An Overview of Developments and Prospects for E-Commerce Agrifood Products in Malaysia

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INTRODUCTION

Application of electronic communications and multimedia (C&M) is gaining popular. It opens new opportunities for businesses, market and supply chain actors as a whole to enhance their operations. Many terms are used in literature to describe activities of Internet Technology between organisations and their environment, including suppliers and customers. Generally, e-business, e-commerce, e-sourcing, e-marketing and e-fulfillment are some of the commercial terms, which have been quoted in the literature. The term is referred to "doing business electronically" (Van der Vorst *et al.*, 2002; Huff *et al.*, 2000). Internet marketing or on-line marketing refers to advertising and marketing efforts that use the Web or email to drive direct sales via electronic commerce. In other words, sales lead from Websites or emails. Internet marketing and on-line advertising efforts are typically used in conjunction with conventional approaches such as advertising on radio, television, newspapers, and magazines. Internet marketing can be further classified into more specific categories such as Web marketing, email marketing, and social media marketing. This paper aims to present the current development and policies of agri-food e-commerce in Malaysia.

Malaysian Current ICT Demographic

In Malaysia, Internet service was introduced since 1990, where Joint Advance Research Integrated Networking (JARING) was the first Internet Service Provider (ISP). Later, in 1996, the service was taken over by a subsidiary of Telekom Malaysia known as TMNET, and since then the Internet usage in Malaysia has been steadily growing (Khatibi *et al.*, 2006). A study by the International Data Corporation (IDC) Asia-Pacific indicated that the future forecast for on-line shopping in Malaysia is bright and promising. Internet commerce is no longer new in Malaysia. However, consumers are less familiar and often skeptical about on-line shopping. Notwithstanding, the trend is now going up, and it will be a new life trend for Malaysian people.

The Internet Users Survey 2014, which was conducted by Malaysian Communications and Multimedia Commission (MCMC) and which involves 3,607 respondents across all states in Malaysia revealed that:
- There are around 20 million Internet users in Malaysia in 2014, with 91.3% of them are Malaysian while 8.7% belong to other nationalities;
- The ethnic groups of Internet users in Malaysia are; Malay (67%), Chinese (17.8%), Bumiputera Sabah and Sarawak (8.2%), Indian (6.2%), Orang Asli (0.6%) and others (1.7%);

- In terms of gender, male Internet users are accounted for 58.3% while female accounted for the remaining 41.7%;
- Majority of Internet users are adults (20-49 years old) accounting for 60.6%, pre-teens and teens (up to 19 years old) given 7.4% and seniors (50 years and above) accounting for 32.0%. The average age of users is 31.1 years;
- Around 39% of Internet users earned monthly income between RM1, 000 and RM3, 000. The average income of all respondents is RM3, 796.60;
- The Internet highest penetration rate is in metropolitan areas and mainly in Selangor (19.6%) followed by Sabah (11.95%), Johor (11.70%) and Perak (8.2%). The ratio is based on Population and Housing Census 2010 of rural population to urban population is 1:2.4;
- Around 82.0% of Internet users have academic qualification of the Malaysia Certificate of Education (equivalent to A level) and above. Among them, 62.5% received their tertiary education, 34.9% in secondary school while 2.4% in primary school;
- Majority of Internet users (55.9%) use the smart phone to access the Internet, followed by notebook/laptop (53.9%) and PC or desktop (24.3%); and
- The Internet users use the Internet for many reasons such as for getting information (82.2%), to socialize networking (84.4%), communication by text (66.4%), for education purposes (63.5%), downloading files (62.3%), reading (57.2%), banking (40.9%), using government services (38.4%) and selling and buying goods (33.9%).

Communications and multimedia Policy

During the 10th Malaysia Plan (2011-2015), several IT initiatives continued to have been implemented to transform the nation into an innovative digital economy. The national digital transformation agenda was primarily driven by the Strategic ICT Roadmap and the Digital Malaysia initiative. Malaysian Communication and Multimedia Commission (MCMC) were mandated to implement and promote Government's national policy objectives and multimedia sector. MCMC is also charged with overseeing the new regulatory framework for the converging telecommunications and broadcasting industries and online activities. In 2012, the ICT Satellite Account (ICTSA) was established spearheading by the Ministry of Finance (MOF), Economic Planning Unit (EPU), Department of Statistics (DOS) and Multimedia Development Corp (MDeC). The Account's role is to measure the progress of the ICT industry development namely in the services, trade, manufacturing, e-commerce and content and media subsector.

Malaysia continues its development for another five years under The 11th Malaysia Plan (2016-2020). It was designed to emphasize driving ICT in the knowledge economy through innovation and productivity and to enhance competitiveness and wealth creation. Focus has been given on the development of digital infrastructure, as well as software solutions and services. Knowledge economy of highly skilled and capable workforce is also being the focal point of the plan the concentration of which is on driving innovation, creativity and productivity. The use of ICT is not only applicable in the multimedia sector, but it also covers all sources of economy contributors, including agriculture. Under this initiative, Malaysian government, through the Ministry of Agriculture and Agro-based Industry has been responsible for intensifying and accelerating modern farming technology and information and communication technology (ICT) along with the agri food supply chain. In addition, Malaysia has embarked on an on-line portal of AgroBazaar.com.my to provide new and sustainable markets for agricultural products. The creation of on-line agrofood through e-commerce model has widened the market access of

agricultural products. The portal was launched in 2014 and currently managed by the Malaysian Federal Agricultural Marketing Authority (FAMA).

E-Commerce potential in Malaysia

In general, the value of ICT industry expanded 6.8% per annum in 2011-2015. Currently, its share in the gross domestic product (GDP) is 16.8% (RM192.6 billion in current prices) and increased from 15.8% (RM 129.7 billion) in 2010. Figure 1 shows the contribution of the ICT industry and its breakdown. ICT services, content and media and e-commerce contributed more than 25% of the total GDP, amounted RM 63.9 billion and RM 55.8 billion respectively. ICT manufacturing is the third highest, 23% with a total contribution of RM 45.6 billions, followed by ICT trade 11% (RM 21.1 billion) and others industries and import duties 5% valued about RM 9.9 billion.
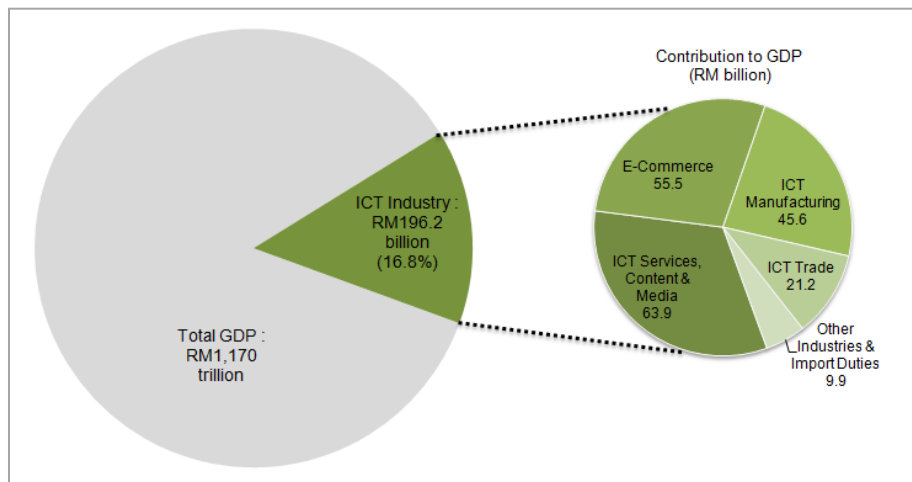

Fig. 1. ICT Industry Contribution to Gross Domestic Product, 2015
Source: Economic Planning Unit and Department of Statistics Malaysia, 2015

The trend of on-line shopping has increased not only in Malaysia, but also in the Asean region. On-line retail market in the Asean region had the potential to grow by as high as 25% annually. Transformations in modern and busy lifestyle have changed the urban person's character from the conventional way to a new alternative purchase method in on-line shopping. It was an easy way to use, without having out to shop, convenience and no more long queues for making the payment. International Data Corporation (IDC) estimated the worldwide of the Internet of Things (IoT) market to grow to more than RM 10 trillion while the National IoT Strategic Framework estimated the local market size for e-commerce itself to be RM 2.9 billion in 2020. Top e-commerce categories will also be presented for both on-line and mobile (smart phone and tablet). This phenomenon has also been correlated with the posting of the products whereby the number of courier goods increased by 3.3% from 29 million items in 2012 to 30 million items in 2013. The trend is seen to be continuing and growing faster in line with the revolutionaries of world technology.

E-Commerce for the agri food sector

A study of *e-Marketing Levels and Performance among Small and Medium Agro-Based Enterprise in Malaysia* conducted by Rashid (2012). This study involved 1500 respondents, mainly from Small and Medium Enterprise players in the Agro based industry. The study found that the level of application of e-Commerce in the industry is still relatively low. The majority of the firms have only five years or less of involvement but proactive in progressing across the application process and selling the products on the Internet. Almost 100% of the respondents agreed that the Internet gives an impact on new sales, obtained new customers, increased profits, create good customer relationship, create new market and provide fast communication. The findings also explained that e-marketing increased customer satisfaction, efficiency in daily business transaction and convenient in conducting business operations. Overall, the result concludes that business Internet among Malaysian SME in Agro Food industry is still at a new stage and is rapidly growing over the years. Most successful products sold on-line are condiments, drinks, ready-to-serve foods and snacks. They are potential in the business future if the company grabs the opportunity and expands the business in the Internet medium.

Another study on *The Potential of e-Commerce of Fresh Agriculture Produce from Consumers Perspective* carried out by Suhana (2014) revealed that online shopping has positive impact and a great potential for the business. The majority of respondents (96.2%) are satisfied with the overall services in on-line shopping. The services include product *specifications, quality, price and delivery service*. The results showed that female users were more intended to buy online fresh produce rather than the male users, even though there is no statistically significant result in the level of satisfaction among genders (male and female). The fresh products consumed by the on-line shoppers are meat and meat preparations (21%) whereby it may be in its frozen form. Others are vegetables and eggs, which shared the same percentage (19.7%), fish and seafood products (17.2%), fruits (15.3%) and fresh flowers (7%). The study concluded that consumers' perceived e-commerce of fresh agriculture produce has potential in the future, instead of its convenience and availability; online producers should improve their services and accessibility especially on their website interface. This is important to make sure that users are easy to use, simple and feel secure while doing online shopping.

Online shopping website for fresh agriculture produce in Malaysia

The online marketing of fresh agriculture produce is relatively new in Malaysia. It started in 2010 by Red Tick.com and it is becoming popular after the large supermarkets introduced it. Tesco the large supermarket expanded its service to cater to online purchases and services in 2013. Figure 2 indicates the traffic ranks of Agrifood e-Commerce companies in Malaysia. Four companies are identified as active providers in operating online business for fresh produce. Ranking in the first place is Tesco, explaining that they are the highest hit counter sent by a visitor's browser to a server for Agrifood providers. While Redtick is at second place and followed by Freshcart and Food World. Even though Tesco is at the first place in the overall ranking among Malaysia's agrofood provider websites, its position is at 244 in Malaysia and at 41,849 places in the global rank in the overall websites. Unfortunately, the Tesco on-line services are currently catered for urban residents, mainly in Klang Valley, Selangor, Johor, Pulau Pinang and Kedah. The handling process in delivering the fresh produce is more complicated than other processed foods. It requires an appropriate logistics

system which is normally the cold storage truck and proper handling to maintain the quality and shelf life of the products. Timely delivery is also important to be considered especially in urban areas, particularly during peak times, which typically runs into a traffic jam.
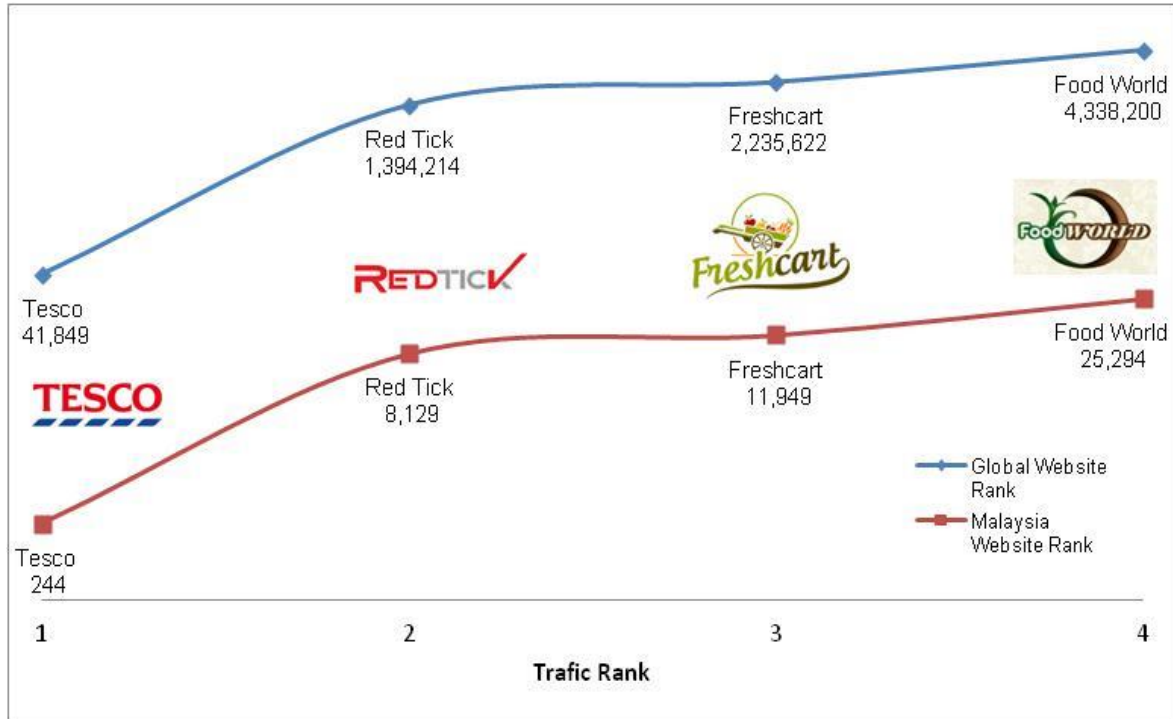

Fig. 2: Traffic Rank of Agrifood e-Commerce Providers in Malaysia
Source: Alexa Web Analytics, 2015

Issues and challenges

As a new industry in Malaysia, e-marketing faced a number of issues and challenges. The main ones are:

1.**Perceived risk**
Perceived risk can be defined as "the extent to which people are afraid because of feeling threatened by an ambiguous situation, and have created belief and institution that try to avoid these" (Nikhashem, Yasmin, Haque, & Khatibi, 2011). In on-line transaction, customer perceived risk can be related as a customers' belief about the potential negative consequences from her/his decision in on-line shopping. In particular, physiological risk and performance risk are predominant perceived risk.

2.**Psychological rRisk**
This refers to the fear of loss, self-confidence due to the erroneous choice of product or service while doing online shopping. In essence, it means, maybe the choice is incorrect or in case something goes wrong after the purchase in the Internet.

3.**Customer trust**
Trust can be described as the willingness of a person to be vulnerable to the actions of other parties based on the expectation that the other will perform a particular action important to the trustee, irrespective of the ability to monitor or control those other parties. In the context of e-commerce, trust refers to the on-line consumers' beliefs and expectations about trust-related characteristics of the on-line sellers. The customer's perception of a company's service quality affects trust in online shopping. It seems to be the most important factor of retaining trust and establishing and sustaining customer relationship.

4.**Familiarity and confidence**
Familiarity and confidence are important success elements for on-line transaction from any companies and in any market place. Number of successful purchases and the percentage of visits that guide towards a purchase has an imperative relationship with on-line shopping intention. It was revealed that satisfaction of purchasing a product leads to repeat purchases and growing usage of such products or services. Satisfaction may also build enough confidence, which can bring about a switch from shopping offline to shopping online

5.**Price perception.**
Price is also one of the most important components that can affect consumers' decision on e-transaction. Price perception is the process by which consumers translate the prices into meaningful mental cognitions. When people want to purchase product or services through the Internet or from any website, they may not be able to physically see or handle the product. Therefore, they are not sure that what is presented on the website is consistent with what will be delivered, in such a way, price perception plays an important role in determining both satisfaction and post-purchase and intention to return.

6.**Website and internet security**
Security is one of the most challenging issues faced by the Internet-based merchant today. In addition, it is the most well-known topic in electronic commerce and frequently discussed in Internet forums. For all the businesses transacted on-line, Internet security has become a major concern. Information security has been recognized as a significant element for ensuring wide participation in society. Security system is one of the most important issues, and it is one of the biggest barriers that can prevent consumers from purchasing items on-line. These are the biggest challengers to the retailers where they should need to build a secured website since internet users fear and hesitate to purchase product or engage in any services on-line because of security concerns.

CONCLUSION

E-commerce in fresh agriculture in Malaysia is yet to reach its full potential despite having grown significantly. There is still a lack of understanding about the characteristics of online shoppers and providers company. However, the trend is increasing and has many potential impacts to the business and economy of the country as well. This new emerging concept of retailing has captured the interest of many parties, retailers and business, financial institutions, telecommunication service providers, government and many more. A number of key players in the e-commerce market have now emerged, striving for market share and 'first mover

advantage'.Until now, there are no jargons in this industry due to continuing technology metamorphosis. At the same time, shopping-commerce has the potential in the future to become an alternative shopping channel, even in the buying and selling of fresh agricultural produce. The shopping trend may change in the near future, and it cannot be easily challenged by the conventional retailing method.

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