Factors Influencing The Attraction of Ict among Customers in The Agriculture-Based Sector in Klang, Selangor

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Abstract
Information and communication technology (ICT) is a primary element of a developed nation. Technology has altered how consumers purchase and how stores and merchants serve their customers. Therefore, the primary aim is to determine the factors influencing the attraction of ICT among customers in the agriculture-based sector in Klang, Selangor. Primary data were collected using a structured questionnaire via an online survey involving 384 respondents in Klang, Selangor. The descriptive analysis revealed that the type of ICT tool customers use frequently is smartphones. The researcher concludes that most of the customers in Klang, Selangor, strongly agree that they could order any product from any part of the world by using ICT. Based on the correlation analysis, the overall factors (social influence, customer satisfaction, and convenience) have a strong positive relationship with the usage of ICT. Social influence is the most dominant factor in the use of ICT. This study would help the customer become more consistent with using ICT in online purchasing. As this study was limited to customers in Klang Selangor, it is advised that additional research be conducted in the area that is centred on the east coast of peninsular Malaysia. Customers may also gain insight into the issues they encounter when using ICT and online shopping to make purchases if the survey is expanded to include the area.

Introduction
Information and communication technology (ICT) is one of the primary elements of a developed nation. ICT usage is one of the best indicators of a nation's overall level of development (information and communication technology). As people use modern technology more often, their growth and standard of living rise. The development of the internet and technology was intended to help simplify daily life, specifically conscious choice.

Telecommunication, television news, intelligent building management systems, visual and audio data transfer processes, and internet monitoring and management activities all fall under information and communications technology (ICT). In today's Malaysia, the majority of the population owns ICT equipment. These are found in recent statistics from the Malaysian Communications and Multimedia Commission (MCMC), which reveal that the country now has over 13 million mobile phone users, including a penetration level of over 50% and over 84 million short message services delivered in a day (Llyod, 2005). ICT covers the technical goods that influence the information in digital data and involves all technological tools that assist individuals, businesses, or organisations in handling the data (Com, 2020).

In Malaysia's agricultural areas, information and communication technology has been moderate. As Fahmi (2005) said, information and communication technology inside the agriculture industry, like spreading news through the portal, would efficiently communicate information between a potential customer and the client. With the various advantages, it offers customers and businesses. Online purchasing has increased. According to a survey published in the local newspaper Utusan Melayu (2008), 500,000 Malaysian blogs were formed in 2006, with more than half a million Malaysians accessing the internet at home. This figure demonstrates that millions of Malaysians are ready to have their own ICT devices. The benefit of ICT in commerce can be shown in how it might boost productivity, enhance efficiency, reduce costs, increase customer knowledge, speed up interactions, and increase social control decision-making in the company.

However, according to Shanthi & Kannaiah (2015), many customers prefer to purchase through conventional markets with a noticeable physical presence. Additionally, most customers want to try things before making a final decision, particularly when buying produce like fruits and vegetables, so they may sample the flavour. Encouraging people to utilise ICT is problematic because most communities around agriculture constantly rely on traditional sources of information, such as neighbours, family, or other farmers. Due to the lack of ICT technology in rural areas has also indirectly led to a reduction in the use of ICT among customers daily (Saidu et al., 2017). Additional obstacles to older persons adopting ICT are a shortage of ICT expertise, poor online experience, and a lack of comfort using online technology (Vroman et al., 2015).

Objectives
The objective that was involved in this study are:
  i.   To determine the ICT tools used among customers in the Klang Selangor agriculture sector.
  ii. To measure the effectiveness level of ICT used among customers in the agriculture-based sector in Klang Selangor.
  iii. To identify the factors influencing the attraction of ICT among customers in the agriculture-based sector in Klang Selangor.

Literature Review
Information Communication Technology (ICT)
Agricultural e-commerce refers to trade models in which agricultural goods or services are bought and sold online via computers connected by existing internet technologies and methods (Folorunso et al., 2004). E-business has impacted agriculture in the twenty-first century and offers advantages to increase product marketing and trading (Zheng et al., 2009). Several theoretical benefits of e in agriculture are being highlighted, including the

encouragement in the flow of information, market transparency, lower transaction costs, sector cooperation facilitation, and transaction value removal (Zheng et al., 2009). Information and communication technology help farmers access up-to-date agricultural information anytime, anywhere. "Mobile phones" indicate successful ICT usage in agricultural expansion. This is one of the most accessible ICTs, enabling a broad spectrum of clients to utilise it, particularly in rural regions.

Used of ICT
Despite recent improvements in global e-commerce, most customers and companies have not benefited from pandemic-related e-commerce potential because of persistent challenges like expensive cellular access, a shortage in technology literacy, poor wages, and a decline in e-commerce excitement (Tan, 2019). Gakuru et al (2009) state that ICT usage benefits agriculture, mainly through internet web browsing. The use of information and communication technologies in agricultural extension services, particularly mobile phone systems in the agricultural sector, has supplied information about the market conditions, environment, and transportation, including improved agriculture, as well as the ability to communicate among concerned departments and agencies (Aker, 2011).

Social Influence
Social influence is one of the most critical behavioural elements in modifying people's behaviour. Reviews research products and services, including online sellers, to remove doubt, verify the buying, and educate potential customers about the products and services. (Kusmaharani & Halim, 2020). More producers are considering social media channels as a critical platform for communicating with potential customers. As a result, the consumers' observations affected the social influence on using information and communications technology for agricultural production data (Carvalho and Fernandes, 2018); (Naivinit,2009).

Customer Satisfaction
Previous research into user acceptance of ICTs has also concentrated on customer satisfaction. Knowing various factors that affect consumer loyalty is beneficial for marketers (Krishna et al., 2020). Customers are happier or participate more when services are of a better standard. Online sellers also should adapt their strategies to reflect changing consumer demands and technological developments (Mumtaz et al., 2011). In addition, e-commerce revenues depend on providing excellent customer care and an outstanding shopping experience. According to a survey by Bain and IPSOS (2013), Internet businesses earn by purchasing products at least four times yearly through regular customers. Overall satisfaction is an individual's reaction toward a firm's expected outcomes and results compared to customer expectations and criteria in attaining the output (Kotler& Keller, 2009).

Convenience
Online shopping has always been popular primarily due to its convenience. Online food purchasing can relieve customer pressure since purchases can be conducted at the house, at the workplace, when out and about, or on a smartphone. Online shopping enables convenient access to a wide range of goods details, which helps save the customer time, effort, and cost throughout the purchase process. Online retail businesses enable customers to buy products wherever at any period (Noor et al., 2011.). Morganosky and Cude (2000) also discovered that purchasing food online is more convenient for customers with physical limitations, like

customers with disabilities. Meanwhile, online shopping enables convenient and straightforward access to a wide range of goods details, which helps save the customer time, effort, and cost throughout the purchase process or offers the most outstanding items at the best rates (Khedkar 2015).

Methodology
Study Area
For the study, Klang, one of the districts in the state of Selangor, was chosen as the research location. Klang was selected as the study location because Klang, one of Malaysia's 14 cities, is ranked third in terms of population. This area exhibits Malaysia's general learning and advancement.

Research Design
The research design used quantitative analysis and used descriptive research. In the descriptive research, the majority of the variables used were adapted from literature and previous studies (e.g. Tan, 2019; Al-Khaffaf & Abdellatif, 2013; Utusan Malaysia, 2008; Sofia, 2017; Kusmaharani and Halim, 2020; Nassae et al., 2019; Mohan et al., 2020; Seitz, 2013; Freeman, 2019; Khedkar, 2015). A simple random sampling method was used to give equal opportunity for the entire population to be selected as the respondent in the research. The sample size of respondents in the present study was 384. The research involved a survey method, and the respondents were interviewed using a questionnaire form.

Research Instrument
The questionnaires in this study had a structured form determined using a five-point Likert scale. The survey is divided into three parts. Section A's demographic profile covers the respondent's gender, age, education levels, daily internet usage frequency, monthly salary, and the most popular ICT tool categories. The following five questionnaires under section B are relevant to assessing ICT effectiveness among customers in Klang, Selangor. The ICT usage among customers based on attraction factors is finally covered in section C.

Data Analysis
The pilot research was carried out in and around Klang, Selangor, to assess the reliability and validity of the questionnaire. Thirty-eight respondents who were customers received the survey questionnaires. The survey is being disseminated through online interactions and social media sites. Before the actual data release, each research questionnaire's reliability is tested using Cronbach's Alpha. The researcher used descriptive analysis to determine the frequency and percentage of every factor interested in learning about the responder. Index calculation was also employed to measure the effectiveness of ICT use among consumers in Klang. Pearson correlation analysis and multiple regression analysis was used to assess the factor influencing the attraction of ICT in agriculture based in Klang, Selangor.

Result and Discussion
Table 1 shows these consumers are primarily female (57.8%), with the rest being male (42.2%). 78.4% of the participants are between the ages of 18 to 30; 9.9% are between the ages of 31 to 40; 6.3% are between the ages of 41 to 50, and just 5.5% are beyond the age of 51. This finding indicates that most of the survey participants fall into the category of average adults. The fact that so many of today's youth possess honed abilities utilising ICT, including

telephone, computers, television, or other devices, does not come as a shock. The researcher also indicates that the highest educational level of the respondents is from a Diploma holder (48.4%), followed by a PMR/SPM holder (24%), and the lowest educational level is from a master's holder (5.5%). The researcher likewise asks how frequently people use the internet daily for the following part. Over 4 hours (75%) are the most frequent, followed by 3–4 hours (17.7%). Respondents also use the internet daily for 1-2 hours (3.6%). Last, 3.6% of respondents use the internet for less than one hour daily. The monthly salary range among many consumers is between RM1000 to RM3000 (69.5%). Then, the second-highest monthly salary ranges between RM3000 to RM5000 (16.1%), followed by less than RM1000 (9.1%), as well as the lease exceeding RM5000 (5.2%).

Table 1
Respondent Socio-Demographic Profile

Profile		Per cent (%)
Gender	Male	42.2
	Female	57.8
Age	18 - 30 years	78.4
	31 - 40 years	9.9
	41 - 50 years	6.3
	More than 50 years	5.5
Educational level	PMR/SPM	24.0
	DIPLOMA	48.4
	DEGREE	16.4
	MASTER	5.5
	OTHER	5.7
Frequency of internet usage per day	Less than 1 hour	3.6
	1-2 hours	3.6
	3-4 hours	17.7
	More than 4hous	75.0
Monthly income	Less than RM1000	9.1
	RM1000-RM3000	69.5
	RM3000-RM5000	16.1
	More than RM5000	5.2

N= 384
Sources: Survey 2022

The study's primary goal is to identify the ICT tools customers in Klang Selangor's agriculture-based sector utilise. Table 2 reveals that most respondents (88.3%) regularly use the telephone as one of their ICT tools. This indicates that most Klang. Selangor respondents had the propensity to use the internet. Computer (7.6%), television (2.3%), and radio are the following respondents (1.8%).

Table 2
ICT Tools used among customer.

ICT Tools	Percentage
Telephone	88.30%
Computer	7.60%
Television	2.30%
Radio	1.80%

The data represented in Table 3 shows that respondents had knowledge and skill of the most effective level to use ICT as perceived by greater than half of respondents (76.3%). Meanwhile, 22.1% of respondents had their opinions on ICT evaluated, including their ability to use internet shopping to purchase goods from anywhere globally. The researcher concludes that most respondents use ICT and know its efficacy.

Table 3
Level of Effectiveness of ICT to Customer

Level	Percent
Most effective	76.3
Very effective	22.1
Effective	1.6
Total	100.0

Source: Field survey, 2022   Scale: 1=Most effective, 2=Very effective, 3=Effective

Table 4 shows that Pearson's correlation analysis has been used to measure the relationship between the factors influencing ICT used among customers in Klang Selangor's agriculture sector. The results show a significant positive correlation between independent variables (social influence, customer satisfaction, and convenience) and dependent variables (use of ICT) at a 0.01 level. There is a strong correlation between three variables which are social influence (r = .798, p < 0.05), customer satisfaction (r = .785, p < 0.05), and convenience (r = .746, p < 0.05). Therefore, there is a strong correlation with an R-value of .798, indicating a strong positive relationship between ICT and social influence. H_1 is accepted, which has shown that customers in Klang Selangor have a strong correlation between social influence and ICT use. Besides that, there is a strong correlation with an R-value of .785, which means a strong positive relationship between ICT and customer satisfaction. H_2 is accepted, showing that customers in Klang Selangor strongly correlate customer satisfaction and ICT use. Next, a strong correlation (r = .746) indicates a strong positive relationship between ICT use and convenience. H_3 is accepted, which has shown customers in Klang Selangor have a strong correlation between convenience and ICT use.

Table 4
Correlation Between All Factor And Used Of ICT

		Social influence	Customer satisfaction	Convenience	Used of ICT
Social influence	Pearson Correlation	1	.883[**]	.804[**]	.798[**]
	Sig. (2-tailed)		.000	.000	.000
	N	384	384	384	384
Customer satisfaction	Pearson Correlation	.883[**]	1	.882[**]	.785[**]
	Sig. (2-tailed)	.000		.000	.000
	N	384	384	384	384
Convenience	Pearson Correlation	.804[**]	.882[**]	1	.746[**]
	Sig. (2-tailed)	.000	.000		.000
	N	384	384	384	384
Used of ICT	Pearson Correlation	.798[**]	.785[**]	.746[**]	1
	Sig. (2-tailed)	.000	.000	.000	
	N	384	384	384	384

Based on the result of table 5, the independent variable is statistically significant and can predict the dependent variable where $F_{(3,380)}$ = 261.908, p (.000) < 0.5. Because the significance level is less than 0.05, it is possible to apply this regression model to estimate customer ICT usage. This implies that factors independent of ICT use among customers, such as social influence, customer satisfaction, and convenience, are reliable. Meanwhile, the value of R, which is the multiple correlation coefficient, is 0.821 showing a strong positive linear correlation. For the coefficient to determination R^2, the value is 0.674 or 67.4% variability in the dependent variable, which is the use of ICT can be explained by independent variables such as social influence, customer satisfaction, and convenience. 32.6% of changes in the dependent variable are explained by differences in other independent variables that are not included in this study. All variables are significant with the use of ICT. The value of the coefficient for social influence indicates that for every unit increased in social influence, the volume of the use of ICT increases by 0.457 units. Social influence also significantly correlates with ICT used with p (.000) < 0.05. The findings are supported by Kamal et al (2020) that social influence significantly affected behavioural intention, which significantly affected social website use. The customer satisfaction coefficient corresponds to the prior expectation and is significant in determining the factor influencing ICT use. This is in line with the study done by Merugu and Mohan (2020), where it was found that customer satisfaction has a positive relationship with online shopping. The value of the coefficient for convenience indicates that for every one-unit increase in convenience, the volume of the use of ICT is expected to increase by 0.196 units. Convenience also has a significant relationship with the use of ICT with p (.002) < 0.05.

Table 5
Multiple Linear Regression

Coefficient		B	t-value	p-value
(Constant)		.642	4.420	.000
Social influence		.457	7.235	.000
Customer satisfaction		.221	2.715	.007
Convenience		.196	3.072	.002
Multiple R-squared	.674	Adjusted R-squared		.671
F-statistic	261.908 and 3,380			

    a.   *Dependent Variable: Used of ICT*

Conclusion and Recommendation
This study sought to identify factors influencing consumer adoption of information and communication technology (ICT). According to the findings, the smartphone is the primary ICT tool for most respondents. The respondent likes a smartphone over a computer because it is faster and more adaptable. The researcher also discovers that most respondents believe they can purchase goods from anywhere globally via internet shopping, demonstrating the power of ICT. Customers are happy to use the internet to buy goods and services. Moreover, the study also confirmed that social influence, customer satisfaction, and convenience positively influenced ICT use.

Since this research was limited to the consumer in Klang Selangor, further research should be undertaken in the following region, which is centred on the east coast of peninsular Malaysia. Expanding the study to the area may also assist the customer with understanding the issues they encounter with online shopping and using ICT while purchasing their goods and services online. As a result, the consumer may recognise the issue and enhance the use of ICT to raise both their attractiveness and expertise. The concept may be excellent since it might provide helpful information that might help with the development of efficient online shopping methods.

References

Aker, J. C. (2011). Dial "A" for Agriculture: Using Information and Communication Technologies for Agricultural Extension in Developing Countries. Agric Econ 42: 631-647.

Al-Khaffaf, M. M., & Abdellatif, H. J. (2013). The effect of information and communication technology on customer relationship management: Jordan public shareholding companies. Managing Customer Trust, Satisfaction, and Loyalty through Information Communication Technologies, January 2020, 342–350. https://doi.org/10.4018/978-1-4666-3631-6.ch020.

Bain and Institute of Public Opinion Outcome Study (IPSOS). (2013). Customer strategy and marketing. Retrieved on 25 Feb. 2015 from http://www.bain.com/.

Carvalho, A., Fernandes, T. (2018). Understanding customer brand engagement with virtual social communities: a comprehensive model of drivers, outcomes and moderators. J Mark Theory Pract 26:23–37.

Com, A. M. (2020). Role of ICT in Business Management: A Conceptual Review. In International Journal of Creative Research Thoughts (Vol. 8, Issue 8). www.ijcrt.org.

Fahmi. (2005). The Relationship Between Quality Evaluation of Agricultural Websites in Malaysia With Internet Use By Agricultural Officials. UPM. Master's thesis.

Folorunso, O., Longe, H. O. D., Akinde, A. D., & Ishola, K. A. (2004). A framework for establishing agriculture e-commerce. Agric-ECRC: Resource Centre, Nigeria. J.Comp. Sci. Applic, 10, 141-149.

Freeman, M. (2019). Experience of users from online grocery stores. In D. Oliver, C. Room Livermore & F. Sudweeks (Eds.), Self-service in the internet age: expectation and experiences, 139-160. London: Springer-Verlag

Gakuru, M., Winters, K., Stepman, F. (2009): Inventory of Innovative Farmer Advisory Services using ICTs, from http://www.faraafrica.org /media/uploads/File/NSF2/ RAILS/ Innovative _Farmer Advisory Systems.pdf.

Mohan, K. V., Merugu, P., & Mohan, K. V. (2020). Article ID: IJM_11_02_005-Available online at Cite this Article: Dr. Pratima Merugu and Dr. Vaddadi Krishna Mohan, Customer Satisfaction towards Online Shopping with Reference to Jalandhar City. In International Journal of Management (IJM) (Vol. 11, Issue http://iaeme.com /Home/journal/IJM3 6 editor@iaeme.comhttp: //iaeme.comhttp:// iaeme.com/Home/journal/IJM37http://iaeme.com.

Kotler and Keller. (2009). Marketing Management. Volume I. Edition 13. Jakarta: Erlangga.

Khedkar, D. (2015). Analysis of Customer Satisfaction during Online Purchase. University of Pune India.

Kusmaharani, A. S., & Halim, R. E. (2020). Social influence and online impulse buying of indonesian indie cosmetic products. Mix jurnal ilmiah manajemen, 10(2), 237. https://doi.org/10.22441/mix.2020.v10i2.007.

Llyod, E. M. (2005). Malaysia: APAC's Next China. Retrieved May 25, 2008 from http://www.imediaconnection.com/content/6704.asp.

Merugu, P., & Mohan, V. K. (2020). Customer Satisfaction Towards Online Shopping with Reference to Jalandhar City. International Journal of Management, 36-47.

Kamal, M. S. B., Noorliza, Z., Mahat, F. A., Bahari, D., Anuar, K., & AzmiNuruddin. (2020). The role of the social influence model in social media marketing. ESTEEM Journal of Social Sciences and Humanities, 93-102.

Morganosky, M., & Cude, B. (2000). Consumer response to online grocery shopping. International Journal of Retail & Distribution Management, 28(1), 17-26.

Mumtaz, H., Islam, M. A., Ariffin, K. H. K., & Karim, A. (2011). Customers satisfaction on online shopping in Malaysia. International Journal of Business and Management, 6(10), 162. https://www.ccsenet.org/journal/index.php/ijbm/article/view/9553.

Naivinit, S. (2009) 'Gender, access to community telecenter and livelihood asset changes', Journal of Information, Communication & Ethics in Society, Vol. 7, Nos. 2/3, pp.128–135. http://doi.org/10.1108/14779960910955846.

Noor, A. M., Zaini, Z. M. M., Jamaluddin, M. R., & Zahari, M. S. M. (2011). Exploratory studies on online grocery shopping. 3rd International Conference on Information and Financial Engineering, 12.

Saidu, A., Clarkson, A. M., Adamu, S., Mohammed, M. A., & Jibo, I. (2017). Application of ICT in Agriculture: Opportunities and Challenges in Developing Countries.

Seitz, C. (2013). E-grocery as new innovative distribution channel in the German food retailing. International Conference, Zadar, Croatia. Retrieved from

https://ideas.repec.org/h/tkp/mklp13/125-133.html.

Shanthi, R., and Desti, Kannaiah. (2015). Consumers' perception on online shopping. Journal of Marketing and Consumer Research, 13. pp. 14-21.

Sofia, M. (2017). The Influence of Instagram as Online Shopping Fashion Media on Consumptive Behavior of Students of the Faculty of Social and Political Sciences. University of Riau. Riau University.

Tan, L. (2019). The Roles of Information Technology in Customer Relationship 43 Performance, Employee User Satisfaction , Service Quality and Customer Satisfaction The Roles of Information Technology in Customer Relationship Performance , Employee User Satisfaction , Service.

Utusan Malaysia. (2008). Utusan Malaysia Website. http://www.utusan.com.my/utusan/content.asp?y=2007&dt=0324&pub=Utusan_Malaysia&sec=Polis_%26_Tentera..-35k.

Zheng, X., Wu, C., Tian, D., & Zhang, X. (2009). B2B e-marketplace adoption in agriculture. Journal of Software, 4(3), 232-239.