



## Intention to Purchase Smart LED Lights from Alibaba Stores

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### Abstract

Based on the customer value theory, this research aims to learn why people in the Baltic European countries are interested in purchasing smart LED lights from online retailers such as Alibaba and AliExpress. The relationship between price utility, function utility, self-image, aesthetics, playfulness, and intention to purchase smart LED lights from Alibaba and AliExpress in the Baltic European states was studied using an online questionnaire with 322 participants. According to structural equation modeling (SEM), pricing utility benefits employees' happiness in their jobs. Established theoretical frameworks like the customer value theory support these novel conclusions. They provide workers and practitioners with fresh perspectives on strategically elevating aesthetics and playfulness. Our findings indicate that consumers' sense of social identity and sense of humor plays a significant role in determining what they prioritize when making purchases. Several substantial policy suggestions, requests for further research, and potential theoretical and practical implications are made.

### Keywords

Intention, Smart LED, European States

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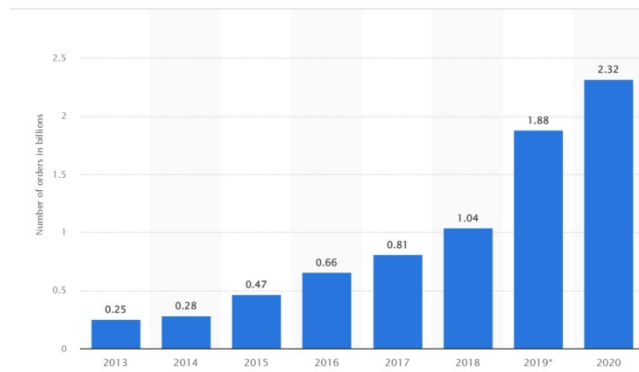
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## 1. Introduction

Advertising has been a primary source of revenue for the many businesses that provide social networking applications like Alibaba and AliExpress. Several academics and industry experts are investigating the viability of making money off social networking applications (Gauvin, 2021; Huang et al., 2022). One such avenue is the networking of social media shopping platforms like AliExpress and Alibaba to users of those platforms. Members use novel digital objects for identification, expression, and communication, such as online personas, image objects, furniture, electronic decorations, clothing, music playback, and many others (McGuinness et al., 2022; Ruperao et al., 2021). Members of social networking sites can buy identities and websites from these Alibaba and AliExpress marketplaces. These social media platforms have rapidly expanded into huge communities with millions of users. Taking into account the network externalities embedded in the social structure can significantly increase these network parties' disposable income (Sparshott, 2019). Advertisers and other professionals in the industry have a strong incentive to learn more about social media users' habits when making and using purchases to expand the economic opportunities available to them.

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(Statistica,2021, <https://www.statista.com/statistics/364780/number-of-orders-alibaba-singles-day/>)

On a single day between 2013 and 2020, shoppers will have placed orders totalling \$1.3 trillion on Alibaba's marketplaces. In 2009, Alibaba linked Single Day with online shopping by offering discounts and deals for a single day to increase sales for its more minor division. Single Day sales on Alibaba's Marketplace and Taobao electronic commerce sites totalled over \$2.3 billion, making them the largest online sales day ever. This means that the biggest online sellers now significantly outperform holiday sales in the United States (Slack et al., 2020).

Price utility is a useful component of consumer value that contributes positively to the component as a whole. The price of a smart LED bulb is set by how much value customers place on their money (Widodo & Balqiah, 2020). According to the transaction utility hypothesis, a product's perceived pricing utility improves as the attractiveness of a price improves. However, the functional quality (a component of practical value) of an LED light is the customer's perception of that light's overall excellence and anticipated performance, and this perception can vary between online marketplaces like Alibaba and AliExpress (Gauvin, 2021). Offline, aesthetics play an important role in the design process. Customers often think about how a product looks before buying it, regardless of whether it's a hedonistic or utilitarian item. One's emotional worth rises in tandem with the value one places on the things one buys (Adorno et al., 2020; Brielmann & Pelli, 2018).

The emotional value of smart LED lights can be attributed to the positive feelings of playfulness and imagination they evoke in consumers. Maintaining a social self-image is important, and some people believe that a smart LED light can help them do that. People use products to enhance their social status because the things they buy, display, and use have symbolic meaning to the people who see them (Li et al., 2020).

Based on customer value theory, this study analyzed the factors that influence people in the Baltic European states to make a purchase intention regarding smart LED lights on Alibaba and AliExpress. The term "customer value theory" refers to an economic concept defined as "the difference between the value obtained from a customer's possession of a product and the cost paid to obtain that product" (Nicholson et al., 2022). Assumptions about clients' perspectives and actions are challenged by customer value theory's unique and experimental concept of "value" (Su et al., 2018). Based on this theory, the current study investigated the connection between self-image, aesthetics, playfulness, and the intention to purchase smart LED lights from Alibaba and AliExpress in the Baltic European states. Furthermore, the current study aims to achieve the following objectives:

1. Examining the price utility positively correlates with smart LED lights purchase intention.
2. To explore the functional utility has a positive relationship with smart LED lights purchase intention.
3. To examine the social self-image utility's positive relationship with smart LED lights purchase intention.
4. Exploring the aesthetics has a positive relationship with smart LED lights purchase intention.
5. To examine how playfulness positively correlates with smart LED light purchase intention.

## 2. Literature Review

This research continues a previous intention that used the customer value theory to analyze the factors influencing people's decisions to purchase smart LED lights from online retailers like Alibaba and AliExpress in the Baltic European states.

### 2.1. Alibaba and AliExpress

AliExpress is a Chinese e-commerce platform that the Alibaba Group owns. It began operations in 2010, and its members are small businesses based in China and other countries (such as Singapore) that sell their products to customers worldwide via the Internet (Chen, 2022). It was the most visited online marketplace in Russia and Brazil's tenth most popular website. It facilitates international trade and aids small businesses. AliExpress has been compared to eBay because its merchants can operate under their brand while using the site to sell their products (Yu, 2021). AliExpress initially launched as a B2B e-commerce platform. Since then, it has expanded to encompass everything from B2B and C2C interactions to payment processing and data storage. Customers from outside these countries typically receive the service's English version (Smith & Krajbich, 2021). Retailing via "drop ship," Internet shops frequently source items from AliExpress. Anyone, from sole proprietors to large corporations, can use AliExpress. AliExpress is distinct from Amazon because it does not sell its products directly to customers. Instead, it acts as a marketplace where other sellers can sell their wares, directly linking Chinese businesses to their international clientele (Chen, 2022; Yu, 2021).



(source: AliExpress, 2022 <https://www.aliexpress.com/>)

Alibaba is among the largest retail and online marketplaces in the world. As of 2020, it was deemed the fifth-largest AI company. Through its fintech subsidiary Ant Group, it is the leading group in the financial services industry, surpassing even Visa in market share. The company is responsible for the largest consumer-to-consumer (C2C) platform in the world (Taobao), as well as the largest business-to-business (B2B) platform (Alibaba.com). Sales have been increasing at 400% a year, and it has recently entered the media industry (Luo et al., 2021). And on China's Singles' Day 2018, the country's biggest online and offline shopping day, it set new sales high (Jyani & Bansal, 2022; Luo et al., 2021).



(source: Alibaba, 2022 <https://www.alibaba.com/>)

## 2.2. Customer Value Theory

Researchers in advertising and online commerce agree that customer value is an important indicator of consumer behavior. Consumer preferences are influenced by product value factors whose relative importance varies across decision contexts (Zeithaml et al., 2020). These comprehensive tiers cover various topics and supply a solid basis for developing future-looking present-value buildings. Therefore, they provided a springboard for subsequent research. The term "customer value theory" refers to an economic concept defined as "the difference between the value obtained by a customer from a product in their possession and the cost paid to obtain that product" (Nicholson et al., 2022). Policymakers may also benefit from a different framework for understanding the full "worth" of digital currencies provided by customer value theory from the marketing field. Customer value theory in the context of digital currencies offers a way to systematically and analytically discover the financial quality of digital currencies to their customers for the sake of realizing the conceptualization of this new investment category, identifying threats that legislation should aim to reduce, and contributing to the development of the crypto space (Kim & Hall, 2020). The value models described by Sweeney et al. took into account the practical, monetary, and social perceptions of one's identity as drivers of consumer intention. These studies showed that a customer's functional, economic, and social self-image influenced their purchasing decisions significantly. The unique and experimental "value" concept of customer value theory creates problems for previously held beliefs about consumers' perspectives and actions (Su et al., 2018). The profile of desirable properties used to evaluate a product's functional value includes dependability, durability, and cost. Usability has traditionally been thought to be the deciding factor for consumers. An individual's emotional investment in a product is determined by the range of feelings they associate with it. Everything a person needs to indulge their senses, imagination, and emotions is contained within these hedonistic objects (Nicholson et al., 2022). People often want to project a certain image or feel a certain way about themselves when they purchase and consume. Products' worth goes beyond what they're used for, such as when they're put to artistic or symbolic ends.

## 2.3. Price utility and smart LED lights purchase intention

Retailers' use of price reduction to boost sales lends credence to the idea that price is a significant component of customers' relative benefits. It is believed that "buyers will experience regret if they do not buy within the set purchase deadline" when presented with a price reduction purchase with a deadline (Solomou et al., 2022). They increase the likelihood of a purchase because of the "opportunity cost perception" that customers form when they have limited time to make a decision (Wang et al., 2020). Based on the effectiveness of time-limited, small-discount campaigns, research suggests that deadlines strengthen the positive association between price value and purchase intention. Furthermore, many

academics argue that time constraints undermine the beneficial association between price value and purchase intention, which is why these promotions often need to be revised in practice (Xie et al., 2021). Literature frequently draws parallels between pricing and the practical aspect of customer value. Price utility is a functional value component that directly affects total consumer value. The value of a digital good is established by how efficiently its price can be used (Kim et al., 2011; Peng et al., 2019). According to the purchase utility hypothesis, consumers will assign a higher value to a price if they find it more appealing. The intention for this is that consumers place a higher value on purchases that help them save purchase (Wang et al., 2020). This article argues that time constraint and time pressure are not synonymous terms. Opportunity cost perception suggests that sales will increase if consumers make decisions on time without feeling rushed (Solomou et al., 2022; Wang et al., 2020; Xie et al., 2021). Therefore, if customers are required to make decisions within a time frame that causes them to feel pressured, worried, or under duress, it will significantly impact their ability to make life choices. When the unpleasant sensation of "losing" due to time constraints overwhelms the pleasurable feeling of "gaining" due to a price cut, the significance and importance of that discount are diminished (Gauvin, 2021). In addition, if a customer is pressed for time, they may not be able to give the product a fair and accurate review, which could lead them to overvalue it (Guo et al., 2019; Kim et al., 2020). From a pragmatic standpoint, we theorise that time constraints may erode the correlation between price value and intention to purchase smart LED lights.

H1: Price utility positively correlates with smart LED light purchase intention.

#### ***2.4. Functional utility and smart LED lights purchase intention***

When we talk about functional utility, we mean the "perceived utility acquired from an alternative's capacity for functional, utilitarian, or physical performance and is viewed as a predominant driver of consumer choice" (Slack et al., 2020). From a functional standpoint, usefulness can also be considered "the use derived from the product's perceived quality and expected performance" (Ruperao et al., 2021). Generally speaking, purchasers judge products based on how they think they will perform in the long run. Intentions to buy smart LED lights on e-component marketplaces like Alibaba and AliExpress can be influenced by a wide range of subjective factors. The functional quality of a smart LED light is defined by the customers' expectations of its quality and performance, which may vary from one customer to the next when shopping on the Alibaba platform (Brooks, 2018). The quality of the light emitted by a smart LED light bulb is one example of a product's quality. Attributes of a smart LED light's visual design, like the animation of digital characters, may enhance its effectiveness.

In contrast, a real thing's effectiveness is usually determined by its quality. High-quality software, of course, requires these qualities: user-friendliness, bug-free, and "backward and forward compatibility" (Guo et al., 2019). Smart LED lights, on the other hand, should be durable, easy to operate, and suitable for the intended environment. Regarding their behavioral and functional excellence, superior Internet products may also increase customers' intention to purchase (Gauvin, 2021). Consumers typically evaluate the practical relative value of a stock by comparing and contrasting the stock's efficiency with that of similar options or by comparing and contrasting the stock's specifications. Most buyers need time to research or consult with friends and family before making a purchase decision because they need to learn how well a product works. Customers who don't have the luxury of time to conduct a thorough analysis of a product's features may resort to using a heuristic rule based on a data filtering strategy instead (Huang et al., 2022; Sparshott, 2019). A rule of thumb could be to zero in on the most crucial aspects of the product. Buyers pressed for time are also more vulnerable to default risk when assessing a stock's intrinsic worth (Li et al., 2020; Widodo & Balqiah, 2020). Once customers recognize risk, they typically resort to the most straightforward mitigation strategies (Ruperao et al., 2021). As a result, they may postpone making a decision or give up making purchases altogether. Given this, we postulated the following.

H2: Functional utility has a positive relationship with smart LED lights purchase intention.

### ***2.5. Social self-image utility and smart LED lights purchase intention***

According to Bachman et al. (2021), customers' use of social self-image and information channels affects their outcomes. One facet of social value is a person's social and personal freedom, defined as the belief in one's ability to enhance one's reputation in the eyes of others. Consumers purchase things to boost their social self-image because of the power they perceive to convey to others through their acquisition, display, and use of those items (Kim et al., 2020). Products are used because of the meanings they carry in social contexts. Members of the Social Self-Image Group are more likely to purchase and use LED lights as a variety of symbols to convey and improve their image if they believe that doing so will enhance their ability to present and articulate their social selves (Bachman et al., 2021; Falk, 2021). The belief that an LED light can support, maintain, and improve personal relationships is another facet of one's "social relationship support," or social self-image. Despite the material goods, there are places where people can find and offer each other comfort, friendship, and creativity. To have a positive social self-image as a current product user is said to satisfy the need for consciousness, which can be defined as the desire to act in ways that are consistent with one's beliefs about oneself and one's values, preferences, and priorities (Bennett & Vijaygopal, 2018). The need for character, or the motivation to behave in ways that support and enhance one's positive self-perception, is met by the prevalence of a positive social self-image as the ideal consumer. High social based on the consumer's social self-image satisfies the need for social integrity, which can be defined as the desire to avoid damaging one's social self-image or identity through one's opinions and/or actions (Chen & Chen, 2020). The social self-image of a person seeking social services is connected to their need for social acceptance by others. Bennett and Vijaygopal (2018) showed how people with positive self-images use social networking sites to stay in touch with one another. Members of the social self-image hope to attract more users (like relatives) by adorning them with appealing LED products, such as music (Li et al., 2020). Thus, LED lights help make and maintain social connections, and the motivation to purchase LED lights among people with high social self-images is affected by the social worth of those goods.

H3: Social self-image utility positively correlates with smart LED lights purchase intention.

### ***2.6. Aesthetics and smart LED lights purchase intention***

According to the definition of aesthetics, "technology is used as a fashion accessory to enhance the look and feel for the user" (Vaidyanathan, 2020). In today's business environment, companies prioritize satisfying the wants and needs of their customers over doing their internal work (Guo et al., 2019). Advertising and sales promotions increasingly acknowledge aesthetics' role in attracting and keeping customers (Adorno et al., 2020). Aesthetics, as a perceptual representation of item design elements, can aid in setting products apart from competitors' offerings, developing a market for said offerings, and organizing relationships with consumers (Brielmann & Pelli, 2018). Furthermore, the aesthetic presentation of a product has a substantial impact on its acceptability and the likelihood that a consumer will buy it (Adorno et al., 2020; Brielmann & Pelli, 2018; Sparshott, 2019). The aesthetics of a product's packaging can influence consumers' opinions and purchases (Guo et al., 2019). Designers should be encouraged to recognize and assess the aesthetic value of their work. LED lights are attractive because of the pictures they create (Seymour, 2019). They must pique the interest of potential buyers. Off-site aesthetics play a crucial role in the decision-making process for purchasing. Consumers frequently consider the product's visual appeal when shopping for both luxury and necessity items. Aesthetics, an important factor in hedonic purchasing, may play a role in purchasing an LED light. Aesthetically pleasing LED lighting is crucial because it raises the confidence and attractiveness of its members (Widodo & Balqiah, 2020). Specifically, item aesthetics examine how a product's qualities can elicit instantaneous reactions in the consciousness of the design through sensations (Vaidyanathan, 2020). Product aesthetics, for instance, are defined by academics as "the subjective appreciation of a product's

structure, unity, and elegance as realized in its physical attributes" (Guo et al., 2019). In this study, "aesthetics" means the overall pleasing appearance of a product, including its color scheme, shape, and proportions. Given this, we postulated the following.

H4: Aesthetics has a positive relationship with smart LED lights purchase intention.

### 2.7. Playfulness and smart LED lights purchase intention

When people engage in fascinating activities with objects, they experience a sense of joy, interest, amusement, and curiosity, known as playfulness (Huang et al., 2022). Previous research has shown that positive emotions like happiness and satisfaction result from playful interactions (Kim & Park, 2019; Widodo & Balqiah, 2020). Emoticons have made communication more effective and efficient, say Kang et al. (2020). When people buy something, they often develop an emotional connection to it along with the monetary purchase (Widodo & Balqiah, 2020). Customers' reactions to fun and imagination when using digital products can be interpreted as evocative of emotion. Therefore, the perception of playfulness with genuine value may influence members' purchase intentions. It is important to note that the wonderful qualities that fall under our definition of playfulness are not limited to those that are merely playful in their design. Kim and Park (2019) argue in their discussion of "perceived play" that even seemingly goal-driven work, such as searching the internet for information, can be enjoyable and entertaining if the user is wholly engrossed in the task. To be playful is a natural disposition that develops from one's experiences with their environment. Being in a state of flow, or having the most pleasurable experience possible, occurs when a person is so engrossed in an activity that they forget about themselves (Huang et al., 2022; Kim et al., 2011). Facilitating conditions are often the result of a wide variety of activities, such as hobbies, reading, writing, running a business, performing rituals, participating in sports, creating works of art, and so on (Widodo & Balqiah, 2020). Other aspects of playfulness can be explained by the presence of feelings of focus, interest, and enjoyment during an activity. Given this, we came up with the following theory.

H5: Playfulness has a positive relationship with smart LED lights purchase intention.

### 2.8. Conceptual Framework

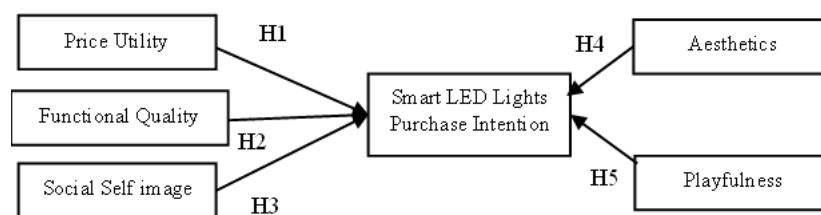


Figure 3: Conceptual Framework

## 3. Methodology

The theoretical framework for the study was developed, and hypotheses were presented based on a comprehensive review of the relevant literature and the customer value theory. This research aimed to determine if people in the Baltic European countries would be interested in purchasing personal smart LED lights from online retailers like Alibaba and AliExpress. The following elements have been added to the questionnaires in light of the literature mentioned above and are meant to gauge the concept of government knowledge: (Ashraf et al., 2022; Zeib & Tahir, 2022). Participants' ages, sexes, and levels

of education are collected alongside other demographic information to analyze the correlation between independent variables. In conclusion, it took a lot of work to collect data from people who shop on Alibaba and AliExpress due to the time constraints of the field study. They learn the data-gathering process by repeatedly putting it into practice.

### ***3.1. Participants and Procedure***

Respondents were citizens of the Baltic European countries who use Alibaba and AliExpress. In the Baltic European countries, people are provided with information. From a random sample of 450 people, we were able to elicit 322 valuable responses. In this case, the sample was selected using techniques outside of probability theory. The research was done using a cross-sectional design. Data from the people of the Baltic European states are gathered using a straightforward sampling method. As English is widely used in academic settings across the Baltic European countries, all respondents were native English speakers. Some of the selected participants declined to participate in the survey because they felt awkward or were unavailable at the time. The authors were successful in recruiting a total of 450 study participants. The information was gathered from May 12, 2021, to August 2, 2021. The online questionnaires were all willingly answered by those who took part. Participants understood the study's goals and were allowed to revoke their consent at any time.

### ***3.2. Measures of the Study***

To better understand the determinants of individuals' intention to purchase smart LED lights from Alibaba and AliExpress in Baltic European states, a comprehensive 24-item questionnaire was developed. The responses were collected using a 7-point Likert scale, ranging from 1= Strongly Disagree to 7= Strongly Agree. The measures of adoption are shown in Appendix. This questionnaire included five different scales to measure different factors that influence purchase intention. The first scale used was a 4-item scale of price utility, which assessed the respondents' perception of the reasonable pricing of the LED lights sold on these platforms. The second scale used was a 4-item scale of functional utility, which assessed the respondents' perception of the quality of the LED lights sold on these platforms. The third scale used was a 4-item scale of social self-image, which assessed the respondents' perception of how using these LED lights would enhance their self-image in the eyes of others. The fourth scale used was a 4-item scale of aesthetics, which assessed the respondents' perception of the visual appeal of the LED lights sold on these platforms. Finally, the fifth scale used was a 5-item scale of playfulness, which assessed the respondents' perception of the fun that they would derive from using these LED lights. To measure the respondents' intention to purchase smart LED lights from Alibaba and AliExpress within the next six months, a 3-item scale was used. This scale assessed the likelihood of purchasing these lights. This comprehensive questionnaire will provide valuable insights into the factors that influence individuals' intention to purchase smart LED lights from Alibaba and AliExpress in Baltic European states.

## **4. Result**

Table 1 displays the demographic characteristics and descriptive statistics of the current study's sample (N= 322) based on the preliminary analysis of respondent data. SmartPLS3 was used to analyze the models' measurements and structures. Individuals' gender, age, and level of education were found to be significant determinants of intention to purchase smart LED lights across the Baltic European countries in the model's analysis.



Table 1: Demographic profile

Demography	Description	No. of Responses	%
Gender	Male	190	59
	Female	132	41
Age	20-30	170	53
	Above 30	152	47
Qualification	SC/BSC	165	51
	BS/MS	157	49

In the above table, the gender of respondents was 59% male and 41% female. Aged 20-30 respondents were 53% and above 30 was 47%. Qualification of FSC/BSC respondents was 51%, and BS/MS was 49%.

Table 2: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
FU	322	1	6	3.54	0.89
SSI	322	1	6	3.34	1.56
PU	322	1	6	3.65	0.79
P	322	1	6	3.87	1.76
A	322	1	6	3.67	0.87
PI	322	1	6	3.58	0.79

"A= Aesthetics; FU= Functional utility; P= Playfulness; PU= Price utility; SSI= Social self-image; PI= smart LED lights purchase intention".

In the table above, "descriptive analysis" is defined as "the type of data analysis that helps in describing, showing, or constructively summarising data points so that patterns may develop that fill every condition of the data" (Sharma et al., 2022). The descriptive analysis of the current study displays the means, standard deviations, maximum values, and minimum values for six variables.

#### 4.1. Measurement model

Factor loadings, validity, and reliability of data collected from 322 people residing in the Baltic European states were initially evaluated using PLS-SEM. The PLS measurement model's findings for the items' factor loadings, validity, and reliability are shown in Table 3. Cronbach's alpha, a measure of item internal consistency, should be 0.70 or higher as a rule of thumb (Fornell & Larcker, 1981). The composite reliability and Cronbach's Alpha for the selected variables were more significant than 0.70. There was evidence of convergent validity, and the demonstrated reliability was based on the fact that AVE values for discriminant validity were more significant than 0.50. (Fornell & Larcker, 1981). Over and above the cutoff value of 0.70, Cronbach's Alpha values ranged from 0.707 to 0.855. (McGuinness et al., 2022).

Table3: Composite reliability, Cronbach's Alpha and AVE values

Instructs/Items	CA	Rho-A	CR	AVE
Aesthetics	0.795	0.795	0.814	0.524
Functional utility	0.772	0.797	0.805	0.515
Playfulness	0.826	0.833	0.878	0.592
Price utility	0.836	0.853	0.890	0.670
Social self-image	0.855	0.813	0.736	0.535
smart LED lights purchase intention	0.707	0.715	0.836	0.631

“Note: CR=composite reliability; AVE=average variance extracted; CA= Cronbach’s Alpha”

Moreover, verifying the discriminant validity of any research strategy is crucial. McGuinness et al. (2022) defined "the degree to which a given latent variable differs from other latent variables" as discriminant validity. Once we knew all of the variables' validity and reliability conditions had been met, we dove into more research for structural path analysis. The HTMT values also fell below 1, demonstrating their discriminant validity (Hair et al., 2019). It was clear from Table 4 how helpful HTMT is.

Table 4: Discriminant validity

	<b>A</b>	<b>FU</b>	<b>P</b>	<b>PU</b>	<b>SSI</b>	<b>PI</b>
<b>Aesthetics</b>	0.724					
<b>Functional utility</b>	0.191	0.718				
<b>Playfulness</b>	0.289	0.397	0.769			
<b>Price utility</b>	0.159	0.524	0.564	0.819		
<b>Social self-image</b>	0.325	0.421	0.438	0.729	0.652	
<b>smart LED lights purchase intention</b>	0.220	0.390	0.401	0.487	0.493	0.794

“A= Aesthetics; FU= Functional utility; P= Playfulness; PU= Price utility; SSI= Social self-image; PI= smart LED lights purchase intention”.

R2 has a value between zero and one. In addition, Hair et al. (2019) suggested that R2 values of "0.13 be regarded as poor, 0.33 as moderate, and 0.67 as strong". The table provides the endogenous constructs' coefficient of determination. The R square value of smart LED lights purchase intention is 0.316, indicating moderate respectively, as shown in the table below.

Table 5: Assessment of R square

	<b>R<sup>2</sup></b>
<b>Smart LED lights purchase intention</b>	0.316

#### 4.2. Structural Equation Model

Using the PLS-SEM bootstrapping method, we statistically determined the structural model path coefficients that show the hypothesized relationships. Playfulness, aesthetics, price utility, functional utility, and social self-image were significant predictors of intention to purchase smart LED lights from Alibaba and AliExpress in the Baltic European states, as depicted by the PLS-SEM assessment, which illustrates the path relationships and testing decisions for hypotheses. As can be seen from the results, there is a statistically significant link between how attractive something is and the likelihood that a person will decide to buy a smart LED light ( $\beta = 0.148$ ,  $t = 1.817$ ,  $p = 0.004$ ). Therefore, we accept H1.

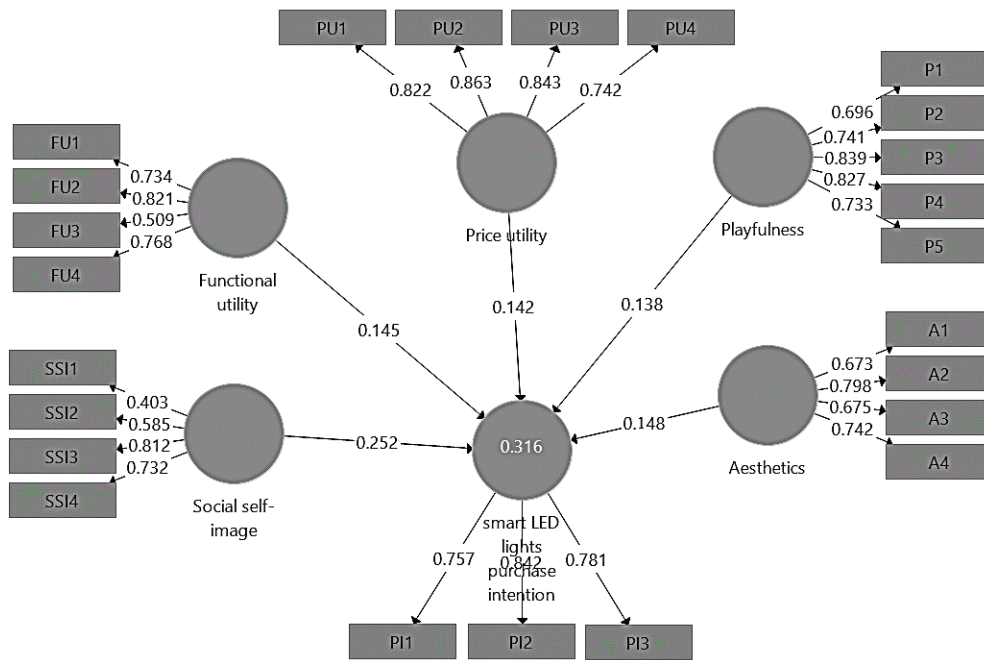


Figure 2: Assessment of PLS Algorithm

The data support the second hypothesis, suggesting that practicality influences the likelihood that people will decide to buy smart LED lights ( $\beta = 0.145$ ,  $t = 2.277$ ,  $p = 0.023$ ). An additional hypothesis stated that there are meaningful connections between a willingness to have fun and an intention to buy smart LED lights. The results of the PLS-SEM experiment supported this ( $\beta = 0.0138$ ,  $t = 1.991$ ,  $p = 0.047$ ), so we also accept the third hypothesis. As expected, H4 testing the link between price utility and intent to buy smart LED lights also passes with flying colors ( $\beta = 0.182$ ,  $t = 1.771$ ,  $p = 0.007$ ). Additionally, PLS-SEM results corroborate the link between social self-image and intention to purchase smart LED lights ( $\beta = 0.252$ ,  $t = 2.984$ ,  $p = 0.003$ ), and H5 is accepted.

Table 6: Direct Relation

	Original Sample	T Statistics	P Values	Decision
<b>Aesthetics -&gt; smart LED lights purchase intention</b>	0.148	1.817	<b>0.004</b>	Supported
<b>Functional utility -&gt; smart LED lights purchase intention</b>	0.145	2.277	<b>0.023</b>	Supported
<b>Playfulness -&gt; smart LED lights purchase intention</b>	0.138	1.991	<b>0.047</b>	Supported
<b>Price utility -&gt; smart LED lights purchase intention</b>	0.182	1.771	<b>0.007</b>	Supported
<b>Social self-image -&gt; smart LED lights purchase intention</b>	0.252	2.984	<b>0.003</b>	Supported

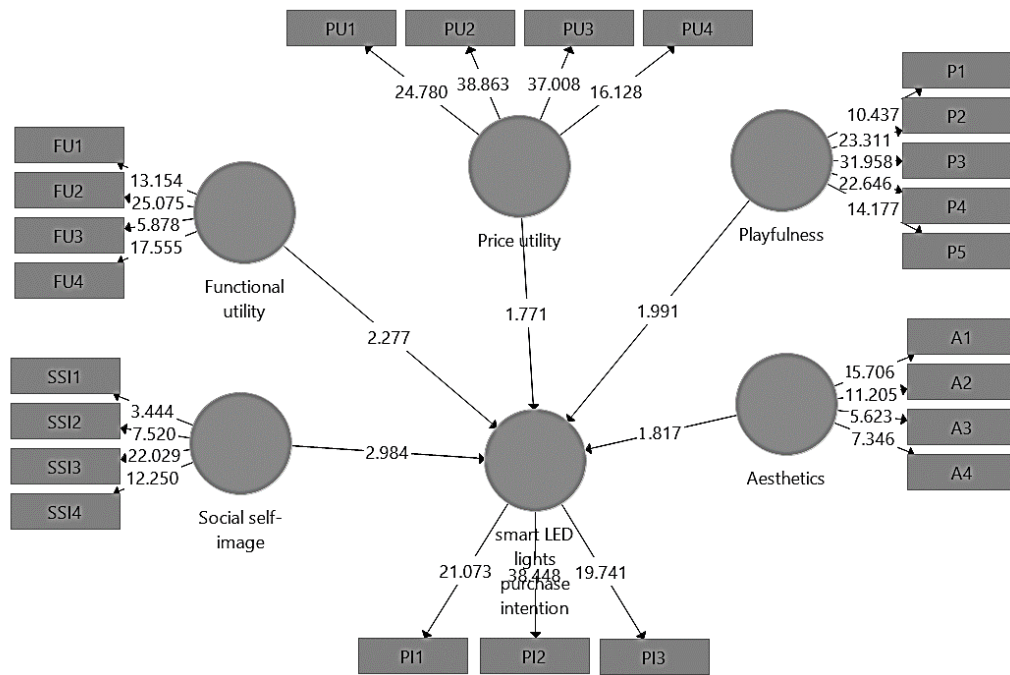


Figure 3: Assessment of PLS Bootstrapping

## 5. Discussion

This research aimed to determine what factors influence consumers' decisions to buy smart LED lights from online retailers like Alibaba and AliExpress in the Baltic European states. The customer value theory underpinned the research. It was determined that each hypothesis was supported by evidence.

According to the study's findings, medical and corporate workers were found to have average EQs. To test this hypothesis, the study looked into the relative importance of several factors: cost, practicality, reputation in one's the social circle, attractiveness, and fun. The results indicate that smart LED lights have a significant relationship with price utility for purchase intention ( $\beta = 0.148$ ,  $t = 1.817$ ,  $p = 0.004$ ). Therefore, we accept H1. Price utility is a functional value component that directly affects total consumer value. The value of a digital good is established by how efficiently its price can be used (Kim et al., 2011; Peng et al., 2019).

The data support the second hypothesis, suggesting that practicality influences people's likelihood of

buying smart LED lights ( $\beta = 0.145$ ,  $t = 2.277$ ,  $p = 0.023$ ). A similar criterion for a smart LED light purchase intention is that they are simple to operate, suitable for the intended environment, and robust enough to withstand normal wear and tear. More valuable customers may be attracted to online products with a more significant impact through superior behavioral and functional excellence, increasing their intention to purchase (Gauvin, 2021).

An additional hypothesis stated that there are meaningful connections between a willingness to have fun and an intention to buy smart LED lights. The results of the PLS-SEM experiment supported this ( $\beta = 0.0138$ ,  $t = 1.991$ ,  $p = 0.047$ ), so we also accept the third hypothesis. High social based on the consumer's social self-image satisfies the need for social integrity, which can be defined as the desire to avoid damaging one's social self-image or identity through one's opinions and/or actions (Chen & Chen, 2020). As expected, H4 testing the link between price utility and intent to buy smart LED lights also passes with flying colors ( $\beta = 0.182$ ,  $t = 1.771$ ,  $p = 0.007$ ). Aesthetic value is ascribed to LED light's image-based attractions (Seymour, 2019). Additionally, PLS-SEM results corroborate the link between social self-image and intention to purchase smart LED lights ( $\beta = 0.252$ ,  $t = 2.984$ ,  $p = 0.003$ ), supporting H5. Previous research has shown positive emotions like happiness and contentment are the outcomes of playful interactions (Kim & Park, 2019; Widodo & Balqiah, 2020). Finally, this study examined the factors influencing consumers' intentions to purchase smart LED lights from Alibaba and AliExpress in the Baltic European states, with an intention on the individual level and the theory of customer value.

### ***5.1. Practical Implication***

The study's primary objective was to raise participants' "practical awareness." There are several ways in which managers, practitioners, and policymakers can use the information presented in this study. However, research into consumer behavior as it relates to online shopping on sites like Alibaba and AliExpress is scant. Our understanding of the various value-added components and subcategories important when shopping on AliExpress and Alibaba has been expanded. Members' purchasing behaviors are profoundly affected by their social self-image manifestation. Customer value theory states that the opinions of others heavily influence an individual's sense of self. People frequently fret over the opinions of others. We also attempted to define the value found in the cases of Alibaba and AliExpress, classifying the perceived consumer value into pricing utility, functional utility, aesthetics, social self-image, and playfulness. All of these have been analyzed in light of Alibaba and AliExpress, providing researchers with a refined theoretical framework to situate their studies. Research on advertising and e-commerce has traditionally focused on the practicality of features like price and functionality. Our analysis revealed the importance of individuals' social self-images in illuminating their actions on Alibaba and AliExpress.

### ***5.2. Theoretical Implications***

The results have far-reaching implications for hospital and business management and lawmakers, who may expand the scope of the current investigation to incorporate price utility, functional utility, aesthetics, social self-image, and playfulness. Accordingly, the customer value theory served as the basis for this investigation. When the customer value theory was applied to the shopping experience, some surprising insights were uncovered. It serves a different function when applied to things as opposed to material goods. However, we found that functional utility was not a reliable predictor of online purchases, despite being a reliable predictor of in-person purchases. Thus, we employ customer value theory to understand what factors influence buyers' decisions. Our findings suggest that customers' purchase intentions are most affected by the product's potential for amusement, aesthetic value, and ability to help them express their social identities. Suppliers on AliExpress and Alibaba who want to increase their sales should focus on these three things. When designing products, professionals should think about the fun and beauty that consumers will feel while using the product, as well as the effect that using the product will have on the consumer's social standing. Avatars, for instance, can be programmed to talk and kept in motion using AI technology as if they were conscious.

### ***5.3. Limitations and Future Research***

Despite its usefulness, the study had a few caveats and suggestions for the future. This research looked at how factors like "quick apply price utility," "functional utility," "aesthetics," "playfulness," and "social self-image" impacted participants' intention to buy smart LED lights. A wide range of issues connected to the intention to purchase may be investigated in subsequent research. Second, it's likely that future researchers will use a longitudinal study design to prove causation more precisely, but the data presented here were collected in a cross-sectional manner. Finally, the mediating and moderating impact may be used to improve the results of future studies. The research was conducted with the help of survey data collected from a single online community.

Furthermore, our frameworks may have yet to be able to describe each variable in customer value theory fully. Finally, Alibaba and AliExpress have made efforts to expand into new countries. There could be cultural and personalization issues down the road.

## **6. Conclusion**

The sale of goods is a relatively new revenue stream for sellers on Alibaba and AliExpress. Understanding what drives consumers is crucial to the success of this revenue model. Even though the importance of understanding primary drivers, more is needed about the decision-making processes and criteria used by Alibaba and AliExpress members when making purchases. We explored the impulse to purchase things by developing a theory of customer value and analyzing the primary drivers of customer value along several dimensions. Using the broad characteristics of customer value theory, we calculated the component price factors in item purchases. According to the results of our study, consumers placed a high value on their positive social impressions and a sense of humor when making purchasing decisions.

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## Appendix

Variables	Items	Source
Price utility	1. The LED lights sold here are generally reasonably priced.	(Kim et al., 2011)
	2. The LED lights sold here offer value for money.	
	3. The LED lights sold here are good products for the price.	
	4. The LED lights sold here are considered economical in terms of price	
Functional utility	1. The LED lights sold here have an acceptable standard of quality.	(Kim et al., 2011)
	2. The LED lights sold here are reliable in their performance.	
	3. The LED lights sold here are good in terms of their overall excellence.	
	4. The LED lights sold here possess a degree of quality which is satisfactory.	
Social self-image	1. Using the LED lights sold here enhances my self-image to others.	(Kim et al., 2011)
	2. Using the LED lights sold here improves my self-expression to others.	
	3. Using the LED lights sold here makes a good impression on other people.	
	4. Using the LED lights sold here improves the way I am perceived.	
Aesthetics	1. The LED lights sold here are lovely.	(Kim et al., 2011)
	2. The LED lights sold here reflect beauty.	
	3. The LED lights sold here are aesthetically appealing.	
	4. The LED lights sold here have attractive aesthetic feature.	
Playfulness	1. Using the LED lights sold here gives fun to me.	(Kim et al., 2011)
	2. Using the LED lights sold here is interesting to me.	
	3. Using the LED lights sold here stimulates my curiosity.	
	4. Using the LED lights sold here arouses my imagination.	
	5. Using the LED lights sold here keeps me absorbed.	
smart LED lights purchase intention	1. The probability that I would consider buying LED lights from Alibaba and AliExpress within the next 6 months is high.	(Kim et al., 2011)
	2. My willingness to buy LED lights from Alibaba and AliExpress within the next 6 months is high.	
	3. The likelihood of my purchasing LED lights from Alibaba and AliExpress within the next 6 months is high.	