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Customer Satisfaction towards Online Shopping in Sri Lanka: Moderating Effect of Income Level

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Authors' contributions

This work was carried out in collaboration between both authors. Author GABSP designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author KMVS managed the analyses of the study and final editing of the manuscript. Both authors read and approved the final manuscript.

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ABSTRACT

Aim: Online shopping is the most popular feature around the world as well as in Sri Lanka. People are tending to do online shopping by using those social media and also by using online shopping websites. As well as most of the business organizations try to use online shopping to sell their product and to increase their market. The objective of this research is to assess the factors influencing customer satisfaction while doing online shopping. Further, the study tested the moderating effect of income level on the relationship between factors influencing customer satisfaction on online shopping.

Design: This study used the deductive approach and research design was based on quantitative and cross sectional. The targeted population for this study is customers living around the Colombo area, those who have internet facility in their living place or working place. The sample size was 380. The survey method is employed to collect data through a standardizes questionnaire. The

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selected dimensions (customer satisfaction, convenience, security, website functionality and customer service) were measured by using a Likert scale measurement items, acknowledging the prior studies.

Findings: According to the survey findings of this study, Convenience, Web site functionality, Customer service have significant influence on customer satisfaction on online shopping. The results also indicated that the income level has a significant moderating effect on the relationship between Convenience, Web site Functionality, Security and Customer service and Customer satisfaction on online shopping.

Implications: According to the findings of this study online retailers can identified that their consumers are more concern about the website functionality, customer service, and convenience of the online shopping. Therefore, online retailers can develop their website by adding more functions which will be helpful and easy for the customers and they can further improve their customer service at the prior purchase level as well as at the post purchase level in order to attract more customers and retain the existing customers with their business.

Keywords: Online shopping; customer satisfaction; income level; developing context; multiple regression.

1. INTRODUCTION

In the 1991 internet was commercialized and it is the birth of the e – commerce. Today's shoppers combine online shopping with real life shopping, using access to Wi-Fi and the showrooming trend. They often make purchases in a retail stores at the same time as using mobile devices to buy something online.

Online shopping is becoming a popular method for selling and purchasing goods, due to many reasons. Because of the busy schedule of people, they face the problem in time consuming. As a solution for that problem, people tend to use online shopping. Because of online shopping facility, people have ability to get full information about the product which they plan to purchase, they can review variety of products and can choose most compatibility item for them. There are no any local or international barriers in the online shopping [1]. Therefore, people can purchase and consume not only local product but also product from foreign countries.

Online shopping is the most popular feature around the world as well as in Sri Lanka. Sri Lanka's internet connectivity is growing at a steadv pace. According to Telecommunication Regulatory Commission of Sri Lanka (TRC) [2], Sri Lankans subscribed to 1.5 million cellular mobile connections and over 300.000 broadband and dial-up internet connections, increasing Sri Lanka's internet population to a 30% and to total internet users to a 6.1 million during the year of 2016 (Fig. 1).

According to the Fig. 1 we can identified that mobile internet users in the Sri Lanka was grow

rapidly. As well as according to their calculation there are more than 4.5 million Facebook users, more than 0.8 million LinkedIn users and more than 200 million Instagram users (daily users) in Sri Lanka. People are tending to do online shopping by using those social media and also by using online shopping websites. Thus, we can understand that online shopping becoming a major part in Sri Lankan businesses. Hence, Online sellers must focus about their online buyers and should take necessary action to increase the satisfaction level of them [3]. Customer satisfaction is most important theory to every business.

According to Pappas [3] customer satisfaction is ongoing analysis about the product acquisition or utilization expertise which inherent to the individual. Kumar [4] highlighted that online shopping helps customers to purchase products which are available in the market and help them to collate the price and quality of the product formerly they purchase the product. Furthermore, it is said that repurchase intention of the customer depend on the quality of the product and services they obtain when they purchase product through online. Therefore, to retain the existing customer and to attract new customers toward their online shopping window online sellers must pay attention to maintain and increase the satisfaction level of their consumers. Therefore, this study has been designed to assess the factors influencing customer satisfaction and identify the problem faced by customers while doing online shopping activities.

Previously, the prior studies have assessed the level of customer satisfaction on online shopping and identified that convenience, usefulness,

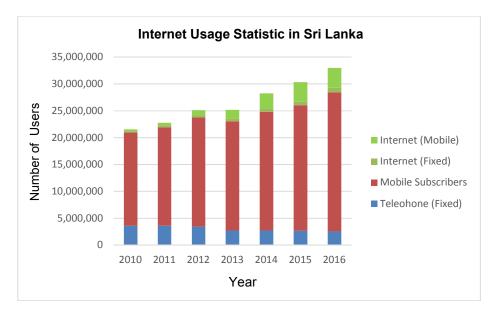


Fig. 1. Internet usage in Sri Lanka Source: Telecommunications Regulatory Commission of Sri Lanka (2017)

enjoyment, perceived web - store traits and consumer traits influence online shopping satisfaction [5]. Pappas [3] studied that customers are more satisfied with their online purchases when their experience is greater. Kumar [4] analyzed that marital status and level of problems faced by customers on their online shopping related to the customer satisfaction. Wijesundara [6] stated that trust, security of the website and product type are the important factors that affect to the customer satisfaction and customer who purchase offline consider web presence of the company as an information source. According to the study of Kumar [7], age, gender and educational qualification have significance influence on customer satisfaction and it concluded that 24 hours service is the first important factor towards the satisfaction on online shopping. However, there is no enough studies to examine how income level of customers influences on online shopping satisfaction. Hence, this study aimed to examine the moderating effect of income level on the relationship between factors influencing customer satisfaction on online shopping.

This study will be beneficial to online sellers in Sri Lanka, because this study provides information about the factors which influence the customer satisfaction and problem faced by them while doing the online shopping activities. Also, it helps online marketers to identify the non-influence factors which can waste the valuable business resources and this study help to identify

the right factors which is helping to affects to retain its existing customers and attract more new or potential customers. And also, online sellers have an ability to gain long term business growth because of their ability to reduce the moving of customers among the different brands. Therefore, online sellers can study about these factors and problems and improve the service quality of their online business.

2. LITERATURE REVIEW

Customer satisfaction is the most important determinant in a marketing field study. According to Chung and Shin [8], customer satisfaction is a causal element, when the customer decided about the pursue or avoid transaction with online distributor [9]. Satisfaction is the estimation of the amaze relevant to the buying decision of the product and utilization experience of the products and services [5].

Disconfirmation theory argues that satisfaction is expounded to the dimensions and direction of the disconfirmation expertise that happens as a result of comparison service performance against expectations. It is a judgement that a product or service feature, or the merchandise or service itself, provided an agreeable level of consumption - related fulfilment, together with levels of under- or over fulfilment [10].

Negativity theory describes that any disparity of performance from expectation of the customer will interrupt the individual and make negative energy [11]. According to that dissatisfaction will arise when the perceived performance is not match with the expectation of the customer. Affective feelings toward a product or service are reciprocally associated with the largeness of the discrepancy.

Customer service is the one of main factors in determining the customer satisfaction. And also, this is the key difference between the online business and physical present business. For an example, when the seller accepted the order which is not available in their stock sufficiently to fulfill that order, customer will dissatisfy about the service of that business when he comes to know that the product is out of stock [12]. There are many reasons to dissatisfaction of customer when doing online shopping. Such as, hackers can steal the personal information of the customers, because of the designing failure and poor performance of the website, customers may face many hassles when searching the product which he hopes to purchase, customer does not receive product on time or product does not have a quality or performance as expected [9].

If business more concern about increasing satisfaction level of their existing customers rather than acquiring new customers, that business can obtain benefit by avoiding customer acquisition cost and also, they can achieve higher profitability because of repeat purchases of the existing customers. When businesses are planning to increase their customer's satisfaction level, they have to study about the customer's expectation about their product and services. When perceived performance of certain product or service is less than the customer's expected performance, customers will get dissatisfied about that product or services and if perceived performance and expected performance are at the equal level customers are in the neutral situation about their satisfaction level. If perceived performance of particular product or service is greater than the customer's expected performance, only that situation customers will be satisfied about the product or service which they purchased.

The empirical studies have been conducted in nationally and internationally concerning the factors in influencing the customer satisfaction on online shopping. Abdeldayem [5] conducted a study on customer satisfaction about online shopping by the evidence from UAE. The study revealed that attitude toward online shopping and

the intention to shop online in the UAE are not only affected by easiness of use, usefulness and enjoyment, but also, by some other factors such as perceived web – store traits, channel traits and consumer traits.

The study conducted by Pappas [3] described that moderating effects of online shopping experience on customer satisfaction and purchase intention. It was found that experience has moderating effects on the relationships between performance expectancy, satisfaction and intention to repurchase. It also reported that prior customer experience strengthens the relationship between performance expectancy and satisfaction, while it weakens the relationship of satisfaction with intention to repurchase.

Tandon [13] analyzed the customer satisfaction by user's perspective toward the online shopping in India. The study revealed that perceived usefulness and website functionality have a positive impact on customer satisfaction, whereas perceived usability had a significant but negative impact on customer satisfaction. It also reported that ease of use, ease of understanding, ease of ordering and ease of purchasing seem to be significant variable of satisfaction of online buyers. It also found that customer satisfaction of online shopping is also forecast by both behavioral intention and attitude to buy.

Kumar [4] found that customer satisfaction is associated with marital status and level of problems faced by customers on their online purchases. It suggested that consumers who face high level of problems when online shopping those consumers have a low level of satisfaction. Therefore, online sellers can incorporate more security features in their web portal and reduce the delivery time by their maximum extent. Also, it mentioned that online sellers should ensure that only quality products are delivered to their customers.

Concerning the empirical studies in Sri Lankan context, Wijesundara [6] explained that factors affecting for online purchase decision of Sri Lankan. This study identified three independent factors which affects to the customer satisfaction of online buyers. These are personal factors, product factors and website factors. Among the personal factors, opinion on transaction safety and privacy are the important factors which affect the customer buying behavior, type of the product was prominent factor out of the product related factors and out of the website factors

navigation speed and information richness are dominant factors which affects the consumers buying decision. Convenience, usefulness, perceived web store traits and customer traits, great experience, trust and security of the website, product type, website gender, educational functionality, age, qualification and 24 hours service are the some of the key factors identified by the literature review as factors influencing customer satisfaction on online shopping.

For study purpose, factors including convenience, security, website functionality have been selected as independent variables whereas income level as moderating variables.

Online shopping has become a convenience shopping method among people because of many reasons. The most popular reason among that is ability to shop for products and services at a time which is convenient for the consumers. Online sellers accept orders 24 hours of the day. Mahnke [14] reported that most of online buyers concern about the security of their information. If there is no any assurance about safeguard of their information, they have not interest to proceeds with online shopping activities. A quality, user friendly web site should be consisting with ease with which website users can navigate that site and obtain the information they are seeking. When website functions are not working properly and those are not compatible with the customers expectation, online buyers try to move to another online sellers which provide highly functional websites. A mobile website option, free or competitive shipping option, advanced navigation and search functions, superior photos and image options, a detailed product description, customer reviews of the products and real time inventory are the most popular website functionality features which satisfy customers.

In recent years the use of internet and ecommerce has become widespread, especially in more technologically developed contexts and cultures, and therefore it is reasonable to assume that the importance of the socioeconomic characteristics has also grown. The prior studies on online shopping behaviour also attempt to determine the importance of socioeconomic user characteristics such as age, gender, educational level, place of residence and income. These characteristics have been commonly tested in the field of marketing for purposes of market segmentation and may explain changes in the behaviour tested [15]. Among the various factors, income is key characteristic that has attracted considerable research attention in the field of technology acceptance [16]. However, Hernández [17] stated that income level of consumers was not condition the behaviour of the experienced eshopper. Several studies [18,19] have stated income as an influencing factor for online shopping behaviour, yet the results concerning its significance are contradictory. Accordingly, the study tested the following hypotheses;

- H1: There is a relationship between convenience of online shopping and customer satisfaction.
- H2: There is a relationship between security and customer satisfaction.
- H3: There is a relationship between website functionality and customer satisfaction.
- H4: There is a relationship between customer services and customer satisfaction.
- H5: Income level moderates the relationship between convenience and customer satisfaction.
- H6: Income level Moderates the relationship between website design/ structure and customer satisfaction.
- H7: Income level moderates the relationship between security and customer satisfaction
- H8: Income level moderates the relationship between customer service and customer satisfaction.

3. STUDY DESIGN

This study used the deductive approach because the conceptual framework (Fig. 1) was developed based on the test data by Ali [9]. The research design is based on quantitative approach and cross-sectional. This study applied explanatory method, that explains the relationship among independent variables which are mentioned above and customer satisfaction.

The targeted population for this study is customers living around the Colombo area, those who have internet facility in their living place or working place. According to the Computer Literacy Statistics (2018)published Department of Census and Statistic [15], higher percentage distribution of Internet (44.9%) and E-mail using household population (26.4%) are in the Colombo district. Since the target population is considerably large, the study utilized the nonprobability, convenience sampling method. Hence, the sample size is 380 respondents. those who have internet facility in their residence place or work place.

The study was based on primary data. The survey method was employed to collect data through a standardizes questionnaire. The first section of the questionnaire consisted with demographic factors of the respondents, such as gender, method of use internet and factors which identified above as convenience, security, website functionality and customer service are consisted in the second section of the questionnaire. Likert scale ranged from strongly agree to strongly disagree was used to measure the items under each variable (refer Table 1). The pilot survey

was conducted, in order to measure the effectiveness of the developed questionnaire and pilot survey was performed with the sample of 22 people who dealing with online shopping. According to result of the pilot survey reliability of the questionnaire is in a satisfactory level.

The data collected was sorted and analyzed using descriptive statistics and inferential statistics. In order to test the hypotheses constructed, multiple regression analysis was employed.

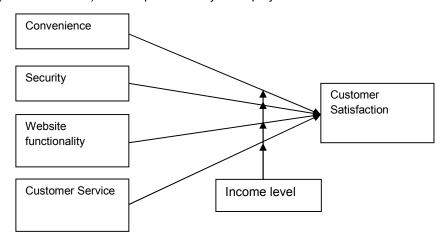


Fig. 2. Conceptual Framework

Table 1. Operationalization of the measurement items

Variables	Measurement	Sources
Convenience	 Easy to select and buy the product 	(Abdeldayem , 2010)
Security	 Safety of credit card and personal information 	(Wijesundara, 2008)
Website functionality	 Speed and access of the web site 	(Tandon et al. 2017)
	 Information about the products 	
Customer Service	 Way of solving complaints. 	(Senthilkumar &
	 Delivery time. 	Chandramohan, 2018)
	 24 hours service. 	
Customer	 Repurchase intention. 	Khan (2018)
Satisfaction	 Easier and faster. 	
	 Feel of safety. 	
	 Timely delivery 	

Table 2. Measurement adequacy

Variable	Cronbach Alpha	KMO	Bartlett's test of sphericity	AVE
Customer satisfaction	0.804	.819	0.000	.5620
Convenience	0.698	.785	0.000	.5440
Security	0.761	730	0.000	.5837
Website functionality	0.757	.746	0.000	.5798
Customer service	0.618	.633	0.000	.5706

4. FINDINGS

The study returned 357 responses out of 380 sampled responses, representing the 93% of response rate. The respondents represented 62% female online buyers and 38% male online buyers. When considered about the income level of this collected sample, 22% of respondents earn less than Rs. 10,000 income, 23% of people earn between Rs. 10,000 - Rs. 25,000, 19% people earn between Rs. 25,000 - Rs.35,000, 22% of people earn between Rs. 35,000 - Rs. 45,000 and 12% of people earn more than Rs. 45,000 of income. As a result, it can be identified that, this sample represent the people who earned each level of income in an equal percentage. When consider about the internet facility, 68% of respondents in the sample have an internet facility both their working place and residence place, 14% of respondents have internet facility only in their residence place and 17% of people have internet facility only in the The final working place. demographic characteristic of this study is "online buying behavior". Further, 39% of respondents used online shopping by once a week, 30% of people used online shopping by once a month, 20% of people tend to use online shopping by twice a year and 9% of people tend to use online shopping by once a year. In overall, it can be concluded that, sample of this study is well diverse.

The reliability of variables was assessed by examining their internal consistency values through computing the construct reliability and factor analysis was applied using principal axis factoring method for data reduction and purification of the items under each variable of the study. It can be concluded that customer satisfaction (5 items), convenience (5 items), website functionality security items), (4 (4 items) and customer service (4 items) met adequate validity (KMO > 0.50; Bartlett's test of sphericity < 0.001; AVE > 0.50) and reliability (Cronbach's alpha value > .70) requirements (Table 2).

Table 3 illustrates the descriptive statistics and inter-correlational values between the variables.

The mean value of the convenience is 3.7725, the value is closed to 4. The results can be considered as averagely agree rather than neither disagree nor agree for the questions provided to measure the convenience of the online shopping. The mean value of the variable of website functionality is 3.9006. It is more closed to the 4. As a result of that we can concluded that, the response provided under the questions in the website functionality variable is "agree". Also mean value of the other independent variable of security and customer service and dependent variable of the customer satisfaction is4.1471, 4.1541 and 4.0437 respectively. Therefore, it can be identified that responses given for the questions under those three variables are also get the "agree".

There were statistically significant correlations between customer satisfaction, convenience, website functionality and customer service at 95 percent and 90 percent confidence intervals. Further, the multiple regression analysis was used to determine whether convenience, security, website functionality and customer service have any significant effect on customer satisfaction on online shopping. Tables 4 and 5 show the results of the multiple regression analysis.

Table 4 shows that adjusted R-square was 0.388 (F = 57.522, p < 0.001), implies that 39 percent of the variation in customer satisfaction on online shopping can be explained by convenience, security, website functionality and customer service.

The Durbin–Watson value was 1.546 (fallen within 1.53 to 2.50), indicates that there is no autocorrelation problem in the data. Further, the variation inflation factor (VIF) values of all the independent variables were above 1 and below the threshold value of 5. In addition, the tolerance values of all the independent variables

Table 3. Descriptive statistics and correlation analysis

	Mean	SD	Con	WebFun	Secu	CusSer
Convenience	3.7725	.54487	1			
Website functionality	3.9006	.55988	.564 ^{**}	1		
Security	4.1471	.50078	.028	.567**	1	
Customer service	4.1541	.44579	.339 [*]	.641 ^{**}	.350	1
Customer satisfaction	4.0437	.57053	.565**	.823 ^{**}	.720 ^{**}	.444*

^{**.} Correlation is significant at the 0.01 level (2-tailed)

^{*.} Correlation is significant at the 0.05 level (2-tailed)

Table 4. Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin- Watson	F	Sig.
1	.629 ^a	.395	.388	44618	1.546	57.522	.000 ^b

a. Predictors: (Constant), Customer Service, Security, Convenience, Web Functionality b. Dependent Variable: Customer Satisfaction

Table 5. Coefficients

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.	Collinearity statistics	
		В	Std. error	Beta	=		Tolerance	VIF
1	(Constant)	.439	.310		1.415	.158		
	Convenience	.406	.053	.388	7.666	.000	.670	1.493
	Web Functionality	.213	.054	.209	3.941	.000	.613	1.631
	Security	.084	.047	.074	1.775	.077	.997	1.003
	Customer Service	.215	.059	.168	3.621	.000	.797	1.255

a. Dependent Variable: Customer Satisfaction

Table 6. Moderating effect analysis

Income level	R square	Adjusted R square	Std. error of the estimate	Durbin- Watson	F	Sig.
Less than Rs.10000	.171	.127	.52725	1.604	3.828	.007
Between Rs. 10000 - Rs 25000	.500	.474	.40282	1.931	19.726	.000
Between Rs. 25000 - Rs 35000	.490	.459	.37110	2.267	15.619	.000
Between Rs. 35000 - Rs 45000	.414	.382	.46588	1.719	13.224	.000
More than Rs. 45000	.608	.567	.41061	1.641	15.102	.000

were higher than 0.20. The results further indicate that there is no multicollinearity issue in the variables. In Table 5, the p-values of convenience, website functionality and customer service were less than 0.05. convenience, website functionality and customer service have significant effect on customer satisfaction on on-line shopping in selected consumers in this study. However, the p-value of security was greater than 0.05, indicating that security is not a significant influencer on on-line shopping. Among the factors. convenience recorded the highest coefficient value (B = 0.406), following customer service (B = 0.215). The lowest effect was recorded to the security (B = 0.084).

Further, the study was split dataset based on income level of consumers in order to test the moderating effect of income level. As Table 6 shows, there is a statistically significant differences in R-square values at different income levels. Further, R-square for More than Rs.45000 income level is relatively higher than other income levels. This is indicating that income level has a significant moderating effect of the relationship between convenience, website

functionality, security and customer service and customer satisfaction on on-line shopping.

5. DISCUSSION AND CONCLUSION

Online shopping has become a popular shopping method ever since the internet has declared a takeover. Online shopping can become imperative tools for improving business and ensuring customers to be happy and loyal. The study designed to assess the factors influencing customer satisfaction on online shopping by using four independent variables. These are convenience, website functionality, security and customer service.

The results of this study are consisted with the previous studies of Abdeldayem [5], Tandon [13] and Kumar [7]. According to the findings of this study researcher identified that convenience have significant influence on the customer satisfaction on online shopping in the Sri Lankan context. The previous study of Abdeldayem [5] also identified that convenience has greater influence on customer satisfaction on online shopping in the UAE context. This is might be the results of the 24 hours service, fast delivery,

availability of detailed information and similarity for the physical market place and etc. In the study of Tandon [13] identified that website functionality has positive impact on customer satisfaction on online shopping in Indian context. When consider about the Sri Lankan context, this study also identified that website functionality has significant influence on customer satisfaction. Website functionality can be a significant influence factor because of the ability to access easily and speed of the website, user friendly website design and etc. In the study of Kumar [7] identified that 24 hours service was the first satisfaction factor of the customers on online shopping. This study also found that customer service has greater influence on customer satisfaction on online shopping in Sri Lanka. Because, it can be as a result of the post purchase services, delivery within the due period and effectiveness of handling the complaints and etc. In the study of Wijesundara [6] identified that trust and security of the web site is the major factors to take the online purchase decision by the customer in the context of Sri Lanka with special reference to Western Province. But in this study result not in line with the result of the Wijesundara [6]. This study found that security has not a significant influence on customer satisfaction on online shopping. It can be as result of lack of trustworthiness of the website and seller, feel of insecurity about the transaction and personal information and etc.

Also, this study has unique contribution when compare with previous studies. Because this study measured the moderate effect on the convenience, website functionality, security, customer service and customer satisfaction on online shopping. The findings of the study indicated that, the income level has a significant moderating effect on the relationship between convenience, website functionality, security and customer service and customer satisfaction on online shopping. Because needs and wants of the people in each income level category are different from one to another. The needs and wants of the high-income earners are different from the needs and wants of the low-income owners. Also, Customer's purchase decision can depend on their income level. High income earners tend to spend more when they are purchasing goods and services while low income earners tend to spend less when they are purchasing goods and services. Most of the highincome earners are more educated than the lowincome earners. Therefore, their purchase decision is based on the information they get.

Further, high income earners have less limit and options when compare with the low-income earners. Hence, income level has a significant influence on the relationship between convenience, website functionality, security and customer service and customer satisfaction on online shopping.

This research will help online sellers to attract and motivate new customers for online shopping and existing customers to extend it in their daily purchase. According to the findings of this study online retailers can identified that their consumers are more concern about the website functionality, customer service, and convenience of the online shopping. Therefore, online retailers can develop their website by adding more functions which will be helpful and easy for the customers and they can further improve their customer service at the prior purchase level as well as at the post purchase level in order to attract more customers and retain the existing customers with their business. Further when consider about the moderating effect of the income level over the customer satisfaction. online retailers can target their market base on the income level of the customers and make different strategies for each income level in order to increase the satisfaction level of the customers.

The main limitation of the study is that it was conducted for respondents from Colombo District only. Also, this study used only four independent variables (convenience, website functionality, security and customer service) while there are so many factors which affect customer satisfaction on online shopping.

As a future direction researcher can suggest that, in future this study can be test by covering different cultural groups. Also, this model can be tested by covering the other district in the country also including the rural and semi – urban areas in the country also having limited access to technology adoption to increase the application.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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