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THE CRITERIAS FOR ASSESSING THE SHARING SERVICE CAPACITY OF TRANSPORTATION COMPANIES IN VIETNAM

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Abstract

In recent years, the emergence of Grab and Uber has facilitated the strongly development of the sharing economy in Vietnam. The issue of sharing in traffic is very clear through car sharing, car rental, car pooling, ride sharing...The article uses the interview method and secondary data sources. The method develops the criterias for assessing the sharing service capacity which provided by a group of transportation companies in Vietnam. Thus, the sharing service capacity of transportation companies is assessed in three aspects: (1) Evaluate behavior customer: the reliability of the service, the price of the service, the reputation of the enterprise; (2) Evaluate capacity of sharing service provider in terms of value structure: the quality of service, the response time, the transparency of information; (3) Evaluate the core capacity of the service delivery system: the system technology, the staffing capacity, the financial resources, the marketing and promotion capacity.

Introduction

In Vietnam, there are many foreign and Vietnamese companies providing transportation services such as Grab, Uber, Dichungxe, Gonow ... In the context of globalization, The rapid development of infrastructure, new technology, the competition of enterprises in the field more and more exciting. Since then, businesses have raised the problem of capacity management to provide services to satisfy and retain customers. For the purposes of this study, the results will give management implications to help the supplier recognize the role of each of the factors that provide customer satisfaction, in order to provide reasonable strategies.

Literature Review

Sharing Economy and Transport Sharing Services

According to Belk (2007), the sharing economy is the act and the process of distributing what we let others use and take or take something from others to use. According to Belk (2014), sharing actions include borrowing something, giving gifts, transferring ownership of the object, or exchanging one another. And, the shared economy involves coordinating the acquisition and distribution of resources at a premium or non-monetary value.

Collaborative consumption - a socio-economic model based on the shared usage of some kind of commodities illustrates how it is possible to avoid, or at least delay, waste by bartering, swapping, gifting, renting, trading, lending and borrowing multiple, underused or unwanted goods between groups of individuals (Botsman and Rogers, 2011). Made possible through community interaction and, increasingly, use of network technologies, collaborative consumption has grown in such a way that sharing has been described as having turned from a private or local behaviour into a transformational movement able to disrupt traditional business models (Owyang et al., 2014). Well known examples include eBay, Airbnb, TaskRabbit, BlaBlaCar, Uber, and Zipcar.

The principle of carsharing is simple: individuals gain the benefits of private vehicle use without the costs and responsibilities of ownership. Rather than owning one or more vehicles, a household or business accesses a fleet of shared vehicles on an as-needed basis. The benefits of carsharing directly align with some of the goals outlined in the SMP 2015. A study of City CarShare members found that 30 percent of members shed one or more of their own personal cars, and two-thirds chose to postpone the purchase of another vehicle after using the service for two years (Cervero and Tsai, 2004). An aggregate-level study of 6,281 people who participated in carsharing programs in the U.S. and Canada documented these impacts: 25 percent of members sold a vehicle due to carsharing, and another 25 percent postponed purchasing a vehicle. The study concluded that one carsharing vehicle replaces 9 to 13 vehicles among carsharing members. This study also documented reductions in VMT (27 to 43 percent) and in GHG emissions (a 34 to 41 percent decline or an average reduction of 0.58 to 0.84 metric tons/household) (Martin and Shaheen, 2011). A case study in Montreal, Canada found that carsharing members have a modal split with auto usage significantly lower than that of noncarsharing members (Sioui et al., 2013). Furthermore, numerous studies of roundtrip carsharing in North America found that members saved an average of $154 to $435 per month per carsharing household when compared to their private vehicle-use expenses (Shaheen et al., 2012a). Businesses can also sign up for carsharing, providing at-work mobility options for their employees. A recent aggregate-level study of Zipcar for Business members showed that two in five members sold or avoided buying a vehicle due to joining Zipcar through their employers (Shaheen and Stocker, 2015).

The Service Capacity

According to the Vietnamese dictionary, capacity is ability, subjective or natural condition available to perform an activity, or capacity is the quality of psychology and physiology to give people the ability to complete into a certain activity with high quality. The capacity of an organization is reflected in the degree to which the organization's capabilities and resources are used to implement key activities.

An enterprise's service delivery capacity is defined as the integration of capabilities and resources that are mobilized to propose and deliver value to meet customer service needs and achieve business strategy goals in the long-term. The approach and structure of service delivery capacity of the enterprise in three views as follows:

The first, the capacity to provide services based on based on customers' buying behavior of enterprises: According Philip Kotler (2001), there are 5 basic criterias constituting the supply capacity of enterprises in the theoretical of purchasing services behavior of customers: 1.The level of attractiveness of the market offering depends on Outstanding products and services, Prices, Commercial conditions, People, Facilities, Uniforms, Tangible elements, Brand image; 2.The level of reliability and added value of specialized services depends on Product quality, Services product structure, Supply capacity, Level of development of core products and services to specialized services; 3.Reputation and credibility depends on: Build and brand value, Develop communication systems, Assess the strength of the business; 4.Reliability and quality of overall customer service depends on Customer care, Customer reliability with the business; 5.Flexibility and dynamism of the business with the market depends on The level of development according to customer needs, Updated information and structure.

The second, the capacity to provide services according to value structure: According D.Aaker (2002) and K.Keller (2004), there are 3 criterias: 1.Ability to choose value for target customers depends on Target market, Target market value, The value of offer and differentiation; 2.Capability to manage and develop target customers are Communication to attract, Retain and develop, Ability to CRM; 3.Targeted customer demand management.

The third, the capacity for service according to core competencies: According P.Reed (1998), there are 5 criterias: 1.Financial capacity are Financial position, Financial position, Timely financing and balance of service provision; 2.Marketing service capabilities depends on Marketing strategy management, Marketing mix and control, Interactive marketing; 3.Material and technical infrastructure capabilities based on Material evidence for customers, Information technology infrastructure, Integrated business communication infrastructure; 4.Capacity of the professional staff of the enterprise include Size, Level, Skills, Behavior and capacity of service relation; 5.Capacity of enterprise management knowledge creation is Promoting corporate identity.

Hypotheses

Based on the theory of sharing economy, transport sharing services and criteria service capacity, the authors propose that a model of the criterias for assessing the sharing service capacity of transportation companies in Viet Nam as follows:

$$Y = \beta + \beta_1 * HVKH + \beta_2 * NCCDV + \beta_3 * NLCLHT$$

Inside:

Y: Dependent variable represents the capacity of sharing service transportation companies in Viet Nam (NLCU).

HVKH is a measure of customer behavior measured by 4 observable variables: the attractiveness of the promotion (CTKM), the added benefit of the service (LIGT), the reputation of the business brand (DNNT), the price flexibility (LHGC).

CTGT is the criterion value structure is measured by 3 observation variables: the accumulative points for regular customers (CTTD), the diversified types of services (DDLH), the customer relation service (CSKH).

NLCL is the core competency criterion, measured by 3 observable variables: the financial resources of enterprises (NLCT), the application of new technologies (CNHD), the professional drivers (TXCN).

β_1, β_2, β_3 are parameters corresponding to HVKH, CTGT, NLCT.

β: coefficient for evaluating the impact of factors other than model on dependent variable Y in terms of independent variables of zero.

With this research model, the research hypotheses are as follows:

Hypothesis H1: The customer behavior is one of the criterias for assessing the sharing service capacity of transportation companies in Viet Nam and has effect it.

Hypothesis H2: The criterion value structure is one of the criterias for assessing the sharing service capacity of transportation companies in Viet Nam and has effect it.

Hypothesis H3: The core competency criterion is one of the criterias for assessing the sharing service capacity of transportation companies in Viet Nam and has effect it.

Research Methods

Data and sample

The author creates questionnaires with the Likert scale questionnaire with 5 levels of influence. Of which, level 1 - No impact; Level 2 - Low impact; Level 3 - Average Impact; Level 4 - Positive Impact; Level 5 - Good Impact.

The survey respondents were customers who have been using technology transport services via an online survey hosted by Google Forms. The collection period was from 30th January, 2018 to 28th February, 2018. Data collection was performed on a sample of 150 Vietnamese consumers. Due to omissions in response, only 114 out of 150 responses were considered. Of these 114 respondents, 44.7 per cent were male and 55.3 per cent were female. Regarding age, 20.17 per cent were under 21 years, 59.65 per cent were between 21 and 26 years, 12.28 per cent between 27 and 33 years, 6.14 per cent between 34 and 40 years and 1.76 per cent were over 40 years. Time to use service, 29.82 per cent were under 1 year, 59.65 per cent were between 1 and 3 years and 10.53 per cent were over 3 years.

Results

Reliability analysis

This method assists analysts in removing irrelevant variables. It also helps evaluating the reliability of the measurement by Cronbach's Alpha coefficient. Variables which have item-total correlation less than 0.3 will be removed. Measurements with Cronbach's Alpha being >= 0.6 can be deployed (Nunnally, 1978, Peterson, 1994). Normally, measurements with Cronbach's Alpha from 0.7 to 0.8 will be used.

In this study, the Cronbach Alpha coefficient of "Customer Behavior", "Value Structure" and "Core Competencies" included from 0.701 to 0.717 all greater than 0.6. The coefficients of the variables of the observed variables in a factor are greater than 0.3. In Conclusion, all variables in the group are reliable and appropriate. Details in Table 1:

Table 1: Reliability Statistics

No	Item	Cronbach's Alpha	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	HVKH	.717		
	1.CTKM		.493	.665
	2.LIGT		.496	.661
	3.DNNT		.534	.637
	4.LHGC		.501	.657
2	CTGT	.750		
	5.CTTD		.597	.645
	6.DDLH		.484	.767
	7. CSKH		.669	.554
3	NLCL	.701		
	8. NLTC		.489	.649
	9. CNHD		.514	.614
	10.TXCN		.552	.567

Exploratory Factor Analysis (EFA)

The reliability test is completed, 10 observational variables are included in the factor analysis. The results from the research data show that the KMO coefficient is quite high (0.815> 0.5), Bartlett's test has p-value = 0.00 <0.05**.** Details in Table 2:

Table 2. Rotated Component Matrix[a] and KMO & Bartlett's Test – No1

	Component	
	1	2
10.TXCN	.813	
9. CNHD	.754	
8. NLTC	.676	
7. CSKH	.629	
4.LHGC		
2.LIGT		.837
3.DNNT		.734
5.CTTD		.642
1.CTKM		.561
6.DDLH		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.815
Bartlett's Test of Sphericity	Approx. Chi-Square	387.605
	df	45
	Sig.	.000

The factor load factor loading factor of an observation factor between factors must be> = 0.3 to ensure the distinction between the factors. An uplink variable observer at both factors, with a load factor difference less than 0.3, was rejected (Jabnour & Al-Tamimi, 2003). Looking at Tables 2, it can be seen that the 4.LHGC and 6.DDLH factors do not have load factor, this type 2 variant and run the rotation matrix again. New results are as follows:

Table 3. Rotated Component Matrix[a] and KMO & Bartlett's Test – No2

	Component	
	1	2
10.TXCN	.823	
9. CNHD	.748	
8. NLTC	.677	
7. CSKH	.647	
2.LIGT		.845
3.DNNT		.735
5.CTTD		.641
1.CTKM		.570
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.774
Bartlett's Test of Sphericity	Approx. Chi-Square	293.313
	df	28
	Sig.	.000
Average Variance Extracted		59.504
Initial Eigenvalues		1.184

The results of the new analysis show that the KMO coefficient is still high (0.774> 0.5), Bartlett's test has p-value = 0.00 <0.05, with a total deviation of 59.504% (> 50%) and Eigenvalue greater than 1. The results of the exploratory factor analysis are accepted (Gerbing & Anderson, "A Update Paradigm for Scale Development Incorporation Unidimensionality and Its Assessments", Journal of Marketing Research, Vol. 25, 1998,

186-192). Thus, two factors were extracted: HVKH and NLCL with 8 variables observed as CTGM, LIGT, DNNT, CTTD, CT, NLTC, CNHD and TXCN.

Pearson correlation analysis and linear regression

After analyzing the exploratory factor, the hypotheses given through multiple correlation and regression analysis will be tested. Prior to testing the model by multiple regression analysis, the correlation between variables in the model would be considered using the Pearson's Correlation coefficient to quantify the degree of correlation between the toxic variables. set up with dependent variable. The results show that the linear correlation coefficients with dependent variables and coefficients of correlation were statistically significant from 0.452 to 0.693 (Table 4).

Table 4. Correlations

		Y.NLCU	HVKH2	NLCL2
Y.NLCU	Pearson Correlation	1	.693**	.452**
	Sig. (2-tailed)		.000	.000
	N	114	114	114
HVKH2	Pearson Correlation	.693**	1	.556**
	Sig. (2-tailed)	.000		.000
	N	114	114	114
NLCL2	Pearson Correlation	.452**	.556**	1
	Sig. (2-tailed)	.000	.000	
	N	114	114	114
**. Correlation is significant at the 0.01 level (2-tailed).				

Apply these two factors to the regression run to evaluate the suitability of the regression model by the Enter method. The value of each element used to run the regression is the mean of the observed variables of that factor. The regression results show that the fit of the model with the data of the study with the adjusted coefficient $R^2 = 0.852$ with significance level 0.05. This shows that the five independent variables explain 85.2% of the variance of the dependent variable (Table 5).

Table 5. Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.698[a]	.487	**.478**	.856	**2.203**
a. Predictors: (Constant), NLCL2, HVKH2					
b. Dependent Variable: Y.NLCU					

Adjusted $R^2 = 0.478$, corresponding to 47.8%, independent variables affected 47.8% dependent variables, 52.2% due to the influence of variables outside the model that the author did not find and the effect of random errors.

Durbin-Watson coefficient = 2.203 between 1 and 3, concluding that the model has no first order autocorrelation.

Table 6. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	77.049	2	38.524	52.636	.000[b]
	Residual	81.241	111	.732		
	Total	158.289	113			
a. Dependent Variable: Y.NLCU						
b. Predictors: (Constant), NLCL2, HVKH2						

Significant coefficients of F = 0.000 <0.005 mean that the regression model is consistent with the whole. That is, the underlying regression model of the author has the meaning of applying and inferring the nature of the whole.

Table 7. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.037	.360		-.103	.918
	HVKH2	.812	.104	.640	7.820	.000
	NLCL2	.125	.107	.196	1.174	.000
a. Dependent Variable: Y.NLCU						

The results in the table above show that both HV and NLCL have sig significance levels. <0.05, so that all hypotheses H1 and H3 were validated. The linear regression equation illustrates the relationship between the two factors affecting the capacity of shared services provided by Vietnamese transport enterprises as follows:

$$Y = 0.64 * HVKH + 0.196 * NLCL$$

In conclusions and Recommendations

The above research shows that there are two criteria of service sharing are the customer behavior and the core competencies, both of which affect the assessing the sharing service capacity of transportation companies in Viet Nam.

Both factors have a coefficient of β> 0, indicating a positive relationship to the supply capacity of Vietnam's transportation companies. The criteria for customer behavior include the appeal of the promotion, the added value of the service, the reputation of the business, the loyalty program for regular clients with a coefficient of β_1 = 0.64 is the most influential (64 per cent) on the capacity of sharing service providers of transportation companies in Viet Nam. The critical core competencies include customer care, financial resources, modern technology, professional drivers only affect only a few (19.6 per cent) to the capacity of sharing service providers of transportation companies in Viet Nam.

Therefore, in order to improve the capacity of sharing service providers of transportation companies in Viet Nam, it is necessary to focus on improving the criteria for customer behavior.

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