

Online Grocery Shopping Intention during a Period of Economic Crisis

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Abstract - A national economic crisis affects local consumer behavior, such as changes in how consumers shop for groceries. This study was conducted to investigate the intention of consumers in the Colombo district of Sri Lanka to use online grocery shopping (OGS) during a period of economic crisis. A descriptive cross-sectional study with an analytical component was conducted with the aim of benefitting entrepreneurs who are deliberating the adoption of OGS systems in the Colombo district. Perceived convenience, perceived risk, and perceived relative advantages were investigated as independent variables affecting consumer intention to use OGS. Further, the study scrutinized whether household uncertainty shocks experienced during the economic crisis impacted the possible relationship between OGS intention and the above-mentioned variables. Convenience sampling was employed and data was collected using an online self-administered questionnaire sent to 150 persons. The response rate was 95% (n=143). Findings revealed that consumers in the Colombo district did not have a significant intention to use OGS during a period of economic crisis ($p=.79$). Perceived convenience ($p<.0001$), perceived risk ($p<.0001$), and perceived relative advantages ($p<.0001$) were found to significantly impact the intention to use OGS. However, household uncertainty shocks ($p=.91$) did not have a significant impact on the relationship between the intention to use OGS and the independent variables. Social tension and the COVID-19 situation during the study period served as challenges for data collection. Further research with robust methodologies is recommended to illuminate whether the trend in intention to use OGS is likely to change after the economic crisis.

Keywords: *intention, online grocery shopping, economic crisis, uncertainty shocks*

I. INTRODUCTION

Businesses need to cater to consumer preferences in pursuing profitability and sustainability. This includes adapting to changes in consumer preference in crisis situations as well. Evidence from other countries indicates that economic crises can permanently mutate consumer lifestyles and behavior [1]. On the other hand, researchers have shown that an economic crisis presents a good opportunity for businesses to reinvent themselves, introduce new services, enter new markets, and seek the most appropriate ways to gain competitive advantages [1]. However, it is important to identify novel, feasible and user-friendly measures for attracting customers during such difficult times.

It is seen that e-commerce is becoming an increasingly important marketing and sales channel worldwide, even during crisis situations. Online grocery shopping (OGS) is a form of e-commerce that allows consumers to purchase grocery items over the internet. It is reported that OGS became popular during the COVID-19 pandemic, a biological crisis situation [2]. As in many other countries, Sri Lanka too experienced a boost in OGS during this time [3]. However, there is a paucity of evidence, world-over, on consumer intention toward OGS during an economic crisis.

Sri Lanka has been going through a period of an economic crisis that has presented a unique set of challenges to local consumers, including restricted mobility due to a lack of fuel,

increased inflation, and financial hardships. If businesses are to remain profitable during this challenging period, it is necessary for them to anticipate and adapt to resulting changes in consumer behaviour.

Although limited studies have investigated different aspects of consumer behaviour during an economic crisis in other parts of the world, there is a paucity of empirical evidence on the impact of such a crisis on consumer intention to use OGS, especially in developing countries. Studies have not been conducted in Sri Lanka to investigate the intention to use OGS during the ongoing economic crisis.

Therefore, this study was conducted as a preliminary attempt to understand the intention of consumers in the Colombo district of Sri Lanka to use OGS during a period of economic crisis. The Colombo district was selected for this study as it had the highest district-wise share of OGS orders during the COVID-19 pandemic [3]. Hence, it was assumed that the consumers in this district had a reasonably good idea about OGS, regardless of whether they have previously used it.

Previous studies on the intention to use OGS have used extended versions of the Technology Acceptance Model (TAM) [3]. The TAM proposes that consumer intention to use a new technology depends on its perceived usefulness (PU) and perceived ease of use (PEU) [4]. Subsequent studies have further extended this model by introducing new dimensions, including perceived risk (PR) and perceived relative advantages (PRA) [5]. PR is the degree to which consumers feel that using OGS may result in unfavorable outcomes, such as receiving incorrect orders or having personal information stolen. PRA is the extent to which consumers view OGS as more beneficial compared to alternative methods of grocery shopping. However, none of these studies have investigated consumer intention to use OGS during an economic crisis. Thus, they have failed to take into account the impact of factors related to an economic crisis, such as a decline in individual income, savings, and expected future wealth and a reduction in household consumption on consumer intention to use OGS.

Therefore, the present study investigated OGS intention using an extended version of the TAM considering the above factors. Perceived convenience, PR, and PRA were selected as the independent variables of this study. Perceived convenience (PC) is an amalgamation of PU and PEU and it measures the degree to which consumers perceive OGS as useful and user-friendly. This study also investigated household uncertainty shocks (HUS) as the moderating variable. HUS is defined as an increase in uncertainty related to household outcomes such as household consumption, income, and savings.

II. MATERIALS AND METHODS

A descriptive cross-sectional study with an analytical component was conducted and data collection was carried out from June to July 2022. A pre-tested, self-administered online questionnaire was used as the study instrument. It consisted of quantitative and qualitative sections. The quantitative section included sociodemographic items and statements related to the variables which were measured using a five-point Likert scale. The study findings were not intended to be generalized to other parts of Sri Lanka due to the disparity in the availability of OGS

services. Hence, convenience sampling was employed. The questionnaire was sent to 150 persons and a response rate of 95% was obtained (n = 143). The sample consisted of consumers in the Colombo district of Sri Lanka aged eighteen years and above. As the study investigated consumer intention, previous experience in OGS was not considered mandatory.

Data was analyzed using SPSS version 26. The proportion of consumers with an intention to use OGS was determined. Associations were investigated using multiple regression analysis. Significance was set at $p < .05$. Deeper insight was gained through the analysis of qualitative responses.

III. RESULTS AND DISCUSSION

Out of the 143 respondents, 54.5% were female and a majority (55.2%) were aged eighteen to twenty-seven years. Most of the respondents were unmarried (56.6%) and the average family income was above Rs. 100,000 (60.1%). Majority (40.6%) shopped for groceries over 4 times per month.

The intention of consumers in the Colombo district of Sri Lanka to use OGS during a period of economic crisis was 44.8% (CI 36.4% - 53.3%). Findings revealed that consumers in the Colombo district of Sri Lanka did not have a significant intention to use OGS during the economic crisis ($p = .24$).

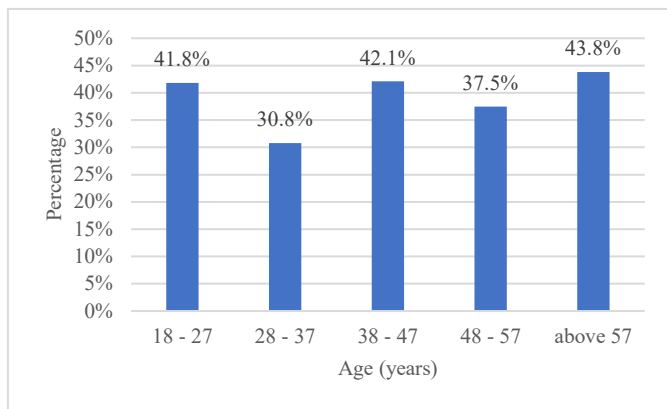


Fig. 1 Age vs intention to use OGS

As shown in Figure 1, the percentage of consumers who have an intention to use OGS are roughly similar across age groups.

Table 1. Summary of multiple regression model

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
PC	.079	.011	.411	6.958	.000
PR	-.081	.009	-.484	-9.204	.000
PRA	.078	.014	.328	5.544	.000
HUS	-.002	.009	-.014	-.268	.789

The results of the multiple regression analysis indicated that the model explained 62.8% of the variance and that the model was a significant predictor of intention to use OGS, $F(4,138) = 58.30$, $p < .0001$. As shown in Table 1, while PC ($B = .079$, $p < .0001$) PR ($B = -.081$, $p < .0001$) and PRA ($B = .078$, $p < .0001$) contributed significantly to the model, HUS did not ($B = -.002$, $p = .79$).

Findings of this study are consistent with research on the significance of PC, PR and PRA on the intention to use OGS [5]. In a similar study conducted among 200 respondents in 2020 in the Colombo district, PR was revealed to be the least important association of consumer adoption of OGS [5]. However, according to the present study, PR had the largest impact. This indicates that consumers may be particularly apprehensive about the risk of using OGS during an economic crisis.

Qualitative analysis provided further insight, revealing that there were concerns about delivery charges, lack of fuel and the resulting unavailability of delivery services, especially during the economic crisis.

IV. CONCLUSION

Findings of the study indicate that perceived risks play a greater role in impacting intention to use OGS among consumers in the Colombo district during the economic crisis. Entrepreneurs can use the study findings to reduce perceived risks and communicate the benefits of OGS to motivate consumers to use it during the economic crisis period.

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