American Research Journal of Humanities Social Science (ARJHSS)
E-ISSN: 2378-702X
Volume-06, Issue-07, PP-25-33
www.arjhss.com

Research Paper **Open Access**

Factors Affecting The Development Of The Sharing Economy In The Mekong Delta Rural Areas

Kwak Busung[1]
[1]*PhD student at TNU- University of Economics and Business Administration, Thai Nguyen province - Vietnam*

ABSTRACT:- The sharing economy is an inevitable trend in order to develop agriculture along a sustainable commodity value chain. With the support of information technology and new technologies, the sharing economic model will help local residents and businesses take advantage of digital technology to develop modern and professional agricultural production, besides helping production households save costs, time and human resources. However, there remains various barriers to the development of the sharing economy in agricultural production in rural areas of Vietnam. And the biggest barriers are the level of information exploitation competency and the limited level of acceptance, application and innovation of science and technology by production households while many agricultural production households are mainly operated by the elderly in small-scales and etc. Rural areas in the Mekong Delta also face the similar difficulties as other rural areas in Vietnam regarding developing the sharing economy. However, with certain supports, including the support of programs such as "Saemaul Pilot Village in Vietnam", the sharing economy began to take shape and had initial development. This article will analyze the factors affecting the development of the sharing economy in rural areas of the Mekong Delta region, and point out the impact of each factor on this activity so that deliver appropriate solutions to develop the sharing economy in these areas.

Keywords: Mekong Delta, EFA, Sharing Economy, Rural areas, Vietnam.

I. INTRODUCTION

This study adopted the exploratory factor analysis (EFA) model to analyze the factors affecting the development of the sharing economy in rural areas of the Mekong Delta through a regression model with the dependent variable of " Sharing economy development in Mekong Delta rural areas" and independent variables including (1) Residents' competency, (2) Residents' attitude, (3) Residents' knowledge, (4) State policies and mechanisms, (5) Socio-economic development conditions, (6) Infrastructure, (7) Natural resources, (8) Science and technology; thereby draw a conclusion about the influence intensity of factors and provide solutions in developing the sharing economy in the Mekong Delta rural areas.

II. RESEARCH MODEL AND METHODOLOGY

To conduct this study, the authors conducted a survey to collect primary data. In addition, the authors have researched a number of published scientific works to serve the research process. For primary data collection, the authors used a paper questionnaire and conducted a random survey among local residents of the areas supported by the program "Saemaul Village in Vietnam" in the Mekong Delta region. The number of valid responses collected is 392. According to Hair et al (2014), the minimum sample size to use EFA is 50, preferably 100 or more. The ratio of number of samples to one analytic variable is at least 5:1. In other words, with 38 observed variables in the factor analysis model, the number of samples needed in this study should be at least 190. So, the sample size of 392 is acceptable for proceeding analysis according to EFA model.

Observations are included in the questionnaire on a 5-point Likert scale, in which, "1" means "strongly disagree"; "2" means "disagree", "3" means "no opinion", "4" means "agree" and "5" means "strongly agree". The proposed research model includes 8 factors and uses Likert scale to consider the rating levels. For the selection of factors, the author uses the expert method, in which the experts have multiple studies in the fields of economics and services. The research model is shown in Figure 1 below.

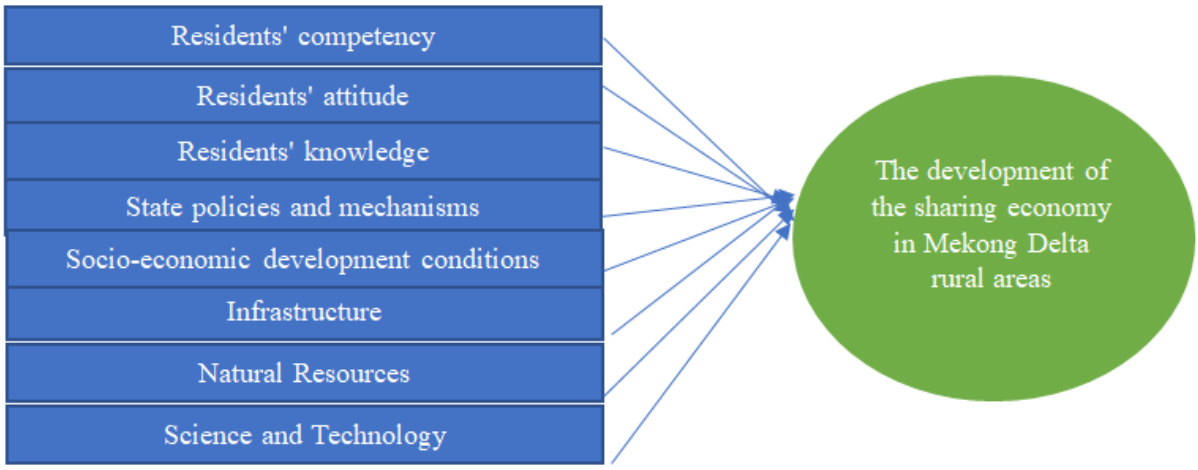

Figure 1. Model of factors affecting the development of sharing economy services in Mekong Delta rural areas

The dependent variable of the selected model is "The development of sharing economy in Mekong Delta rural areas" which is measured by 4 observed variables including: (1) Types of sharing in local production are increasing remarkably, (2) Production efficiency is increasing rapidly and sustainably, (3) Reducing environmental pollution and saving resources, (4) Creating jobs, increasing incomes, and stabilizing society. The independent variables are: (1) Residents' competency, (2) Residents' attitude, (3) Resident' knowledge, (4) State policies and mechanisms, (5) Socio-economic development conditions, (6) Infrastructure, (7) Natural resources, (8) Science and technology

III. RESEARCH RESULT AND DISCUSSIONS

1. Evaluating the reliability of the scale by Cronbach's Alpha Coefficient

Cronbach's Alpha test is a test to analyze and evaluate the reliability of the scale. The purpose of this test is to figure out whether the observed variables have the same scale for a concept to be measured. The value of more or less contribution is analyzed through the correlation coefficient of the total variable (Corrected Item - Total Correlation), thereby allowing to eliminate inappropriate variables in the research model.

Evaluation criteria: Observed variables with item - total correlation coefficient less than 0.3 will be eliminated and the standard for selecting scale when Cronbach's Alpha $\geq$ 0.6 (Hoang Trong & Chu Nguyen Mong Ngoc, 2000).

The results of Cronbach's Alpha analysis for the factors are summarized in the following table:

Table 1: Test of the reliability by Cronbach's Alpha for the factors

Factors	Observed variables	Notation	Corrected item – Total Correlation	Cronbach' s Alpha if item deleted	Cronbach's Alpha
Residents' competency	(1) Capable to learn and acquire new things	NL1	0,349	0,915	0,862
	(2) Have enough health to work	NL2	0,817	0,799	
	(3) Have sufficient assets and resources for production	NL3	0,790	0,803	
	(4) Capable of managing production activities	NL4	0,782	0,807	
	(5) Capable of communication and socialization	NL5	0,722	0,823	
Residents' attitude	(1) Willing to participate in sharing economy activities	TD1	0,679	0,878	0,869
	(2) Ready to support and help the community	TD2	0,801	0,768	

	(3) Willing to share resources	TD3	0,777	0,791	
Residents' knowledge	(1) Have an understanding of sharing economy activities	KT1	0,811	0,839	0,896
	(2) Have knowledge of production	KT2	0,832	0,820	
	(3) Aware of basic laws related to sharing economy	KT3	0,746	0,893	
State policies and mechanisms	(1) Have clear regulations on sharing economy activities	CS1	0,720	0,882	0,894
	(2) Have a mechanism of financial support for sharing economy activities	CS2	0,820	0,843	
	(3) Have a mechanism to support training and improve competency for sharing economy activities	CS3	0,841	0,836	
	(4) Have a mechanism to support community activities	CS4	0,692	0,890	
Socio-economic development conditions	(1) Local economy is developed	DK1	0,552	0,905	0,898
	(2) Local residents' life is good	DK2	0,785	0,871	
	(3) Local investment capitals are abundant	DK3	0,807	0,867	
	(4) The locality has stable social and cultural conditions	DK4	0,808	0,866	
	(5) Local market is stable	DK5	0,691	0,885	
	(6) Local workforce is abundant	DK6	0,709	0,882	
Infrastructure	(1) Transportation infrastructure is convenient	HT1	0,747	0,873	0,896
	(2) Stable resources of electricity, water and fuel with reasonable price	HT2	0,786	0,865	
	(3) Physical facilities, means and technical equipment for agricultural production are adequate	HT3	0,851	0,849	
	(4) Information and communication infrastructure are stable	HT4	0,821	0,856	
	(5) Cultural and educational infrastructure are developed	HT5	0,536	0,919	

Local natural resources	(1) Abundant land resources with high quality	TN1	0,710	0,916	0,918
	(2) water resource is adequate and clean	TN2	0,811	0,896	
	(3) The climate is suitable for agricultural production	TN3	0,821	0,893	
	(4) Rich flora and fauna	TN4	0,828	0,892	
	(5) Abundant and diverse mineral resources	TN5	0,780	0,902	
Science and technology	(1) Apply information and communication technology in production and knowledge sharing activities	CN1	0,586	0,903	0,904
	(2) Agricultural science is fully disseminated	CN2	0,694	0,892	
	(3) Regular application of eco-friendly materials in production	CN3	0,722	0,889	
	(4) Biotechnology is popularized and widely applied	CN4	0,793	0,881	
	(5) Environmental technology is applied to protect the environment	CN5	0,795	0,880	
	(6) Use of renewable energy (solar, wind, etc.)	CN6	0,748	0,886	
	(7) Production process techniques are popularized and effectively applied	CN7	0,692	0,893	
The development of the sharing economy	(1) Types of sharing in local production are increasing remarkably	KTCS1	0,714	0,875	0,890
	(2) Production efficiency is increasing rapidly and sustainably	KTCS2	0,822	0,835	
	(3) Reducing environmental pollution and saving resources	KTCS3	0,820	0,837	
	(4) Creating jobs, increasing incomes, and stabilizing society	KTCS4	0,693	0,885	

Source: Research team synthesized the survey result

The result of testing the reliability of the factors showed that most of the proposed factors have good reliability and the value of Cronbach's Alpha is greater than 0.6. All variables have Item - Total Correlation coefficients greater than 0.3, thereby all variables are kept.

II. EXPLORATORY FACTOR ANALYSIS (EFA) FOR INDEPENDENT VARIABLES

The result of exploratory factor analysis exhibits that the test result is relatively good. KMO coefficient = 0.852, greater than 0.5, so the use of this data set for factor analysis is appropriate (Kaiser, 1974). Bartlett's Test is adopted to examine whether the observed variables of the factor are correlated and this value is also acceptable when the Sig value of the test = 0.000 which greater than 0.5. Therefore, the observed variables are related and eligible for factor analysis by EFA (Table 2).

Table 2: Result of KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.928
Bartlett's Test of Sphericity	Approx. Chi-Square	14032.738
	df	666
	Sig.	.000

Source: Result of surveyed data analysis by the research team

The breakpoint of factor analysis is set on the basis of the Eigenvalue coefficient, in which the maximum number of factors is selected when this coefficient has the smallest value ≥ 1 and the cumulative percentage is greater than 50%. With the above conditions, there are 7 factors extracted at Initial Eigenvalues that are 1,074 > 1, and total variance extracted is 75.996% > 50%, showing that 7 factors extracted in EFA reflect 75.996% variation of all measures included in the model.

Table 3: Result of exploratory factor analysis for independent variables

Rotated Component Matrix[a]							
	Component						
	1	2	3	4	5	6	7
DP1	0,802						
DP2	0,790						
DP3	0,783						
DP4	0,779						
DP5	0,769						
DP6	0,714						
DP7	0,710						
DP8	0,650						
DP9	0,548						
KT1		0,745					
KT2		0,731					
KT3		0,730					
KT4		0,729					
KT5		0,677					
NL1			0,822				
NL2			0,817				
NL3			0,776				
NL4			0,764				
NL5			0,701				
CN1				0,883			
CN2				0,844			
CN3				0,819			
CN4				0,707			
HT1					0,784		
HT2					0,744		
HT3					0,697		

HT4					0,674		
DK1						0,506	
DK2						0,790	
DK3						0,775	
DK4						0,714	
DK5						0,595	
CS1							0,515
CS2							0,716
CS3							0,674
CS4							0,665
CS5							0,621
Extraction Method: Principal Component Analysis. **Rotation Method: Varimax with Kaiser Normalization.**							
a. Rotation converged in 7 iterations.							

Source: Result of surveyed data analysis by the research team

Considering the rotation matrix table, with Varimax rotation and only the Factor Loading factors are displayed > 0.5 (Table 3), the observed variables that have load factors greater than 0.5 are considered to deliver actual significance (Hair et al., 2014). Therefore, all these observed variables are kept for later analysis.
The final result of exploratory factor analysis for the scales of independent variables includes 37 observed variables that are loaded with 7 factors. The order and names of these factors are summarized in Table 4.

Table 4: Summary of factors after exploratory factor analysis (EFA)

No	Factor name	Notation	Number of observed variables
1	Local resources	DP	**9**
2	Residents' knowledge	KT	**5**
3	Human resources	NL	**5**
4	Science and technology	CN	**4**
5	Infrastructure	HT	**4**
6	Science and technology	DK	**5**
7	State policies and mechanisms	CS	**5**
	Total		**37**

Source: Synthetic result of surveyed data analysis by the research team

III. EXPLORATORY FACTOR ANALYSIS FOR DEPENDENT VARIABLE

The result of running EFA illustrates that the test result is quite good. KMO coefficient = 0.78, greater than 0.5, thereby the utilization of this data set for factor analysis is appropriate (Kaiser, 1974). Bartlett's Test also passes when the Sig value of the test = 0.000, greater than 0.5, so the observed variables are related to each other and eligible for factor analysis by EFA (Table 5).

Table 5: Result of KMO and Bartlett's Test for dependent variable KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.780
Bartlett's Test of Sphericity	Approx. Chi-Square	999.189
	df	6
	Sig.	.000

Source: Result of surveyed data analysis by the authors

Table 6: Summary of EFA result for dependent variable

Component Matrix[a]	
	Component
	1
KTCS2	,910
KTCS3	,907
KTCS1	,839
KTCS4	,824
Extraction Method: Principal Component Analysis.	
a. 1 components extracted.	

Source: Analysis result of surveyed data by the research team

Combining the results of testing the scale reliability (Cronbach's Alpha) and exploratory factor analysis (EFA), the study identified factors, variables and scales that can be used to evaluate the factors affecting the development of the sharing economy in the Mekong Delta.

4. Regression analysis of factors affecting the development of the sharing economy in the Mekong Delta region

To test the research hypotheses, the authors performed multiple linear regression of 8 variables involving 8 factors proposed in the adjusted research model after qualitative research. The selection method is Enter and the regression result are as follows:

Table 7: Coefficient of regression model

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.761[a]	.579	.572	.29806	1.974
a. Predictors: (Constant), CS, CN, HT, NL, DP, DK, KT					
b. Dependent Variable: KTCS					

Source: Analysis result of surveyed data by the research team

The result of synthesis coefficient of the regression model in Table 7 delivers adjusted R^2 (Adjusted R Square) = 0.572 which means that 57.2% of the variation of the dependent variable KTCS is explained by 7 independent factors. The remaining 43.8% is influenced by other factors other than the ones in research model. Statistical value Durbin-Watson is 1.974, less than 3, proving that the model has no autocorrelation. Therefore, the regression quality can be considered as good.

Table 8: Coefficient of Variance

ANOVA[a]						
Model		Sum of Squares	DF	Mean Square	F	Sig.
1	Regression	46.979	7	6.711	75.543	.000[b]
	Residual	34.115	384	.089		
	Total	81.094	391			
a. Dependent Variable: KTCS						
b. Predictors: (Constant), CS, CN, HT, NL, DP, DK, KT						

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	**91,765**	**6**	**8,230**	**58,321**	**0,000b**
	Residual	**72,971**	**426**	**,142**		
	Total	**164,930**	**432**			
a. Dependent Variable: PTKTĐ						
a. Predictors: (Constant), CSHT, ATCĐ, NL, CS, TG, QL						

Source: Analysis result of surveyed data by the research team

Table 8 provides test result of F = 75,543 and Sig value = 0.000, proving that the proposed research model is suitable for the surveyed data set.

Table 9: Result of multiple linear regression coefficient

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.207	.188		1.100	.272		
	DP	.285	.052	.257	5.487	.000	.500	2.002
	KT	.055	.057	.053	.972	.332	.371	2.694
	NL	.057	.049	.054	1.163	.246	.511	1.956
	CN	.329	.036	.381	9.257	.000	.648	1.543
	HT	.112	.054	.111	2.092	.037	.390	2.564
	DK	.038	.054	.036	.694	.488	.404	2.473
	CS	.087	.060	.078	1.447	.149	.381	2.625
a. Dependent Variable: KTCS								

Source: Analysis result of surveyed data by the research team

The result in Table 9 shows that the acceptance coefficient (Tolerance) is appropriate, and the variance exaggeration coefficient VIF is less than 10. Therefore, it can be concluded that the relationship between these independent variables is insignificant. It can be considered that there is no multicollinearity in the model. (Hoang Trong & Chu Nguyen Mong Ngoc, 2005).

However, with the sig value of the t-test as above, there are 3 variables that have the strongest impact on the development of the sharing economy in the Mekong Delta region, namely Resources (DP), Technology and Technique (CN), Infrastructure (HT), the remaining variables have insignificant influences.

From the results above, it is possible to draw a standardized regression equation representing the relationship between the factors affecting the development of the sharing economy in the Mekong Delta as follows:

$$KTCS = 0.257*DP + 0.381*CN + 0.111*HT + e$$

With a sample size of 392 and research conducted in the Mekong Delta region, the regression result shows that, among the groups of factors included in the study, the group of factors "Technology and Technique" has the strongest impact on the development of the sharing economy in the Mekong Delta region. The standardized Beta coefficient of 0.381 is significant provided that other factors remain unchanged. If one unit for the variable "Technology and Technique" is changed, the variable "The development of the sharing economy in the Mekong Delta" will change by an average of 0.381 unit. Similarly, the variable "Local resources" (DP) has the second strongest impact on the development of the sharing economy in the Mekong Delta (Standardized Beta coefficient = 0.257) while the factor "Infrastructure" has the third largest impact (Standardized Beta = 0.111).

IV. CONCLUSION

With the above analysis results, it can be seen that the issues with profound impacts on the development of the sharing economy in the Mekong Delta includes the factors of "Technology and Technique", "Local resources" and “Infrastructure". Accordingly, in order to develop the sharing economy in the Mekong Delta, it is necessary to pay attention to the development of issues including: using renewable energy; clean energy to protect the environment; applying biotechnology; applying new production process; using more efficiently local resources such as flora and fauna, water and soil resources; as well as developing infrastructure such as: traffic infrastructure, information and communication infrastructure, electricity and water infrastructure, physical facilities, means and technical equipment for agricultural production.

REFERENCES

[1]. Do Minh Cuong (2022). *National level project: "Assessing the current situation and proposing solutions to apply the sharing economic model to the activities of cooperatives in agricultural production"*.

[2]. Dinh Van Thanh (2010), *Strengthening the participation capacity of agricultural products in the global value chain*. Economics Doctoral Thesis.

[3]. Huynh Van Lanh (2021), *Developing collective economy in agriculture of Long An province*, PhD Thesis, Academy, Hanoi.

[4]. Le Thanh Thuy (2019), *Outstanding sharing economy models in the world and problems facing Vietnam*, Financial Review, December 2019

[5]. Nguyen Tuan Anh, Pham Quang Minh, Le Thi Mai Trang (2016), *New village movement in Korea and the program to build new-style rural areas in Vietnam*, Journal of Social Sciences and Humanities, Volume 2 , No. 1b (2016) 16-25.

[6]. Asian Development Bank (2012), *"The Saemaul Undong movement in the Republic of Korea: Sharing knowledge on community-driven development"*, Mandaluyong City, The Philippines

[7]. ARAMYAN, L. H., OUDE LANSINK, A. G., VAN DER VORST, J. G. & VAN KOOTEN, O. 2007. Performance measurement in agri-food supply chains: a case study. *Supply Chain Management: An International Journal*, 12**,** 304-315.

[8]. Barbara (2017), *Sharing economy in logistics and supply chain management*, Scientific Journal of Logistics.

[9]. Benita Matofska (2016), *what ıs the sharing economy?* http://www.thepeoplewhoshare.com/blog/what-is-the-sharing-economy/

[10]. Nielsen (2013), *The Nielsen Global Survey of Share Communities*, Research report on the application of sharing economy in the world, August 14 and September 6, 2013.

[11]. Nguyen Dinh Tho (2013), *Scientific research methods in business (Textbook)*. Financial Publishing House

Kwak Busung[1]

[1]PhD student at TNU- University of Economics and Business Administration, Thai Nguyen province - Vietnam