020).

# Product

#### Analytics

The fashion industry is mostly seasonal, and it requires reliable data analytics to effectively manage its heavy intake of fresh products and fragile catalogue (Seara et al., 2020). Companies like Supahands, headquartered in Malaysia, collaborate with and provide retail solutions to various online consumer brands in the Malaysian fashion industry. Supahands sutilises end-to-end data analytics and labelling tools to make precise product- and market-oriented choices and sminimises errors in client's inventory datasets, which improves cumulative operational performance in the industry.

# Customer Data Platforms (CDPs)

CDP collects consumer data from the different social channels they employ to engage with their favourite brands. The accumulated data points are in turn unified to create a consistent customer profile or a single customer view (SCV). SCV is important in the fashion industry, so fashion brands are slowly beginning to transition from being fashion-oriented to data-oriented. Zalora's Trender platform is a fitting example of this kind of transition. Trender unifies SCVs for brands that sell on Zalora and this, in turn, enables these brands to make smarter marketing choices (McEleny, 2020).

#### Supply Chain Technology

There are not enough studies on the impact of the adoption of supply chain technology in Malaysia's fashion industry, even though the technology is widely sutilised in the industry to catch up with the smart manufacturing revolution or Industry 4.0. However, Lee et al. (2016) managed a quantitative study on the kind and extent of supply chain technology adopted by more than 200 textile and apparel sorganisations in Malaysia. They reported that most of the sorganisations were invested in the following supply chain technology: blockchain; rapid data analysis, and



management tools like enterprise resource planning (ERP) which is used in textile production for real-time surveillance and material data capture; and radio frequency identification system (RFID) which is a type of wireless communication that features using electromagnetic fields for the identification and tracking of fabric tags.

In addition, Malaysia has established a Digital Free Trade Zone using logistics and a digital platform to help local SMEs access various e-commerce ecosystems (BOF & McKinsey, 2020). A majority of the merits of supply chain technology in the fashion industry are dependent on the firms involved in the chain and the community they operate in. However, Lee et al. (2016) argued that sorganisations that adopt these technologies are usually more interested in what they could benefit from the technology than societal gain.

Auramo et al. (2005) further explained that the impact of supply chain technology on the fashion industry in Malaysia cannot be singled out, but that its adoption generally reduces the cost of the supply chain itself and improves its dependability, dexterity, and receptiveness.

### **Product and Service**

#### Artificial Intelligence (AI)

Al is a newcomer in the fast-growing fashion industry of Malaysia. In developed countries, Al is constantly sutilised to solve marketing problems across various sectors, fashion especially, where it is used to predict trends, provide spersonalised suggestions, and boost consumer experience (Kestenbaum, 2021; Kochar, 2021). However, Malaysia has recently been implementing policies that add value to the fashion industry, like investing in start-ups to develop innovative technology (The Star Online, 2019).

Take SARATIX's Simultaneous Artificial Response and Action (SARA), for example. SARATIX, an Al firm, partnered with an online fashion brand that uses a crowdsource engine to manufacture garments, CUSTLR, to develop SARA: Malaysia's first fashion-based and business-oriented Al (AI4DA, 2021). Based on Deep Learning algorithms and sutilising an A4 paper, SARA offers automated tailoring assistance to customers by scanning and recording their body proportions. Then it uses its deep learning algorithm to examine the captured data and suggest the best fit for their body profile in split seconds, while also generating different apparel patterns and design that will suit the customer and sminimise textile waste.

The existence of SARA and its competence in the fashion industry has piqued the interest of international tech firms, like Sense Time, in the country's apparel industry. Sense Time recently endorsed a partnership with a local start-up G3 Global to establish Malaysia's first AI park that will feature a world-class research and development campus (AI4DA, 2021).

Chatbots are another manifestation of AI. Using machine learning techniques, they provide spersonalised user experience, 24/7 assistance, respond to queries and even send and receive shipping and tracking information. The rapid emergence of these technologies in the fashion industry has led to heightened competition among fashion brands in Malaysia and a spike in the expectations of online shoppers, with supply chain managers increasingly trying to enhance marketing plans in other to deliver seamless and cost-efficient consumer experience and satisfaction (The Star Online, 2019).

The effects of AI on fashion consumption in Malaysia can be surmised as providing scustomised user experiences ranging from technical support to product recommendations.

#### Virtual Reality, Augmented Reality, Mixed Reality, and Interactive Walls and Mirrors

Virtual reality (VR) was integrated into the fashion domain to portray a three-dimensional environment of a physical store that cannot be depicted on an online website. In this way, consumers can experience a store without physically being present. It makes use of headsets, microphones, etc. In conjunction with Augmented Reality (AR), virtual reality has been found to induce positive emotions in consumers. A study that used the stimuli-organism-response (SOR) model stated that stimulus (which in this case could be VR, AR, or Mixed Reality) could affect feelings such as pleasure, arousal, mood, emotional state, etc. (Jin, 2020). This phenomenon is beneficial amidst the MCO period where stores became closed, and customers only had online access.

In terms of shopping intention, Jin (2020) described how providing a unique and different



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experience to consumers through virtual simulation aroused enjoyment, excitement, and store attractiveness, increasing purchase intentions. It also encouraged them to visit the store physically and independent of whether the customer had visited the store previously.

A few Malaysian tech start-ups have started experimenting with AR and VR, with some even fully sutilising it. For example, Conten. T is an "immersive media production agency" created as a virtual and immersive retail division of Fotobox (Fotobox Co., 2021). The founder explained that the start-up meticulously constructs virtual and immersive narratives about client brands and their special offers (Dayangku, 2021). Fotobox has created VR and AR retail content for global fashion brands like Adidas Malaysia, Mamonde, and Coach.

Adidas also features an "AdiVerse Virtual Footwear Wall" in its flagship stores. The wall is an interactive 3D screen that shows articles like shoes and sportswear to make a purchase. Consumers can zoom in to the pictures of around 4000 shoe articles. Another example of interactive walls and mirrors is the "Interactive Fitting Room" by Rebecca Minkoff (Kim, 2020). This is another technology that many Malaysian retails stores have adopted. It is a mirror that doubles as an interactive touch display inside a fitting room. It acts as a lookbook to rummage through all the articles available in the store.

Generally, the effect of VR, AR, and MR on fashion consumption in Malaysia is apparent in how it brings excitement to fashion shopping. It is also useful when physical movement and access to a physical store are restricted.

# **Summary and Conclusions**

Al has significantly improved the way consumers interact with fashion brands. The Malaysian fashion industry has just taken a big leap with the invention of Malaysia's first fashion-oriented neural engine, SARA by SARATIX and CUSTLR; and, the intervention of international tech firms in the industry.

The adoption of smart manufacturing revolution or Industry 4.0 in Malaysia and hence the uprise of supply chain technology like blockchain and rapid data analysis are also playing an important background role in the advancement of the Malaysian fashion industry by enhancing consistent customer experience, relationship, and satisfaction.

E-commerce birthed online shopping in Malaysia. The rapid adoption of internet services mixed with the MCO restriction created exponential growth in online fashion consumption, with brands like Lazada and Zalora recording massive sale spikes. Advances in VR and AR mobile technology to create immersive experiences for consumers were also a contributing factor. In addition, Malaysian fashion brands utilised social networking tools like Instagram live feature and collaborated with influencers and celebrities to jumpstart online campaigns like Lazada's "See Now, Buy Now" model and Zalora's #SaturdaySweat campaign. Also, Malaysia's successful 2020 year-end sales demonstrated a substantial increase in people turning to online shopping for their respective fashion needs (Leong, 2021).

A common theme across the various technologies and their effect on the consumption of Fashion in Malaysia is the use of technology to make shopping an exciting experience rather than a hurdle. However, this theme does not stand alone. It is complemented by the rise in modernity and the change in the consumer's volume of demand and taste of fashion. Technology has induced two major leverage points for this change Malaysia is experiencing:

1. The ability of the middle class to earn more money through increased connection to global job opportunities thereby taking them one step up in the Maslow's hierarchy of needs.

2. The ability to experience global fashion trends thereby elevating individual consumers' fashion taste.

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