

Evaluating the Effectiveness of Environmental Awareness Indicators and Conscious Monitoring on Retaining and Attracting Pharmaceutical Industry Customers with a Shared Business

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Abstract

Sharing Businesses (SBs) are considered a peer-to-peer (P2P) monitoring activity, where the supply of goods and services is done jointly by one platform. Although the issue of SBs has been around for many years, overall it benefits from all the elements of the marketing mix. The purpose of the study was to evaluate the effect of environmental awareness indices (EAIs) and informed monitoring on acquisition and retention of customers in SBs. The study was applied in terms of purpose and mixed research in terms of the nature of the data, with quantitative-qualitative design. Cochran's formula for indefinite societies was used given the large size of the population. The sample size was 384 persons. A researcher-made questionnaire was used for data collection. The results showed that environmental awareness has a positive effect on acquisition and retention of customers in SBs. Moreover, the results showed the moderating role of informed monitoring.

Keywords: Environmental Awareness, Informed Monitoring, Customer Acquisition and retention, SBs

INTRODUCTION

The term “Collaborative Consumption (CC)” was first used by Marcus Felson and Joe L. Spaeth in their paper “Community Structure and CC: A Common Method of Activity” published in 1987.

In 2011, The Times Magazine introduced SBs among the ten ideas that would change the world. SBs are the places where people subscribe to an online platform and share their services and goods with others in return for specific amounts. SBs are considered a P2P monitoring activity, where the supply of goods and services is done jointly by one platform. Although the issue of SBs has been around for many years, overall it benefits from all the elements of the marketing mix. The shift in online supply and demand in the attractive Internet environment has created a continuum in the supply of shared products. SBs are at their growth stage and may create new developed markets all around the world. Generally, SBs depend on the use of resources like life space, human force, manufactured goods, services and surplus assets usually through web-based information and communication technologies.

Problem Statement:

SBs enable the individuals to share their material and intellectual properties. SB uses the Internet platform and capabilities for communication between people and sharing

assets between suppliers and customers. In this type of model, the quality monitoring system is the individuals themselves, and usually the quality is maintained with high ratings of the service they provide. Here, SB trustee-company creates the bridging role between customers in need of services, goods and ideas and suppliers. In other words, these companies have no assets of their own ^[1].

Rachel Bootsman, the author of “What's Mine Is Yours: The Rise of Collaborative Consumption,” states that peer-to-peer sharing “needs the re-emergence of society” as people can trust each other.

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Regarding this, to acquire and retain the customers of SBs, attention is paid to the essential index. The beauty and boom of a business depends on the collaboration of the customers of a common community.

Theoretical Framework: Environmental Awareness

Increasing public awareness and government regulations regarding environmental protection have made it clear for the businesses that besides profitability and sales, environment and consumer health are of great significance. The plastic materials used as product packaging is the biggest environmental problem. In most of the plastic materials used, petroleum and coal products are used and their return to the environment will last many years ^[2]. Regarding this, the companies should raise the environmental awareness of people to pay attention to this issue in their purchases and consciously consider the green criteria in their purchasing decision. Green marketing tools are environmental advertising, environmental branding and environmental labeling as stated in the following:

1. Green marketing tools: These are the tools that assist the customers to identify green products and conventional products.
2. Environmental labels: They are useful tools, with the help of which companies provide useful environmental information to customers about the product and help them make the decision to purchase it by increasing environmental awareness.
3. Environmental brand: A name, symbol or design that is harmless to the environment.
4. Environmental advertisement: It is a tool that affects the purchasing behavior of consumers by increasing their environmental awareness ^[3].

Literature Review

Karimi ^[4] examined entrepreneurs' perceptions of the business environment based on the effect of good governance and performance-based culture. The findings indicated that good governance had a significant effect on entrepreneurs' attitude towards business environment.

Moayed ^[5] analyzed attrition: Customer acquisition and retention using data mining approach. The results showed that four characteristics - traffic usage, online hours, satisfaction with service quality, and the number of terminations as determining factors in attrition or non-attrition – are the key elements and properties that show customer attrition characteristics.

Zare ^[6] examined the effect of business ethical behaviors on customer loyalty with the mediating role of perceived customer satisfaction and trust. The findings showed that business ethical behaviors had a positive and significant relationship with perceived value and ethical business on customer satisfaction. Moreover, the positive and significant relationship of satisfaction with loyalty trust was confirmed. Karimbakhsh ^[7] studied the effect of technological innovation and the design of business model on firm performance. The

study delineated that not all kinds of technological innovations could enhance the performance of the company under various conditions and that the business model of the firm must be compatible with the technological innovation of it to act as a lever to enhance its performance.

In a study entitled "Examining the determinants of life insurance customer satisfaction in Vietnam," Nguyen *et al.* ^[1] showed that life insurance service providers have to improve the quality of service to reach customer satisfaction, which brings about customer loyalty, and focus on the company image.

In a study entitled "The effect of customer satisfaction, customer experience, and customer loyalty on brand power: Experimental evidence from the hotel industry," Nobar & Rostamzadeh ^[8] showed that customer expectations had the greatest effect on customer satisfaction.

Strenitzerová & Gaňa ^[9] did a study entitled "Customer satisfaction and customer loyalty as part of the sustainability of customer-based companies in the mobile communication services sector." Marketing studies have shown that the European Customer Satisfaction Index (ECSI) model can bring about a better understanding of the complex relationships between customer loyalty and customer satisfaction and their effect on the sustainability of Slovak communication.

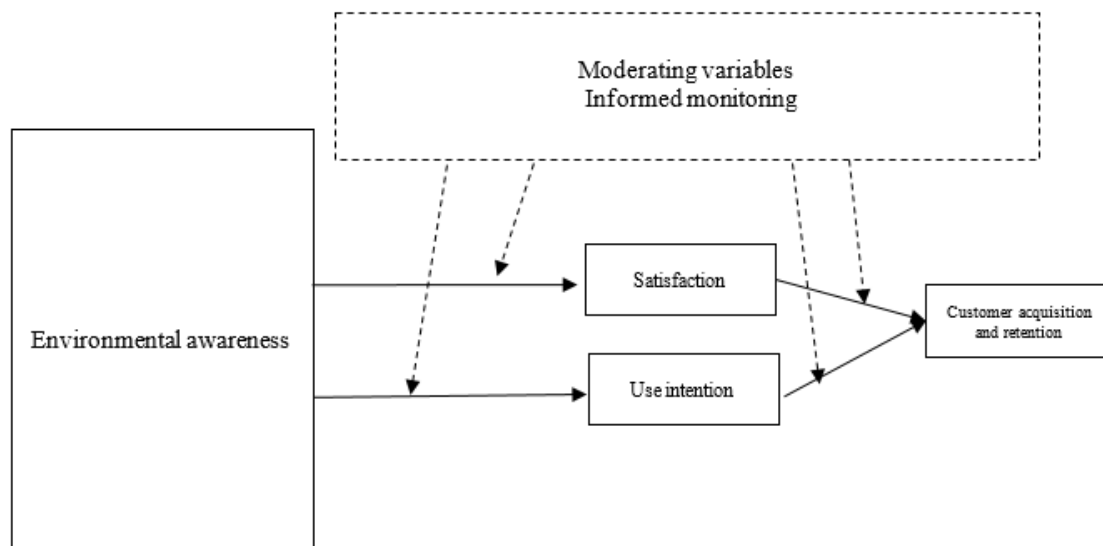
Dudek & Salek ^[10] studied the concept of commodity sharing as a manifestation of information technology evolution in rural areas. The survey in this study indicated the status of knowledge and awareness of the shared economy and the potential benefits to the development of the economy in rural areas.

METHOD

The study was applied in terms of purpose and mixed research in terms of the nature of the data, with quantitative-qualitative design. In this study, the mixed quantitative (questionnaire-based) and qualitative (based on researcher observations and expert interviews) methods were used. The literature related to the subject and research was collected descriptively (survey, correlation, and post-hoc) by library methods and field method was used to collect information to confirm or reject the hypotheses. Cochran's formula for indefinite societies was used as follows given the large size of the population. The sample size was 384 persons. The questionnaire tool used to evaluate the opinions of the clients of the research, where after approving the validity of the questions by the professors of the management department of Islamic Azad University of Susangerd, 5 questions were removed. Different approaches are used to calculate the reliability coefficient of the tools. In this study, test-retest method was used where the value obtained for the Cronbach's alpha coefficient was 0.83, which showed the reliability of

the tool. Structural equation modeling (SEM) was used to test the main hypotheses.

The Conceptual Model of Research



Research objectives:

The effect of environmental awareness on acquisition and retention of customers in SBs

Hypotheses:

The main hypotheses

The effect of environmental awareness on acquisition and retention of customers in SBs is positive and significant.

Sub-hypotheses:

Examining the effect of mediating variables on the relationship between the main variables
Satisfaction and intention to use as mediating variables were added to the main research model.

1. Environmental awareness affects customer acquisition and retention through satisfaction.
2. Environmental awareness affects acquisition and retention of customers through intention to use.
Examining the effect of moderator variable - informed monitoring - on the relationship between the main variables of the study
3. Informed monitoring has a moderating role in the effect of trust on customer retention.
4. Informed monitoring has a moderating role in the effect of trust on acquisition of customers.

RESULTS:

Demographic statistics of the sample

Descriptive statistics of the variables

Mean statistics, standard deviation, and so on were used to describe the variables of the study. Table (1) shows the descriptive statistics of the study variables.

Table 1: Descriptive statistics of the variables

Variable type	Variable (Abbreviation in model)	Number of samples	Min.	Max.	Mean	SD
Independent	Environmental Awareness (E.A)	384	2.33	5.00	4.52	4.66
	Informed monitoring	384	2.67	5.00	4.53	0.54
Dependent	Customer Retention (C.R)	384	2.33	4.67	4.25	4.66
	Acquisition of Customer (A.C)	384	3.00	4.67	4.15	4.66
Mediator	Satisfaction (SA)	384	2.44	5.00	4.47	5.00
	Intention to use (IU)	384	2.93	5.00	4.42	5.00

The results of the descriptive test showed that the variables are in a desirable level.

Testing research hypotheses

Testing the main hypotheses

The main hypotheses of the study are as follows:

The effect of EA on CR and AC in SBs is positive and significant.

SEM was used to test the main hypothesis. SEM is a specific causal structure between a set of latent constructs. A structural equation consists of two components. A structural model that specifies the causal structure between latent

variables and a measurement model that defines the relationships between latent variables and observed variables.

Figure (1) shows the estimation of SEM in standard mode.

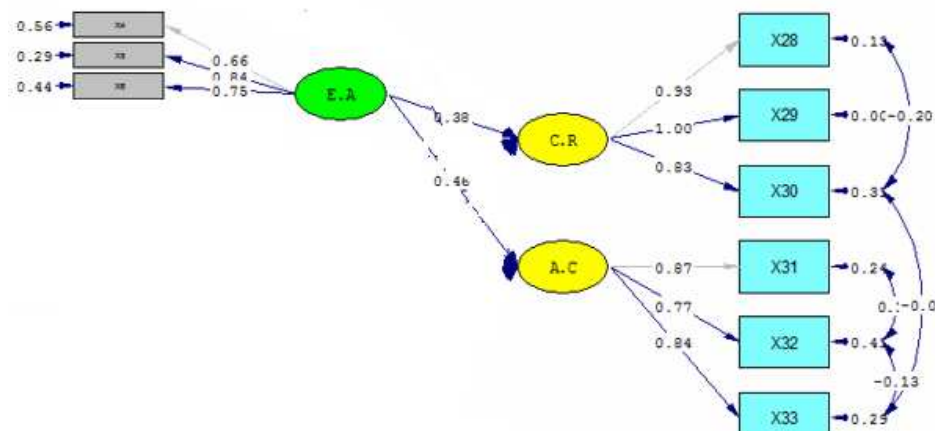


Figure 1: SEM in standard mode

Using this mode, one can find the degree of correlation between the two latent variables in the model and based on

that opine on the effects of the variables on each other. Figure (2) shows the estimation of SEM in the significance mode.

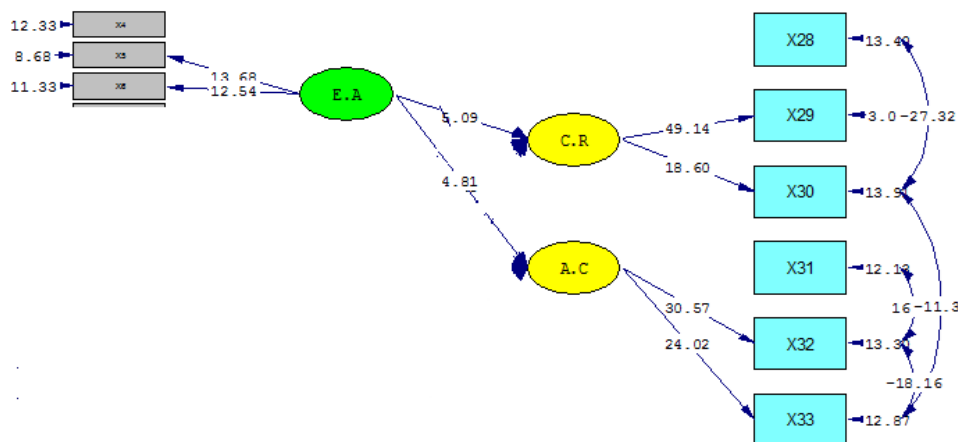


Figure 2: SEM in significance mode

Concerning the significance of the numbers, one has to state that as we are testing the hypotheses at the confidence level of 0.95 or error 0.05, the significant numbers for t-test will be the ones outside the range 1.96 and -1.96. This means that any value in the t-test between 1.96 and -1.96 would be insignificant. Table 2 shows the types of model fit and significance of the model.

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Table 2: Fit indices of the research model

Overall model			
Index	Favorable values	Value obtained	Result
RMSEA	$0 \leq \leq 0.1$	0.077	Acceptable
X^2/df	$1 \leq \leq 3$	3.00	Acceptable
IFI	$0.8 \leq \leq 1$	0.98	Acceptable
CFI	$0.8 \leq \leq 1$	0.97	Acceptable
NFI	$0.8 \leq \leq 1$	0.96	Acceptable
NNFI	$0.8 \leq \leq 1$	0.97	Acceptable

According to the fit indices of the model, one can have a good evaluation of the structural models of the study.

1. The effect of EA on acquisition and retention of customers in SBs is positive and significant.

The effect of EA on acquisition and retention of customers had standard coefficients of 0.38 and 0.46, $t = 5.09$ and $t = 4.81$, respectively. These values of t for this parameter (according to the error rule of 0.05 in the null hypothesis rejection area for values outside 1.96 to -1.96 of each model parameter) are greater than 1.96. The calculated path coefficient is significant. Thus, one can state that the effect of

EA on acquisition and retention of customers in SBs is positive and significant. Thus, this hypothesis is confirmed.

Examining the role of mediating variables in the relationship between the main research variables

In this study, satisfaction and intention to use were added to the main research model as the mediator variables.

1. EA affects the acquisition and retention of customers through satisfaction.
2. EA affects the acquisition and retention of customers through intention to use.

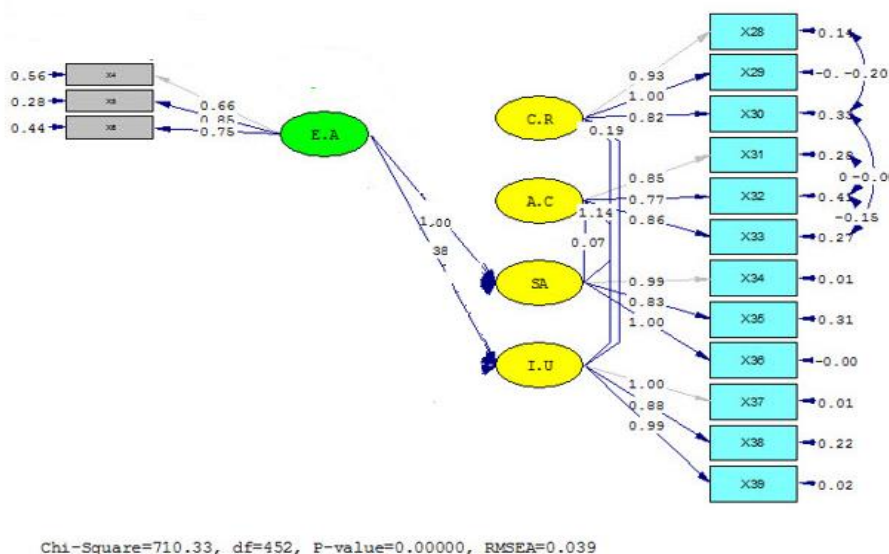


Figure 3: SEM by adding mediator variables (standardized mode)

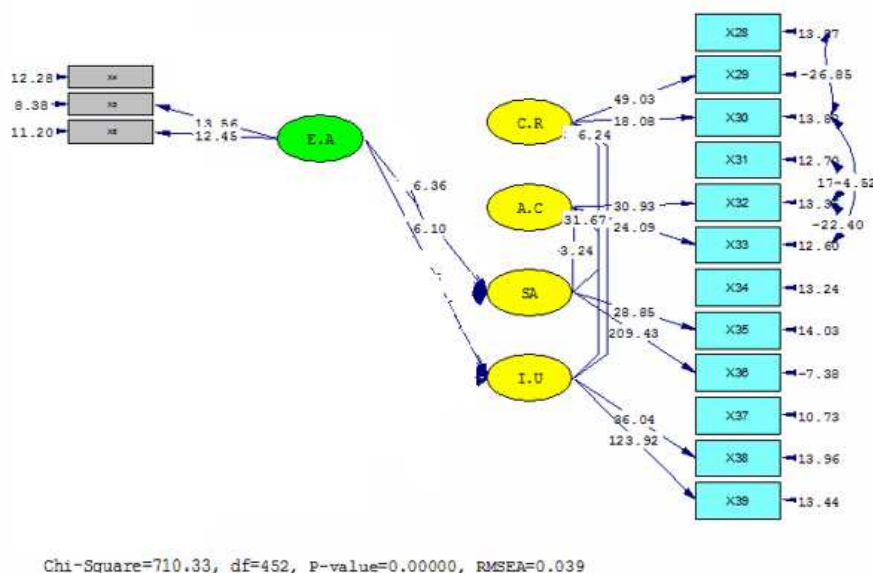


Figure 4: SEM by adding mediator variables (in significance state)

Table 3: Fit indices of the research model considering the mediator variables

Overall model			
Index	Favorable values	Value obtained	Result
RMSEA	$0 \leq \leq 0.1$	0.039	Acceptable
X ² /df	$1 \leq \leq 3$	1.57	Acceptable
IFI	$0.8 \leq \leq 1$	0.97	Acceptable
CFI	$0.8 \leq \leq 1$	0.97	Acceptable
NFI	$0.8 \leq \leq 1$	0.96	Acceptable
NNFI	$0.8 \leq \leq 1$	0.97	Acceptable

The effect of satisfaction on the relationship between EA factors on customer acquisition and retention is reported in the following table.

Table 4: Structural part of the research model with mediator variable satisfaction (dependent variable: customer retention)

Variable (Abbreviation)	Mediator	Standard coefficient	T value
EA	Satisfaction (SA)	0.39	4.45

The observed t values for this parameter (according to the error rule of 0.05 in the null hypothesis rejection area for values outside 1.96 to -1.96 of each model parameter) were calculated more than 1.96. The calculated path coefficients are significant. Thus, the first and second hypotheses are confirmed.

Moreover, the effect of intention to use EA relationship on acquisition and retention of customers is reported in the following table.

Table 5: The structural part of the research model considering the mediator variable intention to use

Variable (Abbreviation)	Mediator	Standard coefficient	T value
EA	Intention to use (I.U)	0.38	4.06

The observed t values for this parameter (according to the error rule of 0.05 in the null hypothesis rejection area for values outside 1.96 to -1.96 of each model parameter) were calculated above 1.96. The calculated path coefficients are significant. Thus, the sub-hypothesis 3 and 4 are confirmed.

Examining the effect of moderating variables on the relationship between the main variables of the study
Informed monitoring

Informed monitoring has a moderating role in the effect of trust on customer retention.

Informed monitoring has a moderating role in the effect of trust on acquisition of customers.

Table 6: The results of the research hypothesis model estimation considering the moderating role of informed monitoring (dependent variables: customer acquisition and retention)

Variables		BETA coefficients	T value	Sig.	Result in model
Dependent variable: customer retention	Constant coefficient	-	11.11	0.000	Significant
	Informed monitoring	0.08	1.16	0.24	Insignificant
	Informed monitoring * trust	0.64	8.67	0.000	Significant
Dependent variable: customer acquisition	Constant coefficient	-	7.22	0.000	Significant
	Informed monitoring	0.11	1.51	0.13	Insignificant
	Informed monitoring * trust	0.61	8.27	0.000	Significant
Dependent variable: customer retention	Sig = 0.000	F= 200.08	D.W= 1.64	Adjusted R ² = 0.51	R ² = 0.51
Dependent variable: customer acquisition	Sig = 0.000	F= 196.80	D.W= 1.64	Adjusted R ² = 0.51	R ² = 0.51

According to the table above, one can see that the coefficients of adjusted model determination (r²) are 0.51 and 0.51, meaning that 51% of the response variable (customer retention) and 28% of the response variable (customer acquisition) can be explained by independent variables. The probability value regarding the existing of a linear relationship between the independent and the response variables is 0.000 that is less than 0.05; thus, a significant linear relationship is observed between the variables. The assumption of lack of autocorrelation between the errors is accepted if Durbin Watson statistic is in the range of 1.5-2.5. Given the significant level observed, one can state that:

- ✓ The hypothesis three stating the moderating role of informed monitoring in the effect of trust on customer retention was significant.
- ✓ The hypothesis four stating the moderating role of informed monitoring in the effect of trust on customer acquisition was significant.

DISCUSSION AND CONCLUSION:

Customer acquisition and retention as of the main goals of relational marketing that are affected by different factors, change and moderate^[11]. The purpose of relational marketing is to provide value to the customer in long-term, and the success criterion is long-term customer satisfaction. Satisfaction shows that customer needs are met. The higher the product quality than the customer's expectations, the higher customer intention to buy will be with a positive effect on his loyalty. The results of the study on the effect of satisfaction and intention to use on customer acquisition and retention were in line with those of Shpëtim^[12], Haddadian and Bagherieh Mashhadi^[13], Lin Wu^[14], Wu & Mohi^[15], Kamble & Sarangdhar^[16], Kiran & Diljit^[17], Long & Khalafinezhad^[18], Moayed^[5], Zare^[6], Nguyen et al.^[1], Nobar & Rostamzadeh^[8], and Strenitzerová & Gaña^[9]. If a business examines the factors affecting customer retention, it will survive in today's competitive market. The results confirmed the moderating role of informed monitoring as well. In explaining the results, one can state that gaining customer trust through various ways like long-term customer relationship, improved service provider attitude, security assurance, and so on can increase the likelihood of repurchase intention, which is a step towards customer retention. This means that satisfied customers are loyal customers of the company who are repurchasing from the same business over and over for a long time. In today's competitive market, a reliable, transparent and trustworthy business model guarantees business survival. Thus, trust should be given special attention as a significant issue in the shared economy.

The results of the study indicated that EA has a positive effect on customer acquisition and retention of in SBs. The results were consistent with those of Jafarzadeh^[3], Golshani^[19], Möhlmann^[20], and Barbu et al.^[21]. In explaining the results, one can state that if businesses raise the EA of their customers to extend the life and safety of their products^[22], the customers will be willing to pay higher price and understand the value added of the products. It is natural that in a business where these principles are adhered to, customer satisfaction and intention to repurchase will increase. The results indicated that consumers are sensitive to the environment and its related issues and consider these in their purchase behavior. Hence, those businesses will be successful that have taken some steps in this regard and have tried to be more responsible towards the environment by adhering to environmental models and better understand and satisfy the needs of the customers.

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