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Determinants in choosing a favorite drink of Vietnamese consumers

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ABSTRACT

Due to the severe competition on the market nowadays, business organizations are paying more and more attention to get to know what factors affect the buying-decisions of their customers and their expectations to serve them better. A similar problem also exists in the beer industry. Therefore, this paper aims at identifying the determinants in choosing a favorite beer of Vietnamese consumers so that relevant companies can have proper strategies to improve their performance for better competitive advantage. By using exploratory factor analysis for data collected from official survey of 2,318 customers, we suggest beer companies pay special attention to 4 key perspectives, including: (1) improving beer quality, (2) developing their brand and distribution channel, (3) paying attention to the information provided through their advertisements, informative labeling, easy usage and storage; and (4) providing presentable packaging, promotions, and prices. These are found as the basic requirements affecting the decisions of Vietnamese consumers in choosing their favorite beer. Some managerial implications proposed in this study should be seriously considered and implemented in operational practice.

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1. Introduction

According to EVBN (2016), the beverage industry in Vietnam observed a strong consumption of 81.6 billion liters in 2016 and is expected to reach 109 billion liters in 2020; thus, it is one of the highest growth industries of consumer goods in Vietnam. With a large population of more than 96 million people (Worldometers, 2018) and the compound annual growth rate (CAGR) of 3.5% of beer consumption until 2020, Vietnam is considered as an attractive market for many breweries. In 2017, 4 billion liters of beer were consumed, equivalent to an annual average of 45 liters per capita; thus, Vietnam is ranked the third biggest market in Asia, preceded by Japan and China. Lincoln (2016) provided a comprehensive review of the alcohol and drinking culture in Vietnam, which could well explain why Vietnamese people consume so much beer.

As such, the beer market in Vietnam well attracts large investment from numerous manufacturers to satisfy local demand which is kept increasing. According to Atkinson (2016), Vietnam has a total of

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129 breweries and an installed capacity of 4.8 billion liters. Among them, three big players, including Saigon Alcohol Beer and Beverages Corp (Sabeco), Vietnam Brewery Limited (VBL) and Hanoi Beer and Beverage Corporation (Habeco) dominate the beer market with a market share of more than 80%. Fig. 1 shows the market share of beer manufacturers in Vietnam in 2016 which is an evidence of how tough the competition is.

In the case of beer market in Vietnam, with various brands available for the customers to choose freely, how to keep the current customers and enhance the market share becomes ever so important to any company in the beer industry. Fig. 2 briefly demonstrates the preferred brands (DI Marketing, 2015).

Nowadays, people concern more and more about the quality, the design, the cost of products and services among a variety of manufacturers, suppliers and traders, a comprehensive understanding of the current and future markets is one of the core issues. Understanding the market is to understand the competitors and customers. Understanding the competitors is critical because their movements in the market will result in different situations which could be either harmful or benefit to the organization. In order to reduce the risks and take the opportunities, the organization must have proper actions and strategies based on the knowledge they get from the signals from its competitors. Moreover, the competition on the beer market becomes more and more severe due to the increasing number of imported brands such as Corona, Budweiser, Bit Burger, Leffe Brown, Hoegaarden White, MOA, Cooper, Bavaria etc., joining the playground.

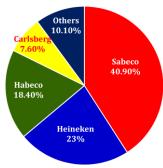


Fig. 1: Market share of beer manufacturers in Vietnam in 2016 (Giang and Chau, 2017)

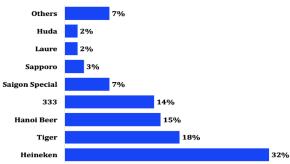


Fig. 2: Preferred beer brands (DI Marketing, 2015)

Consequently, the primary challenge of today's business is not just to face and survive with competitors but also to know customers' needs and analyze their behavior, including what the customers want and in what way, when and where they want it, at what price they are willing to pay and what they expect. These are not easily measured; but once they are fully known, the market will be easily captured. Therefore, understanding the customers is also of significance in the fierce competition.

In the area of studying customer satisfaction and consumer behavior, many researches have been conducted in various fields, such as hotels, restaurants, tourism, foods, and other products/services. However, getting to know the key characteristics affecting the buying of favorite beer chosen by Vietnamese consumers is still open. Thus, this paper aims at giving a suitable answer to this question in order to help domestic companies serve their customers better and make them more satisfied.

2. Literature review

2.1. Customer

According to the classic approach, a customer is the person who buys a product or a service offered by a business organization (Engel et al., 1978; Engel and Blackwell, 1982). It is not easy to explicitly

define the set of customers in a business organization due to the size of this set and the existence of multiple segments and behavioral groups. Once used, the term of "customer" is necessarily clarified whether it is referring to past, existing, potential, internal and external customers. Potential customers are considered as the persons who have the need or demand to purchase the product or the service with the motive to proceed to this particular purchase under certain financial resources and the willingness to access the locations where the products or the services are made available (Grigoroudis and Siskos, 2010). Under the quality approach, customers are defined as the people who are able to assess the quality of the offered products and services and express their satisfaction/dissatisfaction when their expectations are fulfilled or not (Czarnecki, 1999; Dutka, 1995; Gerson, 1993). Based on process-oriented approach, customer is defined as the person or group that receives the work output. A person of an organization receives one or more internal process owners or even process outputs performed by suppliers is called internal customer; whereas, external customer refers to the buyers or users of the final products and services of the organization (Edosomwan, 1993).

2.2. Customer satisfaction

Over many years, customer satisfaction has received a large academic attention and extensive research has been done in this field. The special importance of customer satisfaction lies in that it influences future and repeat purchase by word-of-mouth communication and complaint behavior. Recently, the importance of customer satisfaction has been well recognized across different business sectors, such as airport industry (Moosaei and Safaei, 2016), telecommunications (Mohammed et al., 2017), insurance (Salahat and Majid, 2016), higher education (Monsef, 2015), bank (Ameli and Bagheri, 2016), etc. That keeping existing customers is far less costly to winning new ones has been widely understood in the modern business environment.

examining post-consumption evaluation, companies can redirect business from understanding customer satisfaction or dissatisfaction. It makes the competition of enterprises more effectively and efficiently (Blackwell et al., 2005). And there have been many researches showing that there is a strong relationship between customer satisfaction, customer retention and organizational profitability. Thus, many organizations have set customer satisfaction as the key goal in operating their business. They have seriously invested in their product/service quality and their customer service which are the core areas directly contributing to the customer satisfaction.

According to Oliver (1997), customer satisfaction was defined as the consumer's fulfillment response which is, in fact, a judgment that a product or service provided (or is providing) a pleasurable level of

consumption-related fulfillment, including levels of under- or over-fulfillment. In his research, Oliver explained that a consumption-related fulfillment is considered pleasurable once the consumption gives pleasure, such as better quality, advanced functions, multi-task, or improves the current states of the product or service. Moreover, fulfillment is just limited to meeting the customer's needs and expectation but there are also over-fulfillment and under-fulfillment. Over-fulfillment is a state of satisfaction to a product or service which provides additional unexpected pleasure; whereas, underfulfillment is obtained when the product or service gives greater pleasure than one anticipates in a given situation. In some cases, over-fulfillment and/or under-fulfillment can be result in dissatisfying just because the product and/or service offers too much or too little compared to the actual needs. This was a psychological approach in defining customer satisfaction.

There are still many other definitions but the highly recognized one was suggested by Hill and Alexander (2006) which stated that "Customer satisfaction is a measure of how your organization's total product performs in relation to a set of customer requirements". Customer satisfaction is in customer's subjective mind which may or may not fully match with the reality of the situation. Therefore, customer satisfaction is also referred to how customers perceive the product or service performed by an organization. People tend to form their attitudes quickly but change them slowly.

2.3. Consumer behavior

Over the past few years, customer satisfaction has received a large academic attention and extensive research has been done in this field as discuss in a book by Grigoroudis and Siskos (2010). The special importance of customer satisfaction lies in that it influences future and repeat purchase by word-of-mouth communication and complaint behavior (Fornell et al., 1996; Homburg and Rudolph, 2001). Recently, more and more organizations have well recognized the importance of customer satisfaction. That acquiring new customers is usually so costly compared to keeping existing ones (Daly, 2002; Gillen, 2005; Knemeyer et al., 2003; Hill and Alexander, 2006) has been widely understood in the modern business environment.

By examining post-consumption evaluation, companies can redirect business from understanding customer satisfaction or dissatisfaction to have effective and efficient competition (Blackwell et al., 2005). And there have been many researches showing that there is a strong relationship between customer satisfaction, customer retention and organizational profitability (Koska, 1990; Nelson et al., 1992; Aaker and Jacobson, 1994; Ittner and Larcker, 1996; Zeithaml et al., 1996). Thus, many organizations have set customer satisfaction as the key goal in their business operation. They have seriously invested in their product/service quality

and their customer service which are the core areas directly contributing to the customer satisfaction.

A satisfied customer is more likely to bring more business by repurchasing, buying more often, buying more ranges, recommending to others, etc. Moreover, satisfied customers are less likely to seek for alternatives or substitutes at lower prices from other competitors because they have a strong belief in that the current supplier is much better than any other in matching their long-term requirements (Hill and Alexander, 2006). Besides, satisfied customers are possibly considered as the most effective marketers for a certain product or service in particular or for a whole organization that offers the product or service (Tyson, 2011; Bergh, 2013). And, the organization does not pay anything to the "marketers". Conversely, dissatisfied customers will not only stop purchasing the product or service but also probably tell many others about their experience, resulting in a strong shift in the business opportunity from the organization to its competitors (Blackshaw, 2008). It is quite difficult to make a customer satisfied but a satisfied customer easily becomes unsatisfied after just one or two negative situations. There are few third chances to take them back.

By expanding the adaption theory of Helson (1964) and Oliver (1977, 1980, 1981) believed that expectations can act as standards of performance which are of helpful reference for customer conclusion. This approach has been referred to as the expectancy disconfirmation theory because its content describes how satisfaction established in the expectation disconfirmation framework. If the perceived quality is better than expected, customers are usually more satisfied and vice versa; whereas, if the quality just meets the expectation, it is said that the customer is in confirmation. Hence, Vavra (1997) suggested that the customer satisfaction may be considered as a function of various expectations which are modified by perceived disconfirmation.

The way that consumers show out in looking for evaluating and disposing of using. products/services that they expect to satisfy their needs is referred as consumer behavior (Schiffman and Kanuk, 1994). Consumer behavioral intention, one of the study subjects of consumer behavior, has been one of the most preferred topics in marketing literature because it leads to better competitive advantage for firms once well-managed (Sumaedi et al., 2014). Lai and Chen (2011) pointed that favorable behavioral intention makes price elasticity insensitive; and it also ignores the attractiveness of competitor (Gummesson, 2011). Besides, Clemes et al. (2008, 2010) considered behavioral intention as a mediating variable between customer satisfaction and economic benefits like profitability, market share and income; and claimed that firms will not obtain significant profits unless their customers are satisfied and have favorable behavioral intention.

Practically, understanding customer is very crucial to enterprises in establishing effective

marketing strategies to enhance their market positions by satisfying their customers. Thus, business organizations nowadays attention to the important role of getting to know the customer behavior, especially, in making buyingimprove their organizational to competitiveness because the main focus of consumer behavior is about how individuals decide to spend their available resources (time, money, effort) on buying desired products or using a service, including what- why- when- where they buy, how often they make repurchase, how they evaluate the purchase and the influence of such evaluation on their future intention, and how they get rid of it (Schiffman and Kanuk, 1994). As such, it is always an important issue for all marketers to have communication with consumers and receive their feedbacks in order to make them satisfied and loyal with the products or services that the organization offers; for examples, Negeri (2017) used an econometric approach to identify the determinants of coffee market outlet choice while Negeri (2018) examined the determinants of formal financial saving behavior of rural households. Similarly, fully capturing the determinants of certain behavior of Vietnamese consumers has well attracted the special interest of numerous scholars; for examples, Công (2017) focused on the factors affecting the green buying intention of international tourists in Nha Trang, Vũ and Lê (2018) investigated those affecting Hanoians' intention in buying Chinese garment products, Nguyễn (2018) considered those affecting the decision in buying a house in Vietnam, Yến and Hương (2015) explored those affecting the consumers' intention in using mobile bandwidth in Hanoi region, or Phan and Hoàng (2015) discovered those affecting the choice of domestic tourists of 2star hotels in Hue City, etc.

3. Research methods

This study aims at identifying the determinants in choosing a favorite beer of Vietnamese consumers; thus, we employ an exploratory factor analysis with a survey designed to probe very deeply into all aspects of beer that influence consumer's choice. A self-completion questionnaire was developed with the consultants from 5 experts in the beer industry and pilot study of 40 consumers. After making some improvement, the final version consists of two major parts as the following:

- Part 1: General information. This part has five questions regarding to gender, age, profession, income, living location, drinking experience, the time of recent purchase, the place of purchase, and factors affecting their buying decision. All of these factors usually affect the need and requirement in choosing their favorite beer. Descriptive statistics are used in analyzing the data in this part.
- Part 2: The importance levels of different aspects that affect the consumer decision-making in choosing a favorite beer. There are 23 statements

regarding to price, promotion, package, color, taste, smell, storage, alcohol content, brand, etc. as shown in Table 1. This part is done with exploratory factor analysis (EFA), and Reliability analysis in SPSS software.

The EFA approach is used because we have no idea about the exact variables affecting their decision-making; moreover, it will group highly correlated variables together into appropriate factors to represent key dimensions within the data set (Williams et al., 2010). Due to the large sample size in this study, factor loading of 0.3 should be used (Hair et al., 2010). In this analysis method, the suggested overall criteria making the appropriate are summarized in Table 2. The factors extracted will be further analyzed for their reliability by using Cronbach's Alpha which is considered the appropriate to measure the consistency of different substantive areas within a single construct (Cronbach, 1951; Green et al., 1977; Revelle, 1979; Schmitt, 1996). In social science, Cronbach's Alpha larger than 0.6 is considered appropriate (George and Mallery, 2003).

Then, we started our official survey in three different regions, including North, Middle and South of Vietnam across 34 provinces. We directly delivered 8,000 hard copies of the questionnaire; and only 4,583 copies were collected because several people didn't want to join our survey. After our data screening process, we finally have 2,138 valid observations for our data analysis whose results are presented in the next section.

Table 1: Encoded system for 23 items in Part 2

No.	Statement	Codes
1	Reasonable price	C1
2	Promotion programs of company	C2
3	Presentable packaging	C3
4	Languages printed on the bottle of products	C4
5	Wide distribution channel	C5
6	The net weight of beer in one bottle	C6
7	Expiry time of product	C7
8	Level of beer foam after pouring	C8
9	The time remains beer foam after pouring	C9
10	Color of the beer after opening	C10
11	Good smell of the beer after opening	C11
12	Bitter taste of beer	C12
13	Piquancy taste of beer	C13
14	Sweet taste of beer	C14
15	The time remains beer flavor after pouring	C15
16	Level of alcohol in beer	C16
17	Recognizable brand	C17
18	Trusted brand	C18
19	Clear contact information of the manufacturer	C19
20	Different types of beer from the same brand	C20
21	The widespread advertisement	C21
22	The ease in storage	C22
23	The ease in use	C23

4. Empirical results

4.1. Descriptive statistics of participants

Table 3 briefly presents the descriptive statistics of the participants after the data are screened. The table demonstrates that among the 2,318 people

interviewed and recorded, females account for about 34% and males account for 66% of the observations.

Table 2: Summary of criteria used in EFA

No.	Parameters	Values
1	Kaiser-Meyer-Olkin (KMO)	≥ 0.50
2	Bartlett's Test of Sphericity significance	< 0.05
3	Eigenvalue	> 1.00
4	Total variance explained	≥ 50%
5	Factor loading	≥ 0.30

Table 3: Descriptive statistics of participants

Demographic Characteristics Freq*. Perc**.					
	Female	789	34.04%		
Gender	Male	1529	65.96%		
	18-25	695	29.98%		
	26-35	591	25.50%		
Age range	36-45	510	22.00%		
rige range	46-55	394	17.00%		
	>55	128	5.52%		
	Hanoi	792	34.17%		
Living location	Ho Chi Minh	1193	51.47%		
Erving rocation	Others	333	14.36%		
	Director/manager	139	6.00%		
	Homemaker	139	6.00%		
	Engineer	232	10.01%		
	Civil servant	336	14.50%		
	Retired	116	5.00%		
Professions	Staff	243	10.48%		
1 10103310113	Technician	185	7.98%		
	Businessman	127	5.48%		
	Students	580	25.02%		
	Teacher	162	6.99%		
	Others	59	2.54%		
	<1,050	440	18.98%		
Monthly income	1,050-3,000	452	19.50%		
(1000vnd/month)	3,000-5,000	637	27.48%		
(1000viiu/ iiioiitii)	>5,000	789	34.04%		
	Less than 6 months	348	15.01%		
Drinking	7 months - 1 year	267	11.52%		
experience	1year- 3years	348	15.01%		
скрепенее	Over 3 years	1355	58.46%		
	This month	1472	63.50%		
	Last month	406	17.52%		
Recent purchase	2-3 months ago	197	8.50%		
Recent purchase	4-5 months ago	104	4.49%		
	Over 6 months ago	139	5.99%		
	Agents	365	15.75%		
	Supermarkets	214	9.23%		
	Restaurants/	217	7.2370		
	Taprooms	429	18.51%		
Purchase place	Others	151	6.51%		
i di chase place	Interests	313	13.50%		
	Habits	214	9.23%		
	Relaxation	371	16.01%		
	Others	261	11.26%		
	Advertisements	355	15.31%		
	Salesman	333 137	5.91%		
		232	10.01%		
Affecting factor	Seeing others use	865	37.32%		
	Friends				
	Family	452 277	19.50%		
	Other	277	11.95%		

Notes: * Frequency; ** Percentage

This is possibly due to the fact that drinking beer is more preferred by men than women. Taprooms are so common in Vietnam and every person does not need to have much money to have a drink there. It is easily to find crowded men in taprooms, restaurants drinking beer. Most of the females in this survey were interviewed when they were buying their beers at supermarket stands. Also, as per the culture of Vietnamese, women rarely drink beer in public places such as taprooms. Vietnamese people

would usually invite their friends, their colleagues or partners to have coffee in coffee shops or have beer in taprooms or restaurants. It's a part of Vietnamese culture

In term of age range, it is quite interesting that young Vietnamese who are under 26 years old account for the largest proportion of the observations. This could be explained by the fact that young people tend to invite their friends and colleagues to have beer for a so-called social communication and young people tend to have more gossips with their friends in taprooms or restaurants. The age 26-35 is not considered old enough and the people in this age group also want to find a good job so they can also behave the same as the first group. However, these people tend to have fewer gossips than the younger people. They usually have talks with their colleagues and business partners.

Other demographic characteristics such as living locations, professions, monthly income, experience in drinking beer, their recent purchase, place of purchase, their reasons for drinking beer and factors affecting their buying decision shown Table 3 clearly depict the full picture of the participants investigated in this study.

4.2. Exploratory factor analysis

The statements from C1-C23 are analyzed with EFA approach to find out the determinants of decision-making of Vietnamese customers in buying their favorite beer. In this analysis, we found that C7 and C20 were insignificant in the scales; thus, they were dropped out from the scales. The outputs from SPSS under EFA are shown in Table 4.

As shown in Table 4, the KMO value for this analysis is 0.832 with the significance of Bartlett's Test of Sphericity is 0.000. Therefore, it can be said that using EFA in this study is appropriate. Table 5 shows that the eigenvalues for the first four components are all greater than 1 and these factors account for about 75% of the total variance. This suggests that the scale items are unidimensional. The 23 statements are extracted into four factors as shown in Table 6.

Table 4: KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure	of Sampling Adequacy	0.832
	Approx. Chi-Square	40558.793
Bartlett's Test of Sphericity	df	253
	Sig.	0.000

 Table 5: Total variance explained

	Initial Eigenvalues		Rotation Sums of Squared				
No.	illidal Eigenvalues			Loadings			
NO.	Total	% of	Cum.	Total	% of	Cum. %	
		Var	%		Var		
1	10.961	47.214	47.214	7.015	32.173	31.083	
2	2.933	15.091	62.305	3.812	16.442	45.698	
3	1.432	6.578	68.883	2.904	12.539	59.061	
4	1.272	5.901	74.784	1.569	6.903	74.784	
5	1.061	3.975	78.759				
6	0.773	3.481	82.24				

Table 6: Rotated component matrix

Components	Table 6: Rotated component matrix						
Bitter taste 0.910 Piquancy taste 0.905 Sweet taste 0.891 Time of foam after pouring 0.889 Color after opening 0.880 Smell after opening 0.856 Level foam after pouring 0.764 Time flavor after pouring 0.764 Time flavor after pouring 0.764 Presentable packaging 0.784 Presentable packaging 0.717 Languages printed on products Reasonable price 0.695 Net weight of beer in one bottle Ease in storage Clear contact information Ease in use Widespread advertisement Recognizable brand Wide distribution channel 0.731	Components	I omnonante					
Piquancy taste 0.905 Sweet taste 0.891 Time of foam after pouring 0.889 Color after opening 0.880 Smell after opening 0.856 Level foam after pouring 0.764 pouring 0.764 Time flavor after pouring 0.743 Alcohol level 0.686 Presentable packaging 0.717 Languages printed on products Reasonable price 0.695 Net weight of beer in one bottle Ease in storage 0.835 Clear contact information Ease in use Widespread advertisement Recognizable brand Wide distribution channel 0.731	Components	1	2	3	4		
Sweet taste 0.891 Time of foam after pouring 0.889 Color after opening 0.880 Smell after opening 0.856 Level foam after pouring 0.764 Time flavor after pouring 0.743 Alcohol level 0.686 Presentable packaging 0.717 Languages printed on products Reasonable price 0.695 Net weight of beer in one bottle Ease in storage 0.835 Clear contact information Ease in use Widespread advertisement Recognizable brand Wide distribution channel 0.731	Bitter taste	0.910					
Time of foam after pouring Color after opening 0.880 Smell after opening 0.856 Level foam after pouring Time flavor after pouring Alcohol level 0.686 Presentable packaging Promotion programs 0.717 Languages printed on products Reasonable price 0.695 Net weight of beer in one bottle Ease in storage 0.835 Clear contact information Ease in use 0.765 Widespread advertisement Recognizable brand Wide distribution channel 0.889 0.880 0.764 0.764 0.784 0.784 0.717 0.713 0.713 0.682 0.695 0.682 0.835 0.835 0.819 0.765 0.765 0.792	Piquancy taste	0.905					
pouring Color after opening 0.880 Smell after opening 0.856 Level foam after pouring 0.764 Time flavor after pouring Alcohol level 0.686 Presentable packaging Promotion programs 0.717 Languages printed on products Reasonable price 0.695 Net weight of beer in one bottle Ease in storage Clear contact information Ease in use Widespread advertisement Recognizable brand Wide distribution channel 0.731	0	0.891					
Color after opening 0.880 Smell after opening 0.856 Level foam after pouring 0.764 Time flavor after pouring 0.743 Alcohol level 0.686 Presentable packaging 0.717 Languages printed on products Reasonable price 0.695 Net weight of beer in one bottle Ease in storage Clear contact information Ease in use Widespread advertisement Recognizable brand Wide distribution channel 0.731	Time of foam after	0.889					
Smell after opening Level foam after pouring Time flavor after pouring Alcohol level Presentable packaging Promotion programs Languages printed on products Reasonable price Net weight of beer in one bottle Ease in storage Clear contact information Ease in use Widespread advertisement Recognizable brand Wide distribution channel 0.764 0.743 0.784 0.784 0.717 0.713 0.713 0.695 0.695 0.695 0.695 0.682 0.835 0.835 0.819 0.765 0.765 0.7022 0.792	pouring	0.007					
Level foam after pouring Time flavor after pouring Alcohol level 0.686 Presentable packaging Promotion programs Languages printed on products Reasonable price 0.695 Net weight of beer in one bottle Ease in storage 0.835 Clear contact information Ease in use 0.765 Widespread advertisement Recognizable brand Wide distribution channel 0.743 0.784 0.717 0.717 0.718 0.719 0.682 0.695 0.835 0.835 0.819 0.765 0.765 0.7722 0.792	Color after opening	0.880					
pouring Time flavor after pouring Alcohol level O.686 Presentable packaging Promotion programs Languages printed on products Reasonable price Net weight of beer in one bottle Ease in storage Clear contact information Ease in use Widespread advertisement Recognizable brand Wide distribution channel O.743 O.784 O.784 O.791 O.791 O.791 O.792 O.792 O.792 O.793 O.794 O.793 O.794 O.793 O.794 O.793 O.794 O.793 O.794 O.793 O.794 O.793 O.793 O.793 O.794 O.793 O.793 O.793	Smell after opening	0.856					
pouring Time flavor after pouring Alcohol level O.686 Presentable packaging Promotion programs Languages printed on products Reasonable price Net weight of beer in one bottle Ease in storage Clear contact information Ease in use Widespread advertisement Recognizable brand Wide distribution channel O.686 O.784 O.717 O.713 O.713 O.695 O.695 O.682 O.682 O.835 O.835 O.819 O.765 O.765 Widespread O.765 O.792	Level foam after	0.764					
pouring Alcohol level O.686 Presentable packaging Promotion programs Languages printed on products Reasonable price Net weight of beer in one bottle Ease in storage Clear contact information Ease in use Widespread advertisement Recognizable brand Wide distribution channel O.686 O.713 O.713 O.713 O.682 O.682 O.835 O.835 O.819 O.765 Widespread O.765 O.792		0.704					
pouring Alcohol level 0.686 Presentable packaging 0.784 Promotion programs 0.717 Languages printed on products Reasonable price 0.695 Net weight of beer in one bottle Ease in storage 0.835 Clear contact information Ease in use 0.765 Widespread advertisement Recognizable brand Wide distribution channel 0.686 0.713 0.695 0.682 0.835 0.819 0.819 0.765 0.765 0.765 0.792	Time flavor after	0.743					
Presentable packaging 0.784 Promotion programs 0.717 Languages printed on products 0.695 Reasonable price 0.695 Net weight of beer in one bottle Ease in storage 0.835 Clear contact information Ease in use 0.765 Widespread advertisement Recognizable brand Wide distribution channel 0.731	pouring	0.743					
Promotion programs 0.717 Languages printed on products 0.713 Reasonable price 0.695 Net weight of beer in one bottle Ease in storage 0.835 Clear contact information Ease in use 0.765 Widespread advertisement Recognizable brand Wide distribution channel 0.731	Alcohol level	0.686					
Languages printed on products Reasonable price Net weight of beer in one bottle Ease in storage Clear contact information Ease in use Widespread advertisement Recognizable brand Wide distribution channel 0.713 0.695 0.682 0.835 0.819 0.819 0.765 0.765 0.765 0.765 0.792	Presentable packaging						
products Reasonable price Net weight of beer in one bottle Ease in storage Clear contact information Ease in use Widespread advertisement Recognizable brand Wide distribution channel O.695 0.682 0.835 0.819 0.765 0.765 Widespread 0.765 0.792	Promotion programs		0.717				
Reasonable price 0.695 Net weight of beer in one bottle Ease in storage 0.835 Clear contact information Ease in use 0.765 Widespread advertisement Recognizable brand 0.792 Wide distribution channel 0.731	Languages printed on		0.713				
Net weight of beer in one bottle Ease in storage 0.835 Clear contact 0.819 Ease in use 0.765 Widespread 0.722 Recognizable brand 0.792 Wide distribution channel 0.731	products		0.713				
one bottle Ease in storage 0.835 Clear contact 0.819 Ease in use 0.765 Widespread 0.722 Recognizable brand 0.792 Wide distribution channel 0.731			0.695				
one bottle Ease in storage 0.835 Clear contact 0.819 information Ease in use 0.765 Widespread 0.722 advertisement Recognizable brand 0.792 Wide distribution channel 0.731	Net weight of beer in		0.602				
Clear contact information Ease in use Widespread advertisement Recognizable brand Wide distribution channel 0.819 0.765 0.765 0.722 0.792	one bottle		0.062				
information Ease in use 0.765 Widespread advertisement Recognizable brand Wide distribution channel 0.819 0.765 0.765 0.792	Ease in storage			0.835			
Information Ease in use 0.765 Widespread advertisement Recognizable brand Wide distribution channel 0.731	Clear contact			0.010			
Widespread advertisement Recognizable brand Wide distribution channel 0.722 0.792 0.793	information			0.015			
advertisement Recognizable brand Wide distribution channel 0.722 0.792 0.731	Ease in use			0.765			
Recognizable brand 0.792 Wide distribution 0.731	Widespread			0.722			
Wide distribution 0.731	advertisement			0.722			
channel 0.731					0.792		
channel	Wide distribution				0.731		
Trusted brand 0.694	•						
Futuration Methods Drivainal Component Analysis	Trusted brand				0.684		

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

By using Cronbach's Alpha coefficient, we tested the internal consistency, also known as scale reliability of the four extracted factors. The results are briefly presented in Table 7.

4.3. Reliability analysis

The Cronbach's Alpha coefficients for the four scales are all greater than 0.6; indicating that they all have high internal consistency. And, all of the values of the items in column Corrected item-total correlation are greater than 0.3; therefore, it is said that the items in the four scales are good enough and reliable for further analysis. In short, based on the values of mean of the importance level, the four factors are ranked as in Table 8.

The above four factors are now called four determinants of selecting favorite beer of Vietnamese consumers. It should be noted that among the four identified factors, the beer quality (FAC1) with the mean value of 4.38 is the most important determinants of the buying decision of Vietnamese consumers. Coming next is the brand and distribution channel (FAC4) with the mean value of 4.10.

The information provided on the products, the clear instruction on how to use and store (FAC3) is also important for the consumers whereas packaging, promotions and price (FAC2) is the least important among them. Any beer company doing their business in Vietnam should carefully consider these four determinants for their proper strategies to meet their customers' expectations. From these findings, we propose the following managerial implications.

Table 7: Reliability analysis

Factor	I able 7: Reliability analysis Items	CITC	α if Item Deleted	α
1 40001	Bitter taste	0.748	0.833	
	Piquancy taste	0.873	0.859	
	Sweet taste	0.896	0.806	
PAC4	Time of foam after pouring	0.896	0.806	
FAC1	Color after opening	0.875	0.837	0.878
(Quality)	Smell after opening	0.883	0.867	
	Level foam after pouring	0.882	0.808	
	Time flavor after pouring	0.798	0.841	
	Alcohol level	0.722	0.875	
	Presentable packaging	0.526	0.727	
FAC2	Promotion programs	0.589	0.706	
(Packaging, promotions, price)	Languages printed on products	0.686	0.648	0.762
(Fackaging, promotions, price)	Reasonable price	0.658	0.682	
	Net weight of beer in one bottle	0.579	0.741	
FAC3	Ease in storage	0.631	0.835	
(Information, ease to use	Clear contact information	0.751	0.830	0.841
and store)	Ease in use	0.897	0.733	0.041
and store)	Widespread advertisement	0.785	0.784	
FAC4	Recognizable brand	0.625	0.753	
(Brand, distribution channel)	Wide distribution channel	0.688	0.656	0.793
(Brand, distribution channer)	Trusted brand	0.692	0.643	
	Extraction Method: Principal Component Ar	ıalysis.		
	Rotation Method: Varimax with Kaiser Norma	ılization.		

Table 8: Rank four factors in the decision-making

Rank		Factor	Mean	Min	Max
1	FAC1	Quality	4.38	3.82	4.83
2	FAC4	Brand, distribution channel	4.10	3.48	4.45
3	FAC3	Information, ease to use and store	3.82	3.51	4.18
4	FAC2	Packaging, promotions, price	3.71	3.29	4.02

5. Conclusion and managerial implications

5.1. Conclusion

Due to the severe competition on the market nowadays, business organizations are paying more and more attention to get to know what factors affect the buying-decisions of their customers (including past, existing and future customers) as well as the satisfaction level of their customers to their products and/or services; because, satisfied customers will bring up profits to them; whereas dis-satisfied customers will take away not only the profits but also business opportunities to other potential customers.

In this study, we investigated the key factors affecting the decision-making of Vietnamese consumers in buying their favorite beer. Four main determinants were found in this study. Any beer company who wants to win on Vietnam market in long term business should pay special attention to these factors. These are the basic requirements that consumers expect from a beer in order for them to select it as a favorite brand. Meeting customers' expectations is a crucial target for most of organizations regardless of whether they are profit or non-profit.

However, it is not easy to achieve the goal of meeting the customers' expectation. Customers are human beings and it is always difficult to measure their behaviors. Getting to know and understand the customers is good enough for the organizations to provide quality products and/or services. Therefore, establishing a close relationship with the customers as well as a good customer service system in dealing with any problems occurred in using the products and/or services becomes almost a must for the organizations in pertaining and improving their market-shares these days. Hence, some managerial implications are suggested in this study in order to help beer companies meet the expectations of their consumers to take the competitive advantages over its competitors. These solutions are strongly suggested and should be seriously considered and implemented in the real life.

5.2. Managerial implications

There are four important determinants of decision-making of people in buying their favorite beer. These determinants are really the expectations of customers to a certain kind of beer. If a beer can meet these expectations, the beer company can easily win the market. As per the explanations and illustrations shown in Table 8, customers pay the most attention to the quality of the beer (FAC1) when they make their buying-decisions; they also consider the brand and distribution channel of that kind of beer (FAC4). To a less extent, advertisements, the informative labeling, easy usage and storage (FAC3) are also considered in the decision-making process. The least important factor in the process is about the presentable packaging, promotions, prices (FAC2).

Because the four factors are the determinants of decision-making, any company in the beer industry need to pay special attention to them for their sustainable development by supplying what is needed by the customers. Based on the level of importance of these factors, some relevant

managerial implications are suggested in the order of FAC1, FAC4, FAC3 and FAC2.

5.2.1 Satisfy customer expectations on FAC1

Again, customers firstly consider the beer quality before making their buying-decision. The beer quality is determined by the taste, color, smell, foam level, time of retaining beer flavor after pouring and the alcohol level in beer. A freshly poured glass of beer is emotionally attractive due to the creamy head of foam riding on the top surface of the beer. This appeal is not lost even when the foam collapses or the glass is emptied, because a good head of foam will deposit a generous, lacy cling on the glass, and a good cling has special visual attraction for anyone who knows and appreciates good beer. Based on the real practice in beer industry, the formation of beer foam when the beer is poured is one of the most important aspects of beer quality. In fact, proteins originating from barley are important for the formation of foam. Therefore, it is strongly suggested that owning an advanced technology in deriving proteins from barley to form the beer foam.

Beer flavor is always a very complicated subject. There are more than 800 compounds identified in contributing to the characteristic beer flavor. The main flavor characteristic that has been found is the bitter taste derived from the hops. Secondary flavor notes include fruity ester flavors. However, most of the flavor compounds are added in the beer with very small quantities to provide the balanced and refreshing taste of good beer. The flavor components are usually originated from the raw materials, such as malt, adjuncts, water or hops, or are produced by the yeast during fermentation of the wort. Hence, it is very important to select good raw materials and/or yeast strain because these have great influence on the flavor. However, the flavor is also impacted by technological factors which affect the composition of the wort, and the conditions during fermentation, maturation, filtration and bottling. Therefore, in order to improve the beer quality, they should find the right supplying source for the raw materials and/or searching for the best yeast strain in brewing their beers. Again, investment in manufacturing technology becomes more and more critical in the long-term development.

Color is one of the most important factor affecting the appreciation and evaluation of beer in subtle but definite ways. The color of beer can be a powerful but often subconscious generator of the "halo effect" which is defined as the situation where a positive (or negative) response to one attribute leads to an over evaluation (or under evaluation) of other attributes. Therefore, color control in brewing is important.

5.2.2. Satisfy customer expectations on FAC4

In selecting a favorite beer, consumers also pay much attention to the beer brand and its distribution channel which is known as how easy they can buy their beer. Firstly, it is necessary to tell the difference between brands and products. Brands are "what the consumers buy", while products are "what concern/companies make". Brand is an accumulation of emotional and functional associations.

Brand is a promise that the product will perform as per customer's expectations. It shapes customer's expectations about the product. Brands usually have a trademark which protects them from being used by others. A brand gives particular information about the organization, goods or service, differentiating it from others in marketplace. Brand carries an assurance about the characteristics that make the product or service unique. A strong brand is a means of making people aware of what the company represents and what its offerings are. Or a brand can be defined as a seller's promise to provide consistently a unique set of characteristics, advantages, and services to the buyers/consumers.

Brands simplify consumers purchase decision. Over a period of time, consumers discover the brands which satisfy their need. If the consumers recognize a particular brand and have knowledge about it, they make quick purchase decision and save lot of time. Also, they save search costs for product. Consumers remain committed and loyal to a brand as long as they believe and have an implicit understanding that the brand will continue meeting their expectations and perform in the desired manner consistently. As long as the consumers get benefits and satisfaction from consumption of the product, they will more likely continue to buy that brand. Brands also play a crucial role in signifying certain product features to consumers. Therefore, in this severe competition market, having a strong brand is of great significance to their business development.

Furthermore, in making their decision, people also concern about the ease of buying the beer on the market. If the beer can be bought from any taprooms, restaurant and/or selling agents (called distribution channel), it is more preferred. However, as a matter of fact, any beer company continues to push their distributors to carry only their products, migrating more and more to an exclusive network but it is almost impossible to do so in Vietnam, where there are many different brands available, many taprooms, restaurants and selling agents spring up like the mushrooms. Due to the high competition on the beer market, it is hardly for a distributor to serve only one brand of beer. The distribution of beer is considered an extremely difficult business. It requires a high-volume sale at low margin percentage.

Therefore, further to the suggested solution to use plastic or paper containers with different sizes for a take-away service, they should set up a chain of small stands that can deliver the service as easy as possible. Each stand can be small. Consumers are happy with the kind of service because they can easily buy the wanted products or services at their convenience. This solution can be quickly applied

due to its low investment but high practicability and feasibility.

5.2.3. Satisfy the customer expectations on FAC3

The ease in use, storage, clear contact information and widespread advertisement are the critical issues in the third determinants of the decision-making process. Therefore, it is also very important for beer companies to consider this carefully in its business strategies. Beer bottles are currently offered with crown caps which always require bottle openers to open the bottle. This is sometimes frustrated because the top of the bottles can be easily broken if the cap is not opened properly. Once it is broken, the consumers feel scared which results in the bad image of the beer. Therefore, using the crown ring caps or rip caps is a preferable choice. As it is so easy to open the bottle with this kind of cap, consumers feel more comfortable when buying beer bottles. In addition, it is strongly recommended to use paper cups to protect our living environment.

Regarding to the ease of long storage, it is still a current problem for any company in the beer industry because of the nature of beer. However, for short time storage before using, they can always offer to its customers with some insulators like that of Keg-skin from KegSkins LLC for keg or cozies for bottle and cans because the Keg-skin is able to keep the beer keg cold for more than 5 hours without the hassle and inconvenience of spills, bagged ice, and over-sized tubs; because it is made from high quality, performance-tested Neoprene that insulates the keg and keeps the cold for a long time. Or, for separate bottles or cans of beer, cozies are the best choices to keep the beer cold without ice. Cozies are devices made of neoprene, fabric, or foam, designed to keep beverage inside a bottle cold or hot while allowing the consumer to hold the drinks at normal temperature. It is like giving a jacket for the bottled or canned drinks for insulation purpose.

Also, in this determinant, people also consider the contact information on the product labels. Nowadays, every company should have their contact information on their product labels so that the customers can easily get in touch with them in case needed. A website, a physical address, a customer service phone number as well as hotline number are essentials to be included on the label. Appealing and informative labels not only enhance attractiveness of the product itself but are also a passive selling and marketing tool. An active website on the label is really effective for customers to sign up for an email list, so the company can gather information and start to interact with them to have better understanding of its customers for the sake of better service towards their expectations.

5.2.4. Satisfy the customer expectations on FAC2

This is the last determinant found in this study. In this factor, people consider whether the price is reasonable or not, the promotion programs, the net weight of beer, languages printed on the label and the styles of packaging. Price is always an important factor in decision-making of many buyers or consumers. In the beverage industry, production is up to economic scale. To make good beer at reasonable price, they need to invest in its manufacturing facilities as well as modern technology to lower its production cost. This solution is for a long run strategy as it requires high level of financial support.

In making a buying-decision, promotion plays important roles in directing the customers which product to be bought among the items of the same category. Promoting new or existing products will not only strengthen the brand but also boost sales. Promotions can also be the most cost-effective way to maintain and build brand awareness. A successful promotion program usually has the presence of the integration with the brand identity. Therefore, in most promotion programs, many companies like to leave customers or prospects with something they can keep on their desk or reuse. Hence, personalization of the items in any promotion program is a key factor for its success. If it is personalized, customers will continue to see the company name and become more subconsciously familiar and aware of the brand. This will make the customers to become more comfortable with the product and tend to decide for repurchase in the future. Therefore, in the beer industry, there are too many companies using lighters, pens, etc. in their promotion.

Another element in this determinant is the language printed on the labels of the product. A product label not only provides the ingredients and nutritional information of a product, but also functions as a brand carrier; thus, the label is to be visually appealing and informative enough to draw attention to the item itself and entice consumers into making a purchase. There are ten main elements in creating an attractive and compelling label: color, graphics, readability, fonts, materials, label finish, size, shape, a theme for different flavors and contact information.

Color and graphics will help catch the eye but unless the label is easily readable at a glance then the product will lose its buyers. It is usually said that there are about two seconds to attract the attention of a shopper browsing the aisles of a grocery store which is enough time to read just a handful of words. Therefore, they must improve the appearance and contents of its label for better performance in the long run.

Compliance with ethical standards

Conflict of interest

The authors declare that they have no conflict of interest.

References

- Aaker DA and Jacobson R (1994). The financial information content of perceived quality. Journal of Marketing Research, 31(2): 191-201.
 - https://doi.org/10.1177/002224379403100204
- Ameli OZ and Bagheri A (2016). Identifying the effects of business intelligence in business process. International Journal of Advanced and Applied Sciences, 3(1): 81-86.
- Atkinson KM (2016). The beer market in Vietnam. Chairman's Insights. Available online at: www.grantthornton.com.vn/insights/articles/chairmansinsights/the-beer-market-in-vietnam
- Bergh JVD. (2013). The recommender revolution. Lannoo Publishers, Tielt, Belgium.
- Blackshaw P (2008). Satisfied customers tell three friends, angry customers tell 3,000: Running a business in today's consumer-driven world. Crown Publishing Group, New York, USA. PMCid:PMC2504007
- Blackwell RD, Miniard PW, and Engel JF (2005). Consumer behavior. 10th Edition, South-Western College Publishing, Ohio, USA.
- Clemes MD, Gan C, and Ren M (2010). Synthesizing the effects of service quality, value, and customer satisfaction on behavioral intentions in the motel industry: An empirical analysis. Journal of Hospitality and Tourism Research, 35(4): 530-568. https://doi.org/10.1177/1096348010382239
- Clemes MD, Gan C, Kao TH, and Choong M (2008). An empirical analysis of customer satisfaction in international air travel. Innovative Marketing, 4(2): 50-62.
- Công LC (2017). Analysis of factors affecting green consumption behavior: An empirical case of International tourist in Nha Trang. Journal of Economics and Development, 241: 96-104. [In Vietnamese]
- Cronbach LJ (1951). Coefficient alpha and the internal structure of tests. Psychometrika, 16(3): 297-334. https://doi.org/10.1007/BF02310555
- Czarnecki MT (1999). Managing by measuring: How to improve your organization's performance through effective benchmarking. Amacom, New York, USA.
- Daly JL (2002). Pricing for profitability: Activity-based pricing for competitive advantage. John Wiley and Sons, New Jersey, USA.
- DI Marketing (2015). Study about the beer consumption of Vietnamese. Available online at: www.slideshare.net/dimvn/its-all-about-the-beer
- Dutka AF (1995). AMA handbook for customer satisfaction. NTC Business Books, Lincolnwood, USA.
- Edosomwan JA (1993). Customer and market-driven quality management. ASQC Quality Press, Milwaukee, Wisconsin, USA.
- Engel JF and Blackwell RD (1982). Consumer behavior. 4^{th} Edition, The Dryden Press, Chicago, Illinois, USA.
- Engel JF, Blackwell RD, and Kollat DT (1978). Consumer behavior. $3^{\rm rd}$ Edition, The Dryden Press, Hinsdale, USA.
- EVBN (2016). Vietnam's beverage industry. Research Report, EU-Vietnam Business Network. Hồ Chí, Vietnam. Available online at:
 - www.eurosphere.com.vn/vietnam-beverage-industry-report
- Fornell C, Johnson MD, Anderson EW, Cha J, and Bryant BE (1996). The American customer satisfaction index: Nature, purpose, and findings. The Journal of Marketing, 60(4): 7-18. https://doi.org/10.2307/1251898
- George D and Mallery P (2003). SPSS for Windows step by step: A simple guide and reference. 11.0 Update, $4^{\rm th}$ Edition, Allyn and Bacon, Boston, USA.

- Gerson RF (1993). Measuring customer satisfaction. Menlo Park, USA. PMCid:PMC1297872
- Giang NK and Chau MN (2017). ThaiBev is chief bidder for Vietnam beer stake deemed pricey. Available online at: www.bloomberg.com/news/articles/2017-12-12/thaibeverage-registers-to-buy-more-than-25-stake-in-sabeco
- Gillen T (2005). Winning new business in construction. Gower Publishing Ltd., Farnham, UK. PMCid:PMC1884782
- Green SB, Lissitz RW, and Mulaik SA (1977). Limitations of coefficient alpha as an index of test unidimensionality. Educational and Psychological Measurement, 37(4): 827-838. https://doi.org/10.1177/001316447703700403
- Grigoroudis F and Siskos Y (2010). Customer satisfaction evaluation: International series in operations research and management science. Springer, New York, USA. https://doi.org/10.1007/978-1-4419-1640-2 PMid:21115262
- Gummesson E (2011). Total relationship marketing. Routledge, Abingdon, UK. https://doi.org/10.4324/9780080880112
- Hair JJF, Black WC, Babin BJ, and Anderson RE (2010). Multivariate data analysis: A global perspective. Pearson Prentice Hall, New Jersey, USA.
- Helson H (1964). Adaptation-level theory. Harper and Row, New York, USA. PMid:14165647
- Hill N and Alexander J (2006). The handbook of customer satisfaction and loyalty measurement. 3rd Edition, Gower Publishing, Aldershot, UK.
- Homburg C and Rudolph B (2001). Customer satisfaction in industrial markets: Dimensional and multiple role issues. Journal of Business Research, 52(1): 15-33. https://doi.org/10.1016/S0148-2963(99)00101-0
- Ittner CD and Larcker DF (1996). Measuring the impact of quality initiatives on firm financial performance. Advances in the Management of Organizational Quality, 1(1): 1-37.
- Knemeyer AM, Corsi TM, and Murphy PR (2003). Logistics outsourcing relationships: Customer perspectives. Journal of Business Logistics, 24(1): 77-109. https://doi.org/10.1002/j.2158-1592.2003.tb00033.x
- Koska MT (1990). High-quality care and hospital profits: Is there a link?. Hospitals, 64(5): 62-64. PMid:2303240
- Lai WT and Chen CF (2011). Behavioral intentions of public transit passengers-The roles of service quality, perceived value, satisfaction and involvement. Transport Policy, 18(2): 318-325.
 - https://doi.org/10.1016/j.tranpol.2010.09.003
- Lincoln M (2016). Alcohol and drinking cultures in Vietnam: A review. Drug and Alcohol Dependence, 159: 1-8. https://doi.org/10.1016/j.drugalcdep.2015.10.030 PMid:26802499 PMCid:PMC4725306
- Mohammed GO, Hasaballah AHA, Almohaimmeed B, and Al-Tit AA (2017). The impact of product performance on brand loyalty mediated by customer satisfaction: Study in Sudanese service industry. International Journal of Advanced and Applied Sciences, 4(1): 116-122. https://doi.org/10.21833/ijaas.2017.01.017
- Monsef SMS (2015). The relationship between service quality and student satisfaction (case study): Tidewater University of applied sciences in Bandar Anzali. International Journal of Advanced and Applied Sciences, 2(11): 99-105.
- Moosaei R and Safaei AA (2016). Classification of service delivery to airport passengers using data mining. International Journal of Advanced and Applied Sciences, 3(6): 87-94.
- Negeri MA (2017). Determinants of market outlet choice of coffee producing farmers in Lalo Assabi district, West Wollege Zone, Ethiopia: An econometric approach. Journal of Economics and Development, 19(2): 48-67.

- Negeri MA (2018). Application of a probit model in assessing determinants of formal financial saving behavior of rural households: The case of sinana district, Ethiopia. Journal of Economics and Development, 20(2): 94-106.
- Nelson EC, Rust RT, Zahorik A, Rose RL, Batalden P, and Siemanski BA (1992). Do patient perceptions of quality relate to hospital financial performance?. Journal of Health Care Marketing, 12(4): 6-13. **PMid:10123586**
- Nguyễn TA (2018). Evaluation of factors affecting the decision in house purchase in Vietnam. Journal of Economics and Development, 252(II): 2-10. [In Vietnamese]
- Oliver RL (1977). Effect of expectation and disconfirmation on postexposure product evaluations: An alternative interpretation. Journal of Applied Psychology, 62(4): 480-486. https://doi.org/10.1037/0021-9010.62.4.480
- Oliver RL (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. Journal of Marketing Research, 17(4): 460-469. https://doi.org/10.1177/002224378001700405
- Oliver RL (1981). Measurement and evaluation of satisfaction processes in retail settings. Journal of Retailing, 57(3): 25-48.
- Oliver RL (1997). Satisfaction: A behavioral perspective on the consumer, Irwin-McGraw-Hill, New York, USA,
- Phan TML and Hoàng TAT (2015). Study of factors affecting the selection of 2-star hotels among domestic tourists to Jue. Journal of Economics and Development, 219: 78-86. [In Vietnamesel
- Revelle W (1979). Hierarchical cluster analysis and the internal structure of tests. Multivariate Behavioral Research, 14(1):

https://doi.org/10.1207/s15327906mbr1401_4 PMid:26766619

- Salahat MA and Majid AHBA (2016). Linking leadership styles to customer satisfaction of Palestinian insurance sector: Mediating role of employees' performance. International Journal of Advanced and Applied Sciences, 3(11): 73-82. https://doi.org/10.21833/ijaas.2016.11.013
- Schiffman LG and Kanuk L (1994). Consumer behavior. Prentice Hall, Englewood Cliffs, USA. PMCid:PMC1275920
- Schmitt N (1996). Uses and abuses of coefficient alpha. Psychological Assessment, 8(4): 350-353. https://doi.org/10.1037/1040-3590.8.4.350
- Sumaedi S, Bakti IGMY, Astrini NJ, Rakhmawati T, Widianti T, and Yarmen M (2014). Public transport passengers' behavioural intentions. Springer Science and Business Media, Berlin, Germany. https://doi.org/10.1007/978-981-4585-24-8
- Tyson E (2011). Investing for dummies. John Wiley and Sons, New Jersey, USA.
- Vavra TG (1997). Improving your measurement of customer satisfaction: A guide to creating, conducting, analyzing, and reporting customer satisfaction measurement programs. ASQC Quality Press, Mexico, USA.
- Vũ HT and Lê THH (2018). Study of factors affecting the intention of Hanoi people in buying Chinese garments. Journal of Economics and Development, 253: 70-79. [In Vietnamese]
- Williams AP, Allen CD, Millar CI, Swetnam TW, Michaelsen J, Still CJ, and Leavitt S (2010). Forest responses to increasing aridity and warmth in the Southwestern United States. Proceedings of the National Academy of Sciences, 107(50): 21289-21294. https://doi.org/10.1073/pnas.0914211107

PMid:21149715 PMCid:PMC3003095

- Worldometers (2018). Vietnam population. Available online at: www.worldometers.info/world-population/vietnampopulation
- Yến LTH and Hương LTL (2015). Factors affecting buyers' intention in using mobile broadband services in Ha Noi.

Journal of Economics and Development, 214(II): 56-63. [In Vietnamese] $\,$

Zeithaml VA, Berry LL, and Parasuraman A (1996). The behavioral consequences of service quality. The Journal of Marketing,

60(2): 31-46.

https://doi.org/10.2307/1251929