Involvement of Graduate Student s in E-Commerce: A Case Study in Malaysian Universities

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ABSTRACT

In recent years, e-commerce has pervasively become popular around the globe. With 31 million population in Malaysia, 25 million are heavily involved as internet users while the e-commerce penetration reaches up to 59%, according to "Digital in 2018" annual report. As a result of that, e-commerce has also become a phenomenon among Malaysian graduates. Generally, many Malaysians from various levels of age and generations dive into involvement with online business. In this paper, a research has been conducted to specifically measure the involvement of Malaysian graduates in e-commerce. To achieve the target, a sample of 1000 graduate students from various universities all over Malaysia had participated in this study. Detailed analysis has been given to elaborate the findings. The result showed that in general, the usage of e-commerce among graduates are quite high and significant. The findings were also surprising as it has shown that a lot of graduates are involved with e-commerce as active retailer.

Keywords: *e-commerce, graduate students, online business, e-retailing; Malaysia.*

I. INTRODUCTION

Today, e-commerce or more known as online business has influenced many Malaysians to participate either as consumer or retailer. E-commerce recently evolved and made significantly good impact in Malaysia's economy. In order to execute e-commerce, one must have at least a decent computer or at least minimal specification of smart phones equipped with good internet connection. E-commerce has transformed the traditional ways of doing business. Buyer and seller do not have to meet physically anymore to close any deal. Along with the rising of Industry Revolution (IR) 4.0, online business has expended tremendously and impacted both sellers and buyers [1-4].

In 2018, 28.7 million Malaysian, equivalent to 87.4% of the whole population of Malaysia are reported to use the internet. According to a report published by Malaysian Communication & Multimedia Commission (MCMC), the highest category of internet users aged under 30 years old. The report also stated that Malaysian internet users had increased by 10.5% since 2016. Statistic also shown that graduates surfing the internet and getting involved in online business are significantly high[5, 6].

Electronic commerce (e-commerce) is a commercial transaction conducted electronically on the internet. It is a business done fully via online including promoting, negotiating, selling, buying and financial transaction. All of the processes are done without the need for physical presence in real world. Businesses offered in e-commerce platforms vary from different categories of products such as healthcare, consumption, clothing and many more. Services such as graphics designing and web building also have been promoted via e-commerce platforms. E-commerce platforms also are being used to compare prices among same products and to find better promotions from various seller across the world. E-commerce platforms are undoubtedly the fastest way to shop around the world [7, 8].

In general, e-commerce is divided into 2 categories. First category is business to business (B2B) which sell products or services between businesses through the internet via online sales portal. In general, it is used to increase efficiency for companies. The second category is business to consumer (B2C) which is used to describe a transaction conducted over the internet between business and a consumer for his/her personal use [4]. MCMC reported that men dominated the internet by 59% compared to women 41% [5]. However, in our

study for this paper, the result showed otherwise with women using the internet more than men.

The rest of this paper is organized as follows. In section 2, details of current research related to this work will be explained.

In section 3, the methodology details and tools used as well as sampling details will be elaborated. In section 4 and 5, the findings out of this research as well as discussion of that results will be presented. Finally, the conclusion of this research will be discussed in section 6.

II. RELATED WORKS

Although the emergence of e-commerce is not revolutionary new since it is there for a few decades in form of simple electronic data interchange (EDI) [9], the Interned-based trading has changed the picture dramatically in recent years. Compared with traditional old approach of electronic trading, the Internet-based, 4G supported e-commerce have made it simpler, easier, cheaper, very trusted, and highly accessible for various scale business and consumers to conduct electronic trading [10, 11].

In the last decade, various researches have been involved to study such phenomena and how Malaysian people are attracted/repelled to that new trend of business. Harn et al. [2] have studied and provided an assessment, understanding, and evaluation of the various features of online shopping in Malaysia. They used Chisquire test as well as t-test to compare the differences between online and offline shoppers. Authors in [7] studied the involvement of a sample of 160 university students (sample from Universiti Kebangsaan Malaysia UKM) in electronic commerce while they are studying. The research showed that e-commerce involvement of students is generally high but still low in business and selling. Various factors driving students toward e-commerce have also been studied. However, this study was limited to only one Malaysian university lacking the extend to other universities. Rawi et al. [3] used quantitative method to study the factors that attract people in Malaysia to use e-commerce. They implement their method on a sample of 150 respondents in city of Putrajaya. Various factors have been studied, including ease of use, usefulness, cost, social effect, and safety; where their results show that all these factors have a positive relationship to influence people to use e-commerce but with different level of strength.

III. METHODOLOGY AND SAMPLING

Different methods can be used to measure and analyze how people are heavily involved in a particular subject and what are the factors that encourage or deter them.

However, this research is conducted using descriptive methodology which will be used to identify the involvement of Malaysian graduates in e-commerce. According to author in [12], it is an efficient way to use descriptive method to measure and evaluate the behavior, achievement, perception, and involvement in a specific subject. Descriptive forms and surveys were also used in this study to help discovering the phenomenon occurring [13].

This research is conducted by handling a set of survey forms containing 10 questions via Google Forms. 1000 graduates had cooperated and responded by answering all 10 questions related to involvement in e-commerce. All 1000 participant are Malaysian graduates from various universities around Malaysia.

The surveys and questionnaires are used to help researcher study the problem in hand and achieve the objectives. Author in [14] clarified that survey forms are an efficient tool to collect information from respondents. To determine the sample size for the number of participant, Krejcie and Morgan sampling method were used [15,16]. Additionally, SPSS statistical software version 23 on Windows 10, was used to do various calculations in this study.

IV. RESULTS

A. Respondent Profiles
Table 1 below shows the overall profile of participating respondent based on sex, age, and status. The survey had been conducted fully via online. 34% of the respondent are men and the rest of 66% are women. Majority of the participant in this study lies in the age range of 21 – 24. This majority also covers 90% of full-time student.

TABLE 1: Respondent Profiles.

Item		Frequency	Percentage
Sex	Male	342	34.2%
	Female	658	65.8%
Age	Under 20 years old	267	26%
	21-24 years old	611	61.1%
	Over 25 years old	112	11%
Status	Part-time student	93	9.3%
	Full-time students	897	89.7%

B. Knowledge of e-commerce
Table 2 shows the distribution of respondent based on the knowledge of e-commerce. Most of the respondent already know about the emergence of e-commerce. 79% responded 'yes' while only 21% 'no'. The cause of this unawareness is yet to be determined and study.

TABLE 2: Knowledge of e-commerce.

Have you ever heard about e-commerce?		
	Amount	Percentage
Yes	791	79.1%
No	209	20.9%

C. Involvement of graduates in e-commerce

Table 3 shows the result of graduates involve in e-commerce. The sample can be classified into 3 groups. First, online seller (12.4%). Second, online user / buyer (53.2%). Third, online seller and buyer (34.4%). The data shows that more than 46% of graduates are already involved actively in e-commerce as a seller. This is a good sign that indicates graduates are moving towards entrepreneurial mindset and attitudes. This is also showing that graduates are learning and applying an important skill which is using internet technology that they learnt in courses provided by their universities. It is also a prove that introducing the entrepreneurial subject to university students pay off.

TABLE 3: Involvement of graduates in e-commerce.

	Frequency	Percentage
Online retailer	124	12.4%
Consumer	532	53.2%
Retailer & Consumer	344	34.4%
Total	**1000**	**100%**

D. Medium frequently used for e-commerce

Social media is the most frequently used tool for learning and other daily errands such as reading news and socializing. As Table 4 shows, in e-commerce context, 73% of respondents use social medial to promote, to sell and to buy products and services. This factor might be caused by the ease to communicate using various platforms of social media such as WhatsApp, Instagram and Facebook Messenger. E-commerce applications such as Lazada, Lelong, and Shoppee are seen very popular among graduates as the best platform to shop around. 69% of respondent are using these applications on daily basis. Other respondents are using website 22%, and others 4% (non-stated) as shown in table below.

TABLE 4: Medium frequently used for e-commerce.

Meduim	Frequency	Percentage
Social media (Facebook, Instagram, Twitter)	731	73.1%
Mobile applications (Lazada, Shoppee)	692	69.2%
Websites	227	22.7%
Others	49	4.9%

E. Driving factors for graduates to practice online businesses

This research also looks at findings on driving factors that encourage graduates to actively practice online businesses. The main drive is social influences on the internet by 62%. Undeniably, internet is the most platform that attracts buyers and sellers to practice their businesses. It is also due to most graduates spent lots of hours over the internet. Second factor is the low cost to setup store in e-commerce platforms by 49%, followed by the ease to find customers 39%, and then online businesses is more profitable with an percentage of 26%. On average, all respondents stated that these 4 factors drive them to practice online businesses via various e-commerce platforms. Table 5 represents the data.

TABLE 5: Driving factors for graduates to practice online businesses.

Factors	Frequency	Percentage
Social influences on the internet	621	62.1%
Low setup cost	493	49.3%
Ease to find customers	387	38.7%
Online business is more profitable	255	25.5%

F. Driving factors to use e-platform platforms to purchase online

Table 6 represents forces that motivates graduates to shop online using e-commerce platforms. 76% of respondents say that it saves a lot of time which is a very crucial factor for graduates. Alternatively, 67% prefer to use e-commerce so that they could compare prices before purchasing. 41% say that shopping online helps them find more choices that meet their tastes, while 38% shop online to find trending items. In summary, by using multiple e-commerce platforms available online, graduates can save a lot of time and shop for their needs and favourite items anywhere and anytime. By being able to compare prices, they can also spend wisely and save up some money.

TABLE 6: Driving forces to use e-platform platforms to purchase online.

Factors	Frequency	Percentage
Save time	762	76.2%
Able to compare prices	668	66.8%
Able to select according to own liking	410	41%
Able to follow up-to-date trending	383	38.3%

G. Types of purchases and transaction done via e-commerce platforms

Further findings show that there are 5 main categories of purchases and transaction done by graduates. 75% of respondents shop for clothing. This might be because the sample comprises more women than men. Following is beauty and healthcare by 43%, food and consumable by 25%, sports equipment 20% and others 34%. Table 7 depicts that.

TABLE 7: Types of purchases and transaction done via e-commerce platforms.

Purchase Type	Frequency	Percentage
Sports equipment	204	20.4%
Food & beverages	251	25.1%
Healthcare & beauty products	429	42.9%
Clothing	753	75.3%
Others	345	34.5%

H. Future involvement in e-commerce

Research is furthered to study the interest of graduates to get involved in e-commerce in the future. Result shows that 93% of respondent agree and show interest to shop online and involve more with e-commerce platforms either as consumers or retailers. Table 8 depicts that.

TABLE 8: Future involvement in e-commerce.

Are you interested to involve with e-commerce in the future?		
	Amount	Percentage
Yes	932	93.2 %
No	68	6.8%

V. DISCUSSION

Data from background findings show that most of graduates that involve with e-commerce were of ages between 21-24 years old. This group also known as millennial generation or Gen Y. They were brought up during the boom of internet era thus making them familiar with internet technology compared to other age groups. Women graduates are prone to use e-commerce platforms more than men which might be due to the habit of women to shop more than men. This inference can be supported by the types of purchased products and services identified in this research. Furthermore, full-time students tend to use more e-commerce platforms compared to part-time students due to time constrains for part-time students.

Result also shows that graduates make purchases from e-commerce platforms by 49% while 15.3% sells goods and services via e-commerce platforms and 46.9% do both of the activities. This concur that graduates consume more from e-commerce rather than practicing businesses in e-commerce platforms. In addition, most of graduates uses social media to promote, buy and sell products and services. This is due to most internet users, around 70%, spend so much time using social media in daily life compared to Web and other mobile applications. Social media influence has been identified as the main factor to drive graduates to become retailers in e-commerce platforms. It is easy, low cost and affordable. The ease to find customers and more profitable compare to traditional business method also contribute significantly towards graduate's involvement in online businesses. Time factor contributes most in influencing graduates to shop in e-commerce platforms. Having the options to compare prices and buying trending items hassle free also contributes significantly to drive graduates to shop online.

Further findings indicate that 5 categories are the most common for graduates to do e-commerce where 75% of them buy clothing. This might be due to most boutique shop ended their operation physically to cut cost and move to online shops. Therefore, we can see load of retailers selling cloths online. Majority of women in the sampling also might contribute to this result. 42% of respondent buy health care and beauty products, 25% spend on food and beverages, 20% for sports equipment and 34% on others. Research also proven that 93% of graduates wish to learn more about e-commerce and involve with it in the future.

VI. CONCLUSION

This research provides an important and significant indication on the usage of e-commerce among graduates. It shows a positive development in responding to the advancement of e-commerce. With 46.9% active shoppers, 15.3% retailers, and 49% doing both indicates that that graduates are moving towards IR

4.0 positively. Products and services purchased by graduates are also successfully identified and categorized. Additionally, this research was able to identify social media as the main platform used for e-commerce among graduates which was driven by various factors. Time has been identified as the most crucial factor for both consumers and retailers participating in e-commerce. Based on all the data collected, in conclusion, graduates are highly involved in e-commerce in consumerism perspective while not so encouraging in entrepreneurial aspect of selling and trading. Universities should come out with more ideas and initiatives to encourage and inculcate the driving factors for graduates in order to get more involved as ecommerce retailers and merchants

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