Effective Factors in Selecting Purchasing Channels for Cosmetic Products in Iran

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Abstract

This paper provides an in-depth analysis of the key effective factors in selecting purchasing channels for cosmetic products. The purpose of this research is to investigate customer perceptions of cosmetics shopping. By synthesizing insights from prior research, this research develops a conceptual model by integrating innovations diffusion theory and theory of perceived risk to apply in preference to online shopping. 435 questionnaires were gathered, and data were analysed with the partial least squared structural equation modelling (PLS-SEM) method. The results show that online channels are the most popular purchasing channels for cosmetics and clarify the most significant factors that lead to cosmetic online shopping.

Keywords: Cosmetic Market; Iran; E Commerce; Innovation Diffusion Theory; In-Store Purchase Intention; Online Purchase Intention; Global Markets.

1. Positioning and Research Questions

Currently, the retail sector is becoming an increasingly challenging place under the influences of increased digitalization (Hagberg et al. 2016), technological innovation (Shankar et al. 2021) and emergent technology (Grewal et al. 2021). Several consequences of digitalization (Hagberg & Kjellberg, 2020) influence marketing and consumption, and scholars devote their attention to analysing the implications for consumption (Lehdonvirta, 2012; Cochoy et al. 2017) and consumer practices (Denegri-Knott & Molesworth, 2010). In this scenario, online retailers have successfully exploited new opportunities by employing emergent technology (Grewal et al. 2021), while physical retailers are losing ground (Stieninger et al.

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2021). However, consumers' preferences towards online or offline channels depend on different products (Levin et al. 2005). Considering that it is necessary to consider the influence of this trend on various products. Generally, the recent literature about the effect of innovative technologies in retail settings mainly focused on:

- consumer attitudes toward new technologies (Lin & Hsieh, 2006; Rosenbaum & Wong, 2015);
- the effect of employing augmented reality apps (Cattaneo et al. 2014; Rese et al. 2017);
- customers' adoption of retail digitalization based on Davis' (1989) technology acceptance model (McLean et al. 2020);
- the effect of digital devices into the purchasing process (Pauwels et al. 2011);
- the utilization of digital technologies in the physical stores (Hagberg et al., 2016; Shankar et al., 2011), especially on customer's shopping behaviour (Pantano & Viassone, 2015; Basile, 2019)
- and how digitalization can transform traditional cosmetic brick-and-mortar stores to new smart settings for retailing (Hagberg et al. 2016; Pantano & Vannucci 2019).

According to the literature, the research focused on technology diffusion in retail settings is a well-explored topic, more specifically in recent years (Pantano & Vannucci, 2019; Shankar et al. 2021).

For example, online shopping behaviour is a topic that has received considerable attention, especially for product categories such as grocery (Malekpour et al. 2023; Thomas-Francois et al.2023), fashion (Kim & Zhang, 2023; Kullak et al. 2023), and electronics (Kim et al. 2019). However, cosmetic products seem to be under-researched, despite their growing popularity and importance in the online market. This might be because digital shopping for cosmetic and beauty products was regarded as problematic until recently, as it was assumed that customers were required to touch or smell the products before purchasing them (Prasad et al. 2019). Another limitation in this area that emerges from the literature review is the scarcity of studies on technology diffusion in developing countries, such as Iran. Most of the studies have concentrated mainly on Western countries such as the United States and Europe, as well as China, (Bhattacharyya et al. 2021). In contrast, only a few studies (Etminani-Ghasrodashti & Hamidi, 2020; Gohary et al. 2016; Mohammadzadeh et al. 2017) have been focused on developing countries such as Iran. More specifically, regarding the importance of these developing countries in the cosmetic industry in the world, the number of studies related to consumer shopping behaviour in the cosmetic or beauty market is relatively small studies. Due to this limitation, an exploration of the effects of digitalization in developing countries would be a novel contribution to the literature. Therefore, this study is based on the integration of innovations diffusion theory by Rogers (1983) and the theory of perceived risk (TPR) by Bauer (1960) to investigate influential factors in the usage of online cosmetic shopping. The emerging markets in Asia (Larsen & Tambo, 2014), Latin America

(Lopaciuk & Loboda, 2013), and more specifically in some developing countries like Iran, have contributed to the global cosmetics market's rising growth (Mohammadzadeh et al. 2017). Additionally, according to a Statista report, online retail's share of beauty and personal care products went from 15.8% in 2017 to 21.7% in 2020 and is projected to reach 33% in 2025 (Statista, 2021). Iran has the largest beauty consumption market in the Middle East after Saudi Arabia (Jozi, 2016) and more customers are purchasing online (Etminani-Ghasrodashti & Hamidi, 2020). As a result, the Asia Pacific region dominates the worldwide beauty market (Statista, 2019) by having approximately 40% of the market in the world, and in 2015, it had the biggest proportion of online cosmetic product sales (almost 10% of total sales) (Deloitte, 2017). Considering this situation, the current study explores determinant factors in the usage of online cosmetic shopping and offers a thorough analysis of consumer behaviour in this retail environment. The following research question led to the development of the paper:

RQ1: What is the customer's preferred store for beauty products shopping?

RQ2: What are the factors that influence consumers' preference for online or offline shopping for cosmetic products in Iran?

The structure of this research is as follows. The following section presents the literature background focused on retail technologies in the cosmetics market. Subsequently, the methodology section is addressed, and then the research results are presented. Finally, conclusions and managerial implications are discussed in the last section.

2. Theories and Hypotheses

The literature shows that there are conflicting views on the role of the Internet in retail settings. Some scholars (i.e., Reinartz et al. 2019) argue that the Internet acts as a threat to physical stores as it erodes brick-and-mortar retailing through online ordering. In contrast, others (e.g., Verhoef et al., 2015; Pantano, 2016) contend that the opposite is true, as many online retailers open physical stores as a complement to their online operations, using the Internet as a powerful tool to enhance physical operations. However, we cannot deny that online shopping is one of the biggest challenges (Barile et al. 2018). Therefore, more work is needed to predict the post-digitalisation era of retail settings. The process of modernization of retail industry as a result of employing new technologies has changed the role of retailers (Musso, 2010).

2.1. Online Cosmetic Shopping

Cosmetic retailing is also undergoing a major transformation, more specifically during Covid 19. Many new online stores are introduced into the market and in this competitive environment, physical stores are using digital devices to enhance customer experience (Meyer & Schwager, 2007) and engage them in the shopping process (Reinartz et al. 2019) to create value for customers (Riboldazzi, 2005) and improve their beauty experiences (Roy et al. 2017). In this market, one of the successful experiences of applying digitalisation through augmented reality was created by the top-selling beauty retailer Sephora. Sephora has dramatically combined digital and in-store retail (Fast Company, 2015). It has 2300 physical stores across more than 33 countries and continues to expand even while the retail sector struggles. A customer can virtually test a myriad of colours through Sephora's virtual artist just by uploading photos (Berman, 2019). Similarly, Clinique provided Apple iPads at leading department stores, where consumers could determine their skin tone and receive tailored suggestions through printouts or email (Pantano & Vannucci, 2019).

In contrast, some cosmetic companies have gained a competitive edge over their rivals by investing heavily in marketing and online selling during the crisis. For example, L'Oréal, the world's biggest cosmetics company, reported a surge in sales thanks to its strong online presence (Brondoni, 2021). This indicates that online shopping may offer some relative advantages over offline shopping for cosmetic products, such as convenience, safety and variety. Hence, identifying customers' preferred channels for purchasing cosmetic products and the identification of effective factors that influence customers' preference for online or offline shopping for cosmetic products is a fundamental goal of current research. It could be said that nowadays, how retailers want to sell their products has become less important; instead, how customers want to shop and buy determines retail success (Aw et al. 2021). As tech-savvy consumers are one of the main drivers of digital disruption (Human et al. 2020), therefore, it is necessary to understand how customers feel about adopting new technologies or what their preferred buying channels are to anticipate the impact of digitisation in the cosmetic retail setting. Customer technology acceptance has been widely studied, and several theoretical models have been proposed, such as the Technology Acceptance Model (TAM) (Davis et al. 1989), the Theory of Planned Behaviour (TPB) (Ajzen, 1991), The Unified Theory of Technology Adoption and Use of Technology (UTAUT) (Venkatesh et al. 2003) and Innovations Diffusion Theory (IDT) (Rogers, 1983). In this section two most significant theories for accepting and rejecting new technologies will be considered, innovation diffusion theory and perceived risk.

2.2. Innovation Diffusion Theory (IDT)

The innovations diffusion theory originally developed by Rogers in 1983, describes how technology is accepted by individuals and spreads in industries (Rogers, 2010). This theory has received empirical support in many fields more specifically, in online shopping (Amaro & Duarte, 2015) highlights that technology acceptance can be measured by a set of customer beliefs including perceived relative advantage,

perceived compatibility, perceived complexity, experimental (trialability), and observability (Su et al. 2022; Agag & El-Masry, 2016). However, reviewing prior studies shows that some of Roger's suggested theory items fail to evaluate innovation adoption and the majority of studies focused on perceived complexity, perceived compatibility, and perceived relative advantages (Tornatzky & Klein, 1982; Vijayasarathy, 2004; Papies & Clement, 2008; Amaro & Duarte, 2015) as three more related characteristics to innovation adoption. Following this doctrine, current research focuses on considering these three characteristics.

Perceived Relative Advantage

Firstly, it should be said that a high perceived relative advantage by customers would indicate that innovation is superior to its alternatives (Yuen et al. 2021).

Nowadays, customers select their purchasing channel regarding product-price-service advantages (Riboldazzi, 2015). The authors consider the most important variables that provide benefits to consumers and lead to a higher perceived relative advantage for them. From the literature, several major determinants of advantages for preference towards online shopping included lower prices (Manss et al. 2019; Gensler et al. 2017; AW et al. 2021), a broad diversity of products (Barbosa et al. 2021; Sharma et al. 2017; Zhang et al. 2017), enjoyment from online shopping (Wang et al. 2022) and finally perceived helpfulness of reviewing other customers' points of view in online channels (Zhang & Hou, 2017). This last factor is especially relevant for cosmetic products, as customers rely on the opinions and feedback of other users who have tried the products before them. Generally, consumers share their shopping experience on social media (Zhang et al. 2023) which can influence the purchase decisions of potential buyers. As prior research shows a positive relationship between perceived relative advantages and customers' purchase intention (Amaro & Duarte, 2015), therefore, this research considers the aforementioned items as predictors of perceived relative advantage (see Table 2) and assumes:

H1: *Perceived relative advantage has a positive impact on customer intention to purchase cosmetics through online channels.*

Perceived Compatibility

Perceived compatibility is defined as "the degree to which an innovation is perceived as being consistent with existing values, past experiences, and needs of potential adopters" (Rogers, 1995, p. 15) or fits a customer's lifestyle (Vijayasarathy, 2004). Prior studies have demonstrated the relationship between preference for online shopping and perceived compatibility (Vijayasarathy, 2004; Christou & Kassianidis, 2002). According to Vijayasarathy (2004), this attribute is connected to a customer's busy lifestyle. It implies that some time-pressed clients are more likely to make purchases online. This research considers three items as a predictor of perceived compatibility including purchasing without time limitation, faster shopping and having a busy lifestyle.

H2: *Perceived compatibility has a positive impact on customers' attitudes toward intention to online shopping.*

Perceived Complexity (Ease of Use)

The ease of use of innovation refers to how simple it is for consumers to understand and use it (Venkatesh et al. 2013). Moore and Benbasat (1991) renamed the complexity characteristic in Roger's model as ease of use. Among many others, Pikkarainen et al. (2004) believe consumers are more inclined to adopt a new system when they think it is simple to learn and utilize. Regarding this, comfortable shopping and being enjoyable consider a predictor of perceived complexity. Therefore, perceived simplicity of use may encourage consumers to buy cosmetics online:

H3: *Consumer preference for online cosmetic buying is positively influenced by perceived complexity (ease of use).*

2.3. Theory of Perceived Risk

This study applies Bauer's (1960) theory of perceived risk (TPR). According to Gough (1990, p. 16), perceived risk refers to "the individual or group, judgment or valuation of the magnitude and likelihood of the possible 'bad' outcomes which may result from an action". Turning to detail about perceived risk in e-shopping, Kim and Forsythe (2010), define it as "a belief about possible negative uncertainty from an online commerce transaction". Several types of perceived risk have been widely used in prior research including financial risk (Popli & Mishram, 2015), product or performance risk (Dai et al. 2014), social risk (Zielke & Dobbelstein, 2007), Convenience risk (Li & Huang, 2009), security risk (Almousa, 2011) and time risk (Zhang et al. 2012). However, to find the most significant perceived risk toward cosmetic products, the authors reviewed the literature on the beauty market. Since in the online shopping procedure, customers are not able to touch or try products (Jiang & Benbasat, 2007; Li et al. 2002), or receive professional sales stuff advice before purchasing (Lee et al. 2019), it appears this problem is one of the biggest concerns that customers perceive. Two other significant perceived risk is related to product risk (Zhang et al. 2012) and financial risk (Alrawad et al. 2023). Perceived product risk is considered a major influencer on consumer behaviour toward online shopping (Zhang, et al. 2012; Dai et al. 2014) which means that customers are worried about low product quality being fake when they purchase online. The delivered product may not have the same colour or shape as one displayed in the online channel (Dai et al. 2014). Consequently, this risk perception is one of the most important reasons that some individuals avoid purchasing online (Vellido et al. 2000). Another risk pointed out by the previous research is the lack of simplicity in online shopping (Li & Huang, 2009). Therefore, three items of perceived helpfulness of in-store salespeople, perceived product risk (perception of reliability and the lack of simplicity of online shopping act as predictors of aversion to online shopping.

H4: Perceived risk has a negative impact on customer intention to purchase cosmetics through online channels.

Figure 1: *Conceptual Research Model*
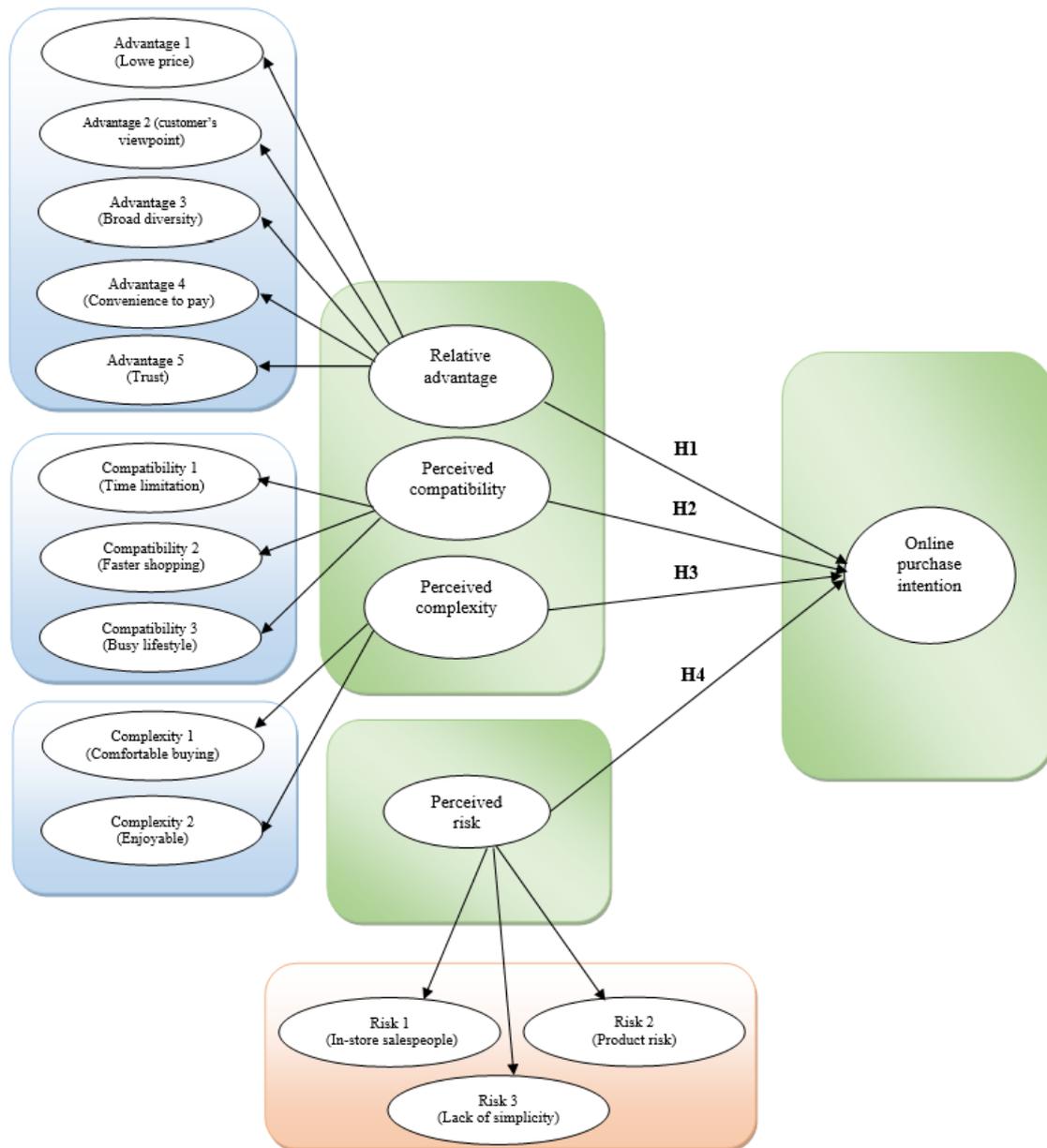
Source (s): Extended the innovations diffusion theory from Rogers (1983) with the theory of perceived risk of Bauer (1960).

3. Methodology

In the Iranian setting, cosmetics products are one of the most important segments of the consumer market (Mohammadzadeh et al. 2017). Becoming beautiful is a value for the Iranian people, and there is competition for beauty among them (Zare et al. 2014). Moreover, online purchasing has an annual growth rate of 60%. Considering data focused on this market (Statista, 2022 a) shows that there is a drastic growth in online shopping for cosmetic products (Table 1) compared to recent years and now more than 25% of all cosmetics are purchased through online channels that it was just a more than 8% in 2017. It is predicted that it will reach nearly 40% in 2025. However, this trend in other product categories like grocery items is slower and for example, in the grocery items just 1.1% of them are sold through online channels (Statista, 2022 b).

Table 1: *Sales of Cosmetic Products through Online and Offline Channels*

	2017	2018	2019	2020	2021	2022	2023	2024	2025
Offline	91.70%	89.00%	86.80%	81.20%	76.80%	74.40%	71.5	68.0	64.0
Online	8.30%	11.00%	13.20%	18.80%	23.20%	25.60%	28.5	32.0	36.0

Source: Statista (2022a).

3.1. Materials and Methods

This study deploys a quantitative method approach to examine customers' buying behaviours regarding cosmetic products. Additionally, the cosmetics market is one of the leading markets in which the tech-savvy (Nusair et al. 2013) younger generation is particularly active (Dharmesti et al. 2021) and they are also engrossed in online activities such as e-shopping (Lester et al. 2006). Therefore, the present study focused more on the perspective of the younger generation. A Google Form-based questionnaire was created by authors to study customers' behaviour. The partial least squares structural equation modelling (PLS-SEM) approach is used to assess the results. When data sets have small or non-normally distributed observations, this method is employed (Hair et al. 2014).

3.2. Data Collection

In seeking to understand customers' preferred buying channels to predict the future of brick-and-mortar cosmetics stores in Iran, the study started with data collection through an online questionnaire. The author's preference was to recruit respondents between 18 and 41 years old (young customers) to answer the survey. To check that the wording and meaning of the questionnaire items were appropriate, a pilot test with ten clients was conducted. Due to spelling issues, only minor adjustments were made after careful consideration. In addition, to test the construct validity of each scale, before survey administration, academic referees reviewed the questionnaire for

clarification, their comments and opinions were considered to make necessary changes, and some of the questions were redesigned. Between January 27th and February 15th, 2022, a total of 467 surveys by non-probability convenience sampling were distributed for this study to reach the standard for validity and to reduce the error rate. A total of 435 qualified questionnaires were used in the analysis, with a response rate of 93.1%. To provide a relevant research sample of participants from most customers, two screening questions were used in the first section of the questionnaire. One question was ensuring that participants were 18-41 years old and the next question was asked to ensure the regular use of cosmetic products. The second part of the questionnaire had several items included: (1) five variables borrowed from prior studies to measure Perceived Relative Advantages (Lee & Kwon, 2021; Cha, 2011), (2) three items for measuring Perceived Compatibility, and (3) two items for Perceived Complexity (Ease-of-use) to measure customer preferences toward online shopping. The third part was designed to measure perceived risk by three items and the last section covered the demographics of the respondents (described in Table 2). Using a 5-point Likert scale with totally disagree (1) and totally agree (5) as its anchor points, the respondents were asked to indicate their level of agreement with each of the questions.

3.3. Data Analysis

The summary of demographic profiles for respondents presented in Table 3 indicates that all respondents were females. In terms of academic qualifications, approximately 84.3 per cent of the respondents held university degrees, and the remaining 16 per cent had a secondary school education or below. The majority (75.8%) were between 23 and 41 years old. The data were analysed using the partial least squares structural equation modelling (PLS-SEM) method. According to the literature (Sedighi et al. 2018, p: 1272), "PLS–SEM is used to analyse results as it is a type of SEM approach, which supports formative constructs". Using PLS–SEM the relationship between different items of accepting or rejecting innovation was tested. The PLS–SEM method includes the two-step analysis method; the measuring model is evaluated in the first step, and the structural relationship between study constructs is assessed in the second phase (Hair et al. 2011). The data analysis method used is SmartPLS version 3.

Table 2: *Construct and Questionnaire Sources*

Constructs	Measurement items	Sources
Online shopping intention	OPI 1: Preference to online in contrast to offline platforms OPI 2: I will practice e-shopping more in the future	Wei et al. (2018) Edrisi et al. (2020)
Perceived relative advantage (advantage)	Advantage 1: Lower price Advantage 2: Perceived helpfulness in reviewing other customers' points of view Advantage 3: Broad diversity of products Advantage 4: Convenience to pay Advantage 5: Trust	Moore & Benbasat, (1991) Lee & Kwon, (2021) Cha, (2011)
Perceived Compatibility (compatibility)	Compatibility 1: Eliminating time limitation Compatibility 2: Faster shopping Compatibility 3: Busy lifestyle	Childers et al. (2001) Konus et al. (2008) Lee & Kwon, (2021)
Ease of use (complexity)	Complexity 1: Simplicity (comfortable buying) Complexity 2: Being enjoyable	Lee & Kwon, (2021) Parker et al. (2016)
Perceived Risk (risk)	Risk1: Perceived helpfulness of in-store representative Risk 2: Perceived product risk (perception of reliability) Risk 3: The lack of simplicity of online shopping	Edmondson et al. (2019) Dai et al. (2014)

Respondents

Table 3: *Demographic Profile of Respondents*

Variables	Frequency (N = 435)	Percentage
Age		
22 and less than 22	68	15.6
23 to 30	178	40.9
31 to 41	152	34.9
42 and more than it	37	8.5
Academic qualification		
Doctoral degree		
Master degree	20	4.6
Bachelor degree	132	30.6
Diploma/ Secondary or Lower	212	49.2
	64	15.5
Employment status		
Full time=1		
Part-time-2	162	37.4
Student=3	40	9.2
Unemployed=4	101	23.3
Freelancer=5	59	13.6
	71	16.4

4. Results and Discussion

The measurement model, which assesses the validity and reliability of the constructs of questionnaires, was evaluated as the first step of the analysis.

4.1. Measurement Model

(1) Reliability

Utilizing composite reliability (CR) and Cronbach's alpha, the constructs' reliability was assessed (see Table 4 below). Cronbach's alpha values greater than 0.7 are considered satisfactory (Bagozzi, 1994). Table 4 demonstrates that all Cronbach's alpha values and CRs are higher than 0.797, indicating that the measurement model was reasonably reliable and that all latent construct values exceeded the minimum threshold level of 0.70. Furthermore, it is possible to say that the participants understood the current survey questions (Ariffin et al. 2018). From Table 4, the outer loadings ranged between 0.713 and 0.993. According to the literature, average variance extracted (AVE) and cross-loadings were employed to analyze validity (Fornell & Larcker, 1981; Hair et al. 2013). According to Hair et al. (2017), a satisfactory level for AVE is when a value is greater than o.50. Table 4 demonstrates that the average variance extracted (AVE) is greater than 0.50 and has reached a good level.

Table 4: *Reliability Test*

Latent Construct	Items	Factor loading	Cronbach's alpha	CR	AVE
Online Purchase Intention	OPI 1 OPI 2	0.993** 0.992**	0.985	0.992	0.985
Relative Advantage	Advantage 1 Advantage 2 Advantage 3 Advantage 4 Advantage 5	0.875** 0.875** 0.891** 0.851** 0.713**	0.898	0.925	0.712
Perceived Compatibility	Compatibility 1 Compatibility 2 Compatibility 3	0.948** 0.767** 0.951**	0.868	0.921	0.797
Perceived Complexity	Complexity 1 Complexity 2	0.924** 0.899**	0.797	0.908	0.831
Perceived Risk	Risk 1 Risk 2 Risk 3	0.858** 0.870** 0.833**	0.815	0.890	0.729

(2) Validity

Data were examined for discriminant validity after a reliability analysis. Discriminant validity was assessed through cross-loadings and Fornell-Larcker Criterion (Tables 5 and 6). Discriminant validity defines when the cross-loading value in the latent variable is higher than that in any other constructs (Sarstedt et al. 2014; Hussain et al. 2018). Table 5 confirms satisfied levels of items, as all the factor loadings were greater than their cross-loadings, which is a sign of discriminant validity. In addition, Table 6 indicates the Fornell-Larcker Criterion of the research model that it is obvious that they were at a satisfied level because the squared correlations were greater than the correlation between the construct and other constructs. Therefore, the suggested conceptual model was supposed to be acceptable.

Table 5: *Discriminant Validity Using Cross-Loading*

Items	Online Purchase Intention	Perceived Compatibility	Perceived Complexity	Perceived risk	Relative advantage
Advantage1	0.750	0.740	0.751	-0.644	0.875
Advantage2	0.746	0.718	0.726	-0.617	0.875
Advantage3	0.740	0.747	0.744	-0.633	0.891
Advantage4	0.651	0.673	0.679	-0.575	0.851
Advantage5	0.516	0.513	0.520	-0.450	0.713
Compatibility1	0.723	0.948	0.736	-0.620	0.778
Compatibility2	0.615	0.767	0.572	-0.562	0.585
Compatibility3	0.760	0.951	0.748	-0.625	0.794
Complexity1	0.737	0.739	0.924	-0.675	0.778
Complexity2	0.646	0.667	0.899	-0.641	0.712
OPI1	0.993	0.794	0.767	-0.706	0.821
OPI2	0.992	0.767	0.744	-0.678	0.796
Risk1	-0.652	-0.599	-0.638	0.858	-0.626
Risk2	-0.576	-0.570	-0.629	0.870	-0.586
Risk3	-0.550	-0.556	-0.581	0.833	-0.573

Table 6: *Discriminant Validity Using the Fornell-Larcker Criterion Test*

Constructs	1	2	3	4	5
Online Purchase Intention	**0.992**				
Perceived Compatibility	0.787	**0.893**			
Perceived Complexity	0.761	0.773	**0.912**		
Perceived risk	-0.698	-0.675	-0.723	**0.854**	
Relative advantage	0.815	0.812	0.819	-0.698	**0.844**

Note: The bold numbers on the diagonal indicate the square root of AVEs. Correlations between constructs are indicated by the numbers below the diagonal.

Source(s): Authors' own calculation.

(3) Structural Model Assessment

According to the literature (Hair et al. 2014), two key methods to assess inner models in PLS–SEM techniques are coefficient of determination (R2) and cross-validated redundancy (Q2). The explanatory power of the model is indicated by the coefficient of determination (R2). (Shmueli & Koppius, 2011) and assesses the prediction power within the sample (Rigdon, 2012). In this study, the inner path model is 0.731. This shows that the four independent constructs considerably account for 73.1% of the variance in the intention to shop for cosmetic products online, which means the four latent constructs in the model account for roughly 73% of the change in the customer's intention to buy online. According to Hair et al. (2021) and Cohen, (1988), an R2 value of 0.75 is considered substantial. Therefore, the R2 value in this research was substantial. Besides evaluating the magnitude of the R^2, using the blindfolding procedure, the predictive relevance of the model's latent constructs was evaluated by Stone-Geisser's Q^2. Sarstedt et al. (2014) point out that a Q2 value larger than zero indicates that the PLS path model's predictive accuracy is acceptable. In this research, $Q^2 = 0.714$ illustrates that the PLS path models the PLS path model is predictively relevant for this construct.

Table 7: *Stone-Geisser's Q^2 Value*

	SSO	SSE	Q^2 (=1-SSE/SSO)
Online Purchase Intention	870	248.608	0.714
Perceived Compatibility	1305	1305	
Perceived Complexity	870	870	
Perceived risk	1305	1305	
Relative advantage	2175	2175	

Estimation of Path Coefficients (b) and T-statistics

Through the path coefficient, the significance of the hypothesis is tested. The greater b value (verified by the T-statistics test) has a more substantial effect on the endogenous latent construct. The bootstrapping approach (using 500 subsamples) was employed to assess the significance of the hypotheses, and a p-value of 0.05 is required to confirm the significant relationship between variables (Chin, 1988; Hussain et al. 2018) (see Table 8). If P ≤0.05 the hypothesis is accepted, otherwise it is rejected. The bootstrapping procedure is presented in Table 8. It should be mentioned that according to the literature (Faqih, 2016), there is a significant relationship in paths with t-values higher than or equal to 1.96 (with a significance level of 0.05).
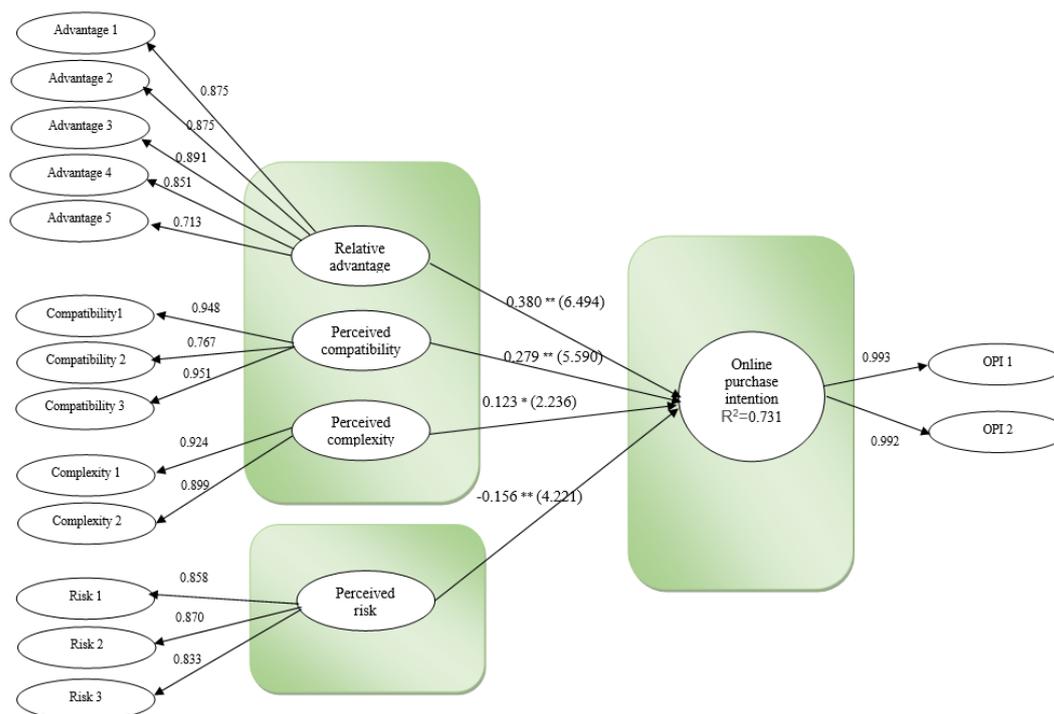
Figure 2: *Result of Analysis*

Table 8: *Path Coefficient and T-Statistics and Hypothesis Testing Results*

Hypothesis	Hypothesized Path	Std Beta	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Lower 95%	Upper 95%	Decision
H1	Relative advantage -> Online purchase intention	0.380	0.384	0.058	6.494**	0.000	0.255	0.482	Supported
H2	Perceived compatibility -> Online purchase intention	0.279	0.280	0.050	5.590**	0.000	0.179	0.374	Supported
H3	Perceived complexity -> Online purchase intention	0.123	0.120	0.055	2.236*	0.026	0.005	0.223	Supported
H4	Perceived risk -> Online purchase intention	-0.156	-0.152	0.037	4.221**	0.000	-0.229	-0.085	Supported

Note: **$p < 0.01$ *$p < 0.05$

In H1, it is predicted that the relative advantage would significantly and positively influence online purchase intention. As predicted, the findings in Table 8 and Fig. 2 confirmed that the relative advantage item significantly influenced online shopping of cosmetic products (b = 0.380, T = 6.494, p < 0.01). Hence, H1 was robustly supported. Furthermore, according to Table 8 and Fig. 2, it is apparent that perceived compatibility

has a significant impact on online shopping intention (b = 0.279, T = 5.590, p < 0.01), confirming the hypothesis (H2). The influence of perceived complexity on online shopping intention on cosmetic products was positive (b = 0.123, T = 2.236, p < 0.05), therefore supporting H3. Regarding perceived risk -> online purchase intention, it should be mentioned that as the negative effect of this item was predicted in research hypothesis 4, the findings in Table 8 and Fig. 2 support empirically H4 and the negative relationship between perceived risk and customer intention to online purchasing of cosmetic products (b = -0.156, T = 4.221, p < 0.01). Therefore, hypotheses H1, H2, H3 and H4 are accepted (see Table 8). Generally speaking, regarding the fact that the higher value of beta coefficient (b), has a stronger effect of an exogenous latent construct on the endogenous latent construct, therefore, according to research findings (Table 8 and Fig. 2), the relative advantage had topmost path coefficient (b = 0.380) affecting on online purchase intention compared to other b values in the model. Fig. 2 illustrates the graphical representation of all path coefficients of this research model. In addition, all of the five dimensions of relative advantages had a significant effect on the intention of online shopping of cosmetic products that broad diversity of products or advantage 3 (β =0.891) has the largest value and acts as the best predictor of the perceived relative advantage of online shopping. However, other significant factors are lower price or advantage 1 and perceived helpfulness of other customers' points of view or advantage 2 (β =0.875), convenience to pay online or advantage 4 (β =0.851). The lowest predictor in this construct was trust or advantage 5 (β =0.713). The second most effective construct is perceived compatibility that having a busy lifestyle or compatibility 3 (β =0.951) was the largest predictor of perceived compatibility, followed by purchasing without time limitation or compatibility 1 (β =0.948). Faster shopping acts as less important than two other items (β =0.767). Regarding the last category that leads to positive intention to online shopping, perceived complexity, comfortable online shopping, or complexity 1 has the largest predictor of the perceived complexity category (β =0.924). The last category is perceived risk which according to literature (Li and Huang, 2009), has a negative effect on online shopping. In this group, perceived product risk or risk 2 was the largest predictor of perceived risk (β =0.870), followed by perceived helpfulness of in-store salespeople or risk 1 (β =0.858). These findings are consistent with those seen in other investigations. (e.g., Zhang et al. 2012; Dai et al., 2014) regarding perceived risk and Ganesh et al. (2010) and Amaro and Duarte, (2015), regarding acceptance of new technologies and intention to online shopping. All in all, three effective factors that lead to cosmetic online shopping are a relative advantage (b =0.380), compatibility (b =0.279) and complexity (b =0.123) respectively.

5. Conclusion

This paper, following prior studies, applies the extended innovations diffusion theory (Rogers, 1983) with the theory of perceived risk (Bauer, 1960) focusing on Iranian cosmetic shoppers.

The authors analysed the predictors of preference towards specific purchasing channels, and the result showed that perceived relative advantage (β = 0.380, p <

0.01), Perceived compatibility (β = 0.279, p < 0.01), Perceived complexity (β = 0.123, p < 0.05) are significantly positively related to intention to cosmetic online shopping and therefore the best predictor of preference towards purchasing online, respectively. Regarding perceived risk, it should be mentioned that as the negative effect of this item was predicted in research hypothesis 4, this category illustrated a negative relationship with online shopping intention (β = -0.156). Additionally, as mentioned before, all of the hypotheses were supported. According to our data, the most significant driver of online cosmetic shopping is perceived relative advantage. It had a strong relationship with online purchases of cosmetics products. Broad diversity of products was the best predictor of the perceived relative advantage of online shopping. However, other significant factors were lower prices in online channels, perceived helpfulness of other customers' points of view (reviewing their comments through social media) and convenience of paying. The lowest predictor in this category was trust.

The second most effective factor was perceived compatibility that having a busy lifestyle and online purchasing without time limitation were the largest predictors of perceived compatibility. Faster shopping is depicted as less important than two other factors. Regarding perceived complexity, comfortable online shopping and being enjoyable of it were predictors of the perceived complexity category. Perceived risk was the final variable that was taken into consideration. In this group, perceived product risk was the biggest predictor of the perceived risk of online buying, followed by perceived helpfulness of in-store salespeople and the lack of simplicity of online purchasing respectively.

This study shows that all of the abovementioned variables are among the important predictors of positive intention or aversion to online shopping for cosmetic products. These findings are consistent with prior research that points out some factors that increase the use of internet-based retailing dynamics, such as more and better information availability about a product (Reinartz et al. 2019), larger assortments (Cheema & Papatla, 2010; Reinartz et al. 2019) and potentially lower prices (Reinartz et al. 2019). Customers' preference for online purchasing acts as a treat for physical stores, and considering some factors like (simplicity or comfortable buying (Perceived complexity 1) or convenience to pay (Perceived relative advantage 4) shows customers' readiness to accept new technologies. Therefore, the findings suggest that physical stores should combine online and in-store experiences under one roof to give their customers enjoyable and worthwhile experiences. According to customers' changing preferences towards online shopping, this study proposes that brick-and-mortar stores use new technology to improve the positive shopping experience. For instance, a visually good-looking store with a modern tool such as Sephora Virtual Artist is an attractive store. However, to avoid this type of technology being rejected, all potential obstacles must be carefully considered. The number of personnel of a store that decides to go digital surely will be decreased and will be taken over by machines like Sephora Artist. However, the lack of these people will probably cause customers to become dissatisfied, especially older people who crave human interaction. As a result, it can take a while before the usage of these gadgets is widely recognized. Retailers should train their employees to instruct and assist clients until

they become familiar with these technologies. Additionally, the results of earlier research suggest that implementing digital transformation would increase customer engagement and motivation given the positive experience of Sephora stores, it appears that brick-and-mortar retailers will adapt to the expanding e-retail channels. This concerns some customers who prefer not to make purchases in physical stores.

Therefore, considering the relevance of our research topic in literature and the empirical analysis, we suggest that it is possible to determine the following key factors in selecting purchasing channels for cosmetic products in emerging e-commerce markets.

Consumer Preferences

Online vs. offline: Consumers in emerging e-commerce markets are increasingly shopping online for cosmetic products, but there is still a significant offline market. It is important to understand where your target consumers prefer to shop and to be present on those channels.

Specific online platforms: Some online platforms are more popular than others in different emerging markets. For example, Alibaba is popular in China, while MercadoLibre is popular in Latin America. It is important to choose platforms that are popular with your target consumers.

Product categories: Some cosmetic product categories are more popular than others in different emerging markets. For example, skincare products are popular in South Korea, while makeup products are popular in Brazil. It is important to focus on the product categories that are most popular with your target consumers.

Market Conditions

Level of e-commerce development: The level of e-commerce development varies widely across emerging markets. In some markets, such as China, e-commerce is highly developed, while in other markets, it is still in its early stages. It is important to choose channels that are appropriate for the level of e-commerce development in your target market. Internet penetration and smartphone usage: Internet penetration and smartphone usage are also important factors to consider. In some emerging markets, such as India, internet penetration is relatively low, while in other markets, such as Brazil, it is relatively high. It is important to choose channels that are accessible to your target consumers.

Payment methods: Consumers in emerging markets often use different payment methods than consumers in developed markets. For example, cash on delivery is a popular payment method in many emerging markets. It is important to offer the payment methods that your target consumers prefer.

Brand and Product Factors

Brand awareness: Brand awareness is an important factor to consider when choosing purchasing channels. If your brand is well-known in your target market, you may be able to sell through a wider range of channels. However, if your brand is not well-known, you may need to focus on channels that can help you build brand awareness.

Product type: Some cosmetic product types are more suitable for online sales than others. For example, skincare products and makeup products are well-suited for online sales, while fragrances and perfumes may be less suited for online sales due to the importance of testing the product in person.

6. Managerial Implications

This study predicts that the future of the retail setting will change, consumer behaviour will alter because they will rely more on smart technologies than on store employees because these technologies will be able to help customers in all situations (Priporas, 2020). Women are more likely than males to be concerned about enjoying shopping settings, according to new research (Heitz-Spahn et al. 2018). However, this study's findings regarding cosmetics show distinct results. According to Berman (2019), physical stores should be created to give clients an engaging experience, such as allowing them to watch sports or engage in other leisure activities. To provide a joyful and interesting purchasing experience, brick-and-mortar retail stores, particularly those selling cosmetics and other beauty products, should use digital devices. Shortly, Generation Z consumers will be the most demanding users of cosmetic goods. According to Seemiller and Grace (2019), these age groups are both digital natives and dependent on technology. Ng et al. (2019) further point out that these groups are closely related to cutting-edge retail technologies.

Therefore, it is expected that most beauty consumers will tend to make purchases through e-commerce in the early future. Retailers should therefore concentrate on building digitization to attract this age group to these stores to help their physical businesses survive. It should be a top priority for brick-and-mortar cosmetic businesses to digitize, and one of the greatest ways to boost sales in this industry is without a doubt to apply some of the most innovative new technologies in digital transformation, including augmented reality.

The results of this study demonstrate consumers' favourable opinions on emerging technology in the cosmetics sector, including Sephora Artist. This viewpoint is in line with that of Hänninen et al. (2021), who claim that retailers must keep investing in actual store locations and making use of cutting-edge digital technologies like touch displays to interact with customers more.

Lastly, our analysis shows that the managerial implications for managers in the cosmetics industry mainly concern distribution strategies. That are, decisions about:

Channel Costs and Logistics
Channel costs: The costs of different purchasing channels vary widely. For example, selling through online marketplaces can be more expensive than selling through your own website. It is important to factor in the costs of different channels when making your decision.
Logistics: It is also important to consider the logistics of getting your products to your customers. If you are selling through online marketplaces, you may need to use

their fulfilment services. However, if you are selling through your own website, you will need to arrange your own fulfilment. By carefully considering all of these factors, you can select the most effective purchasing channels for your cosmetic products in an emerging e-commerce market.

Additional strategies for selecting purchasing channels in emerging e-commerce markets are the number of channels. For example, it could be better to start with a small number of channels and then expand as you learn more about the market and your customers. Or make partnerships with local distributors, to reach consumers in emerging markets. Local distributors can help you overcome logistical challenges and better understand the local market. Invest in marketing and customer support: It is important to invest in marketing and customer support when selling in emerging e-commerce markets. Consumers in these markets may be less familiar with online shopping, so it is important to provide them with a good customer experience.

7. Limitations and Further Research

The principal constraint of this study is the lack of available resources to consider in the cosmetics market. Therefore, it is recommended that future research focus on understanding the reaction of customers when they use digitalized tools in the cosmetic market in some countries that currently people are not using digital shopping tools. In this study, the authors analysed only the Iranian market. Indeed, to consider customers' attitudes towards their preferred purchasing channel, more extensive research on other countries of the Middle East is needed.

This study focused on Iranian customers between 18 and 41 years old (young customers) and their points of view on beauty purchases in this industry; however, focusing on Gen Z customers would allow us to consider the future of the market in more detail. As mentioned before, this paper, considered the beauty or cosmetic market including all categories of products related to improving appearance, cleaning, perfuming, correcting odours, or keeping the body in the best possible condition. However, it seems that customers have different attitudes toward purchasing various beauty products. Future research should investigate customers' preferred purchasing channels in the context of various beauty products, for instance, hair care products or lipstick. Furthermore, it is suggested that male customers' preferences towards purchasing beauty products be considered, as this market appears to be growing fast among men. Another limitation of this study is that we only considered three items related to perceived risk: perceived helpfulness of in-store salespeople, perceived product risk and the lack of simplicity of online shopping. financial risk was not included in our study; however, it is another important aspect of perceived risk that may affect customer preference for online shopping. Future research should include financial risk as a variable and examine how it influences customer intention to shop online for cosmetic products.

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