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16 Marketing Innovation Drivers: Toward Reusing and Recycling

Abstract: Due to a continuous increase in polluting and destructing resources, environmental protection has become an unprecedented ultimatum that requires the attention of businesses and governments. Information technologies can help companies to be effective in forming a resilient and green society in addition to the competitiveness scope and meeting the new customer needs. Over the past few decades, technological advancements have developed exponentially, especially in the field of artificial intelligence (AI). Digital technology applications based on artificial intelligence (AI) have also been accepted and expanded in the fashion industry to improve products, services and new ways of communication, such as virtual reality and social media platforms. In this research, we identified drivers of marketing innovations in the fashion industry by reviewing library research and taking advantage of the panel of experts, consisting of startup executive managers and academic faculty members in fashion design and computer engineering.

Keywords: fashion, marketing, artificial intelligence, innovation, reuse, recycling, futurology

Introduction

Production, marketing and consumption of fashion products have negative environmental effects (Thorisdottir & Johannsdottir, 2019). The sustainable agenda has developed over the last four decades and has emphasised the collaboration among governments and firms by performing strategies focused on sustainability-related areas (Drexhage & Murphy, 2010).

Fashion is the second most environmentally destructive industry after oil (Moorhouse & Moorhouse, 2017). As a result, there are increasing pressures from the market

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and beneficiaries to apply sustainable environmental methods. Consequently, sustainable strategies can be implemented as an instrument to create more value for the customers and improve the brand image. While devising digital transformation strategies, firms must also consider sustainable environmental strategies (Aron & Molina, 2020; Neutzling et al., 2018; Tariq et al., 2017).

On the one hand, developing political, economic and cultural relations have increasingly formed an interconnected world, and notions like the digital sharing economy have led to redefining business efficiency to achieve sustainability (Sarc et al., 2019). Industrial processes are constantly evolving at the same time. Then, the need to gain competitive advantages in production has historically been a driving force for developing new economic mechanisms. Since the beginning of industrialisation, a technological leap has occurred from time to time that transformed the concept of industrial production. For instance, industry 4.0 is part of the realisation of an integrated and united world that has evolved through the ICT revolution. Technological changes in Industry 4.0 occur through smartness which electronically connects the industry with internal and external supply chain networks through the internet of things (Liao et al., 2017; Ślusarczyk, 2018). Many organisations that have not accepted IT are striving for survival. In contemporary firms, business units have the same vision for the future regardless of their departments and activities. Therefore, every sector uses Industry 4.0 to achieve capabilities in product customisation. However, there is still a high consumption of resources, raw materials, information and energy with Industry 4.0, which is environmentally unsustainable despite its many benefits. It has also made society and the public aware of the threats (McWilliams et al., 2016). Technologies of Industry 4.0 and digital innovations have recently positively impacted the promoting of circular economy (CE), for example, through product life cycle analysis. Accordingly, there is a need for a close collaboration between industries, consumers and politicians to gain more accurate and detailed information about the product life cycle, waste collection and consumers' behaviour. In this regard, digitalisation can help track products by transmitting real-time data about the products' location, status, availability, etc., extending product life expectancy through sensors and digital platforms.

In order to reach more efficient and effective circular economy solutions, close cooperation between different players in the circular textile ecosystem is required where consumers are at the core of such an ecosystem. In this sense, the internet of things plays a fundamental role by transmitting information and data to all players and improving their awareness of new circular opportunities (Ghoreishi & Happonen, 2022). Recently, fashion studies have received increasing attention from computer vision, machine learning and artificial intelligence (Gu et al., 2020). Artificial intelligence (AI) involves machines that learn from experience, adapt to new inputs and perform tasks like humans (Duan et al., 2019). In this chapter, we review the extant literature to identify the driving forces of marketing innovations in the fashion industry by forming a panel of experts.

Related Literature

Sustainability in the Fashion Industry

Nowadays, sustainability is an essential issue at all levels of society. Sustainability means using resources to meet the needs of current and future generations without jeopardising ecosystems. This global sustainability trend has led to many innovative business strategies in various companies selling fashion products (Caniato et al., 2012; Dana et al., 2022; Dana & Salamzadeh, 2021; Morelli, 2011; Toghraee et al., 2022). There are some limitations to ensuring that natural resources are not overused at a constant rate higher than the renewal rate of these resources. Also, one should not overlook the environment's capacity to absorb these wastes. Therefore, the focus should be on renewable natural resources as an alternative to non-renewable resources (Zhu et al., 2015). The production of massive waste, which mainly consists of goods that are not disposed of, leads to huge irreparable damages to our planet and ecosystem and constitutes the experience of a global environmental crisis.

The supply of textiles and their components is an integral part of the fashion industry, but the fabric has large environmental impacts. For example, Woodside & Fine (2019) claim that at least 8,000 chemicals are used to transform raw materials into textiles. Also, cotton is the most common crop worldwide, but it takes 20,000 litres of water to grow one kilogram of cotton. Much pesticide is used on cotton and almost 1% of the global CO_2 emissions are produced by cotton agriculture (Organic Cotton Plus, 2017).

Advanced societies are trying to reduce the environmental pollution caused by industries by limiting resource consumption (Sandhiya et al., 2021). Significant efforts have been made to promote consumers' sustainable consumption, and sustainability has become an important issue in marketing theory and practice (Di Benedetto, 2017). According to the losses incurred to the environment and the environmental crises, paying attention to sustainability has become necessary, and it requires the most advanced and newest solutions. However, despite the abovementioned points, and although the consumers are aware of resource limitations and their importance, we are still far from sustainable consumption, and the demand for products is much more than the real needs. Therefore, there is a big difference between sustainable consumption and real behaviour (Terlau & Hirsch, 2015; Sogari et al., 2017). Industry, innovation and infrastructure have emerged to form Industry 4.0 with smart factories that carry out smart production through innovative methods that encourage research and development of technology to increase efficiency and effectiveness (Lentner et al., 2019).

The fashion industry should be considered an important and interesting area to evaluate the consequences of the so-called Industry 4.0 and digital transformation paradigms. Fashion is a proper context for studying for several reasons. From a diachronic perspective, this sector has played a key role during the industrial revolutions over the centuries and has historically been considered a "design-driven" sector. Most designers

and managers work together to create a brand and a successful business model through which they can interact (Bertola & Teunissen, 2018). In the fashion industry, the concept of sustainability has been synonymous with “eco-friendly”, “green”, “ethical”, and “sustainable” fashion (Leahy, 2019; Min Kong & Ko, 2017). Thus, some fashion companies have tried to increase sustainability by reengineering their business processes (Morelli, 2011), and in certain cases creating formal programs with a 5R approach (Reduce, Reuse, Recycle, Redesign, Reimage) to achieve sustainability (Ho & Choi, 2012; Li et al., 2015).

Some firms have offered a digital solution for preserving selected clothing with the advent of artificial intelligence and virtual simulation of clothing. Some researchers have focused on reconstructing historical three-dimensional clothes and have successfully studied the restoration of old clothes and virtual mannequins (Moskvin et al., 2020). In general, with its technological development, digitalisation strengthens the transition towards circular economy models by supporting the analysis of massive data about the products and materials in their life cycle from the design stage up to the end of life and recycling stages. The digitalisation helps extend a product’s life through data analysis and transformation processes such as product maintenance services or digital platforms used to resell second-hand products (Ghoreishi et al., 2020).

Reuse and Recycle

The textile and apparel industries are moving towards circular economy models such as recycling and reuse. Here, production flow is reduced by reusing, recycling, or minimising waste. For instance, the 2008 Waste Framework Directive (WFD) was introduced accordingly. The effects of recycling can affect the reduction in prices. In this regard, it is crucial to understand customers’ views because the customer experience plays an important role in the adaption of CE products (European Parliament and Council, 2021; Ta et al., 2022). Therefore, attracting customers, their interests, engagements and retention, learning customer preferences and communicating with customers are key strategies in building strong customer relationships. However, many firms ignore the long-term aspects of customer relationship management (Nikunen et al., 2017). From a customer perspective, there is an increased customer acceptance of recycled and reused materials and products (Vehmas et al., 2018). Then, firms can develop their business models based on the products designed for reusing or recycling. Moreover, social media influencers’ support of second-hand clothes causes the adoption of online platforms for second-hand clothing retailers (Shrivastava et al., 2021; Salamzadeh et al., 2022, a, b). Using digital technologies in marketing offers several advantages for marketers in their customer relationships. The customers’ perceived value of using digital channels and interacting with marketing can be increased accordingly. Regular communication with customers through digital marketing communication (DMC) provides marketers with new ways to form customer relationship management.

It can be argued that digital solutions can play a critical role in supporting the creation of CE, and digital development can help remove the obstacles throughout the value chain accordingly. Also, they can help improve product design, manufacturing processes, the use of recycled products and waste management. Digitalisation could change the current linear models, reduce resource consumption and even support dematerialisation (Hedberg & Šipka, 2021). Research on the overlap between fashion and digital technologies is growing and attracting the interest of academics and practitioners (Noris et al., 2021). Today, the fashion industry players interact with information and communication technologies at different levels, helping adopt digital media and develop reusing and recycling (Janigo & Wu, 2015; Rocamora, 2017). Data analysis is critical for implementing successful strategies in the business context. Besides, technologies such as artificial intelligence play a significant role in this industry (Duan et al., 2019). Artificial intelligence integrates thousands of computers and other resources to solve some problems, achieve goals and reach the desired result. With the use of AI, business practices have evolved in various industries. Since the decisions made by AI are derived from objective data and are far from cognitive and emotional biases, they differ from the results obtained by experts (Nishant et al., 2020).

AI rapidly changes digital marketing practices (Mogaji et al., 2020). As the nascent technology of the "fourth industrial revolution", it can support and accelerate human innovation to design fashion developments in sustainable future cities (Kadar & Kadar, 2020). AI aims to study new ways to attract new customers and expand the business. Even the fashion industry has benefitted from the business advantages of Instagram in this rapid and competitive industry. AI appears promising and can change Instagram users', advertisers' and influencers' approaches (Yeo et al., 2022).

Marketing Innovations and Using Artificial Intelligence

Fashion is an integral part of human life around the world, affecting the life and career of many people in society. On the one hand, according to previous research in fashion marketing, the share of AI in the fashion market was globally estimated 419.70 million dollars in 2021, and it is expected to reach 500.66 million dollars in 2022 and over a billion dollars in 2027 (ReportLinker, 2022). On the other hand, various resources, such as human resources, environmental resources, etc., are used in producing different fashion products (Sandhiya et al., 2021). With the help of digital technologies and fashion product customisation, the consumer purchase intention may change, and they will be more willing to purchase the products that meet their needs as explicitly as possible (Meng, 2022). It would prevent the accumulation of goods and lead to sustainable economic and environmental savings. It is noteworthy that a significant part of the waste produced in the fashion industry was because of the poor marketing strategies resulting from customer dissatisfaction with the product size, colour or style (Eppinger, 2022; Piippo et al., 2022). Therefore, reducing waste with smart recycling of products is

necessary to improve customer satisfaction and create a sustainable digital supply chain. The ultimate value of AI is not merely limited to reducing natural resources and the energy consumed by human activities. It is rather beyond these issues, and its ultimate goal is to create a new attitude and thought for facilitating and strengthening sustainability in the industry (Linkov et al., 2018). AI systems try to identify as much human behaviour as possible, like seeing and hearing and imitating it in the best possible way (Russell & Norvig, 2016). The fashion industry's recycling process should focus on the design so that the consumer can participate in the entire design process with the producer. Thus, the output would meet all the individual needs and the most suitable product for each customer would be produced in the shortest time (Qiu & Ma, 2021).

Some startups and applications based on AI can significantly help customers in the process of purchasing and ordering products. For instance, Zeekit is a startup in the field of fashion that Walmart acquired. Using AI, this company has come up with virtual fitting rooms for customers allowing them to try on the products in their size without physically touching them or even visiting the store. Also, Goodstyle application is a digital fitting room with a personal virtual stylist that helps people find their style and choose their favourite style from various fashion products with the help of customised recommendations from AI.

The Process of Selling

AI can make significant changes in all parts of society and be implemented in all stages of the value chain (Silvestri, 2020). One of the stages that leaves the greatest impact and footprint on the environment is the product design stage (EU Science Hub, 2022). On the other hand, new products' lifecycle in the fashion industry is very short for each season (Ceptureanu et al., 2018). As a result, it is very difficult to accurately predict product sales in any specific period. Using AI, every company and designer can predict the process of affecting the audience (Silvestri, 2020). One of AI's most valuable use case is achieving valuable sustainable business goals (Candeloro, 2020).

Brands such as H&M use AI, data analysis programs and 3D visualisation to predict the customer demand and desire and, accordingly, reduce the excessive accumulation of unsold clothes that end up as waste and improve their sales process towards sustainability. They calculated the probability of selling one product instead of another product (De Bruyn et al., 2020; McKinsey, 2018). They have transformed customer purchase behaviour using AI-based digital technologies and marketing programmes. Yeo et al. (2022) used Engel Kollat Blackwell (EKB) theory in their research to analyse the effects of digital technology based on AI and its applications in manipulating buying decisions of fashion products on Instagram. They have shown how the buyers' views and understanding have changed industry through AI on social media. Online fashion marketing has improved customer experiences by customising and understanding new concepts in the new world of digital fashion (Nobile & Kalbaska, 2020).

Heuritech is a fashion forecasting agency that uses data analytics, AI and image processing technologies to analyse photos on social media, especially Instagram and Weibo, to predict trends. The forecasting process of this agency is briefly explained below:

(i) **Audience definition:** at first, it defines a relevant panel, using random sampling among the audience interested in fashion on social media.
(ii) **Image analysis:** then, by using computer vision technology, it defines and categorises photos and clothing components, and by monitoring the details of key trends (from shapes and features to fabrics, patterns, prints and colours) and through data analysis over time. How a trend evolves using prior data gives a comprehensive view of the market, making this information quantitatively accessible and comparable.
(iii) **Trend prediction:** it predicts the fashion trends until a year before, using machine learning algorithms (ML) to predict the future and other algorithms to integrate the predictions of fashion items that have been followed.
(iv) **Inform fashion brands:** finally, when the trend forecasting results have been published on the platform, sellers and designers can use these results and make conscious decisions about their next products.

Some famous brands like Louis Vuitton, Wrangler, Paco Rabanne, Adidas, Dior, Jimmy Choo and Lee have been mentioned as this agency's clients.

Consumer Behaviour

AI can also affect consumer purchase behaviour and move towards sustainability by informing and educating customers about the products' production process. In this regard, Fertech, an online luxury fashion platform, has created a partnership with its online users. It has done it by using the Farfetch fashion footprint tool on its official website and with the help of artificial intelligence, as well as with accurate calculation and publication of the environmental effects of each fabric type in garment manufacturing. It suggests alternative materials that are less harmful to the environment, shows which textiles are more sustainable than traditional textiles and leads customers to use pre-owned fashion. Footprint also shows how many primary resources are saved by choosing a pre-owned (second-hand) garment and how effectively it reduces environmental pollution (Candeloro, 2020; Salamzadeh et al., 2022 a, b; Wightman, 2020).

Among other use cases of artificial intelligence in the fashion industry, we can mention virtual fashion shows using virtual fashion. Companies like ORDRE changed the world of events and fashion shows and disrupted the traditional channels of the fashion business. In the virtual catwalk, buyers of the retail network are given virtual

reality headsets, and they can watch the show from anywhere in the world, sitting in the front row without having any physical presence there (ORDRE, 2022).

Also, ORDRE online wholesale platform offers a complementary channel to luxury brands using 360-degree cloud technology to present seasonal collections through the online showrooms. Recently, Tommy Hilfiger (an American premium clothing brand) has expanded its activity in using virtual and hyperreal models with the help of AI in 3D virtual corridors in collaboration with Elite World virtual group (Douglass, 2021). Buyers can see the fabric details by rotating, zooming and reviewing each part of the garment on the 3D models and purchase (ORDRE, 2022). According to Silvestri's research (2020) on the future of the fashion industry, it has been shown that virtual reality and AI have improved the relationship between the brand and customer's positive attitude towards the brand, and customers feel a higher level of ownership and trust which has led to a higher and more informed purchase probability that helps approach sustainability.

Methodology

This research is exploratory and functional and takes advantage of the Delphi method to identify the innovation drivers in the fashion industry. In the current research, we identified the innovative marketing drivers based on the role of the artificial intelligence approach in reusing and recycling in the fashion industry. We determined the accuracy of the classification of drivers in the four fields of institutional and legal, economic, social and cultural, and ultimately technological, relying on the panel of experts to discover the main drivers in addition to the accuracy of the division. In the third round of Delphi, we measured the degree of certainty in the fashion industry's marketing innovations' occurrence, dimensions and effective accelerating factors. Previous research has emphasised the importance of systematically identifying strategic issues for consideration in subsequent Delphi studies. The Delphi method has been widely used in planning, policy analysis and long-term forecasting in the public and private sectors. It has also been used in various fields like education and library studies. The Delphi techniques are valuable tools for choosing which ones can be implemented. Therefore, we followed a rigorous methodology to uncover the list of strategic issues intended to form the future state of smart city policymaking.

In order to ensure the reliability of findings, it is necessary to identify and select the right experts to participate in the survey. Previous researchers have emphasised the integration of diverse perspectives in strategy development to avoid misleading consensus of stakeholder opinions with similar orientations. We argue that the participation of people with functional and scientific backgrounds in the field of marketing innovations in the evaluation of strategic issues can be a way to increase both scientific and operational aspects in perceptions about strategic matters. Therefore, we have also used academic faculty members related to the subject in addition to the

agents from startup executive managers. We specifically put the scientific and operational stakeholders in our panel because they are mainly affected by social and technical changes in urban mobility. Accordingly, this process has been conducted by the expert team consisting of 57 academic faculty members, researchers and marketing innovation managers who are experts in the field of artificial intelligence or fashion with several years of experience in the fashion industry. Academic faculty members were selected from fashion design and computer engineering fields. Executives of startups in the fashion and fashion design fields were also invited to take advantage of their experiences in marketing innovations and discovering opportunities for quick exploitation. The members of an expert team can significantly help the policymakers with their full knowledge of the research field and generalisation of their idea in the body of fashion industry knowledge (see Table 16.1).

Table 16.1: Demographic characteristics of experts.

Education degree	**Master's level**		**PhD**	
	10 (20.6%)		47 (79.4%)	
Type of activity	**Faculty members of fashion design**	**Faculty members of computer engineering**	**Startup executive managers**	
	12 (35%)	5 (5%)	17 (50%)	
Experience of activity	**Less than 5 years**	**5–10 years**	**10–15 years**	**Over 15 years**
	2 (6%)	4 (12%)	12 (35%)	16 (47%)

The face and content validity of the interview protocol is equal to 79.8%. Therefore, the validity of the interview protocol is accepted. Cronbach's alpha was used to measure reliability. The results of validity and reliability tests in the qualitative section are as follows (Table 16.2):

Table 16.2: Evaluating convergent validity and reliability in qualitative protocol.

		All the questions			**Compliance of the questions with the preliminary research model**
Reliability	**Number of respondents**	34	**Validity**	**Average**	3.8
	Cronbach's alpha	0.916		**Validity score**	79.80

Findings

The identified drivers from library research have been divided into four exes by obtaining the opinion of experts in two rounds of Delphi.

Table 16.3: Drivers and factors.

Factors & Drivers	Macro-axis	Main Driver	Index	Uncertainty	Importance
Collaboration among stakeholders	Institutional and legal	Longitudinal and transverse integration of institution	IS1	7	7
Formation of new connotations and needs					
Regulation					
Virtual communication between stakeholders					
Planning and public policy making					
Public and private partnership development					
Reduction of pollution level	Institutional and legal	Sustainable management	IS2	2	3
Consumption management and row material quality					
Energy consumption reduction					
Reduction of raw material consumption					
Resource deficiency					
Waste Management Systems					
Sustainable management of natural resources					
Goals and visions Transparent governance	Institutional and legal	Strategic management	IS3	10	11
Using the experience of intelligentisation of industries					
Public safety and security					
Increase social awareness					
Environmental support					

Table 16.3 (continued)

Factors & Drivers	Macro-axis	Main Driver	Index	Uncertainty	Importance
Encouraging entrepreneurship and innovation	Institutional and legal	Innovative management	IS4	6	6
Knowledge capital development					
Labour productivity improvement					
Modern urban infrastructure					
Smart planning in the fashion industry					
Digital marketing infrastructure					
Knowledge capital expansion					
Ownership structure in cyberspace					
Citizen participation	Social and cultural	Social capital participation	CS1	8	10
ollaborative decision-making					
Citizenship education	Social and cultural	Social education development	CS2	9	8
Facilitating lifelong learning					
Environmental awareness					
Availability of labor (skilled and unskilled)					
Citizen empowerment					
Public and social service improvement Increasing urban capacity to attract tourists	Social and cultural	Improving and developing of social services	CS3	12	14
Improving the quality of life					
Interactive systems in customer relationship					
Attractive fashion tourism projects					

Table 16.3 (continued)

Factors & Drivers	Macro-axis	Main Driver	Index	Uncertainty	Importance
Innovative educational institutions	Social and cultural	Social innovation development	CS4	1	2
Knowledge sharing					
Innovative companies					
Innovative sanitary facilities					
Research and development (R&D)					
Funding from subsidies (interest-free loans, tax exemptions, cash grants, etc.)	Economic	Objective economics	E1	14	15
Using renewable energy sources, energy saving initiatives, smart energy systems	Economic	Resource depletion	E2	11	12
Conserve resource					
Business intelligence	Economic	Techno economics	E3	5	9
Energy efficiency					
Foreign investment attraction	Economic	International economic	E4	3	4
Value chain optimisation					
Business network management					
Expertise in new technology design and technology-based solutions in fashion industry Cost-effective and developed technologies suitable for local conditions in fashion recycling	Technological	Native technology	T1	15	13
Smart technologies					
Flexible working models					

Table 16.3 (continued)

Factors & Drivers	Macro-axis	Main Driver	Index	Uncertainty	Importance
Artificial intelligence	Technological	New technology	T2	4	1
Internet of things (IOT)					
Big data					
Data mining					
Data security & information security					
Smart technologies					
Social media					
3D design					
simulation 3D					
Customer behaviour analysis					
Socio-technical effects of digitalisation (impact of technology on production tasks)	Technological	Technology acceptance	T3	13	16
Acceptance of new construction technologies (smart materials, smart structure technologies, etc.)					
Integration of physical infrastructure	Technological	Technology platforms	T4	16	5
Boardband and internet access					
Platform infrastructure					

The identified drivers are presented to the panel of experts. Confirmation of the factors in two rounds of Delphi is shown as described in Table 16.3. Sixteen identified drivers have the threshold of more than three and have been approved. By conducting the third round of Delphi, factors based on the importance and uncertainty of occurrence were ranked by experts. It was done with the 5-point Likert scale: one means very little and five means very much. The final ranking of key factors is determined based on the average level of importance and uncertainty of occurrence, along with the ranking of importance and uncertainty of the factors in Table 16.4.

Table 16.4: Validation of drivers and key factors (*KFs) based on the Delphi metho.*

Main driver	Average	Consensus percentage	Weight	Rank	Average	Consensus percentage	Weight	Rank
1st round					**2nd round**			
IS1	4.4375	56.25	0.059019119	15	4.625	65.625	0.060730406	13
IS2	4.90625	93.75	0.065253533	3	4.9375	93.75	0.064833812	2
IS3	4.75	78.125	0.063175395	7	4.78125	78.125	0.062782109	7
IS4	4.59375	65.625	0.061097257	11	4.625	65.625	0.060730406	13
CS1	4.65625	78.125	0.061928512	9	4.78125	84.375	0.062782109	7
CS2	4.84375	90.625	0.064422278	5	4.875	93.75	0.064013131	5
CS3	4.59375	81.25	0.061097257	11	4.6875	84.375	0.061551087	11
CS4	4.90625	93.75	0.065253533	3	4.9375	93.75	0.064833812	2
E	4.28125	53.125	0.056940981	16	4.34375	56.25	0.057037341	16
E2	4.59375	78.125	0.061097257	11	4.625	81.25	0.060730406	13
E3	4.9375	93.75	0.06566916	2	4.9375	93.75	0.064833812	2
E4	4.59375	78.125	0.061097257	11	4.78125	84.375	0.062782109	7
T1	4.65625	78.125	0.061928512	9	4.78125	78.125	0.062782109	7
T2	4.96875	96.875	0.066084788	1	4.96875	96.875	0.065244153	1
T3	4.6875	87.5	0.06234414	8	4.65625	87.5	0.061140747	12
T4	4.78125	81.25	0.063591022	6	4.8125	81.25	0.06319245	6

Conclusions

This chapter has investigated the marketing innovation drivers based on the reusing and recycling approach in the fashion industry. The purpose is to understand how customers are persuaded to accept and practice reusing and recycling while increasing their awareness. We have focused on the innovations that result from artificial intelligence in investigating marketing innovations. This information helps businesses in the industry to create a powerful AI marketing plan to increase awareness. Based on this, the concept of reusing and recycling was examined in describing the performance of artificial intelligence in business environments, customers' purchase behaviour and marketing for accessing through the various digital marketing channels and platforms. The findings are consistent with those of Yeo (2022) and Zhao (2019) regarding the value of big data produced on digital platforms to discover information and the flow of their hidden knowledge in changing traditional marketing trends. In contrast, due to the research done by Brevini (2020) and Dauvergne (2022), digital technologies like artificial intelligence lead to consumerism and disrupt the sustainable cycle by persuading customers. Using artificial intelligence in marketing will bring out major changes in terms of innovation. Artificial intelligence brings a revolution to business and society. It provides companies with a set of ways to better understand, predict and interact with customers. It can enable the reusing and recycling approach as a strategy for fashion business owners during their interactions with customers. In the fashion industry, to encourage customers towards reusing and recycling and using artificial intelligence in the emergence of innovations in marketing, two axes were investigated further as follows: (i) focusing on the products' sales trend, and (ii) changing the consumers' behaviour. In order to explain the requirements that can be set as this form of marketing development drivers, we investigated and identified drivers along axes: (i) institutional and legal; (ii) social and cultural; (iii) economic; and (iv) technological. Such analysis effectively comprehends the systematic relationships between constituent parameters in the analysis of ecosystem's service flow and the green development issues (Everard et al., 2012) and (Everard 2013; 2015). The results were obtained from interviews with industry experts. The results show that sustainable management in the institutional and legal axis, the development of social innovation in the social and cultural axis, the economy of innovation in the economic axis and the development of new technologies in the technology axis are the drivers of marketing innovations towards reusing and recycling in the fashion industry. The main limitation of our research is narrowing the innovation down to the innovative effects of artificial intelligence in marketing which can lead to reusing and recycling among customers. As a suggestion for future research, investigating the other aspects of the innovation can be considered. Also, researchers can explore how the sixteen identified drivers affect each other to do further study.

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