AN ANALYSIS OF CREATING VIRTUAL SHOPPING STORE ENVIRONMENT IN SRI LANKA

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ABSTACT

Online shopping is a developed concept all over the world. Even though there are no high level online sides existing in Sri Lanka, and still we have e- commerce sides which are capable of having good products. When looking at the FMCG Sri Lanka's leading supermarkets already having e commerce sides. But still consumers are choosing physical outlets to choose their goods rather than choosing the easy online way. Major concern of the consumer's when comes to the online shopping they think as financial (Payments), product quality or performance, Delivery, trust and security and website design and access are risks. As a result of this consumers are visiting the outlet and purchasing the goods what they need. But this method of approach causing them several unnecessary problems, such as main constrain is time waste, followed by travel expenses, vehicle traffic, and lesser parking slot and so on. Conceptual framework was created according to the hypotheses and questioners were created to get the support to that and mainly for the data collection. Descriptive statistics, correlation analysis, multiple linear regression and chi-square test was used as statistical methods. The identified conceptual framework, using depends and independent variables which are having relations to the analysis of creating virtual shopping environment in Sri Lanka were analyzed using statistical methodologies. Reliability analysis was carried out to validate the underlying dimension of the success factors generated through factor analysis.

Key Words: *Consumer Behaviors, Imaginary Vividness, Sales & Marketing, Shopping Culture, Virtual Reality*

1 INTRODUCTION

Today, shopping has become an essential part of everyone's day to day life. Shopping is every corner and its up for Grocery items, clothing's and cosmetics and food items too. And shopping has taken several dimensions in its path so far. In earlier days family leaders who are the one who has done the shopping,

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but now everyone has the opportunity to go for the purchasing. But sill no one has time do their shopping due to the rush and busy working hours.

Currently there were several online sides which are doing online business. Consumer started gave more priority to those sides as consumer can buy the goods without going to the shops or malls. But in other side most of those are not proper, unless few famous sides are still doing the business properly but not in Sri Lanka, but still existing with the business. Virtual reality is a technological concept which started in early 1960's and got the 3-dimansion visual in recent years. Also current day's virtual reality concepts and its usage are involved in several fields and business also. Therefore this research is about props and cons about the opportunities and barrier of introducing virtual store environment in Sri Lanka.

1.1 Research Problem

Current generation's major problem is they don't have enough time to do their day to day events. When comes to the shopping even though there are lot of shopping malls are active. One of the major problems is reaching the location. Traffic is the worst case scenario when comes to shopping, for an example, inside a shopping mall it will take nearly one hour to shop but it will take two three hours to reach the residence. Mostly this is the scenario in the major cities in every country. Traffic also indicates the time waste but making a free time for shopping is the next concern. Current age group they are working nine hours per day and they have travelling time also. Some are working overtime in mid nights to complete their allocated tasks; in the holiday period they are more concern on going for trip to enjoy their free time peacefully than thinking of going for shopping. But still somehow they scarify the time and go for shopping to buy their essential needs. Also with their mental pressure and concern of the time some prefer outside dinning than the normal cook in the home. This need to be solved as soon as possible mainly no point of wasting the time in the roads or shopping malls. Time is the most precious now days than the money. Also if this isn't sorted future generation might prefer outside dinning (hotels and restaurants) than the cooking.

1.2 Objective of the study

- To identify the different attitude between physical and online shopping
- To identify the consumer's various problems faced towards online shopping
- To determine the opportunities of online shopping for sellers
- To find out the factors affecting online shops.
- To evaluate the opportunities and barriers in virtual stores

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1.3 Significance

Virtual reality concept has taken the technology usage to a different level as it can be used for business sector than the other technology concepts. Virtual reality stores will change the entire dimension of the online shopping and it will reduce the physical stores also. Although a novel concept to Sri Lanka, the concept of virtual stores is becoming an emerging trend in the world with more and more shopping being swept in every day. This concept can minimize the purchasing tension of the consumers, also the money what they spend for a single purchase. This study will suggest the opportunities and barriers what they have when it comes to virtual reality stores in Sri Lanka.

2. LITERATURE REVIEW

While looking at the business stores in Sri Lanka every store has a physical structure most of the transactions are happening directly rather than using the technology. Even though there are some online shopping is available those are stick to a certain extend. Almost all currently accessible Internet stores fall into the category of 2- dimensional virtual stores. For example, grocery web sites imitate the structure of catalogs where consumers select the category grocery, laundry, and freezer (Keells Super, 2018), view the available assortment, and can retrieve more detailed product descriptions, images, and prices.

While looking at the difference of 2 D and 3 D, 3 D will the starter for virtual reality concept. Virtual reality to a 2D pictorial representation of the same shopping environment, keeping the store assortment, display, and product information identical. The differences between virtual reality and pictures thus center on how immersive the presentation of the store is, not the actual products or information that are presented to people. This allows for a direct assessment of what 3D immersive virtual reality offers above and beyond 2D pictorial representations. Virtual product interactions, as simulated in 3-D product visualization, have been shown to influence non-evaluative dimensions of attitudes, namely, attitude strength. Klein (2003) has shown that virtual experience leads to stronger beliefs in product claims and more intense brand attitudes than 2-D internet ads. Recent work by Lee, Li, and Edwards (2012) has demonstrated that compared with a pictorial representation of a product, an interactive 3-D product interface tends to foster the formation of more accessible and confident brand attitudes. Virtual experience in the form of an interactive 3-D interface has been shown to outperform traditional 2-D product online presentations with regard to standard erasures of advertising effectiveness such as product knowledge, brand attitude, and purchase intention as well as measures of website success, including attitude toward the website, willingness to purchase from the website, and willingness to revisit the website (Fiore, Jin, & Kim, 2005).

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Virtual reality increases the realism of the choice environment compared to lab setups using textual or pictorial stimuli. This added realism should increase feelings of being present in the virtual environment: participants feel as though they are in the store rather than the lab. Such a feeling of presence has often been linked to virtual reality experiences, and is an important advantage of using virtual reality (Lessiter, Freeman, Keogh, & Davidoff, 2001; Schuemie, Van Der Straaten, Krijn, & Van Der Mast, 2001; Steuer, 1992; Witmer & Singer, 1998). This feeling of presence could affect consumer behavior.

Also case studies proving that interactive 3D graphics have the ability to increase the productivity of online businesses. Companies such as Sharper Image Inc. have seen their online number of visitor augment by 300% after putting three dimensional models for some of their products on their website. Visitors stayed 50% more time in the 3D area. This increase in visitors generated also a very significant increase in revenues, as in just one year, the profit went up to $30 million, compared to $4.9 million the year before. Another reason for using Virtual Reality for E-Commerce is the high attraction of interactive 3D environment. Experiments concluded that interactive 3D graphics have attracted more customers on the Web. Haubl and Figueroa at University of Alberta Edmonton conducted several experiments to examinetheeffectsofinteractive3Dproductpresentationsonbuyerbehavior. The results show that with the availability of 3D product presentation, instead of still images, buyers tend to spend a greater amount of time viewing the products, and that there is a higher likelihood of purchase. Prior online shopping experience and product choice share is high. Presentation has a better effect on individuals with prior online shopping experience. Therefore, the consideration is to use new concepts to further enhance the possibilities of E-Commerce on the Web for example Virtual Reality and Rich media content.

3 METHODOLOGY

Conceptual framework was created with the hypotheses testing.

3.1 Population

This study will conduct for the people who are living in town areas. Mainly focus of where both the people are working in the family, mostly where grandparents or other elder relations are not there for back support, and rush for shopping. Also target audiences are mostly using supermarkets for their FMCG purchases. However since the population is broad Sri Lankan current population is 21 million (worldometer, Sri Lankan Population), it will be further narrow down to a target population as age limit between 22 – 46, and Colombo district (both who are living in inside Colombo and also people who are live in outer parts of Colombo) where total population of 684,034 (world population index, Sri Lankan capital) in Colombo. Both male and female are

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taken for this population and gender splitting has not done. As per the Anderson's sampling table, it is required to have at least 384 responses for the population of 684,034 in order to get a confidence of 95% leaving out 5% for the errors.

3.2 Sample

The sampling method for the study will be stratified systematic simple random sampling. As this research is depend on technological related terms. There were two questioners were created. Questioner A spread with any audience and Questioner B spread with target set of audience, mainly who are professionals, managers in popular organizations, business oriented people, business keepers, IT professionals and teachers. Getting the sample value more than 384 is the concern from this. Both of these questioners were shared via online in Google survey form.

3.3 Variables & Measurement

Identified variables are,

- Cognitive Elaboration
- Imagery Vividness
- Attitude Accessibility & Confidence
- Sales & Expenses
- Online Payment

4 DATA ANALYSIS & RESULTS

The questionnaires were spread among more than 800 individuals and among that 445 responded for the questionnaire. This data analysis was used to capture the individual responses which are within the sample size and also to analyze the responses within the sample size in statistical data analysis software to conduct various testing. Two different questioners used to target to different sets of audience. One and the most common questioner got answered by 311 people and targeted set of questioner got answered by 114 individuals.

4.1 Reliability Analysis

A reliability analysis was carried out to validate the underlying dimension of the success factors generated through factor analysis. The study was done with the respondents of 21 and did the calculation for Cronbach's Alpha to check the internal scales, which had Cronbach's Alpha value of 0.53 on all 25 items.

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4.2 Missing Data

As these surveys have done via online with the use of Google forms, there is high probability to have missed questions. But all the questions were marked as mandatory in the survey. It won't be an issue. But still to analyses the data author conducted an exploratory analysis shows in the below. Analysis shows that all the 445 responses were valid with 0% missing data.

4.3 Outlier Detection

Performing furthermore analysis on the selected data set indicated that there were no outliers for all the variables that were within the selected data. Because of that all the 445 records were used for further data analysis.

4.4 Multiple Linear Regressions ANOVA

In the multiple linear regression analysis, with this coefficient table all five independent variables are highly sticking with the dependent variable. Analysis suggests that cognitive elaboration 28%, imaginary vividness 23%, attitude accessibility and confidence 32%, online payment 18% and sales and expenses 38% of increase with the dependent variable. Multiple linear regression ANOVA it predictors that there is a significant amount of variance with the creating virtual shopping store in Sri Lanka and the variables of consumer perception.

4.5 Chi Square

All the five variables have got created with hypothesizes to test. Every hypothesis will two statements, where one agrees and other one oppose. The results of Chi square test is shown below. If the 'Asymp. Sig. (2-tailed)' for Pearson Chi-Square is less than 0.05, which means there is an association between independent and dependent variable. In the Chi-Square test analysis, the Chi-Square significance values were shown as 0.000 which is less than 0.05 means that there is an association between creating virtual shopping stores in Sri Lanka's attributes.

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Performing furthermore analysis on the selected data set indicated that there were no outliers for all the variables that were within the selected data. Because of that all the 445 records were used for further data analysis.

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4.7 Descriptive Analysis

Descriptive statistics are given in the Table 1.

Table 1: Descriptive Analysis

Variable	N	Mean	Standard Deviation	Maximum	Minimum
Cognitive Elaboration	445	4.22	0.49	2.4	5.0
Imaginary Vividness	445	3.818	0.45	2.2	4.8
Attitude of Accessibility & Confidence	445	3.716	0.48	2.0	4.7
Sales & Expense	445	3.634	0.49	2.8	4.8
Online Payment	445	3.018	0.42	2.54	4.53

4.8 Correlation Coefficient

With those results the hypotheses were tested. In the model summary it calculates the multiple correlation coefficients "R", its square "R^2" and adjusted R square. Having an adjusted R square of 0.78 means that 78% variance of dependable variance 'creating virtual shopping store in Sri Lanka' is explained by the independent variables 'cognitive elaboration, imaginary vividness, attitude accessibility, online payment and sales and expenses (Table 2).

Table 2: Correlation Coefficient

	Un standardized Coefficients		standardized Coefficients	t	Sig.
	Beta	Std. Error	Beta		
Constant	-.19	.10	.00	-.23	.664
Cognitive elaboration	.28	.02	.26	13.86	.000
Imaginary vividness	.23	.09	.32	4.86	.000
Attitude accessibility	.32	.02	.30	11.08	.000
Online payment	.18	.02	.22	3.28	.000
Sales and expenses	.38	.08	.30	9.35	.000

5 DISCUSSION OF THE FINDINGS

Currently as Sri Lanka is a developing country, technologies and education level is getting better every day. Therefore peoples working hours are getting higher day by day due to the work load. Due to those spending time for shopping has got the problem. Online shopping has introduced to resolve that

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but it too had several cons and probs. When comes to Sri Lanka most of them have internet facilities. Nearly 6.1 million people having their own internet connection that's only 30% when comes to the Sri Lankan population. This is mainly attributed to the growth of Sri Lanka's mobile industry. The country now has a mobile penetration of 131 percent, with the accessibility of smart phones growing rapidly.

Also when comes to the FMCG buyers via online in Sri Lanka its less than 10%, most of the e commerce site users are purchasing electronic, clothing and cosmetics, but not foods or FMCG. Popular supermarket chains like Keells super and Arpico Super currently having online site and home delivery of FMCG items. With the technology development creating virtual shopping outlets in Sri Lanka is possible. To get the variables author has checked several literature review paper, after identifying independent variables conceptual model was created. To check the relationship between the dependant and independent variables several data were gathered mostly via questioners through Google survey forms.

On those surveys able to identify the required data set. It was working people who are between 25 – 34 ages living in Colombo town and western province but outer Colombo. Most of the responses came from females 158 as more than majority percentage. In the demographics variable analysis author able to found all the responders 100% have jobs and 87% responders are working in private sector, and 55% are working 8 hours per day, 20% are working for 10 hours and another 20% says they can't ensure the working time and it will depend on the workload. And when comes to the salary, most of the responders are earning between 75,000/= - 150,000/= per month, only 7.4% earring salary where less than 30,000/= according to the survey results.

The identified conceptual framework, using depends and independent variables which are having relations to the analysis of creating virtual shopping environment in Sri Lanka were analyzed using statistical methodologies. These statistical methodologies analyzed the level of contribution and its weight of each variable towards analysis of creating virtual shopping environment in Sri Lanka and validated the relationship between independent variable and the dependent variable.

6 CONCLUSION AND CONTRIBUTIONS

Analysis suggests that cognitive elaboration 28%, imaginary vividness 23%, attitude accessibility and confidence 32%, online payment 18% and sales and expenses 38% of increase with the dependent variable. In this section we will be analyzing the barriers of creating virtual shopping store in Sri Lanka with the help of the data what obtained from the literature review and questionnaire.

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While cognitive elaboration is having 28%, it has an impact on making barriers. As a developing country Sri Lanka has lack in technology, even though most of the IT and technical experts and companies are stated in Sri Lanka, we don't have exact resource in Sri Lanka to implement. Also most of the Sri Lankan are not proper online buyers, a survey of internet says only 30% of Sri Lankans are using internet frequently. People who are buying in Supermarket and via online are city people who are lack of time. Same time people who have worked with online purchasing has a shorter aware on virtual systems and different between a normal e commerce side and a virtual 3D online shopping. Than the consumer's business enterprise people, a mainly shopkeeper mainly has no clue on virtual shopping. As they are good for business, but not as up to the standard when comes to the online business or technical stuff. In the questionnaire responders "how good are you connecting imaginary with visualization" have marked positive for the statement but its equaling with the response of NO. It has got 58% only. Therefore cognitive elaboration which will have a high impact as an independent variable in creating virtual shopping store in Sri Lanka?

Imagery vividness has got 23%, imagery vividness also lack the same as mentioned in cognitive elaboration. Imagery vividness is depending on people's imaginary power over, natural think regarding the outer box. While comes to the Sri Lankan audience they are too much depend on realistic. And therefore virtual shopping will give them a chance and feel like purchasing on their own in a supermarket. But they won't believe the technology unless they started to use and got the difference. Therefore 23% influence has given to imagery vividness as independent variable and it will have a huge impact.

Attitude accessibility and confidence is having major impact as an independent variable 32%. Brand attitude and how people have confidence on a particular product. Some people feel buying through online won't give them the same product as what they have chosen. There is a statement says " online shopping will have a good impact on western countries but it will lack in Asian countries due to poor service" even though it's not highly impacting Sri Lanka while comparing to some other Asian countries like India.

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