¹Shokooh Sadat Alizadeh Moghadam

^{2*}Asadollah Kordnaeij

³Hamid Khodadad Hosseini

⁴Ayoub Mohamadian

Strategy Formation Conceptual Modelin Digital Transformation of Fashion Retail Organizations



Abstract: - This research was conducted to introduce the conceptual model of digital transformation strategy formation in clothing retail organizations. The qualitative research method was based on the Many Foundations Data Theory approach. Using CASP, the quality of the input articles was reviewed from 37 articles, in the second part of the many databases strategy, the semi-structured interview method was conducted with 17 experts and senior managers of clothing retail organizations, and its validity was confirmed by the Launched method and the Kappa agreement coefficient. Using the combination of empirical and theoretical grounding, 73 codes were extracted in the form of 23 themes in the form of three main components of decision-making drivers, decision-making elements, and strategic decision-making consequences of digital transformation in clothing retailing, finally with a round-trip and enrichment process. The theory, the strategic decision-making model of digital transformation in Iran's clothing retail was designed.

Keywords: digital transformation, online retail, strategic decision making.

I. INTRODUCTION

In terms of investment size, turnover, share of GDP, and employment, the global fashion and apparel market is rightfully perceived as one of the most significant sectors of the world economy, as it tends to offer a wide range of products with very short product life cycle and unpredictable variable demand, as well as inflexible delivery time and production process. known for a long time (Fashion, 2015). The clothing retail industry is almost certain to face paradigm-scale alterations in the not-so-distant future. As such, retailers have no choice but to adapt themselves to a plethora of customers' temporal and spatial preferences, achieved through the digital infrastructure, with the aim of forging a unique customized experience for each customer based on their value chain. These arguably all-inclusive changes, that seem to rely on not only the digitalization of customer experience but also that of business operations, are currently being framed as the digital transformation of clothing retailing (Berman & Marshall, 2014). Currently, the main strategies of clothing retail organizations are focused on market orientation, relationships with stakeholders affecting the company's results (network capital), in which customer relationship management (CRM) is at the very forefront, the use of technology to better serve online and offline customers and the integration of technology-reliant service delivery omni-channels (Cai & Lo, 2020). That is, investing in the development of interactive digital technologies in the field of sales and services, developing mobile apps and IoT-enabled social media, and improving customer experience through journey-engineering in integrated channels are at the forefront of decision-making discussions that senior managers must plan for in order to develop a solid brand, gain a competitive advantage and acquire new customers and retain current ones (McTiernan, 2021).

The emergence of new technologies such as the Internet of Things, Big Data, 3D printing, robotics, smart sensors, artificial intelligence (AI), augmented reality (AR) and cloud computing has transformed the very face and internal affairs of organizations working in fashion and clothing, thereby providing a significant competitive advantage for such organizations given their need for high levels financial and knowledge (Li, 2020). This in turn exposes clothing retail industry to the need for altering the way by which organizations are managed, to extent that the application - or lack thereof, the manner and intensity of using these technologies in the aforesaid industry is simply a major factor in the race of supremacy among market players (Bertola & Teunissen, 2018). Digital renovation in fashion retail industry can lead to enhanced accuracy and efficiency of processes, reduced operational errors and alleviated levels risks within the decision-making process in the corresponding organizations, as they are faced with an enormous body of information related to various products in terms of colors and sizes, the diverse tastes of customers, and the vast array of suppliers (Testa & Karpova, 2022). Yet, the emergence of digital technologies has permanently altered, and will continue to do so, the landscape of clothing retail industry. That is, the very tangible spaces of the stores are certain to be transformed and instead of the main sales channel, and hence would become the frontiers through which brands and products are ripe for heightened levels of the customer experience and branding. Furthermore, innovative digital experiences in virtual fashion

¹Department of business administration, Faculty of Management and Economics, Tarbiat Modares University, Tehran, Iran.

²Department of business administration, Faculty of Management and Economics, Tarbiat Modares University, Tehran, Iran.

³Department of business administration, Faculty of Management and Economics, Tarbiat Modares University, Tehran, Iran.

⁴Department of Information technolgy, Faculty of Management, University of Tehran, Tehran, Iran.

^{*}Corresponding Author

shows, digital stores, interactive games and customer-tailored online clothing design, and agora-like shopping in the context of product sharing, are expected to further alter consumer tastes and preferences, in turn leading to fundamental changes in the organization's business model. Nevertheless, the uncertainty resulting from the presence of these technologies in the store and organization, the perceivable resistance of employees to employ new-found technology, the desire of customers to browse and try on clothes in the physical environment, and the fear of managers in making emerging and unprecedented decisions in the presence of novel and unknown variables will render the digital transformation in clothing retail organizations an all-encompassing and controversial challenge (Szozda, 2023).

Given the perceived significance of retail industry in the global economy and the level of expected fluctuations therein, the retail industry in general is the fifth most studied research field in the literature of digital transformation around the world. However, many such studies have recorded inconclusive findings in the digital transformation of clothing retails owing to the distinct characteristics of the underlying businesses, and a lack of reliable scientific model for the managers to guide their strategies and plans (Kutnjak, Pihiri, & Furjan, 2019). The traditional nature of the clothing retail business environment and its resistance to the highly-paced environment of digital technology developments has led to fear and confusion in the face of this paradigm shift, and the decision to select among technologies, their depth of integration into the organization, and the speed of digital transformation of the organization have posed a great challenge for top-level managers who do not necessarily have knowledge and experience in the digital (Wanick & Bazaki, 2023). The complexity and uncertainty of the corresponding environment and the high speed of environmental changes has led to formulation and design of long-term transformational strategies in the current situation giving its place to the preparation of the organization to rather employ a set of technology-based strategic decisions. Meanwhile, a solid framework or model for the transformation of the organization based on the external and internal conditions specific to the industry, one that takes into account all the perceivable possible consequences, would alleviate, to a great extent, the risk of adopting illfated decisions (Testa & Karpova, 2022). Considering a lack of agreed-upon model for strategic decisionmaking in clothing retails in the literature the current study seeks to propose a comprehensive model by examining and evaluating the driving factors of digital transformation decisions in clothing retail organizations, the underlying elements of digital transformation and the consequences of strategic transformation decisions. As such, the purpose of the current research is to determine the drivers of digital transformation in clothing retail organizations, the element undertaking this transformation, and last but not least, the consequences of digital transformation in clothing retail organizations.

II. LITERATURE REVIEW

Digital transformation (also known as digitalization), is concerned with the changes that digital technologies can bring about in a company's business model, products, processes and organizational structure. These changes can be observed in individual and organizational contexts. It is reflected in the change of entire business models brought about by digital technologies (Hess, Matt, Benlian, & Wiesböck, 2016). Therefore, digital transformation should not be solely framed as the acquisition and deployment of digital technology in the organization, but rather an approach to management issues such as human resources, business development, and process redesign with a comprehensive analysis of the opportunities and risks caused by the ever-changing landscape of digital technology (Li, 2020). That is, altering a comprehensive approach requires a digital transformation strategy in every organization, which is developed according to the characteristics of the environment internal and external to the organization (Westerman & Bonnet, 2015). Digital transformation requires the organization to have to face an array of emerging decisions, which are strategic in nature according to Mintzberg. Mintzberg et al. argue that the most important characteristics of strategic decision-making are their ambiguity, novelty, complexity and unconstrained nature. As such, they categorize the strategic decision-making processes based on the features of innovation, complexity, and interminable operations. Mintzberg thereby states that organizations are mostly plagued with a low understanding of the decision-making scenarios and they possible solutions in the process of strategic decision-making, in that they have a vague idea of an effective solution and hence have a clear lack of information pool in how to develop and evaluate the solution. Yet, adopting decisions in a coherent and related manner simply creates an integrated and guiding model for the organization, which is called the organization's strategy: a continuous flow of decisions with the purpose of aligning the organization's resources with environmental opportunities and existing constraints in an effective way (Mintzberg, 2000). Colombi et al. (2010) examined fashion retailing and its strategic nature in their "Fashion retailing "tech-gagement" article, in which they examined a research population of American and Italian consumers to point out the presence of digital interactive technologies in clothing retailing and the need to develop a strategy for a new business model,

partnering with stakeholders and improving the customer's sensory and motor experience in integrated shopping to alleviate the challenges confusion and waste of resources (Colombi, Kim, & Wyatt, 2018). Tiamnara and Inwang (2018) examine the success of clothing retailers through online channels using digital marketing in Thailand. Personalization of the shopping experience, service integration, digital brand personality, data analysis and future trends, and the creation of an integration channel for purchasing were determined to be the success factors of apparel retail in the midst of digital transformation in Thailand, which in turn undermines the area of strategic decision making and the priority of change in the digital evolution of clothing retail (Tiamnara & Inwang, 2018).

Bulović & Čović (2020) sought in their research to examine the impact of digital transformation on the sustainability of clothing and fashion retail in Serbia. As such, they discuss the implications of implementing Industry 4.0 in clothing retail, therein considering the digital transformation process to include the formation of a new architecture of the entire ecosystem of the company, in which all data and information at every level of the organization (i.e., vertical hierarchies) are collected and exchanged at each stage of the process in the entire value chain (horizontal network), enabling a virtual replica of the entire system at any moment, otherwise known as the digital twin. There, the authors argue that Industry 4.0 is progressing rapidly with its distinct technological and environmental drivers and will have a positive impact on the clothing retail industry by influencing the strategic decisions of the corresponding organizations. Nonetheless, the ambiguity enveloping the vision and consequences of digital transformation, and that of the competencies required to lead the organization in the digital transformation process, and the required organizational skills are currently cited as the biggest hindrance to the digitalization paradigm (Bulović & Čović, 2020). Jin and Shin (2020) examined Innovations in the fashion retail industry from the disruptive business model and proposed three new business frameworks in the digital transformation of apparel retail, namely (1) organizations that are digitally born and have a technology-based nature, (2) organizations that use artificial intelligence to forecast the market and design products and (3) organizations based on collaborative consumption. These models have consequences such as product quality according to customer needs, competitive price, personalization of services and sustainable consumption (Jin & Shin, 2020). McTiernan (2021) examined the effects of COVID-19 on the dynamics of digital transformation in reshaping the fashion industry, insisting that that there will be drastic changes in clothing retail strategies and environments, leading to a completely novel business model. Along this path, the biggest competitive advantage of a clothing retailer, i.e., its tangible and space-related attraction, is set to be swiped away by other advantages (McTiernan, 2021). Grewal et al. (2021) examined the strategizing of retailing in the post-COVID technology era and its overall impact on the clothing retail management strategies, pointing out six areas of the impact of digital transformation, namely supply chain management and stores, product management, pricing, promotion, employees and product presentation (Grewal, Gauri, Roggeveen, & Sethuraman, 2021).

Testa and Karpova (2021) examined executive decision-making in fashion retail following a phenomenological exploration of resources and strategies arguing that access to sources of information and data can increase manager' ability to make strategic decisions in uncertain conditions. As such, strategic decision-making in clothing retailing would simply be the result of the integration of business intelligence and the creative vision of decision-making managers who guarantee the impending prosperity of the business by gaining access to facts and in-depth data and multi-factored data analysis using digital technologies. Internal data and industry-level benchmarks, business information of the industry and competitors, information obtained from social media and customer opinions, along with new knowledge from academic research, are sources of information for strategic decisions of retail companies (Testa & Karpova, 2022). Wanick and Bazaki (2023) studied the trends, innovations and challenges of fashion retailing in the process of strategic restructuring for the post-pandemic, leading to a 4-pillar model for the industry: digitalization of the sales organization, gamification and Game-based customer experience, entrepreneurship and using the influence of bloggers and social media and technology-based customer-oriented business models (Wanick & Bazaki, 2023).

Thus far, studies have rather tended to the need for digital transformation in organizations, its context and possible consequences, yet there is a need for more focused research with the purpose of proposing a comprehensive model that covers the formation of apparel retail strategic decisions, its dimensions and consequences, as it has remained elusive in the literature.

III. RESEARCH METHODOLOGY

The main goal of the current research was to identify and conceptualize the drivers, dimensions of transformation and consequences of strategic decision making for digital transformation in apparel and fashion retail

organizations. The multi-dimensional and complex nature of the issues requires the use of a similarly complex method that provides the researcher with the required toolkit to validate the model by conceptualizing its initial grounds based on theoretical methods. As such, multi-grounded theory (MGT) method, developed by Goldkuhl & Cronholm (2010) as an alternative approach to grounded theory, was employed for the purposes of the current study. In this study, theoretical grounding is added to empirical grounding. In the proposed stages of this method, theoretical matching with the research results is done, theoretical coherence evaluation and experimental validation together lead to the enrichment of the theory and the possibility of conceptual refinement is provided to the researcher (Goldkuhl & Cronholm, 2010).

In simpler words, in the MGT method, the codes and concepts related to the research questions are first extracted by reviewing the existing literature. the codes and concepts obtained from the interviews with experts are also extracted at the same time, and the two are combined to establish a new theory or model for the research. It is safe to argue, as such, that inductive and analogical approaches are used concurrently in the MGT framework. The findings are conceptually refined in a back-and-forth process between theoretical and empirical grounding, such that concepts and categories are evolved and the theory is developed. After developing the model based on the MGT framework, it is used by experts to test and check the generalizability of the model, theoretical and empirical grounding are often performed concomitantly, and the formation of the theory, which is the third stage of the MGT approach is accomplished by evaluating the coherence of the results.

Step 1. Theoretical grounding:

For the purposes of the research, meta-synthesis method was employed the theoretical grounding stage, for reviewing previous literature them. The ultimate purpose of the aforesaid methodology is to integrate previous qualitative studies and thus generate comprehensive and interpretive findings that serves to establish a deep understanding for the researcher. In this research, Sandelowski and Barroso's seven-step method was used (Sandelowski, Barroso, & Voils, 2007). The first step is to frame a meta-synthesis excersise, taking into account the four main dimensions (subject, the research population, time limit and method) in the current research. As such, the main question was set as follows: "What are the drivers, dimensions and consequences of strategic decision making in the digital transformation of clothing retail organizations?" In the second step, a systematic review of the texts was carried out by locating the relevant studies, for which the inclusion criteria from Table 1 was employed.

Table 1.Search criteria for articles

Inclusion criteria	ı	Queried keywords
Language	English	
Timeframe of studies	2010-	(Strategy or "strategic decision")
Research population	Retailing industries	and (digital or analytics or omnichannel or "internet of things" or "artificial intelligence" or "smart")
Subject	Digital transformation	and (retail) or (fashion or apparel or clothing)
Type of literature	Published articles in known journals	•

Four reliable scientific databases of Scopus, Web of Science, ProQuest and Google Scholar were systematically searched using keywords words and criteria in Table 1. In the third step, to select the appropriate articles, first the title, then the abstract, and in a deeper investigation, the content of the research and the quality of the research method were evaluated respectively, and at each stage, a number of articles that were not relevant enough to the research questions were excluded. Next, in order to check the methodological quality of the studies based on the Critical Assessment Skills Program (CASP), a score was assigned each article based on the ten mentioned criteria. This stage was controlled by the main researcher and a fellow researcher, and articles that scored at least 30 out of 50 from this stage entered the coding stage. In the fourth step, 37 articles entered the analysis stage for coding. From the study of selected articles and using MaxQDA, 83 initial codes were extracted in the first stage, from

which 75 codes were accepted and introduced for the next stage. In the fifth step, after extracting all related codes in previous researches, the researcher grouped those codes in a similar concept (theme) and 27 categories were identified. The quality of the results was measured in the sixth step, for which the extracted codes and inferred categories were presented to an expert to control the reliability of the research based on the agreement between the researcher and another expert using the Kappa index. After evaluating the codes and categories by the second researcher, in was revealed that the significance coefficient of the findings was at the level 0.001 with an index value of 0.635, effectively meaning that the extraction of the codes has good reliability (Serral, Vander Stede, & Hasić, 2020). In the last stage of meta-synthesis method, the findings are displayed in detail in a table in the research findings section.

Step 2: Empirical grounding

In the second part of the MGT method, the author devised semi-structured interviews with experts and senior managers of clothing retail organizations who were faced with strategic decision-making for the organization's digital transformation at different levels of organizational maturity. Purposive snowball sampling was used in this study to select the interviewees. Given that having the capacity to strategic decision-making was a major inclusion criterion for the study, managers who had the authority to make decisions and organizational direction in this area were interviewed, and then they were asked to introduce the consultants and experts who have opinions in this area. Interviews were conducted with seventeen experts in this field who held the positions of senior managers and CEOs and often had higher education than bachelor's and master's degrees. Since in this research, the method of multiple database is used, the protocol of the interviews was compiled based on the data extracted from the meta-composition stage with the Spickard approach, and the interview questions were extracted from the concepts and categories of the meta-composition. The validity of the interview questions was also measured with the CVR and CVI indices in a group of five industry experts. All the questions were evaluated as "essential" by the experts, and the CVR was equal to 1 and the CVI index was equal to 0.93, which confirms the validity of the questions. All interviews were conducted face-to-face and the interviews were recorded, transcribed and coded immediately. According to the results, theoretical saturation was achieved from the 14th interview, but in order to increase confidence, it went to the 17th interview. In order to measure the reliability and validity of this phase of the research, the strategies introduced by Creswell and Creswell (2018) were used. The long-term involvement of one of the researchers 14 with the research topic (12 years of experience in the industry under review) and at least 10 years of experience of all the interviewees in clothing retail, the control of the validity of the findings through the evaluation of the participants 15, which led to the presentation of the final model to five of the interviewees and evaluation by these people. It indicates that the detailed explanation of the coding steps for the readers in order to ensure the transferability and random recoding of the researchers and the comparison of the two codings in the software, which reported the Kappa coefficient equal to 73%, shows the validity and reliability of this phase of the research (Creswell, 2018).

Step 3: Data analysis

Since the ultimate goal of the qualitative phase is to identify drivers, dimensions and consequences of strategic decision-making in the digital transformation of clothing retail organizations, at the end of the qualitative phase, the results of the previous two phases were combined. The reason for adopting this approach was to prevent unnecessary repetition of tables and better representation of findings. That is, combining the codes calculated from meta-synthesis with the theory arising from the data provided the grounds to better redefine the core categories, which is perceived to be the direct benefit of using the meta-synthesis methodology; Therefore, two MaxQDA files were combined according to the initial composition of the research.

Step 4: Theoretical enrichment

Theoretical enrichment, which is the final stage of theory development in the multi-grounded theory method, is carried out along with the processes of theoretical adaptation, explicit empirical validation, and evaluation of theoretical coherence, following which the theory is developed. Different methods have been proposed in the literature for the integration of concepts, among which that of the Strauss and Corbin (2001), which uses drawing figures for theory development, has been deemed as more effective. As such, the strategic decision model in the digital evolution of clothing retailing was developed, and the explanations related to the concepts extracted, the comparison of the results with previous studies, and the conceptual refinement of the outputs were provided. The inputs of the panel of experts were requested to complete the conceptual model. After explaining the conceptual model in online meetings to seven experts, they were asked to specify wheter each item was necessary, useful but

unnecessary, or not useful, to confirm or disconfirm with the formula related to the CVR index. For all 23 mentioned concepts, the CVR index was between 0.85 and 1, which indicates that all the concepts were approved by the experts.

IV. RESEARCH FINDINGS

In theoretical research, 37 qualitative articles were examined out of a total of 275 articles, and 75 codes were categorized into 27 concepts as described in Table 2. Concepts were classified in three main categories of drivers, elements and consequences of strategic decision-making of digital transformation in the organization.

 Table 2

 Results from the theoretical grounding (meta-synthesis)

category	concepts	Important codes	Source
Individual drives	Digital transformation leadership	Entrepreneurial competences of managers, perception of innovation, experience of digital transformation, motivation to participate in transformation)Cai & Lo, 2020), (Jocevski, Arvidsson, Miragliotta, Ghezzi, & Mangiaracina, 2019al, 2019), (Tuunainen & Rossi, 2002)
	Staff readiness	Employee digital competencies, generation Z, employee development motivation and Employee Digital Literacy	(Jocevski et al., 2019al, 2019). (Pantano, Priporas, & Dennis, 2018) 2018), (Cai & Lo, 2020), (Suciu, Kolodziejak, Nasulea, Nasulea, & Postma, 2018al, 2018), (Tuunainen & Rossi, 2002)
	Digital technology infrastructure	Technological equipment of the organization, digital security	(Pantano et al., 2018 2018), (Ishfaq, Davis& Gibson, 2022), (Jocevski et al., 2019al, 2019), (Maðarac, Eljuga, & Filipović, 2021), (Savastano, Bellini& De Marco, 2019), (Lorenzo-Romero, Andrés-Martínez, Cordente-Rodríguez, & Gómez-Borja, 2021al, 2021)
Organizational drivers	Financial performance expectation	Transformation financial resources, cost optimization, financing	(Jocevski et al., 2019al, 2019), (Ishfaq, Davis& Gibson, 2022), (Maðarac, Eljuga, & Filipović, 2021), (Rao, Vihari, & Jabeen, 2021), (Pantano et al., 2018 2018)
	Strategic capacity of the organization	Digital vision, participation of senior managers, organizational readiness, organizational flexibility, organizational learning	(Savastano, Bellini& De Marco, 2019), (Jocevski, et.al, 2019), (Pantano, Priporas, & Dennis, 2018), (Jin & Shin, 2020), (Urdan, 2019), (Freitag & da Silva, 2021), (Rao, Vihari, & Jabeen, 2021), (Watson, 2011), (Ishfaq, Davis& Gibson, 2022)
The drivers of the macro environment	The influence of information technology	The expansion of mobile software, the integration of financial software, the maturity of technologies available to consumers, increasing the speed of the Internet, increasing the digital skills of people.	(Fildes, Ma, & Kolassa, 2022), (Rao, Vihari, & Jabeen, 2021), (Silva, Hassani, & Madsen, 2020), (Tuunainen & Rossi, 2002), (López, Riedler, Köhnen, & Fütterer, 2022al, 2022), (Jocevski, et.al, 2019), (Pantano, Priporas, & Dennis, 2018), (Khan & Tariq, 2021)

	Environmental sustainability trends	Reducing air pollution, reducing unnecessary production, reducing damage to water resources, optimizing transportation	(Savastano, Bellini& De Marco, 2019), (Pantano, Priporas, & Dennis, 2018), (Ishfaq, Davis& Gibson, 2022)
	social	Global health and covid 19, Generation Z	(Savastano, Bellini& De Marco, 2019), (Ishfaq, Davis& Gibson, 2022)
	Economic	Economic stability of society, global recession	(Jocevski, et.al, 2019), (Watson, 2011), (Ishfaq, Davis& Gibson, 2022)
	legal	and inflation Digital banking laws, financial transparency, international trade laws	(Maðarac, Eljuga, & Filipović, 2021), (Kim, Ahn, & Forney, 2014), (Suciu et al., 2018al, 2018)
Industrial environment drivers	Customer pressure (changing customer requests and preferences)	The desire for speed and innovation, integration of services, social life, new models of communication with customers, uncertainty of orders, shortening the time of appearance of demand until purchase by the customer, changing the lifestyle of customers, increasing the digital skills of customers, changing the mindset of customers, trusting customers to buy Online, changing customer expectations	(Fildes, Ma, & Kolassa, 2022), (Alexander & Cano, 2020), (Savastano, Bellini& De Marco, 2019), (Kapustina, Pereverzeva & Rusu, 2019), (Maðarac, Eljuga, & Filipović, 2021), (Freitag & da Silva, 2021), (López, et.al, 2022), (Jocevski, et.al, 2019), (Sousa et al., , 2021), (Ishfaq, Davis& Gibson, 2022)
	Pressure from competitors	New startup competitors, innovation of competitors	(Jocevski, et.al, 2019), (Rao, Vihari, & Jabeen, 2021), (Fildes, Ma, & Kolassa, 2022), (Kapustina, Pereverzeva & Rusu, 2019), (Maðarac, Eljuga, & Filipović, 2021), (López, et.al, 2022), (Jocevski, et.al, 2019), (Watson, 2011), (Sousa et al., 2021), (Khan & Tariq, 2021)
	Supply chain pressure	Supply chain digital maturity, integration, supply chain transparency, reduced time to market	(Jin & Shin, 2020), (Angeles, 2018), (Pantano, Priporas, & Dennis, 2018)
Elements of the organization's digital transformation	Business model	Reorganization of resources and competencies, service customization, retail as a service, value chain redesign, digital roadmap	(Jocevski, et.al, 2019), (Pantano, Priporas, & Dennis, 2018), (Watson, 2011), (Ishfaq, Davis& Gibson, 2022), (Urdan, 2019), (Rao, Vihari, & Jabeen, 2021), (Alexander & Cano, 2020), (Kapustina, Pereverzeva & Rusu, 2019), (Maðarac, Eljuga, & Filipović, 2021), (Cai & Lo, 2020), (Silva, Hassani, & Madsen, 2020), (Jin & Shin,

Staff experience	Empowerment and individual growth, digital work environment, employee diversity, flexible work contract, employee satisfaction	2020), (Tuunainen & Rossi, 2002), (Colombi, Kim, & Wyatt, 2018), (Gonzalo, et.al, 2020), (Reinartz & Imschloß, 2017), (Serral, Vander Stede, & Hasić, 2020), (Reinartz, Wiegand, & Imschloss, 2019), (Priyono, Moin, & Putri, 2020) (López, et.al, 2022), (Urdan, 2019), (Kapustina, Pereverzeva & Rusu, 2019), (Maðarac, Eljuga, & Filipović, 2021), (Grewal, Gauri, & Sethuraman, 2021), (Priyono, Moin, & Putri, 2020)
Data and technology	Technology management, data management, data analysis, data collection and storage, analysis indicators, data analysis	(Jocevski, et.al, 2019), (Suciu, et.al, 2018), (Pantano, Priporas, & Dennis, 2018), (Watson, 2011), (Ishfaq, Davis& Gibson, 2022), (Sousa et al., 2021), (Khan & Tariq, 2021), (Fildes, Ma, & Kolassa, 2022), (Rao, Vihari, & Jabeen, 2021), (Alexander & Cano, 2020), (Savastano, Bellini& De Marco, 2019), (Freitag & da Silva, 2021), (Cai & Lo, 2020), (Silva, Hassani, & Madsen, 2020), (Jin & Shin, 2020), (Colombi, Kim, & Wyatt, 2018), (Gonzalo, et.al, 2020), (Venkatesh, Mathew, & Singhal, 2019), (Serral, Vander Stede, & Hasić, 2020), Lorenzo, Romero et al., 2021), (Grewal, Gauri, & Sethuraman, 2021), (Grewal & Roggeveen, 2017), (Reinartz, Wiegand, & Imschloss, 2019), (Priyono, Moin, & Putri, 2020)
Digital organization	Transformation leadership, digital transformation unit, organization structure reorganization, digital culture, digital talent map of the organization	(López, et.al , 2022), (Pantano, Priporas, & Dennis, 2018), (Watson, 2011), (Sousa et al., 2021), (Ishfaq, Davis& Gibson, 2022), (Urdan, 2019), (Kapustina, Pereverzeva & Rusu, 2019), (Maðarac, Eljuga, & Filipović, 2021), (Silva, Hassani, & Madsen, 2020), (Gonzalo, et.al, 2020), (Venkatesh, Mathew, & Singhal, 2019), (Serral, Vander Stede, & Hasić, 2020), (Bonetti, Perry, & Quinn, 2018), (Grewal & Roggeveen, 2017), (Priyono, Moin, & Putri, 2020), (Bulović & Čović, 2020)
Executive processes and operations	Reorganization of business processes, integration of processes, knowledge management, enjoyable operation model, optimization of decision flow.	(Angeles, 2018), (López, et.al, 2022), (Suciu, et.al, 2018), (Pantano, Priporas, & Dennis, 2018), (Sousa et al., 2021), (Ishfaq, Davis& Gibson, 2022), (Urdan, 2019), (Alexander & Cano, 2020), (Kapustina, Pereverzeva & Rusu, 2019), (Maðarac, Eljuga, & Filipović, 2021), (Kim, Ahn, & Forney, 2014),

			(Cai & Lo, 2020), (Colombi, Kim, & Wyatt, 2018), (Gonzalo, et.al, 2020), (Serral, Vander Stede, & Hasić, 2020), (Reinartz, Wiegand, & Imschloss, 2019), (Jin & Shin, 2021), (Priyono, Moin, & Putri, 2020)
	Customer experience	Service personalization, digital services, digital channels, customer interaction and participation, customer journey design	(Lorenzo-Romero et al., 2021al, 2021), (López, et.al, 2022), (Jocevski, et.al, 2019), (Pantano, Priporas, & Dennis, 2018), (Watson, 2011), (Sousa et al., 2021), (Ishfaq, Davis& Gibson, 2022), (Urdan, 2019), (Rao, Vihari, & Jabeen, 2021), (Alexander & Cano, 2020), (Savastano, Bellini& De Marco, 2019)., (Kapustina, Pereverzeva & Rusu, 2019), (Maðarac, Eljuga, & Filipović, 2021), (Kim, Ahn, & Forney, 2014), (Cai & Lo, 2020), (Silva, Hassani, & Madsen, 2020), (Tuunainen & Rossi, 2002), (Colombi, Kim, & Wyatt, 2018), (Gonzalo, et.al, 2020), (Reinartz & Imschloß, 2017), (Venkatesh, Mathew, & Singhal, 2019), (Lorenzo, Romero et al., 2021), (Grewal, Gauri, & Roggeveen, 2017), (Reinartz, Wiegand, & Imschloss, 2019), (Jin & Shin, 2021), (Priyono, Moin, & Putri, 2020)
	supply chain	supply of digitized goods and services, logistics redesign, supply chain digital empowerment, supply chain transparency, participation in supply chain digitization	(Angeles, 2018), (Jocevski, et.al, 2019), (Watson, 2011), (Sousa et al., 2021), (Ishfaq, Davis& Gibson, 2022), (Rao, Vihari, & Jabeen, 2021), (Kapustina, Pereverzeva & Rusu, 2019), (Freitag & da Silva, 2021), (Cai & Lo, 2020), (Tuunainen & Rossi, 2002), (Colombi, Kim, & Wyatt, 2018), (Gonzalo, et.al, 2020), (Venkatesh, Mathew, & Singhal, 2019)
Internal consequences	Improve financial performance	Reduce resource wastage, improve sales performance	(Angeles, 2018), (Suciu, et.al, 2018), (Pantano, Priporas, & Dennis, 2018), (Watson, 2011), (Sousa et al., 2021), (Khan & Tariq, 2021), (Urdan, 2019), (Rao, Vihari, & Jabeen, 2021), (Savastano, Bellini& De Marco, 2019)., (Maðarac, Eljuga, & Filipović, 2021), (Freitag & da Silva, 2021), (Cai & Lo, 2020), (Silva, Hassani, & Madsen, 2020), (Grewal, Gauri, & Sethuraman, 2021), (Grewal & Roggeveen, 2017), (Jin & Shin, 2021)
	Improving the competitive position	Increasing operational efficiency, organizational agility	(Angeles, 2018), (López, et.al, 2022), (Pantano, Priporas, & Dennis, 2018), (Watson, 2011), (Ishfaq, Davis& Gibson, 2022), (Urdan, 2019), (Rao, Vihari, & Jabeen, 2021), (Savastano,

			Bellini& De Marco, 2019), (Kapustina, Pereverzeva & Rusu, 2019), (Freitag & da Silva, 2021), (Silva, Hassani, & Madsen, 2020), (Grewal, Gauri, & Sethuraman, 2021), (Grewal & Roggeveen, 2017), (Jin & Shin, 2021)
	Efficiency and effectiveness	Improving organizational operations, increasing the size of the organization, increasing the strength of the organization	(Angeles, 2018), (Watson, 2011), (Sousa et al., 2021), (Ishfaq, Davis& Gibson, 2022), (Rao, Vihari, & Jabeen, 2021)
Consequences for	Co-creation of value	Collaborative economy, network value creation, collaborative and rental platforms, acquisition of partner companies, cooperation with technology companies, outsourcing, open innovation, digital ecosystem	(Lorenzo, et.al, 2021), (López, et.al, 2022), (Pantano, Priporas, & Dennis, 2018), (Watson, 2011), (Ishfaq, Davis& Gibson, 2022), (Maðarac, Eljuga, & Filipović, 2021), (Freitag & da Silva, 2021), (Kim, Ahn, & Forney, 2014), (Silva, Hassani, & Madsen, 2020), (Jin & Shin, 2020), (Venkatesh, Mathew, & Singhal, 2019), (Lorenzo, Romero et al., 2021), (Grewal, Gauri, & Sethuraman, 2021), (Bonetti, Perry, & Quinn, 2018), (Reinartz, Wiegand, & Imschloss, 2019), (Jin & Shin, 2021), (Priyono, Moin, & Putri, 2020)
customers	Customer Satisfaction	Transparency, increasing credibility, increasing trust, turning the customer into a colleague and partner, emotional connection with the audience, increasing brand capital, joint storytelling between the brand and the customer.	(Lorenzo, et.al, 2021), (Angeles, 2018), (Jocevski, et.al, 2019), (Pantano, Priporas, & Dennis, 2018), (Ishfaq, Davis& Gibson, 2022), (Alexander & Cano, 2020), (Maðarac, Eljuga, & Filipović, 2021), (Kim, Ahn, & Forney, 2014), (Colombi, Kim, & Wyatt, 2018), (Venkatesh, Mathew, & Singhal, 2019), (Lorenzo, Romero et al., 2021), (Grewal, Gauri, & Sethuraman, 2021), (Grewal & Roggeveen, 2017), (Reinartz, Wiegand, & Imschloss, 2019), (Bulović & Čović, 2020)
Long-term	intelligence	Smart retail, smart customer, smart city	(Pantano, Priporas, & Dennis, 2018), (Rao, Vihari, & Jabeen, 2021), (Kim, Ahn, & Forney, 2014), (Cai & Lo, 2020), (Venkatesh, Mathew, & Singhal, 2019), (Reinartz, Wiegand, & Imschloss, 2019)
consequences	sustainability	Social sustainability, sustainable environment, circular economy, non-linear value chain	(Suciu, et.al, 2018), (Sousa et al., 2021), (Rao, Vihari, & Jabeen, 2021), (Silva, Hassani, & Madsen, 2020), (Venkatesh, Mathew, & Singhal, 2019), (Grewal, Gauri, & Sethuraman, 2021), (Reinartz, Wiegand, & Imschloss, 2019), (Jin & Shin, 2021)

The following diagrams were plotted to represent the frequency of the concepts in the three main categories in the reviewed articles. Figure 1 depicts the frequency distribution of concepts related to drivers, while Figure 2 represents the frequency distribution of concepts related to elements. Figure 3 illustrates the frequency distribution of concepts related to the consequences of strategic decision-making of digital transformation in the organization are shown.

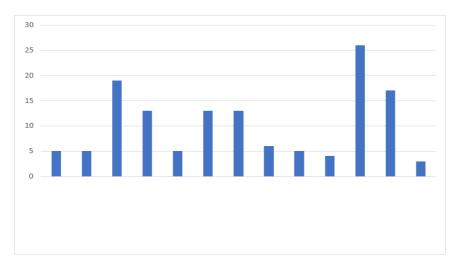


Figure 1

Frequency distribution of concepts of strategic decision drivers of digital transformation in the papers on fashion retailing

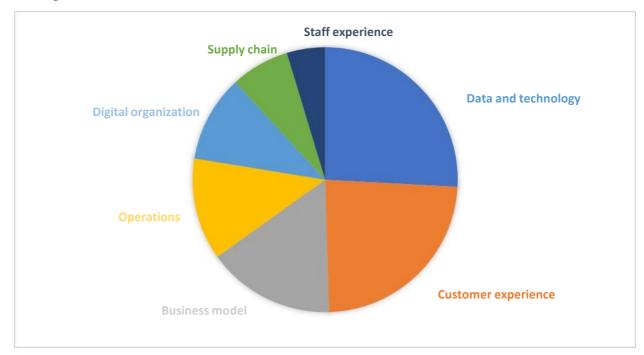


Figure 2
Strategic decision-making elements of digital transformation in clothing retailing in articles

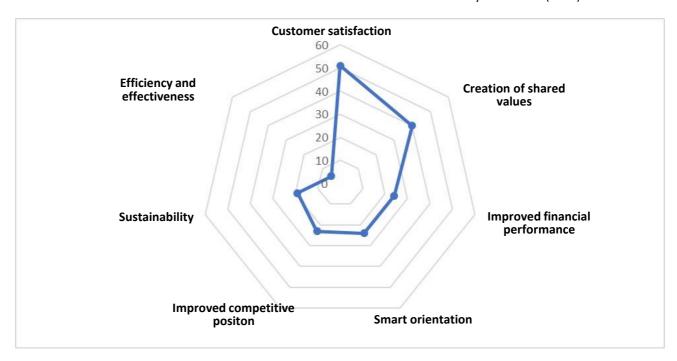


Figure 3

Frequency distribution of the consequences of strategic decision-making of digital transformation in clothing retailing in articles

Using the interview protocol based on the results of the theoretical grounding section, the experimental phase began and after the interviews were conducted, the interview texts were coded in the MaxQDA software. The 90 codes found were categorized into 23 concepts. In this stage, new concepts appeared compared to the previous stage, and some of the concepts mentioned in the theoretical background section were not observed in the new codes. The 23 concepts found were categorized into 3 categories of drivers, elements and consequences, which can be seen in Table 3. These two groups of results entered the third stage for joint analysis.

Table 3 Findings from empirical grounding phase (interview with experts)

Category	Concepts	Extracted primary codes	Interviewee code	Frequenc y
Organization al drivers	Financial capacity of the organization	financial capacity for development, the need to reduce waste, the need to optimize costs, targeting orders	p8,p13,p3,p10,p4,p9,p5,p11, p17	9
	The maturity of the board of directors	Digital thinking, strategic thinking, innovative thinking of senior managers, readiness for change, risk-taking and recklessness of managers, cooperation and partnership	p1p17	17
	Technology infrastructure	Abundance of sales data, digital talent of the organization, specialized software	p6,p15,p4,p9,p7,p12	6
Macro environment drivers	Economic	Economic prosperity, investment security, currency price stability	p2,p16,p6,p15,p17	5
	political	Digital laws, government support, embargo and lack of access to world standard software, hijab laws and content production	p1,p2,p7,p8,p16,p14,p12, p13	14

	social	Covid-19, reducing air pollution, employees' willingness to work remotely	p7,p8,p4,p9,p12,p13	6
	The penetration of digital technology	High speed of technology emergence, stable internet access	p1,p14,p6,p15,p2,p16,p17	7
	Customer pressure	Rapid change in customer behavior, change in gender of the decision maker, generation change, change in purchasing power, change in customer education and intelligence, change in customer expectations, customer digital maturity	p4,p6,p9,p15,p1,p14,p17,p5, p11,p3,p10	11
Industry-level drivers	Market pressure	Innovation of competitors, successful foreign models, new startups, abundance and variety of goods in the market	p1,p2,p14,p16,p17	7
	Partners and supply chain	Information sharing in the supply chain, outsourcing, the need to separate retail from production, the abundance of supply chain data, the stability of product supply	p1,p2,p14,p16,p17,p6,p15,p 7,p12,p5,p11	8
	Knowledge facilitators	Transformation consultants, reliable knowledge and experience, informed and demanding trade unions	p17,p2,p16,p4,p9	5
Dimensions of digital transformatio n	Improving technology-based operations	Marketing targeting with digital tools, digital design using simulation software, online sales platforms, integrated management of retail operations, intelligent distribution and logistics, retail process management dashboards	p4,p5,p6/p7,p1, p14,p15, p12, p9, p11, p1, p14, p15, p11, p2,p16, p8, p13, p2,p16,p3, p10, p4,p9, p5, p11, p6,p15,p7, p12, p1, p14, p4, p9, p5, p11, p6,p15, p7,p12, p8,p13	27
	Data management and technology	Systematic collection of massive data, sales data analysis, data-driven decision dashboards, customer behavior foundation data analysis, digital technology equipment and infrastructure	p3,p4,p7,p9,p10,p12,p4,p9,p 8,p13, p1,p15,p2,p16,p4,p9,p5,p11	34
	Staff experience	Employee empowerment, organization's digital talent, digital work environment, employee resistance, employee satisfaction, digital skills	p2,p16,p4,p9,p5,p11,p7,p12, p8,p13,p3,p10,p5,p6,p11,p1 5,p17	18
	Customer experience	Attractive online shopping, channel security, integration of services, gamification	p2, p16,p1,p14,p4,p9	7
	Supply chain	Digital empowerment of the supply chain, participation in the value chain, communication	p1,p14,p7,p12,p8,p13	9

		infrastructure in the supply chain, transparency of the supply chain		
	Digital organization	Digital culture, platform structure development, transformation planning, digital model, value chain reconstruction, virtual business model	p1,p4,p11,p14	6
	Efficiency and effectiveness	Targeted production, reducing waste of time and resources, effective management of the product creation process, increasing productivity	p7, p15, p3,p10, p1, p14 ,p9 , p4,p5, p11, p6, p12	9
	Creating shared value	Outsourcing, co-creation of value in the supply chain	p5, p11, p7, p1,p9	13
Consequence s	Customer Satisfaction	Personalization, matching production with customer needs, facilitating the purchase and return of goods through targeted channels	p1, p14,p2, p16, p6, p15,p8,p13	6
	Smartness	Smart product creation, smart decisions	P4, p9	2
	Sustainability	Reducing environmental pollution, circular economy	p1	4
	Improving the competitive position	Innovation and leading	P5	2

The results of the two phases of theoretical and empirical grounding were integrated with each other, and from the combination of concepts and the redefinition of relations, concepts were drawn in the form of the conceptual model of Figure 3, which after validation by the panel of experts, introduced 73 codes in 23 concepts and three main categories.

V.DISCUSSION AND CONCLUSION

Digital transformation is rapidly altering the face of apparel retail organizations. The high speed of new knowledge entering the organization and the uncertainty of the fashion and clothing world do not allow the organization to make strategic plans, and senior managers are forced to make strategic decisions in this field. The main goal of the current study was to develop a strategic decision model in the digital transformation of retail organizations is. This research has identified the drivers, elements and consequences of strategic decision-making of digital transformation in fashion retail using the multiple foundation data research strategy during two stages of theoretical and empirical research. In the theoretical grounding stage, 73 international-level articles were selected from reliable databases using the meta-synthesis method, and codes and concepts related to the research questions were extracted. In the experimental grounding stage, interviews were conducted with seventeen Iranian clothing retail experts based on a predetermined protocol, and the codes and concepts extracted from the meta-synthesis stage were re-examined, redefined and completed. Finally, with a process of going back and forth and enriching the theory, the strategic decision-making model of digital transformation in Iran's clothing retail was designed.

Based on the findings of the current study, three levels of individual, intra-organizational and external environment were considered for the degree of influence of the organization on the strategic decision-making drivers of digital transformation in fashion and apparel retailing. The first level, i.e., the individual level drivers, pertain to the skills, motivations and competencies of employees and managers within the organizations. In the absence of these individual level drivers, the resistances of the winning analysis will prevent the initiation and progress of the digital transformation process. To this end, it is of paramount importance to establish and strengthen this class of drivers as the primary infrastructure of transformation. Strengthening work-related features in employers of the organization with training and encouragement practices and employing young, enthusiastic workers with digital

interests can propel the first level of digital transformation in the organization. The emergence of the so-called generation Z, with the extensive digital literacy they have, and recruiting them as salespeople, designers, and analysts, among others, and other jobs and skills alleviates the issue of employee readiness and demand as drivers of digital transformation. Youngsters are highly disinterested in the repetitive processes and lack of diversity and have a desire to change conditions, and to learn, participate and innovate, features that propel the organization to use digital technology and transform traditional processes and procedures into data-oriented and automatic processes (Bonetti, Perry, and Quinn, 2018; Bulović & Čović, 2020; Pantano et al., 2018; Sousa et al., 2021). The second category of drivers effective in strategic decision-making of digital transformation in clothing retail organizations are the intra-organizational drivers of clothing retailers. It was suggested in the interviews that the digital infrastructures are of an instrumental nature that has a significant effect on the self-confidence and willingness to change of senior managers. Creating digital security in processes, and preserving data and transactions can play a leading and supportive role in digital transformation and minimize the fears of the transformation process for traditionalist and document-oriented organizations. It is noteworthy that individual and intra-organizational drivers are directly controlled by the organization, so it is possible to create the grounds of digital transformation and by strengthening these intra-organizational drivers, the position of the organization at the beginning of the digital transformation process is improved, internal resistances are reduced and better results are obtained. These stimuli take root from within the organization and it is possible to improve and control them within the organization. One of the rather major drivers of digital transformation is the organization's strategic capacity, which is derived from the organization's strategic vision and positioning for the future. If the vision and future horizon of the organization is not aligned towards digitalization, the digital transformation will not be realized. In other words, digital transformation requires specific goals, strategy and plan from top to bottom in the organization and it will not be implemented without the support and participation of senior managers (Cai & Lo, 2020; Gonzalo, Harreis, Altable, & Villepelet, 2020; Ishfaq, Davis -Sramek, & Gibson, 2022; Priyono, Moin, & Putri, 2020; Serral et al., 2020; Tuunainen & Rossi, 2002). The third class of decision-making drivers for the digital transformation of clothing retail pertain to environmental and external drivers, over which the organization has less control and hence must adjust its position according to their dynamics. Among the most important factors deemed external to the organization are the environmental trends. These influential macrotrends include the spread of information technology (Jocevski et al., 2019; Pantano et al., 2018; Reinartz & Imschloß, 2017; Savastano, Bellini, D'Ascenzo, & De Marco, 2019; Silva, Hassani, & Madsen, 2020; Sousa et al., 2021; Tuunainen & Rossi, 2002), biosocial changes around the world such as remote work trends left over from the COVID-19 era and the presence of Generation Z as consumers and service providers (Gonzalo et al., 2020; Rao et al. al., 2021), economic pressures such as recession and global inflation (Ishfaq et al., 2022; Pantano et al., 2018; Rao et al., 2021) and environmental sustainability trends such as reducing pollution, directing production and reducing transportation (Gonzalo et al., 2020; Pantano et al., 2018; Rao et al., 2021). Although this class of drivers have been evaluated as to have a very strong effect, top-level managers have less influence in and control on them and can only guide the conditions of internal transformation by relying on external forces.

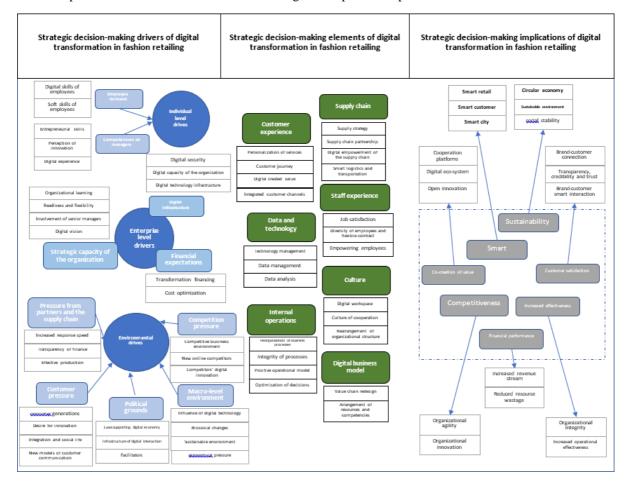
The second part of the pertain to the strategic elements devised for the digital transformation of clothing retail organizations. Given the customer-oriented nature of the clothing retail industry, the findings on the current study revealed that improving customer experience based on digital technologies, data and technology management, improving processes and operations, digital business model, culture and digital organization, supply chain realignment and digital employee experience are respectively the main elements of the digital transformation. Strategic decisions regarding executive priority, speed, depth, and extent of digital transformation are categorized in these dimensions based the characteristics of apparel retailing. Improving the customer experience is here effectively translated as rearranging the process of creating value for the customer by relying on digital tools and influencing his way of thinking, obtaining information and making decisions when dealing with fashion and clothing. Considering fashion and clothing are perceived to be directed by community and collective indoctrination, improving the customer experience relies on the interactive and two-way use of digital tools in customer communities. This interaction and the possibility of analyzing customer data can be the basis for providing personalized services and maximizing the shopping pleasure based on the customer's opinion and preference in the purchase process. The customer experience can be altered optimally by managing the customer journey in the pre-purchase, purchase and post-purchase stages, serving better the purpose of the digital storytelling space provided by the brand for the customer (Alexander & Cano, 2020; Grewal et al., 2021; Grewal & Roggeveen, 2017; Kim, Ahn, & Forney, 2014; Pantano et al., 2018).

Every change and transformation at different individual, organizational and environmental levels inevitably has outputs, achievements and consequences, through the knowledge of which the path to transformation can be manipulated or predicted to some extent from the beginning. Various consequences to the path of digital transformation were identified in the current research. In this research, three categories of consequences of digital transformation were extracted, namely (1) within the organization, including improving financial performance, improving competitive position, and increasing efficiency and effectiveness, (2) customer relations, including creating shared value with customers and customer satisfaction, and (3) long-term consequences, such as intelligence and sustainability. This categorization is based on the expectations of the stakeholders of the retail organization. At the intra-organizational level, internal stakeholders include shareholders and managers, at the second level, the main external stakeholders include customers, partners, and colleagues, and at the highest level, it refers to the effects and consequences of the organization's digital transformation for society and the environment, to be Improving the organization's financial performance comes from reducing resource wastage and optimizing resource consumption at the same time as increasing customer communication channels and improving sales performance. Investing in the right technologies will improve the customer experience and increase sales, make it easier to manage customer requests and increase the loyalty of existing customers and acquire new customers. On the other hand, identifying points of saving in time, human, financial and informational resources and creating solutions to reduce this waste of resources are the results of using digital technologies and big business data analysis (Grewal & Roggeveen, 2017; Pantano et al., 2018; Rao et al., 2021; Szozda, 2023). This consequence of digital transformation in organizations becomes the driving force of digital transformation in other organizations and industries and is a tangible result that can be checked in the organization's reports. One of the significant issues running in process of the digital transformation process is the need to balance the cost and benefits and hence provide tangible and measurable results during the digital transformation process, which not only confirms the organization's sustainability in the transformation process, but also is the very hallmark of being on the right path to digital transformation.

The digital transformation in a clothing retail organization simply results in highly swift and tangible industrylevel effects such as increasing productivity, enhancing timeframe-related efficiencies, integrated customer experience and supply chain efficiency, each of which can be monitored and improved by relying on smart indicators and dashboards (Rao et al., 2021; Sousa et al., 2021). It can be argued that analyzing macro-level data and trends allows the organization to predict the customer's wide range of tastes and demands, which will lead to targeted quota for production and distribution. Organizational integration and increased effectiveness and operational efficiency are among the most prominent expected consequences of digital transformation in fashion retailing organization. This can be confirmed when the organization has chosen its current goals and success indicators from the onset. Therefore, it is expected that this consequence has a measurable relationship to the business model and the methods by which processes and data are managed. Such internal implications are shown to enhance customer satisfaction and improve transparency and brand credibility and intelligent customer-brand partnership using digital technologies. Increased customer satisfaction, which is itself deemed to be the result of a pleasant and enjoyable customer journey in the digital shopping adventure, is associated with increased customer convenience and savings and hence improved customer service. The second consequence of the digital transformation process is the co-creation of value. In the traditional way, the organization is responsible for creating value for the consumer, and this one-way flow is regulated based on the organization's capabilities and the way it perceives the customer's needs, and hence the customer or consumer has a passive role in the value generation process. With the introduction of interactive technologies and increased ability to collect and analyze data, customer and consumer can themselves get involved in the value creation cycle, as hence the provision of one-way service based on the taste and recognition of the organization is replaced by the notion of joint creation of value between the customer and retail replaces. This presence, which leads to a transformation in the concepts of customer participation in the value chain, overshadows from product design and production to marketing and sales. In value co-creation, the point of contact with the customer is propagated from one end of the value chain to several points within the value chain (Lorenzo-Romero et al., 2021).

Notions such as smart retailing, smart customer experience and smart city were also frequently cited in smart-related literature. Smart, as it is applicable here, refers to the use of smart technologies to collect data, manage information, transfer knowledge from the organization to the customer and vice versa and hence adopt the correct and timely decisions at the moment, therein taking into account the active role of the customer in interaction and partnership with the business. The purpose of such class of techs is to provide satisfactory services to customers in highly variable market conditions and innovation management (Pantano et al., 2018). Smart technologies make

use of the capacity to integrate software, hardware and networks in real time using advanced analytics to allow customers and retailers to make smart decisions about purchases. As such, heightened levels of access to products, services and information, knowledge sharing between brands and customers and smart partnership between retailers and manufacturers and consumers using smart channels are the results of smart retail sales. The contribution of the current research research is best summarized as providing a comprehensive model of strategic decision-making of digital transformation in clothing retail, which can be prospectively used as a basis for planning digital transformation in the aforementioned organizations. Since the current study is based on the analysis of previous research findings, there are limitations such as the difference in research environments and summarizing the opinions of previous researchers with different perspectives and levels of analysis. That is, future studies are advised to develop a model of strategic paths of digital transformation in retail organizations, conduct a quantitative review of the digital transformation model presented in this research and examine the internal relationships of factors can as a solution to the strategic and operational problems.



REFERENCES

- [1] Alexander, B., & Cano, M. B. (2020). Store of the future: Towards a (re) invention and (re) imagination of physical store space in an omnichannel context. *Journal of Retailing and Consumer Services*, 55, 101913.
- [2] Angeles, R. (2018). American apparel's journey towards accurate inventory management: prelude to omnichannel retailing. Paper presented at the 11th IADIS International Conference Information Systems 2018.
- [3] Berman, S., & Marshall, A. (2014). The next digital transformation: from an individual-centered to an everyone-to-everyone economy. *Strategy & Leadership*, 42(5), 9-17.
- [4] Bertola, P., & Teunissen, J. (2018). Fashion 4.0. Innovating fashion industry through digital transformation. *Research Journal of Textile and Apparel*.
- [5] Bonetti, F., Perry, P., & Quinn, L. (2018). *The digital revolution in fashion retailing: examining managerial processes and challenges in the adoption of consumer-facing in-store technology.* Paper presented at the 20th Annual Conference for the International Foundation of Fashion Technology Institutes.
- [6] Bulović, V., & Čović, Z. (2020). *The impact of digital transformation on sustainability in fashion retail*. Paper presented at the 2020 IEEE 18th International Symposium on Intelligent Systems and Informatics (SISY).
- [7] Cai, Y.-J., & Lo, C. K. (2020). Omni-channel management in the new retailing era: A systematic review and future research agenda. *International Journal of Production Economics*, 229, 107729.

- [8] Colombi, C., Kim, P., & Wyatt, N. (2018). Fashion retailing "tech-gagement": engagement fueled by new technology. *Research Journal of Textile and Apparel*.
- [9] Creswell, J. W., & Creswell, J. D. . (2018). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches: SAGE Publications.
- [10] De Morais, A. S. A., Hoeckesfeld, L., Sarquis, A. B., & Mussi, C. C. (2019). Omnichannel como estratégia de inovação no varejo de moda jovem no Brasil. *ReMark-Revista Brasileira de Marketing*, 18(2), 268-296.
- [11] Fashion, U. (2015). Global fashion statistics. Retrieved June, 13.
- [12] Fildes, R., Ma, S., & Kolassa, S. (2022). Retail forecasting: Research and practice. *International Journal of Forecasting*, 38(4), 1283-1318.
- [13] Freitag, A. E. B., & da Silva, F. C. (2021). Logistics as a competitive advantage in retail organizations. *Independent Journal of Management & Production*, 12(9), s922-s939.
- [14] Goldkuhl, G., & Cronholm, S. (2010). Adding theoretical grounding to grounded theory: Toward multi-grounded theory. *International journal of qualitative methods*, *9*(2), 187-205.
- [15] Gonzalo, A., Harreis, H., Altable, C. S., & Villepelet, C. (2020). Fashion's digital transformation: Now or never. *McKinsey & Company*.
- [16] Grewal, D., Gauri, D. K., Roggeveen, A. L., & Sethuraman, R. (2021). Strategizing retailing in the new technology era. *Journal of Retailing*, 97(1), 6-12.
- [17] Grewal, D., & Roggeveen, A. L. (2017). The future of retailing. Journal of Retailing, 93(1), 1-6.
- [18] Hess, T., Matt, C., Benlian, A., & Wiesböck, F. (2016). Options for formulating a digital transformation strategy. *MIS Quarterly Executive*, 15(2).
- [19] Ishfaq, R., Davis-Sramek, B., & Gibson, B. (2022). Digital supply chains in omnichannel retail: A conceptual framework. *Journal of Business Logistics*, 43(2), 169-188.
- [20] Jin, B. E., & Shin, D. C. (2020). Changing the game to compete: Innovations in the fashion retail industry from the disruptive business model. *Business Horizons*, 63(3), 301-311.
- [21] Jin, B. E., & Shin, D. C. (2021). The power of 4th industrial revolution in the fashion industry: what, why, and how has the industry changed? *Fashion and Textiles*, 8(1), 1-25.
- [22] Jocevski, M., Arvidsson, N., Miragliotta, G., Ghezzi, A., & Mangiaracina, R. (2019). Transitions towards omni-channel retailing strategies: a business model perspective. *International Journal of Retail & Distribution Management*.
- [23] Khan, S., & Tariq, M. U. (2021). Harnessing IOT advantages in the disruptive era: UAE retail industry. *Academy of Entrepreneurship Journal*, 27, 1-13.
- [24] Kim, H., Ahn, S.-K., & Forney, J. A. (2014). Shifting paradigms for fashion: From total to global to smart consumer experience. *Fashion and Textiles*, 1, 1-16.
- [25] Kutnjak, A., Pihiri, I., & Furjan, M. T. (2019). *Digital transformation case studies across industries—literature review*. Paper presented at the 2019 42nd International Convention on Information and Communication Technology, Electronics and Microelectronics (MIPRO).
- [26] Li, F. (2020). Leading digital transformation: three emerging approaches for managing the transition. *International journal of operations & production management*.
- [27] López, T., Riedler, T., Köhnen, H., & Fütterer, M. (2022). Digital value chain restructuring and labour process transformations in the fast-fashion sector: Evidence from the value chains of Zara & H&M. *Global Networks*, 22(4), 684-700.
- [28] Lorenzo-Romero, C., Andrés-Martínez, M.-E., Cordente-Rodríguez, M., & Gómez-Borja, M. Á. (2021). Active participation of e-consumer: A qualitative analysis from fashion retailer perspective. *Sage Open, 11*(1), 2158244020979169.
- [29] Maðarac, S. M., Eljuga, M., & Filipović, Z. (2021). DIGITAL TRANSFORMATION IN RETAIL BUSINESS. *Challenges of the Knowledge Society*, 860-867.
- [30] McTiernan, N. (2021). COVID-19 and the dynamics of digital transformation: Reshaping the fashion industry. Dublin Business School,
- [31] Mintzberg, H. (2000). The rise and fall of strategic planning: Pearson Education.
- [32] Pantano, E., Priporas, C. V., & Dennis, C. (2018). A new approach to retailing for successful competition in the new smart scenario. *International Journal of Retail & Distribution Management*, 46(3), 264-282.
- [33] Priyono, A., Moin, A., & Putri, V. N. A. O. (2020). Identifying digital transformation paths in the business model of SMEs during the COVID-19 pandemic. *Journal of Open Innovation: Technology, Market, and Complexity, 6*(4), 104.
- [34] Rao, P. H. N., Vihari, N. S., & Jabeen, S. S. (2021). Reimagining the fashion retail industry through the implications of COVID-19 in the Gulf Cooperation Council (GCC) countries. *FIIB Business Review*, 10(4), 327-338.
- [35] Reinartz, W., & Imschloß, M. (2017). From point of sale to point of need: How digital technology is transforming retailing. *NIM Marketing Intelligence Review*, 9(1), 42-47.
- [36] Reinartz, W., Wiegand, N., & Imschloss, M. (2019). The impact of digital transformation on the retailing value chain. *International Journal of Research in Marketing*, 36(3), 350-366.
- [37] Sandelowski, M., Barroso, J., & Voils, C. I. (2007). Using qualitative metasummary to synthesize qualitative and quantitative descriptive findings. *Research in nursing & health*, 30(1), 99-111.

- [38] Savastano, M., Bellini, F., D'Ascenzo, F., & De Marco, M. (2019). Technology adoption for the integration of online–offline purchasing: Omnichannel strategies in the retail environment. *International Journal of Retail & Distribution Management*.
- [39] Serral, E., Vander Stede, C., & Hasić, F. (2020). *Leveraging IoT in retail industry: a maturity model*. Paper presented at the 2020 IEEE 22nd Conference on Business Informatics (CBI).
- [40] Silva, E. S., Hassani, H., & Madsen, D. Ø. (2020). Big Data in fashion: transforming the retail sector. *Journal of Business Strategy*, 41(4), 21-27.
- [41] Sousa, P. R. d., Barbosa, M. W., Oliveira, L. K. d., Resende, P. T. V. d., Rodrigues, R. R., Moura, M. T., & Matoso, D. (2021). Challenges, Opportunities, and lessons learned: Sustainability in Brazilian omnichannel retail. *Sustainability*, 13(2), 666.
- [42] Suciu, M.-C., Kolodziejak, A., Nasulea, C., Nasulea, D., & Postma, E. J. (2018). *The Impact of Big Data on Knowledge Management Systems in Romanian E-commerce Retailers*. Paper presented at the Proceedings of the 19th European Conference on Knowledge Management.
- [43] Szozda, N. (2023). Omnichannel as a driver of digitalization: evidence from the emerging market in the fashion industry. *Journal of Fashion Marketing and Management: An International Journal, ahead-of-print*(ahead-of-print). doi:10.1108/JFMM-11-2021-0293
- [44] Testa, D. S., & Karpova, E. E. (2022). Executive decision-making in fashion retail: a phenomenological exploration of resources and strategies. *Journal of Fashion Marketing and Management: An International Journal*, 26(4), 700-716.
- [45] Tiamnara, N., & Inwang, K. (2018). Success of Clothing Retailers throung Online Channel Using Digital Marketing. *International Journal of the Computer. The Internet and Management*, 26(2), 31-40.
- [46] Tuunainen, V. K., & Rossi, M. (2002). eBusiness in apparel retailing industry-critical issues. ECIS 2002 Proceedings, 136.
- [47] Urdan, A. T. (2019). mnichannel as Strategy of Innovation in Youth Fashion Retail Industry in Brazil. *Revista Brasileira de Marketing*, 18(2), 264-291.
- [48] Venkatesh, R., Mathew, L., & Singhal, T. K. (2019). Imperatives of business models and digital transformation for digital services providers. *International Journal of Business Data Communications and Networking (IJBDCN)*, 15(1), 105-124
- [49] Wanick, V., & Bazaki, E. (2023). The State of Fashion Retailing Post-pandemic: Trends, Challenges and Innovations. In E. Bazaki & V. Wanick (Eds.), *Reinventing Fashion Retailing: Digitalising, Gamifying, Entrepreneuring* (pp. 1-15). Cham: Springer International Publishing.
- [50] Watson, B. C. (2011). Barcode empires: politics, digital technology, and comparative retail firm strategies. *Journal of industry, competition and trade, 11*, 309-324.
- [51] Westerman, G., & Bonnet, D. (2015). Revamping your business through digital transformation. *MIT Sloan Management Review*, 56(3), 10.