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Creating a Model for the Online Shopping Experience of DigiKala Customers in VUCA Environments

[1]Helia Abedi*, [2] Mohsen Nazari

[1]PhD of Marketing Management, Department of Business Management, Faculty of Management, University of Tehran, Iran
[2]Associate Professor, Department of Business Management, Faculty of Management, University of Tehran,Iran
Helia.abedi@ut.ac.ir*

ABSTRACT

Today, companies are required to create a memorable and positive experience for customers in VUCA environments. The aim of this study is to design a model of the actual online shopping experience of Digikala customers under VUCA conditions. This research is fundamental and applied in terms of purpose, qualitative with a phenomenological approach in terms of analysis method, exploratory and descriptive with an inductive approach in terms of execution, and cross-sectional in terms of timing. The statistical population includes 10 Digikala customers in Tehran who made digital purchases between December 2022 and March 2023 under VUCA conditions. The sampling was conducted purposefully and judgmentally. To assess the validity of the interviews and their questions, face validity was employed, and for coding process validity, continuous involvement, participation with research members, and triangulation methods were used. Additionally, the reliability of the interviews was assessed using the retest method, resulting in a reliability score of 26.73%. In this study, 144 formulated meanings were extracted, and subsequently, 53 sub-themes were categorized into four main VUCA themes (volatility, uncertainty, ambiguity, and complexity) considering both positive and negative experiences. The results indicated that frequent price changes, currency fluctuations, and other factors can create doubt and tension for customers, ultimately leading to negative experiences. By implementing price stability, providing comprehensive information, and other strategies, the actual online shopping experience of Digikala customers can be improved, thereby increasing customer satisfaction.

Keywords: Volatility, Uncertainty, Ambiguity, Complexity, Customer Journey

Introduction

One of the concepts that marketers in the field of consumer behavior focus on today is creating pleasant experiences and their impact on consumer behavior. Creating various experiences as a vital element in marketing strategies can create value and lead to a competitive advantage (Esmaeilpour & Mohseni, 2019).

Customer Experience Quality (EXQ) is crucial for the success of companies in a transforming competitive market. Researchers have provided multiple arguments to promote a rich understanding of customer experience as a critical determinant of consumer service quality evaluation; however, customer experience is inherently dynamic and subjective, depending on the conditions of interaction and the consumption context. Researchers have described the customer experience as a journey that includes direct or indirect interactions between the customer and the service provider. A significant volume of research has been based on this definition, focusing on topics such as measuring customer experience, customer relationship management, and customer engagement. Although these studies have enriched the literature on customer experience, only a few have considered customer experience from a dynamic and holistic perspective (Li et al., 2022).

The actual customer experience arises from a series of interactions between a customer and a product, a company, or a part of the organization, resulting in a customer reaction. This experience is personal and refers to customer engagement at various levels (Shafiei et al., 2019). Therefore, the actual customer experience is a multifaceted concept.

Therefore, the actual customer experience is a multifaceted concept that includes cognitive, emotional, affective, social, and physical dimensions of the customer's response to a company throughout the customer journey (Leva & Zilani, 2018). The actual customer experience can be described as a process in which customers interact with a company's services or products. In 2013, Kalas developed a multi-item scale for Customer Experience Quality (EXQ) to capture the holistic nature of the customer experience across three stages: pre-purchase, purchase, and post-purchase, and to monitor customer experience and its key features over time (Li et al., 2022). All these stages are influenced by the outcome of the experience that the customer gains and how this experience is interpreted by the customer. Customers are conceptually different for companies and can be defined as consumers, users, participants, guests, or even experiential actors. Despite this different perspective, there is a consensus that experience is perceived individually, and

customers interpret products or services based on their past experiences. Customer experience is an emotional connection between the customer and the organization, and it is largely tied to customer touchpoints. Touchpoints refer to all moments of interaction between an organization and its customers. As mentioned, these touchpoints are divided into three categories: pre-purchase touchpoints, purchase touchpoints, and post-purchase touchpoints. The customer journey begins when the customer enters the process of receiving a service or purchasing a product, and this journey ends when the customer exits this process. The main outcome of the customer journey is the customer experience. The examination of the customer journey is a systematic review that helps organizations understand how their current and future customers have used different paths and touchpoints and how the customer perceives the organization at each touchpoint in meeting their needs. The customer journey includes everything; it comprises the stages of awareness, consideration and reflection, inquiry and evaluation, purchase, and usage (Atashgar et al., 2021). The process of online shopping involves direct transactions between the seller and the customer without intermediaries, which can be termed as the activity of buying and selling goods via the internet (Daroch et al., 2021). Online shopping transactions provide a variety of products and services to customers, allowing them to compare these products with those of other intermediaries and choose the best product (Sivanesan, 2017).

Given that e-commerce has been widely mentioned as the new frontier of marketing, providing seamless shopping experiences across various online channels is essential for success; however, only a few companies can clearly link actual customer experience investments to marketing outcomes, which requires companies to thoroughly and comprehensively examine customer experience and journey (Izogo & Jayawardhena, 2018). The actual online customer experience is a concept very close to the actual customer experience, which includes new aspects such as internet experience (meaning the general experience gained from being on the internet), online payment experience (meaning the payment for services and products online), and online shopping in the internet environment (Wang et al., 2017). A customer may have both positive and negative experiences when using an online medium for their purchase. Some past studies have shown that although there are many advantages to online shopping, some customers still do not prefer online shopping as their primary means of purchasing and, therefore, do not have any experience with it (Daroch et al., 2021). Change in the world of commerce is nothing new. What is new is the acceleration in change and innovation that organizations face almost continuously. Continuous changes in today's world create unforeseen problems and vulnerabilities, which companies need to overcome using new strategies and skills.

These changes have introduced new challenges for strategic management, which constantly seeks to respond effectively to such dynamic environments. In recent years, several theoretical frameworks have emerged that can assist organizations in effectively interacting with larger systems to survive and achieve their goals. For instance, organizations can be viewed as Complex Adaptive Systems (CAS). These frameworks encompass key processes such as adaptation, emergence, self-organization, and adaptive traits. Biological systems possess two characteristics—complexity and adaptability—that can offer valuable insights for understanding and navigating an unpredictable and chaotic world. However, unlike organizational dynamics and the advantages of adaptation from self-organizing phenomena and emergent processes, many organizations lack the sufficient capacity for self-organization like biological entities. For example, organizations require guidance through hierarchical strategic decisions to achieve business goals, as they cannot automatically and solely based on self-organizing characteristics steer towards these goals.

Today, the business world has become significantly more complex, turbulent, and unpredictable. One of the primary reasons for this is the advent of digital transformation. This dynamic environment is often referred to by the acronym VUCA (Volatility, Uncertainty, Complexity, and Ambiguity). The term "volatility" refers to the rapid pace of change, while "uncertainty" pertains to the lack of predictability and sufficient information. "Complexity" points to interconnected structures that lack clear cause-and-effect relationships, and "ambiguity" refers to the challenge of accurately assessing reality in a complex and changing environment. VUCA defines the fundamental internal and external conditions and situations that affect a company. The concept of VUCA has recently gained recognition due to digital transformation, technological advances in fields like artificial intelligence, robotics, online exchange platforms, and significant changes in business models and industries.

It can be said that the individual components of VUCA are not always disruptive on their own and usually have a combined effect. For instance, a new product market can be unstable and ambiguous, or the expansion of a new area during a period of major governmental changes may be complex and uncertain. Therefore, it is not always possible to draw a clear boundary between unstable, uncertain, complex, and ambiguous business environments. Proper utilization of VUCA involves leveraging it in situations that help reduce risks and develop strategies to mitigate instability. VUCA management methods are employed to navigate through known or unknown situations. Using the VUCA environment can lead to a better understanding of the situation, its vulnerabilities, and risks, and help leaders manage the changing landscape of modern business. Today, environmental instability coupled with technological changes has created conditions of volatility, uncertainty, complexity, and ambiguity for nearly all companies. Thus, for companies to adapt to these environmental conditions, they must become more dynamic, flexible, and agile. It is important to note that possessing these abilities alone is not sufficient; they must be effectively utilized. The utilization of these capabilities depends on the organizational structure, which is influenced by factors such as technology, technological changes, innovation, and environmental instability.

Accordingly, customers who make online purchases under VUCA conditions today are aware that they will undoubtedly encounter "price volatility and changes," "uncertainty in product purchase investment," "ambiguity in product quality," and "complexities arising from the rules and conditions of purchasing on online retail sites," which may lead to unexpected and unstable challenges and, in some cases, persist for an indefinite period. Despite numerous studies conducted on customers' real experiences of online shopping and the design of related models, no research has yet been conducted under uncertain and undefined conditions, indicating a research gap in this area. In fact, one of the research areas that has not been addressed in previous studies related to customer experience is examining customer experience under stable conditions without ambiguity, complexity, and fluctuations.

Exploration of VUCA in Online Sales

Researchers have utilized various methods and tools to examine the VUCA (Volatility, Uncertainty, Complexity, and Ambiguity) conditions in the electronics segment of the Digikala company. This examination involved the analysis of historical data, direct observations, interviews, questionnaires, and secondary sources. In the present study, elements such as trend analyses, market dynamics, sudden changes, supply chain complexities, and uncertainties in the electronics market were used to identify VUCA conditions. The researchers, aiming to better understand the online shopping experience of electronics customers on Digikala, encountered specific characteristics such as frequent and unexpected changes in customer behavior, shifts in market trends, disruptions arising from technological advancements, supply chain complexities, intense competition, and uncertainties regarding future developments. Despite the fact that the world today generally operates under VUCA conditions, the use of the term VUCA in research is of significant importance.

Specific Focus:

The use of the term VUCA enables researchers to focus on the specific challenges and dynamics present in online electronics purchases. This term allows for a concentration on the unique aspects of VUCA conditions that may influence customer decision-making and behavior.

Analytical Framework:

The term VUCA serves as an analytical framework that aids in understanding and managing complexities. Identifying VUCA conditions in the online shopping environment guides researchers toward innovative solutions, adaptive approaches, and planning for confronting challenges.

Problem Solving and Preparedness:

Recognizing VUCA conditions prompts researchers to seek innovative solutions, flexible approaches, and precautionary plans to address challenges. A better understanding of these conditions can lead to the development of improved models and methods for enhancing the online shopping experience for customers in the electronics market.

The aim of this study is to design a model that illustrates the online shopping experience of customers purchasing digital goods under VUCA conditions (Volatility, Uncertainty, Complexity, and Ambiguity). This research examines the specific challenges and opportunities faced by customers when purchasing electronics through an online platform, with a focus on Digikala (an online retail site). The reasons for selecting electronics customers in this study are as follows:

High Demand for Digital Goods:

In recent years, due to rapid technological advancements and shifting consumer preferences, the demand for electronics has significantly increased. Given that customers are increasingly turning to online platforms to purchase digital goods, understanding their experiences and behaviors under VUCA conditions is essential.

Intricate Decision-Making Process: When purchasing electronic devices, customers face a complex decision-making process due to the wide range of products, varied specifications, and detailed technical aspects. This complexity can create difficulties for customers in choosing the most appropriate product that aligns with their needs and preferences.

Rapid Technological Changes: The market for digital goods is highly dynamic, with new models and features constantly emerging. Customers often encounter uncertainties related to product performance, compatibility, and future upgrades, making the market a compelling subject for studying VUCA conditions. The choice of Digikala is based on the following reasons:

Prominence and Popularity: Digikala is a leading online retail platform known for its vast selection of digital products. As a key e-commerce platform in the region, it has a large customer base, which provides a robust foundation for studying a wide range of user experiences.

Access to Rich Data: The extensive customer database and transaction records available at Digikala offer valuable insights into consumer behavior, preferences, and purchasing trends. This rich data allows for a deeper analysis of the online shopping experience.

Challenges Rooted in VUCA: Operating in a VUCA environment, Digikala faces various challenges, including market volatility, intense competition, supply chain disruptions, and customer uncertainty. Investigating customer experiences under these conditions helps in understanding their coping strategies and preferences.

Industry Impact: The outcomes of this research may have substantial implications for Digikala and the broader e-commerce industry. The developed model could assist Digikala and similar companies in improving user experience, refining marketing strategies, and better addressing customer concerns in VUCA conditions.

This study focuses on creating a model of the online shopping experience for customers of digital goods within the VUCA context. The selection of electronic devices as a specific product category and Digikala as the online platform is due to the complexities and uncertainties inherent in the digital goods market, as well as the potential to gather valuable insights from a prominent e-commerce platform with extensive data resources.

In summary, this study aims to construct a model of the online shopping experience under VUCA conditions and to explore what such a model entails in practice.

Moreover, the study will explore the following questions:

- What are the positive and negative online shopping experiences individuals have in turbulent environments?

- What are the positive and negative online shopping experiences individuals have in uncertain environments?

- What are the positive and negative online shopping experiences individuals have in ambiguous environments?

- What are the positive and negative online shopping experiences individuals have in complex environments?

- How credible is the model of the online shopping experience under VUCA conditions?

2. Theoretical Framework of the Research

1-2. Purchase Intention

Purchase intention is defined as the inclination to buy a particular product or service within a specified period. It reflects the belief that consumers will make a purchase in the future to fulfill their needs and wants (Naseri, 2021).

2-2. Real experience customer

Actual customer experience includes all interactions—both positive and negative—that customers have with various touchpoints of a company, leading to company-related outcomes such as purchase intention, satisfaction, loyalty, and more. Thus, in this research, customer experience is treated as a multidimensional construct consisting of both controllable and uncontrollable factors by the company (Imhof & Kalus, 2020).

In essence, customer experience is a tangible and sensory phenomenon for customers and represents an emotional connection between the customer and the organization. It is a deeply internal experience for the customer, highly influenced by the moment of contact or interaction (Garg et al., 2014).

Customer experience shapes how customers feel, think, and act, influencing their future choices. The quality of an experience is ultimately determined by comparing the expected experience with the actual experience received (Mokhtari et al., 2021).

3-2. VUCA

The VUCA world is the reality that people currently confront. By embracing the flow of life, preparing for unknown territories, and taking calculated risks, individuals become more adaptable to the influences of the VUCA world. However, the significant insecurity that VUCA brings can cause considerable stress and exhaustion. Understanding its dimensions enables individuals to better manage the challenges and setbacks they encounter. The term VUCA was first introduced by the U.S. military in the late 1980s to describe the geopolitical environment. This term, moving away from the notion of stability and balance, characterizes a state of near-instability on the brink of chaos (Miller et al., 2018).

The VUCA world generally refers to the contemporary world, which is characterized by turbulence, uncertainty, complexity, ambiguity, and mystery (Kaya, 2022).

In the word VUCA, the letter "V" is taken from the word Volatility and it means turbulence, which is related to the industry.

The global market has experienced changes that are closely tied to instability and demand fluctuations. As instability in the world increases, so does the frequency of these changes. The term "U" stands for "Uncertainty," which denotes the lack of predictability caused by a failure to grasp events and external influences. Environments with unpredictable conditions are indicative of uncertainty. Increased uncertainty translates to greater difficulty in forecasting future developments. The letter "C" is derived from "Complexity," reflecting the number of variables that need to be considered during decision-making, including the variety of elements and their interactions. Hence, environments with numerous and interconnected factors become increasingly complex, complicating effective decision-making. The letter "A" stands for "Ambiguity," describing situations where phenomena are unclear and difficult to interpret. Ambiguity occurs when information is so inconsistent, incomplete, or vague that it becomes impossible to reach clear conclusions (Wereda et al., 2023).

Donald Trump exemplifies the VUCA world by disrupting established norms upon his entry into the White House. His disregard for existing rules and protocols shook the established diplomatic and economic order that the world had grown accustomed to (Popova et al., 2021).

3. The background of the research

Table 1 : Background of the research.

Table1 Background of the research :

Table 1: Literature review

the result	Research method and statistical society	title	Name and year	row
Unstable environments in which Turism institutions (T & HI). and Hospitality and (Industry or tourism industry operates, it needs to redefine the rules for designing marketing activities. The concept of Voca may act as a basis for these changes and its implementation requires specific management skills that enable tourism and hospitality industry entities to use an agile marketing strategy. Also, this strategy should be based on a flexible and customer-oriented approach.	Quality and in a hotel and among customers done accepted	**Critical reflection on Voca in tourism and hotel marketing activities**	Lubowiecki-Vikuk et al., 2023	1
The observations contained in the article are part of a wider research about the role of customer service and the creation of Yemeni relations between the company and the .suppliers in the time of Voka Combining quality suppliers in business can greatly increase customer service and operational efficiency. Establishing favorable relations with suppliers can lead to commercial partnerships Valuable, providing new insights and .To open new ways for growth	The research method used in this research is of qualitative and quantitative type, and in between, commercial companies and their suppliers	**Yajad's customer service** **Yemen relations between the company and** **Providers in time** **Voca**		2

The findings show that retailers should provide points Appropriate contact for your customers ;have the ability to be elected Because some of them can have a direct or indirect negative effect have sales Also, retailers can use this Insights to support contact point selection and, consequently, the process Use intellectual motives to make . decisions	Quantitative-qualitative research method and statistical population includes 84967 registered customers Retail is mid-November to mid-December 2020.	**Identifying contact points effective on sales during the omnichannel customer journey**		3
Data analysis showed several overlaps and relationships between the four terms. Based on this analysis, the authors suggest a comprehensive conceptual map that can be used as a basis for future research and .exercises	This research was done based on metacomposition method. In this ,research338 ,articles were identified among which26 articles met the .inclusion criteria	**:Clarifying the concept map Voca, a systematic review**		٨
The findings of this study show ,that perceived ease of use perceived usefulness and purchase intention using social .media It is relevant for the development .of sustainability goals	The research method isquantitative and customers are present online and .offline	**,Perceived ease of use perceived usefulness, and media use** **Social for promoting sustainability in the world of Voca**		5

Based on the results of this research In total, six factors were obtained from this study that deter consumers from buying from online sites Prevents: fear of bank transaction, traditional purchase is easier than buying Online, reputation and services provided, experience, insecurity and insufficient product .information and lack of trust	The research method isquantitative .and statistical analysis of online sites	**Investigating the limiting factors of online shopping behavior of consumers**		6

) Recent developments inBDA (orBig Data Analysis Big data analysis opens possibilities It has provided customer insights for customer experience management.	The research method is meta-composite 6990. articles were adopted	**Experience Management in the Age of Big Data Analysis: A Strategic Framework**		7
The findings of this research with a holistic approach The theory has been tested, although it is important, the necessary subtlety and detail In terms of complex concept, it does not have customer experience. Also, like other studies in this field, even the crisis conditions Although the government has not considered these conditions.	The qualitative research method was conducted among customers.	**Positive and negative shopping experience** **Online platform, online customer experience**		8
This study shows that Buyers consider the opinions of other buyers as a suitable basis for performing a wide range of behaviors.	Qualitative research from the page Facebook is a leading online retailer in 11. African countries	**Online shopping experience in the emerging electronic retail market**		9
It provides a roadmap to design stability for the future Even . , with the change of technologies organizations are becoming more focused on the customers they serve .	The research method is qualitative and it was conducted among customers.	**Designing a roadmap in an uncertain: world implementing a strategy based on customer experience**		10
3 articles have been introduced in ,this research . Also 15 challenge and , It provides explicit and implicit recommendations for managers, academics and leaders to succeed in the unpredictable and challenging world of Voca in the 12th century.	The research method is qualitative and meta-composite based on the selection of51. articles	**Challenges and suggestions for management innovation in the world of Voca**		11

Here is a solution from a model A single unit is used in It shows all workflows in different fields It is worth changing. This is the solution :It is based on three pillars1- Data extraction at the time of execution2- integrated ;workflow display3- Presentation Current information to shareholders. This concept was confirmed by initial prototyping .and a use case	quantitative research method and statistical society is also a production .company in Slovakia	**Control of customer orders** **In the field ofETO Voca /**		12
Smart marketers are at the top of the scale of changes. They are from Marketing strategies and touch points ensure that as long as the consumer space spends time online to check . his behavior	The research method isquantitative and the data was collected from Kanyakumari region.	**Examining the problems faced by customers in online shopping**		13
The results of this research show that social media in all stages of experience management Customers of the hotel industry play a role, and only in one step of the "customer experience design" stage, the role of social .media was not identified	The research method is qualitative and .meta-composite	**Providing a framework for explanation** **The role of social media in** **Customer experience management industry** **Hospitality: a systematic review of theoretical foundations**		14
Using the concept of flow, and learning from leading web applications to improve repeat visits, repurchases that ensure customer loyalty and ultimately, lead to more sales and profitability of the company..	The qualitative research method and the statistical community of those software companies are of the rank of the High Council of Informatics with a .history of producing mobile software	**Designing a theoretical model of customer experience in store mobile applications with emphasis on flow theory**		15

Source of research findings

In the background of marketing, it has taken many studies and researches; However, the customer's electronic shopping experience in terms of willingness to buy online and customer experience in the form of Voca conditions, which are full of turbulence, uncertainty, complexity and ambiguity, have not been considered as much as they should be, and as a result, the shopping experience of the customers has not been measured in this environment. Companies also do not have the idea and background of managing these experiences. For this reason, no research has been done in this field either. It should be mentioned that the gender of this experience in terms of being positive or negative has not been discussed in these researches and in these conditions. It is worth mentioning that in none of the previous studies, the design of the model was not considered for this purpose. This is while in the current research, it has been decided to use a part-to-whole approach to identify these experiences and then use qualitative approaches; Therefore, this research can be considered as one of the

few researches conducted in this field, especially in the context of Voca and in the digital goods industry, which will undoubtedly help the development of the relevant background. In general, in a topic entitled "Designing a model of the real online shopping experience of electronic devices for customers of digital goods under the conditions of Voca", several gaps in the field of marketing and sales are pointed out, the key aspects of which include the following:

Experience of Online Shopping: With the increasing popularity of e-commerce, the purchasing methods of customers for electronic devices through online systems have changed; however, there may be a need for research on designing an optimized online shopping experience specifically for customers of digital goods. The aim of the present research is to fill this gap by providing insights on how to enhance the online shopping journey for customers of electronic devices.

Customer Behavior and Expectations: The environment is characterized by rapid changes, unpredictability, complex challenges, and uncertain situations. In such an environment, customer behavior and expectations may change rapidly; therefore, understanding how these factors affect their decisions when purchasing electronic devices online is crucial.

Designing Customer-Centric Experiences: In the fast-paced and dynamic environment, businesses often strive to keep up with the priorities and desires of customers. The goal of this research is to discover methods for designing a customer-centric online shopping experience for digital goods, taking into account the changing landscape of customer needs.

Marketing Digital Goods: Digital goods refer to intangible products and services that can be delivered electronically, such as software, e-books, music, and online courses. In this research, digital goods such as computer devices are considered. Selling digital goods involves different marketing strategies compared to physical products. Marketing strategies address how businesses can effectively market digital goods to customers of electronic devices in the e-commerce landscape.

Technological Advancements: The field of electronic devices is continuously evolving with new technological advancements. This research aims to examine how technological advancements influence customer preferences, behavior, and expectations when purchasing electronic devices online.

Ambiguity), where uncertainty is common, customers may have concerns about the security of their online transactions and the reliability of the platforms they use. This research addresses these concerns and seeks ways to build trust in the online shopping process.

Online Trust and Security: In the context of Voca where uncertainty is common, customers may be concerned about the security of their online transactions and the reliability of the platforms they use. In the current research, attention has been paid to these concerns and finding ways to build trust in the online shopping process.

Competitive Landscape: The online market for electronic devices can be highly competitive. Understanding the factors that influence customer choice and loyalty in this competitive environment is essential for businesses seeking to gain a competitive advantage.

In summary, the focus of this research is to examine and fill the gaps in the marketing and sales of electronic devices, particularly emphasizing the online shopping experience for customers of digital goods. The VUCA conditions add a layer of complexity that necessitates a deeper understanding of customer behavior, expectations, and the examination of the customer journey throughout the purchasing process.

5. Research Methodology

This research is fundamental and applied in terms of its objectives.

In terms of analysis methods, it is a qualitative study with a phenomenological approach, and in terms of execution, it is exploratory and descriptive. The research approach is inductive and has been conducted in a cross-sectional manner. The statistical population includes customers of digital electronic goods in Tehran, and sampling was conducted purposefully and judgmentally. In this regard, semi-structured interviews were initially conducted until saturation was reached with 10 customers (who were either customers or retail store owners purchasing from DigiKala or final consumers of electronic products) based on a protocol. The interviews were then transcribed. After reaching theoretical saturation, interviews with 5 additional participants were conducted to ensure the adequacy of the collected data, which provided new insights; thus, it was confirmed that 10 interviews had a desirable effectiveness.

The characteristics of the interviewees are summarized in Table 2.

Table 2 : Characteristics of the sample

Interview duration (total)	Type of job		age	age eee		education			gr	gende r
18 hours	Employee and worker	آزاد free اد	40 >40	30-40	20-30	Ph.D. and Ph.D. student	master	سر Bachelor	زن W	M
	3	7	2	5	3	2 2	3	5	7	3
	3	7	2	5	3	3		5	7	3

Table 2: Demographic characteristics of respondents

In the present research, face validity was used for the interview and its questions, in order to check the validity in the coding process of continuous conflict, participation with the research members and triangulation, and to check the reliability of the interviews, the test-retest reliability was used. Also, two experts who had mastered the subject were requested to participate in the research as coders. In each of the interviews, the codes that were similar to each other from the point of view of two people were identified as agreement and non-similar codes as non-agreement. Finally, a reliability level of 73.26% was obtained and confirmed.

Reliability percentages $= \dfrac{2* \text{number of expectation}}{\text{Total number of codes}}$

Table3: Test-retest reliability

Retest reliability (percentage)	Number of disagreements	Number of agreements	The total number of codes	The title of the interview
75%	21	42	112	**N1**
73.78%	12	38	103	**N2**
74.41%	33	80	215	**total**

6. Findings and discussion

In the current research, the analysis of phenomenological data is done by reducing meaningful propositions into themes and then writing textual and structural descriptions. Based on the data obtained from the research questions that were raised in the interview format, important propositions, sentences and phrases that show how the experience of the experts about the studied phenomenon is formed, are identified and then the propositions with equal value are identified and the main themes are identified. This process is called horizontalization. Finally, the researcher writes a comprehensive description of the phenomenon by integrating and integrating textual and structural descriptions. A researcher in phenomenology is looking for the meaning, structure and nature of the lived experience for people. The reason for using phenomenology is because the phenomenon of experience with the customers themselves is also experienced with them in the process of purchase. In order to analyze the data about phenomenology, the seven-step method of collation has been used. The most important topic of Husserl's phenomenological method is the concept of epoch. The phenomenological research strategy relies less on interpretation and interpretation by the researcher and is more based on descriptions of the participants' experiences. Epoch is a basic concept that Husserl focuses on and in which the researcher puts aside his previous experiences as much as possible (although temporarily) and does this to create a new space about the investigated phenomenon. Bracketing is a method in qualitative research that is used to reduce the harmful effects of (mental) biases that can negatively affect the research process; But in this method, there is no correct understanding of the individual's mentality in the bracketing processes, which can be a part of it because of its distance from its origin, that is, phenomenology.

Step 1: Familiarization

Familiarization is the initial step in data analysis using Colaizzi's (1978) descriptive phenomenological method. In this step, the researcher repeatedly plays the recorded interviews, which were conducted with the consent of the participants. Initially, interviews are conducted with 10 customers until the point of saturation is reached, based on the protocol, and then transcribed into text. After reaching theoretical saturation, interviews are conducted with 5 more individuals for confirmation to ensure no new points are presented; no new points emerged, confirming that 10 interviews were sufficiently effective. Subsequently, the researcher read these texts multiple times to gain a general sense of the described experience.

Step 2: Identification of Significant Statements

In this stage, each interview text was re-read, and all statements deemed significant and directly related to the studied phenomenon were identified and isolated.

Step 3: Formulation of Meanings

With all significant statements from the previous stage in hand, the researcher, based on the concept of epoche, bracketed and attempted to set aside all prior assumptions and experiences. Then, each significant statement regarding the customer's actual experience was carefully studied to determine its conceptual meaning. Coding for interviews number 1 and 5 is provided in Table 4.

Table 4: Coding interview No.1

Editing meaning	Markers	Important phrases	row
Ambiguity in price	A1B1	My experience of buying from the site has been very expensive in ambiguous conditions.	1
Complexity in identifying suppliers	A1B2	I see several suppliers on one page.	2
Price instability on the site	A1B3	A professional seller should have a fixed price on his site	3
There are many suppliers of different prices	A1B4	To buy printer cartridges, I came across several different brands with different prices on the site.	4
Ambiguity in product warranty features	A1B5	If we want to buy a digital spare part, there is no mention of warranty on the site.	5
Not receiving accurate information about product warranty **Difficulty in receiving information about the product**	A1B6	Regarding the warranty, I have to ask the site's support and sometimes they don't give the right answer.	6
Low complexity in tax calculation due to receipt of official invoice	A1B7	The DigiKala site gives me an official invoice and I can include this sale as part of the company's expenses. But my purchase from offline store does not include this issue. Because it gives an unofficial invoice. Since I am a legitimate buyer and purchase large amounts, I can include these expenses as expenses to reduce my taxes.	7
Ambiguity about the conditions of after-sales service	A1B8	When buying a TV from the site, there are situations where I was not sure of the site's after-sales service.	8
Ambiguity about product installation information on the site	A1B9	If I want to change a spare part of my digital product, there is no information about which side (the seller or the buyer) will do the installation.	9

Ambiguity about product installation information on the site	A1B10	If I want to get a spare part of my digital product, about which side (seller or buyer) the installation is done, the information only answers part of the questions in my mind and sometimes it is vague.	10
Lack of proper notification	A1B11	I recently bought a product from Digi that I installed myself; But after 48 hours later, I found out that the installation was done by the company itself, and in general, I lost my warranty; Because the notification was not done correctly.	11
Uncertainty of delivery time on the site	A1B12	When the miscellaneous courier (I do not mean the goods courier) is supposed to bring a product, the delivery time is not specified on the website.	12
Specific delivery time	A1B13	If the order is sent from Digi warehouse itself, it is always done on time. Finally, the problem was an hour delay in sending.	13
Lack of information and awareness about some products on the site	A1B14	There are cases where I didn't call the site about the digital product when I wasn't sure about the authenticity of the product, and the consulting team didn't provide reliable and uniform information for a subject.	14
Frequent changes in the showcase Products on the site	A1B15	In some cases, some of the layouts on the site changed so quickly that I was visually confused and different from the previous layout.	15

Table. Coding 5: interview No.5

Editing meaning	Markers	Important phrases	row
Inquiring from other sites in order to clear the ambiguity	A5B1	In the ambiguous price situation, before buying from DigiKala, I first inquired about the price from several sites and then made my purchase from DigiKala.	1
Ambiguity in announcing the installation status of the product on the site	A5B2	Appropriate and accurate information about product installation is not provided on the site.	2
Previous purchase experience from the site	A5B3	Undoubtedly, it is very helpful to have the experience of previous purchase from the DigiKala site.	3
Existence of information about the price and accurate information of the product	A5B4	The existence of information about the price and accurate information of the product makes my purchase effective.	4
Not having accurate information about the service	A5B5	I will not buy if I do not have accurate information about the service.	5
Site validity	A5B6	It is important for me that the site is valid.	6

Lack of high-quality photos on the site	A5B7	If there is no quality photo of the product on the site, I will be confused.	7
Ambiguity in the introduction of fake and original products on the site	A5B8	If the picture of the product is small and I cannot see the different dimensions of the product, I will not buy.	8

Difficult to choose from A lot of similar goods	A5B9	If there were a lot of similar products and their differences were not clearly announced on the site, I would have a problem.	9
There are not enough photos of the product	A5B10	If there are few photos of the product and I cannot see the different dimensions of the product, I will not buy.	10
Ambiguity in the authenticity of the payment portal	A5B11	During a purchase, I noticed that the site directed me to pay with the seller's private portal, which I quickly stopped the operation.	11
Entering user points on the site	A5B12	When I see that the product in question has been rated on the site, I choose more easily.	12

Source: Research findings

Step 4: Clustering of themes

At this stage, the codified meanings extracted from the text of the interviews should be clustered. In this sense, an attempt was made to identify and modify the common meanings extracted from the interviews; Therefore, these meanings were grouped into 53 sub-topics in line with the final clustering.

Table 6: The consolidated table of coding in connection with the formation of sub-themes in line with the final clustering

extracted meanings (edited)	Corresponding codes of each meaning	sub-theme	Subject material
Ambiguity in the price Ambiguity in the price	A1B1 A10B11	Ambiguity of value	**negative experience**
,Complexity in identifying suppliers the existence of many suppliers, the existence of many suppliers	A1B2 A1B4 A7B1	Complexity in identifying suppliers	**negative experience**
Instability of prices on the site Price fluctuations price volatility Price chaos price volatility	A1B3 A2B7 A2B6 A2B9 A4B4 A4B6 A4B12 A7B9 A6B2 A6B9 A10B9 A9B13 A9B1	price volatility	**negative experience**

Different prices Existence of different and multiple prices, complexity in conditions and announced price Existence of multiple and different prices	A1B4 A4B13 A2B11 A9B11	Various prices	**negative experience**
Ambiguity in product warranty features Ambiguity in the information related to the warranty site Not receiving accurate information about product warranty Ambiguity in the warranty inquiry	A1B5 A2B1 A1B6 A9B12	Ambiguity of warranty status	**negative experience**
Difficulty in receiving information about product Lack of proper information	A1B6 A1B11	Difficulty in receiving information about the product	**negative experience**
Low complexity in tax calculation due to receipt of official invoice	A1B7	Ease of calculating taxes when buying from the site	**positive experience**
Ambiguity about the conditions of after-sales service Ambiguity about product installation information on the site Ambiguity in announcing the installation status of the product on the site ,Ambiguity about product services lack of accurate information about services Lack of accurate ,information about services ambiguity about services Uncertainty about the status of services, uncertainty about product installation information on the site	A1B8 A1B9 A5B2 A3B3 A4B10 A5B5 A6B5 A8B4 A1B10	The condition of after-sales service is unclear	**negative experience**
Uncertainty of the delivery time on the site. **Uncertainty in the delivery time Uncertainty** in product delivery	A1B12 A3B5 A8B6	Uncertainty of product delivery time	**negative experience**
Specific delivery time. Specific delivery time	A1B13 A3B7	Specific delivery time	**positive experience**
Frequent changes in the showcase of products			

site	A1B15	Instability of showcase products on the site	**negative experience**
Lack of knowledge and ambiguity about the product in the website support team, confusion about the nature and authenticity of the .product Not having full knowledge of the product's authenticity Uncertainty of product features	A2B2 A2B12 A3B6 A3B12 A4B3 A4B8 A5B8	Ambiguity about products and goods	**negative experience**

Ambiguity about the authenticity of the goods It is not possible to track the authenticity of the goods Ambiguity in the introduction of fake and original products on the site Ambiguity about original and fake products on the site Confusion in the originality of the product, ambiguity in the introduction of original and fake products on the site Ambiguity in the introduction of the main products and Fic on the site	A7B10 A6B10 A10B10 A9B1		
Lack of information and awareness about some products on the site Failure to provide accurate information for purchase Failure to provide an explanation of the site about the product. There is no specific standard on the site for the presentation of products	A1B14 A3B9 A4B3 A4B5	Lack of information for some products on the site	**negative experience**
Clarity of price Clarity of price dimensions	A2B3 A2B4	Clarity of the price situation	**positive experience**
,The lack of complexity of the site the complexity of the site, the complexity of the site	A2B5 A6B11 A7B5	Simplicity of the site	**positive experience**
Unpredictability of price Unpredictability of price	A2B7 A8B9	Unpredictability of the price	**negative experience**

Temporary removal of goods from the order basket under special conditions	A2B8	Removing goods from the sales basket and Not different pricing in fluctuating mode	**positive experience**
High dependence on foreign currency	A2B9	High dependence on foreign currency	**negative experience**
Reducing complications about the site's beneficiaries	A2B10	Reducing complications about the buyer and the seller	**positive experience**
There is uncertainty about the status of the sponsor	A2B11	Ambiguity about the provider	**negative experience**
Ambiguity in the authenticity of the site Ambiguity in the authenticity of the site Not knowing the authenticity of the site	A2B13 A3B10 A7B4	Ambiguity in the authenticity of the site	**negative experience**
The presence of comments on the site about the product is in line with the use of other people's opinions Eliminate ambiguity Disambiguation according to the comments of others on the site	A2B14 A3B2 A4B14	Using other people's opinions about the product	**positive experience**

Reducing uncertainty in the price by repeatedly visiting the site at different times	A3B1	Reducing uncertainty in the price by visiting the site repeatedly	**positive experience**
Ambiguity about the payment gateway Lack of authenticity of the payment gateway Ambiguity about the authenticity of the payment portal Ambiguity in the authenticity of the payment portal Fik payment portal Ambiguity in the authenticity of the payment portal Ambiguity in the authenticity of the payment portal Fik payment portal	A3B4 A10B6 A4B9 A5B11 A6B8 A7B8 A8B7 A8B10	Ambiguity about the payment gateway	**negative experience**
Not having accurate information about return conditions	A3B8	Not having information about returning the product	**negative experience**
Existence of duality in decision making Complexity in decision making Complexity in decision making	A3B9 A4B11 A10B1	Not being able to make a decision	**negative experience**
Not checking the sites about a specific product			

Eliminating opportunities to review digital goods by not visiting other sites	A3B11 A4B1	Not checking similar sites	**negative experience**
One-sided attention to a factor in the purchase Only pay attention to one factor	A3B13 A7B3	Attention to a factor in the purchase	**negative experience**
Effective choice	A3B14	The right choice	**positive experience**
The availability of goods in the warehouse of Digi-Kala	A3B15	Stock of goods in warehouse	**positive experience**
Complexity with the user not being familiar with the complexity of the site, the complexity of the site	A4B2 A10B2 A9B7	Not being familiar with the site	**negative experience**
Choosing the best supplier with Using other people's comments Knowing the supplier according to the feedback of others Knowing the supplier according to the feedback of others	A4B7 A7B2 A8B15	Choosing the best supplier	**positive experience**
Price comparison on the DigiKala site. The possibility of price comparison on the site	A4B15 A5B12	Price comparison	**positive experience**
Possibility of payment at the place of payment at the place	A4B16 A6B12	Payment on the spot	**positive experience**
Inquiry from other sites in line disambiguation	A5B1	Inquiry from similar sites	**positive experience**

Previous purchase experience from the site	A5B3	Previous purchase experience	**positive experience**
Existence of information about the price and accurate information of the product	A5B4	Existence of information about the product and its price	**positive experience**
Site credit. Site credit	A5B6 A6B4	Site validity	**positive experience**
Lack of high-quality photos on the site Lack of high-quality photos on the site Lack of quality photos of the product on the site	A5B7 A10B4 A8B8	Lack of high-quality photos on the site	**negative experience**
Difficulty in choosing among the multitude of similar goods			

There are a lot of confusing products Choose from a large number of similar products and offer similar offers frequently digi goods	A5B9 A8B2 A9B9 A9B2	A large number of similar products	**negative experience**
There are not enough photos of product	A5B10	Limited photo of the product	**negative experience**
Entering users' points on the user's points entry site	A5B12 A7B13	Entering user points on the site	**positive experience**
Introduction of several specific suppliers from the site	A6B3	Specific suppliers	**positive experience**
Congestion and irregularity of the site environment Congestion and irregularity of the site Congestion and irregularity of the site	A6B1 A10B12 A8B5	The site is busy	**negative experience**
The variable price of dollars and currencies Complicated relationship between ,commodity price and dollar commodity price relationship with currency price The relationship between the price of goods and the price of currency, the fluctuating price of dollars and currency	A6B6 A7B12 A8B1 A10B8 A8B13	The variable and influential price of dollars and currencies in goods	**negative experience**
The dimensions of the product are not clear on the site Uncertainty of product features Uncertainty of product features	A6B7 A7B6 A9B8	The dimensions of the product are not clear on the site	**negative experience**
Authenticity of the site	A7B7	Authenticity of the site	**positive experience**
Contact support for information Product features Contact support to know about product features	A7B11 A9B3	Use of site support	**positive experience**

Site filtering facilities based on request Being familiar with DigiKala search and search in DigiKala	A8B3 A9B5 A10B5	Site usability	**positive experience**
Delivery of the same goods with the same characteristics Available on the site Delivery of the same goods with the same features available on the site Compliance of the goods with the provided features	A8B11 A10B7 A8B14	Compatibility of the product with the product on the site	**positive experience**
Failure to meet customer needs Not knowing the answer to the need .based on what we get	A8B12 A10B3	Failure to meet customer needs	**negative experience**
The goods arrived on time	A9B4	arrive on time	**Positive experience**
Lack of proper information about new products	A9B6	Lack of proper information about new products	**negative experience**

Source: Research findings

In the next stage of topics, sub-topics in The four main themes of Voca(turbulence, uncertainty, ambiguity and complexity) that have been identified before, take place and so-called It is clustered be the result this clustering in Table 7 .is provided

Table7 Final clustering of subjects :

The main theme	sub-theme	Subject material
turbulence	price volatility	**negative experience**
	Instability of showcase products on the site	**negative experience**
	The variable and influential price of dollars and currencies in goods	**negative experience**
uncertainty	Uncertainty of product delivery time	**negative experience**
	Specific delivery time	**positive experience**
	Clarity of the price situation	**positive experience**
	Unpredictability of the price	**negative experience**
	Removing goods from the sales basket and not setting different prices in a fluctuating state	**positive experience**
	Goods in stock	**positive experience**
	Compatibility of the product with the product on the site	**positive experience**
	Failure to meet customer needs	**negative experience**
	arrive on time	**positive experience**

	Lack of proper information about new products	**negative experience**
Ambiguity	Ambiguity of value	**negative experience**
	Ambiguity of warranty status	**negative experience**
	The condition of after-sales service is unclear	**negative experience**
	Ambiguity about products and goods	**negative experience**
	Ambiguity about the provider	**negative experience**
	Ambiguity in the authenticity of the site	**negative experience**
	Using other people's opinions about the product	**positive experience**
	Reducing uncertainty in the price by visiting the site repeatedly	**positive experience**
	Ambiguity about the payment gateway	**negative experience**
	Payment on the spot	**positive experience**
	Inquiry from similar sites	**positive experience**
	Previous purchase experience	**positive experience**
	Site validity	**positive experience**
	Lack of high-quality photos on the site	**negative experience**
	The dimensions of the product are not clear on the site	**negative experience**
	Authenticity of the site	**positive experience**
	Use of site support	**positive experience**
complexity	Complexity in identifying suppliers	**negative experience**
	Various prices	**negative experience**
	Difficulty in receiving information about the product	**negative experience**
	Ease of calculating taxes when buying from the site	**positive experience**
	Lack of information for some products on the site	**negative experience**
	Simplicity of the site	**positive experience**
	High dependence on foreign currency	**negative experience**
	Reducing complications about the buyer and the seller	**positive experience**
	There is no information about the return of the product	**negative experience**
	Not being able to make a decision	**negative experience**
	Not checking similar sites	**negative experience**
	Attention to a factor in the purchase	**negative experience**

The right choice	**positive experience**
Not being familiar with the site	**negative experience**
Choosing the best supplier	**positive experience**
Price comparison	**positive experience**
Existence of information about the product and its price	**positive experience**
A large number of similar products	**negative experience**
Limited photo of the product	**negative experience**
Entering user points on the site	**positive experience**
Specific suppliers	**positive experience**
The site is busy	**negative experience**
Site usability	**positive experience**

Step 5 and 6: Formulating a Comprehensive and Structural Description

In this step, to achieve the objectives of this research—which includes the dimensions of VUCA, the main category (the experienced reality of online shopping by customers in VUCA conditions), and the main theme (turbulence, uncertainty, ambiguity, and complexity)—a comprehensive and structural description is provided in two sections. The difference between the comprehensive and structural sections lies in that in the comprehensive section, the dimensions obtained about each of the indicators of the model are presented; however, in the structural section, the researcher's analysis of the dimensions is accompanied by explanations of points derived from the interviews that have come to mind and been written down. In this regard, the main themes are presented as follows. The formulation of the comprehensive description is as below.

• Formulating a Comprehensive Description of Turbulence

Turbulence is one of the main themes extracted. This theme was determined based on the dimensions of VUCA that were previously defined, and then sub-themes were incorporated within it. Turbulence refers to a rapid and significant change that occurs over a period of time. Turbulences are characterized by an unexpected or unstable event within an unspecified duration, of which the individual is aware. In this case, predicting the outcomes, although possible, is also challenging. In other words, turbulence is a change that is relatively unstable, where information is accessible and in a comprehensible state; however, change in it occurs repeatedly and sometimes in an unforeseeable manner. Sub-themes include price turbulence, instability in the product showcase on the site, fluctuating prices, and the impactful effects of the dollar and currency on goods; that is, price instability and its frequent changes, variations in the showcase of websites in terms of product diversity, changes in brands, and changes in the currency and dollar prices can create turbulence and lead to confusion among users. All of these are negative experiences that users have encountered

Development of Structural Description of Turbulence

Thus, in a brief description, it can be stated that from the perspective of individuals, when the Digikala site frequently changes prices and cannot consider a fixed price for a product, buyers become embroiled in turbulence while making decisions. Frequent fluctuations in foreign currency and dollar values lead the site itself to purchase goods at different prices and offer them at variable prices on the site, which also creates turbulence for customers. Regarding certain products such as various models of laptops, TVs, and audio-visual equipment, frequent changes in models, addition, or removal of goods can lead to confusion for customers who are evaluating and comparing various models within a timeframe.

Development of Comprehensive Description of Uncertainty

Uncertainty is one of the main themes extracted, which relates to unpredictability. This theme was determined based on the previously defined VUCA dimensions and encompasses secondary themes within it. Uncertainty indicates the unpredictability of conditions, events, and unforeseen incidents. It does not relate to cause and effect; rather, it is a term used to describe a situation characterized by a lack of specific knowledge. Even if information about a situation or event is available, predicting future outcomes may not be suitable. Secondary themes include uncertainties regarding the delivery time of the product, specified delivery time, clarity of pricing conditions, unpredictability of price, items being removed from the sales basket, and being unsold during fluctuating conditions, inventory stored in warehouses, alignment of products with those displayed on the site, failure to meet buyer needs, timely arrival, and lack of adequate information regarding new products. Some of these themes carry positive aspects, as they stem from positive experiences; however, their nature falls under certainty or uncertainty.

Development of Structural Description of Uncertainty

In a brief description, it can be indicated that if the delivery time is not specified, individuals may face doubt in their decision-making and subsequently encounter uncertainty; however, if the pricing situation of products is explicit, individuals will decide with certainty, resulting in a positive experience for them. Moreover, if the company does not price goods with various rates during fluctuating price conditions and provides a message indicating that the offering of this product is paused until price stabilization, then individuals will decide with certainty regarding their purchases from this site or other sites or about postponing their purchase. The failure to meet buyer needs also imposes uncertainty, hindering suitable decision-making in this regard. Timely arrival of goods is also a factor—if an individual has a positive experience regarding it, they will find it easier to make a definitive decision. The absence of adequate information about new products is another factor that may lead to confusion and negative experiences.

Development of Comprehensive Description of Ambiguity

Ambiguity is one of the main themes extracted. This theme was defined based on previously specified VUCA dimensions, subsequently integrating secondary themes within it. A lack of knowledge about general principles, causes, and effects is involved. Ambiguity identifies situations where there is doubt and uncertainty about the nature of cause-and-effect relationships. An ambiguous situation is more often applicable to products that 1) are completely novel; 2) have entered markets that are entirely new, where no one has previously introduced them (the novelty of the product). For instance, if a company intends to convert print media to digital media within which it has no prior experience, the appropriate approach to cope with ambiguity is to trial and develop hypotheses (according to the results obtained). In this section, ambiguity comprises price ambiguity, uncertainty regarding warranty conditions, unspecified after-sales service situations, ambiguity concerning the product and goods, uncertainty regarding suppliers, ambiguity about the authenticity of the site, reliance on others' opinions about the product, reduction of price ambiguity through frequent site visits, ambiguity regarding payment gateways, cash on delivery, inquiries from similar sites, previous purchase experiences, site credibility, lack of high-quality images on the site, unspecified product dimensions on the site, authenticity of the site, and utilization of site support. Some of these themes carry positive experiences, while others entail negative experiences.

Structural Explanation of Ambiguity

Therefore, in a summary description, it can be stated that price ambiguity will cause doubt and hesitation among individuals. If the warranty status of the product is unclear, a person will have a negative experience; they do not know what will happen if the purchased product encounters problems. Lack of clarity regarding after-sales service can also create a negative experience and lead to ambiguity; as products heavily rely on after-sales services. Additionally, if the supplier and their status are not well-defined, a person may experience hesitation and doubt; because their primary goal is to purchase directly from the Digikala website. For this reason, buying from another supplier is unthinkable for them. Lack of knowledge about the authenticity of the website is another source of ambiguity. Digikala is a reputable website; however, links from other sites to Digikala may create hesitation in customers and subsequently lead to a negative experience.

Comprehensive Explanation of Complexity

Complexity is one of the main themes extracted. This theme was defined based on the dimensions of VUCA that were previously identified, and sub-themes were incorporated within it. Complexity refers to a situation or event that has many interconnected and related components, and only limited information regarding their interaction and mutual dependency is available. Sub-themes include complexity in identifying suppliers, various prices, difficulty in obtaining product information, ease of calculating taxes when purchasing from the site, absence of information for some products on the site, simplicity of the site, excessive reliance on foreign currency, reduction of complexities for buyers and sellers, lack of information on product returns, inability to make decisions, not checking similar websites, focusing on one factor in purchasing, making the right choice, user-friendliness of the site, selecting the best supplier, price comparison, availability of information about products and their prices, a large number of similar products, limited photos of products, user ratings on the site, identifiable suppliers, site congestion, and user familiarity with the site. Some of these themes have positive aspects, as they represent a type of positive experiences; however, their nature is related to complexity or non-complexity.

Structural Explanation of Complexity

Therefore, in a summary description, it can be stated that complexity in identifying suppliers may cause complications for users who do not operate professionally and directly with companies. Different prices can also create complexity in product evaluation for people who do not have a comprehensive view of specific products. Difficulty in obtaining product information can lead to complexity for different individuals and can also result in a negative experience. The ease of tax calculation when purchasing from the site is among those factors that can be very useful for retailers and provide a positive experience. The lack of information for certain products on the site also causes complexity for individuals and may result in a negative experience. The site's simplicity can help reduce complexity. Additionally, excessive reliance on foreign currency can create complexity for individuals in determining their shopping basket.

Step 7: Validation

Revisiting participants is the final step in data analysis. In this step, the obtained structural descriptions were presented to the participants so they could compare them with their lived experiences. The mentioned results were then shared with five of the participants. Eventually, each of the identified themes was confirmed. In the present study, the triadic approach was used to examine credibility (internal validity), as it involves clarification, exclusion, and triangulation, and ultimately, the results obtained were discussed with a number of participants to gather their opinions. Additionally, the results were reviewed with the supervisor, and transferability (external validity) was ensured with rich descriptions; as the information provided about the actual experiences of the customers can serve as a basis for other researchers to judge the transferability of the findings. Reliability was assessed based on structured processes derived from the interviews in the context of data recording and analysis, as well as the guidance received from the supervisor. Given

the fundamental concepts of epoché and bracketed perspectives in phenomenological research, it can be stated that validation has been achieved by avoiding the influence of the researcher's personal values.

Conclusion

In this study, 144 formulated meanings were derived, and subsequently, 53 sub-themes were categorized into four main VUCA themes (volatility, uncertainty, ambiguity, and complexity), considering both positive and negative experiences. Furthermore, 29 negative themes and 24 positive themes emerged. In the volatility section, sub-themes include price volatility, instability of product showcases on the site, and variable influencing dollar and currency prices. In the uncertainty section, the sub-themes consist of unclear delivery time for products, specified delivery time, clarity regarding pricing status, unpredictability of prices, absence of products from the sales basket, and non-pricing of goods during market fluctuations. In the ambiguity section, sub-themes include pricing ambiguity, unclear warranty status, vagueness in after-sales service, uncertainty about products, ambiguity regarding suppliers, uncertainty about the website's authenticity, and reliance on others' reviews about the product. In the complexity section, sub-themes include complexity in identifying suppliers, varying prices, difficulty in obtaining product information, ease of tax calculation when purchasing from the site, and lack of information regarding certain products available on the site. While similar studies in the field of VUCA and on positive and negative experiences have not been conducted, Zimmermann et al. (2022) demonstrated that retailers need to have the capability to offer suitable contact points to their customers; as some may have a direct or indirect negative impact on sales. Additionally, retailers can utilize these insights to support the selection of contact points and the decision-making process with cognitive motivations. The online shopping experience of customers seeking electronic devices in VUCA conditions (volatility, uncertainty, complexity, and ambiguity) presents a multifaceted and dynamic perspective. In this study, the specific context of electronic devices was examined as a customer purchase in a VUCA world. The aim of the current research was to understand how consumers face challenges posed by VUCA conditions when purchasing digital goods, with a particular focus on electronic devices. By extensively analyzing the existing literature, market trends, and consumer behavior patterns, valuable insights into the complex interplay between VUCA conditions and the purchase of digital goods were obtained. The findings revealed that VUCA conditions significantly affect the online shopping experiences of customers seeking electronic devices. Key takeaways from the interpretation of this research are as follows:

Rapid Technological Advancements: In a VUCA world, technology evolves at an unprecedented pace, making it challenging for customers to keep up with the latest innovations; consequently, consumers may become overwhelmed by the available options and features in electronic devices.

Information Overload: VUCA conditions create an abundance of information through multiple channels, making it difficult for customers to identify reliable sources and relevant data. This overload can lead to decision paralysis and ultimately disrupt the purchasing process.

Changing Customer Preferences: Consumer preferences can shift rapidly due to external influences, economic fluctuations, and emerging trends. Businesses need to be agile and responsive to adapt their products and marketing strategies accordingly.

Supply Chain Disruptions: The VUCA world is characterized by supply chain disruptions caused by natural disasters, geopolitical issues, or unexpected events, which ultimately lead to challenges in the availability of electronic devices.

In a VUCA environment, providing secure personal experiences for online purchases is crucial for retaining customers in a competitive landscape.

Security Concerns: The digital realm is under threat from cyber risks and information breaches. Customers purchasing electronic devices are increasingly concerned about the privacy of their data and their cybersecurity; this concern influences their purchasing decisions.

Designing a model for the real online shopping experience of customers in the digital goods sector, especially regarding electronic devices, is essential for advancement in a VUCA (Volatility, Uncertainty, Complexity, Ambiguity) world. To address the challenges arising from VUCA conditions, businesses need to adopt a customer-centric approach and embrace innovation and flexibility in their strategies. Some key considerations are presented in this section.

Personalization and Customer Insights: To prevent customers from becoming confused due to the overwhelming amount of information available online, businesses must utilize data analytics and AI-based technologies. Personalizing a website involves creating customized experiences for visitors, allowing companies to offer tailored experiences that meet their needs instead of providing a one-size-fits-all experience.

Agility and Adaptability: Embracing agility in operations and supply chains helps companies respond quickly to changes in customer demands and disruptions to ensure a smooth supply of electronic devices.

Omnichannel Experience: To mitigate the risks associated with the uncertainties of online shopping, providing a seamless and consistent experience across various digital and offline channels enhances customer satisfaction and loyalty.

Security Measures: Prioritizing strong cybersecurity measures and transparent data management builds trust with customers and protects their sensitive information. Additionally, these actions encourage them to purchase electronic devices with confidence.

Continuous Innovation: Staying ahead of technological advancements and introducing new features in electronic devices attract customers seeking advanced products.

In conclusion, the VUCA environment presents challenges and opportunities for businesses in the digital goods industry, especially concerning the purchase of electronic devices. By understanding and addressing the unique dynamics of VUCA conditions, companies can establish a model for online

shopping experiences that meets the evolving needs of customers and sustains success in this dynamic and ever-changing environment. VUCA conditions (Volatility, Uncertainty, Complexity, Ambiguity) can significantly affect the actual online shopping experiences of Digikala customers. Frequent changes in prices, currency fluctuations, model changes, and other factors can lead to hesitation, tension, and the creation of negative experiences for customers.

Some limitations faced by researchers in this study include:

- Limited access to internal and external resources related to the research topic due to its novelty.
- Difficulty in finding customers who have shopped from Digikala under VUCA conditions.
- Participants' hesitance in responding to questions due to privacy concerns prompted by the researcher.

The results of this research pertain to customers who made digital purchases online from the Digikala website; therefore, caution should be exercised when using these data for other purchasing methods or industries.

Recommendations for future researchers include:

1. **Real-Time Price Updates**:

Implement a system that guarantees real-time price updates for products, accurately reflecting currency fluctuations. This system will help customers ensure they receive the most current and competitive prices.

2. **Sustainable Product Showcase**:

Having a stable display and a reliable user interface on the website can reduce errors during turbulent times, increasing customer trust and ultimately creating a positive shopping experience.

3. **Multiple Currency Options**:

Provide the ability to view prices in different currencies, especially local currency, and allow customers to choose their preferred currency for transactions. This will reduce uncertainty regarding currency fluctuations and improve transparency.

4. **Guaranteed Delivery Timeframes**

Offer precise and specific delivery timeframes for each product, ensuring customers know exactly when they can expect to receive their items. This will alleviate uncertainty regarding delivery times and reduce abandoned carts due to unclear delivery information

5. **Price Lock Mechanism**

A price lock feature is introduced, as it allows customers to set a specific price for a limited time after adding items to their shopping cart. This not only helps mitigate price fluctuations but also ensures that desired prices remain stable during variations.

6. **Comprehensive Product Information**

It is essential to ensure that product descriptions, specifications, and warranty details are clear and easily accessible, as this reduces ambiguity and instills trust in customers when making informed purchasing decisions.

7. **Verified Supplier Profiles**

A system should be established for confirming supplier profiles and displaying trust indicators to showcase reliable and reputable sellers. This feature, on one hand, eliminates the possibility of ambiguity regarding the credibility of suppliers, and on the other hand, enhances the overall trustworthiness of the platform.

8. **Interactive Customer Reviews**

A system should be created that includes interactive elements such as product ratings, images, and video descriptions of positive customer experiences. This helps reduce ambiguity, as potential buyers can make their decisions based on the real experiences shared by others.

Other recommendations for future researchers include the following:

- Utilizing other qualitative research methods such as content analysis, thematic analysis, and meta-analysis, and conducting comparative studies on two specific industries.
- Investigating the impact of significant contextual factors, including consumer culture. Examining the effects of demographic and psychological characteristics such as education level and income, or personality and lifestyle, are additional areas recommended for researchers.
- The current study focuses on electronic products; therefore, it is suggested that research is also conducted on other products that have high consumption rates and variability.

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