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## **SOCIAL AND MANAGEMENT RESEARCH JOURNAL**

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# **An Evaluation of Business-to-Business Electronic Commerce Marketplaces (e-marketplaces) in Malaysia**

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## **ABSTRACT**

*The development of business-to-business electronic commerce marketplaces (B2B e-marketplaces) has influenced the way businesses are conducted. The emergence of many types of e-marketplaces together with the increase use of e-marketplaces allows many organizations to become e-market makers in the electronic commerce environment. Nonetheless, too many B2B e-marketplaces could become a challenge with e-marketplaces have shown numerous successes and failures since early existence. With this background, this paper discusses the characteristics and success factors of B2B e-marketplaces offered in Malaysia. A content analysis of e-marketplace websites using the integrated model from the Extended Model of Internet Commerce Adoption (eMICA) and the Internet-Based B2B Stages of Growth enabled an examination of type, ownership, B2B features and B2B stages of growth. A few e-marketplaces were then selected as case studies to identify the success factors based on the Framework of the Critical Success Factors Analysis for E-Marketplaces. Overall, Malaysia B2B public e-marketplaces have shown positive growth development stages across time with high adoption of e-commerce website features. In addition, factors of strategic, functional, technology, build liquidity,*

*create value and others were also essential for the success of the e-marketplaces. Indeed, good marketing strategies, multiple income streams, value added information services and government initiatives are among keys to success.*

**Keywords:** *B2B E-Marketplaces, public E-Marketplaces, B2B Features, B2B Stages of Growth, E-Marketplace Success Factors*

## **Introduction**

Electronic Commerce can be described as the process of buying, selling, transferring, or exchanging products, services, and/or information via computer networks, including the Internet that take place between individuals, organizations or both (Turban et al., 2002; Rayport and Jaworski, 2002). It can be classified into four types: Business-to-Business (B2B), Business-to-Consumers (B2C), Consumers-to-Consumers (C2C) and Consumers-to-Business (C2B) (Afuah and Tucci, 2001). Although B2C e-commerce receives most public attention, B2B is the leading model and has much more potential than B2C and other e-commerce models (Subramani and Walden, 1999). The entire participant in B2B e-commerce is businesses or other organizations.

B2B e-marketplace or also known simply as e-marketplace is an electronic platform on the Internet for businesses and organizations to perform business activities. It has three main functions: matching buyers and sellers, facilitating the exchange of information, goods, services, and payments associated with market transaction, and providing an institutional infrastructure such as legal and regulatory framework, that enables the efficient functioning of the market (Bakos, 1998).

Since early existence, e-marketplaces developments have gained vast popularity. Nonetheless, despite the potential value creation within participating businesses, the e-marketplaces have gained little momentum and in many cases are failing (Gill and Wu, 2000). Even though many e-marketplaces have failed, hundreds have survived and some thrived (Laseter and Capers, 2002). With the collapse of many e-marketplaces and the success of some e-marketplaces a study on evaluation of e-marketplaces becomes necessary.

According to Li and Li (2005), little research has been conducted on the e-marketplaces critical success factors. Koch and Koch (2002) also agree that organizations must evaluate their B2B e-marketplace endeavors, because very little work has been done in this area. To evaluate e-marketplaces, one must first categorize the different types of e-marketplaces based on an understanding of the e-marketplace business model (Brunn et al., 2002) in order to understand the characteristics and the success factors of an e-marketplace (Yu et al., 2002).

This paper aims to examine the characteristics of e-marketplaces in Malaysia from ten public e-marketplaces sites. It then uses the critical success factors of e-marketplaces framework that has been identified from the literature and applies them to three case studies to evaluate how these factors have been incorporated by the e-marketplaces.

## **Literature Review**

In this section, information regarding e-marketplaces is introduced consisting of defining B2B e-marketplace, B2B features, B2B Stages of Growth and previous works related to e-marketplace success factors.

### **What is an e-marketplace?**

There are various terms regarding electronic markets which are: (a) e-marketplace (also known as e-market or exchange) by Bakos (1997), (b) e-Hubs (Kaplan and Sawhney, 2000), (c) e-Marketplaces (Kafka et al., 2000) (d) B2B exchange (Wise and Morrison, 2000) and also (e) B2B e-marketplace (Ranganathan, 2003). B2B e-marketplace as defined by Ranganathan is an electronic hub which inter-organisational information system that allows the participating sellers and buyers in some market to exchange information about prices and product offerings, trade goods and services.

According to Ranganathan (2003), two fundamental ways to understand B2B landscape is that B2B business relationships could be categorized into one-to-many or many-to-many relationships. One-to-many relationships are found in direct or private exchange that is owned and operated by a single company. Public e-marketplace which is owned by independent investors or industry consortia is considered as many-to-many relationship. Raisch (2001) describes types of e-marketplaces as either vertical or horizontal based on industries and products. Vertical e-marketplaces are suited to specific industries while horizontal e-marketplaces revolve around specific products or a group of products. Normally, many companies participate in vertical e-marketplaces to buy or sell direct material and horizontal e-marketplaces for buying and selling MRO (materials, repair, and operations) goods. In spite of these classifications, Premkumar (2003) shows four types of marketplaces based on ownership which is buyer hosted, seller hosted, neutral/broker hosted and industry/consortium hosted. In buyer hosted marketplaces, a dominant buyer creates interactions with many suppliers in a single marketplace. In contrast, one seller or a host of sellers can host seller-hosted marketplaces to multiple buyers. Neutral/Broker hosted e-marketplaces are the most popular.

They are started by many entrepreneurs as a neutral intermediary to provide benefits to both buyers and sellers. Industry/Consortium hosted e-marketplaces

started as a response to the growth in broker-hosted marketplaces specifically formed by industry members using their extensive industry expertise to create alternate marketplaces.

## **B2B e-marketplace Features**

E-marketplaces offer different levels of services to buyers and sellers. Ten common features or functions on B2B e-marketplaces are directory of companies, storefronts for participants, classified, e-catalog, product content, product notification, internal messaging system, forum, electronic auction and reverse auction (Kabir, 2005): Besides that, numerous other features could be incorporated to an existing B2B e-marketplace depending on an e-marketplace requirement. According to many of the website evaluation/adoption model, the functionality of website matures over time (Davidson, n.d) with different features. Burgess and Cooper (2000) improved Model of Internet E-Commerce Adoption (MICA) to Extended Model of Internet Commerce Adoption (eMICA). The model contains three stages of adoption with associated features and functionality as described in Table 1. eMICA described the roadmap of a business or industry in their development of Internet application. Each of the stages contains different levels of features and functionality that reflect the maturity of the web technology.

Table 1: eMICA Stages of Adoption

Stage	Stages of Adoption	Features	Examples of Functionality
1	Promotion	Level 1 – Basic information	Company name, physical address and contact details, area of business
		Level 2 – Rich information	Annual report, email contact, information on company activities
2	Provision	Level 1 – Low interactivity	Basic product catalogue, hyperlinks to further information, online enquiry form
		Level 2 – Medium interactivity	Higher-level product catalogues, customer support, industry-specific value-added features
		Level 3 – High interactivity	Chat room, discussion forum, multimedia, newsletters or updates by email
3	Transaction	-	Secure online transactions, order status and tracking, interaction with corporate servers

*Source:* (Burgess & Cooper, 2000)

## **B2B Stages of Growth**

Stages of growth models are among the most popular approaches that can be used for studying strategy development and implementation of B2B e-commerce (Chan and Swatman, 2004). Internet-Based B2B Stages of Growth Model by Rayport and Jaworski (2002) shows that there are four stages that an organization will go through as it continues to utilize the Internet in its B2B activities as shown in Table 2.

**Table 2: Internet-Based B2B Stages of Growth by Rayport and Jaworski (2002)**

Stage	B2B Capability	Description
1	Broadcast	A web page creation to primarily static information to the customers such as company-related information, product and services.
2	Interact	Using the Internet for interaction with customers such as e-mails, customer survey and feedbacks.
3	Transact	The use of the Internet to take, manage and support transactions with customers such as online ordering systems.
4	Collaborate	The use of the Internet to provide inter-organizational activities, which can be assessed and utilized by the company and its trading partners.

*Source:* (Chan & Swatman, 2004)

## **E-marketplace Success Factors**

Rockart (1979) defines critical success factors as “The limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance for the organisation. They are the few key areas where “things must go right” for the business to flourish. If the results in these areas are not adequate, the organisations efforts for the period will be less than desired”. Ideally, a profitable marketplace is considered successful, however buyers, sellers and market makers may place greater emphasis on achieving significant value (Stockdale, 2003). Previous studies have identified many factors that affect the success of e-marketplaces. Standing (2001) for example believes that the B2B e-marketplaces success was recognized from multiple income streams in model. Raisch (2001) points out these revenue channels could be license fees, professional services, transaction fees, advertising fees and payment for supply chain savings and subscription or membership fees. It appears that the issues of critical mass of participants (Standing, 2001), and to fulfill participant needs with value added information services such as e-catalog and extensive

online customer support contribute to the success of B2B e-marketplaces (Standing, 2001; Asleena, 2001).

Besides that, the development of Internet based application to optimize interaction with customers and build market share is found to be important (Asleena, 2001). To increase participation from small and medium organizations, many governments take initiatives to fund many activities to increase SMEs use of Internet commerce (Poon and Swatman, 1999). In other studies, it is observed that researches mentioned many success factors, ranging from target market, function of e-marketplaces, technology platform, sources of revenues, liquidity, neutrality and bias, partnership and lots of other issues (Statham, 2001; Thong, 2004; Li and Li, 2005). The later study on the success factors for B2B e-marketplace appears to be comprehensive as it incorporates all the issues discussed by the other previous researchers. Li and Li (2005) in their study suggest a framework for the analysis on critical success factor by showing that the core of e-marketplaces is to build liquidity and create value along with the strategic factor, functional factor, technical factor and others. The understanding of each factor is then further refined with review work from Thong (2004).

## **Methodology**

This study combines two different methodologies: content analysis and interview, which are grouped into two stages. The first stage is content analysis that examines the type, ownership, B2B features and B2B Stages of Growth of e-marketplaces in Malaysia. The second stage is case studies that are conducted to identify the success factors that influence the implementation of the e-marketplaces. In a study of this kind, the optimum number of websites to analyze is open to argument (Stockdale, 2003). Nevertheless, a detailed analysis of all e-marketplaces websites from a range of different types of marketplaces is ensured.

### **Content Analysis**

Content analysis is a research method that uses a set of procedures to make valid inferences from text by systematically identifying specified characteristics of messages (Weber, 1990). According to Abadzhiev et al., (2005), content analysis has also been used by many researchers for the purpose of studying the content of websites (home pages). A list of Malaysia e-marketplaces on the Internet is obtained from the use of the search engines. While examining the type and ownership of the e-marketplaces, this stage emphasizes to study the features and functions available in e-marketplaces sites as well as the stages of growth.

This study uses a proposed research model by Nor Laila et al., (2006) which integrate Extended Model of Internet Commerce Adoption (eMICA)



created by Burgess and Cooper (2000) and the Internet-Based B2B Stages of Growth (Rayport and Jaworski 2002). Nor Laila et. al. (2006) maintained four stages of adoption with the first and second stages divided into two and three levels respectively to reflect the intensity of the information provision and interactivity. The third stage is divided into two levels to differentiate the security level offered for the transaction. Each stage of the model has the features to be observed. Since Nor Laila et al., (2006) research is pertaining about e-commerce adoption in tourism industry, changes are made as to reflect the content analysis of B2B e-marketplaces as depicted in Table 3.

**Table 3: Adapted Research Model of eMICA and Internet-Based B2B Stages of Growth from Nor Laila et al. (2006)**

B2B Development Stage	Level	Website Features / Functions	Stage Label
Broadcast	Basic Information	Company name Contact details Textual information Product image	1
	Rich Information	Annual report Information of company activities List of accommodations * Information of attractions Information of activities Newsletter	2
Interact	Low interactivity	E-mail contact Links Basic product catalogue News aggregation using RSS feed ** Electronic Journal ** Press Room ** Document Repository **	3
	Medium interactivity	FAQ Site map Search engine Online inquiry form Storefront ** Classified ** Company directories ** E-catalog ** Contact management **	4

*continued*

Table 3 – *continued*

	High Interactivity	Chat room Discussion forum Multimedia Voice over IP Electronic bulletin board Membership Mailing list Auction system ** Reverse auction ** Messaging system ** Product content adding system product ** Product notification ** Request for quotation status and tracking ** B2B interactions **	5
Transact	Non-secured	Online booking Order status and tracking Online payment	6
	Secured	Security sign	7
Collaborate	-	B2B collaboration E2E Interactivity ** C2C experience sharing	8

List of accommodation feature is taken out because it is not suitable for the content analysis for B2B e-marketplaces. Dropped feature/function is marked by \*. Added feature/function is marked by \*\*. Additional features are added referring to B2B e-marketplaces features by Kabir (2005).

### **Case Studies**

In order to gain in-depth information about the success factors in implementing existing e-marketplaces, case studies with interviews are arranged with few selected e-marketplace market makers from different types that are identified in the first stage (content analysis). Responses are analyzed on a qualitative basis, which is building theories from case study. Eisenhart (1989) claim this method as the most appropriate in analyzing the data collected.

The case studies determine to analyze the extent to which key success factors identified in the literature review are being emphasized. This study will follow the research framework of the critical success factor proposed by Li and Li (2005) with further enhancement from Thong (2005) for the explanation for each of the factors as described in Table 4.

Research questions for the interviews revolve around about what and how each of the success factors is described in the selected e-marketplaces.

Table 4: E-Marketplace Success Factor

Key Success Factor	Notes
Strategic Factor	There are two main areas in this category. Firstly, it looks into identifying the target market of the B2B e-marketplaces. Specifically, determining who the participants of the market are. Secondly, it tries to identify the type of products being traded on the e-marketplaces. Other strategic factors could be such as establishing brand, being customer-oriented, targeted marketing activities, developing user community.
Functional Factor	This category is mainly focusing on the functions provided by the e-marketplaces to its participants. The core functions include Commerce, Content and Collaboration (Brunn, 2002) besides other value-added services that are offered by the e-marketplaces. An e-marketplace should create functions that are not provided by its competitors to create a competitive advantage.
Technical Factor	The main objective of this category is to satisfy the need of the participants of the e-marketplace. The e-marketplace quality of service should be compatible, reliable, flexible, secure and easy to use. The technology must be exploited to enable the usage of the e-marketplace at the optimum level.
Create Value	Functions of costs and income mean that the e-marketplaces require sufficient critical mass to drive transaction volumes for the business to cover costs and make a profit (Mark Neill, 2004). Therefore, it is important for e-marketplaces to find ways to reach critical mass by targeting key participants to join and trade in the marketplaces as soon as possible.
Build Liquidity	Value creation is linked directly to the revenue model being adopted by the e-marketplaces. It means identifying how the e-marketplaces make money, looking into its source of income and profit from the e-marketplaces. The common method is by charging the participants of the e-marketplaces.
Industry/Operator/ State/Region/Other	The success factors for each e-marketplace are different based on the industry it is in, the region it covers, the stage of the growth and other factors. Other factors could be whether the e-marketplace is neutral (when equally attractive to buyers and sellers) or bias (when it supports more to sellers). Other than that, partnership is also important because it helps e-marketplaces to share risks, share information and improve business operations.

Source: (Li and Li, 2005; Thong, 2004)

## Results and Discussions

In this section, the results and findings from content analysis and case studies are discussed.

### Content Analysis Findings

A list of existing B2B e-marketplaces in Malaysia is taken from the MDEC (Multimedia Development Corporation) through its MSC (Multimedia Super Corridor) website and the MATRADE (Malaysia External Trade Development Corporation) website. These organizations together with MIMOS (Malaysian Institute of Microelectronic Systems) Berhad are governmental bodies that urge the e-commerce initiatives in Malaysia. Many initiatives are done by these governmental bodies to involve in e-business activities and development including B2B e-marketplaces. Overall, there are ten existing B2B e-marketplaces being identified as shown in Table 5. From the MDEC/MSM website, there are two e-marketplaces which are AseanSources and EASIA2U. The other eight e-marketplaces are from the MATRADE website which is AsiaEp, MyBiz, Cocolulu, DagangAsia, OicTrade, Tradenex, Agribazaar and CIDB E-construct.

Table 5: Selected E-Marketplaces

	Types of Market	Market Focus	Ownership Model	Owner / Market Maker / Host
AsiaEp www.asiaep.com	Horizontal	Various products from various industry especially manufacturing	Neutral/Broker	AsiaEP Bhd
MyBiz www.mybiz.net	Horizontal	Various products based on industries, MRO, new revenue generating opportunities	Neutral/Broker	MyBiz Sdn Bhd
EAsia2U www.easia2u.com	Horizontal	Various products based on industries, MRO, new revenue generating opportunities	Neutral/Broker	Multimedia Prospect Sdn Bhd
CIDB E-construct www.cidbec.com	Vertical	Building material and construction industry	Consortia/ Industry	CIDB EConstruct Services Sdn Bhd.

*continued*

Table 5 – *continued*

DagangAsia www.dagangasia.com	Horizontal	Various products based on industries, MRO, new revenue generating opportunities	Neutral/Broker	WEBSE Technology Sdn. Bhd.
Tradenex www.tradenex.com	Horizontal	Manufacturing, Retailing and Distribution	Consortia/ Industry	Federation of Malaysia Manufacturers, Dancom Telecommunications Sdn. Bhd. & POS Services Holdings Bhd
Cocolulu www.cocolulu.cc	Horizontal	MRO, new revenue generating opportunities	Neutral/Broker	Wisegate Sdn. Bhd
OicTrade www.oicexchange.com	Horizontal	MRO, new revenue generating opportunities	Neutral/Broker	OICnetworks Sdn. Bhd., Islamic Development Bank and MIMOS
Agribazaar www.agribazaar.com.my	Vertical	Agricultural products	Neutral/Broker (government initiative)	Agriculture Department and MIMOS Bhd.
AseanSources www.aseansources.com	Horizontal	Various products and various industries	Neutral/Broker	Infodata Media Sdn. Bhd.

From the analysis, all of the e-marketplaces in Malaysia are public many-to-many markets. Private exchanges and marketplaces are not easily accessible because of the entry barriers such as requiring qualified registered participants or accessible only to invited participants. Most of public e-marketplaces are focusing on horizontal markets providing various products for various industries. Only two e-marketplaces are vertical markets: CIDB e-construct (construction industry) and Agribazaar (agricultural). Two e-marketplaces are hosted by consortia/industry: CIDB e-construct and Tradenex, while the others are hosted by third party.

The analysis of the adoption of the features or functions of website from each of the e-marketplaces is tabulated in Table 6. The summary checklist shows that AsiaEp has the highest total features with 30 features out of 46 features being analyzed. This is followed by DagangAsia (27), Agribazaar (25), MyBiz (24), Easia2u (23) and Aseansources (21). Tradenex and Cocolulu both have 17 features, OicTrade has 11 features while CIDB E-construct has 7 features.

The features that have the highest number which also mean that the features are available in all of the B2B e-marketplace websites are company name, contact details, textual information and links. The website features that exist in only one

e-marketplace are annual report, discussion forum, voice over IP, electronic bulletin board, auction system and messaging system. Features that are not available in any of the e-marketplaces are news aggregation using RSS feed, electronic journal, document repository, chat room, mailing list, reverse auction, B2B collaboration, E2E interactivity and C2C experience.

**Table 6: Summary Checklist for B2B E-Marketplaces Features and B2B Stages of Growth**

B2B E-Marketplaces	B2B Development Stages									Total
	Broadcast		Interact		Transact		Collaborate		-	
	Basic	Rich	Low	Medium	High	Non-secured	Secured			
1. AsiaEp	4	4	4	8	7	2	1	0	30/46	
2. DagangAsia	4	3	3	9	4	2	2	0	27/46	
3. Agribazaar	4	3	4	8	6	0	0	0	25/46	
4. MyBiz	4	3	4	6	4	2	1	0	24/46	
5. Easia2u	4	1	3	6	5	3	1	0	23/46	
6. Aseansources	4	2	3	7	5	0	0	0	21/46	
7. Tradenex	4	2	4	6	1	0	0	0	17/46	
8. Cocolulu	4	1	4	6	2	0	0	0	17/46	
9. OicTrade	3	3	1	2	2	0	0	0	11/46	
10. CIDB E-construct	3	1	2	1	0	0	0	0	7/46	

Overall, the summary checklist indicates that Malaysia e-marketplaces Broadcast the sites very well with Basic Information features with the use of Rich Information features still can be improved. However, e-marketplaces lack of Interaction features like chat room, discussion room, electronic bulletin board and messaging system that help for faster information and quick responses.

Therefore, it is agreed that the development of Internet based application to optimize interaction with customers and build market share that was mentioned by Asleena (2001) found to be important. To improve interaction, e-marketplaces should adopt more interactivity features in the website especially High Interactivity that shows many of the features are not present in many of the e-marketplaces. Since the e-marketplaces still struggling at the Interact development stage, it is not surprising that the Collaborate stage features are not available in all of the e-marketplaces. Nonetheless, Transact stage shows an interesting sign when two e-marketplaces are utilizing all of the transact features even though six e-marketplaces do not have all of the features.

The total of ten e-marketplaces is also analyzed according to stages of B2B development can be acquired from the summary checklist. The concluding stage of growth is noted at any development stage before the number 0 in the

table of summary checklist. Being the top five e-marketplaces with highest website features, AsiaEp, DagangAsia, MyBiz and Easia2u have reached the Secured Transact stage except for Agribazaar. Agribazaar development stage is at High Interactivity stage. The other e-marketplaces, Aseansources, Tradenex, Cocolulu and OicTrade are also at the High Interactivity stage. Only CIDB E-construct is at the Medium Interactivity stage.

Being the pioneer e-marketplaces in Malaysia since early establishment in 1996, AsiaEp has become the top e-marketplaces that adopt highest numbers of e-commerce website features at Secured Transact stage. MyBiz, Easia2u and DagangAsia are also showing motivating sign for being at the top five e-marketplaces at Secured Transact stage. The other e-marketplaces such as Tradenex, Cocolulu, OicTrade and Aseansources are also developing at positive rate at High Interactivity stage even though many of them can be considered as quite new in the market. All of the e-marketplaces except for AsiaEp have been established within ten years ago.

Maybe the two interesting outcomes are from Agribazaar and CIDB E-construct e-marketplaces. Agribazaar has shown remarkable growth for being quite new at the top five e-marketplaces at High Interactivity stage. In contrast, CIDB E-construct that has existed before Agribazaar has the lowest number of websites features at the lowest stage at Medium Interactivity. Even though both e-marketplaces are showing contrasting result, need to be highlighted that only these two e-marketplaces focusing on vertical e-marketplaces based on the industry they are in (agricultural industry for Agribazaar and construction industry for CIDB E-construct). The acceptance of the e-marketplaces players depending on the industry they are in might have affected the outcome of these two e-marketplaces.

## **Case Studies Findings**

The emergence of e-marketplaces with different types of market, ownership model, B2B features and B2B development stages of growth make it important to analyze the key success factors for the survival of B2B e-marketplaces. Thus, data that are gathered from the interviews are subject to an in depth analysis to understand the success factors of e-marketplaces in Malaysia. From ten of the e-marketplaces, three are chosen for this case studies analysis. There are AsiaEp, MyBiz and Agribazaar. All three are selected for being the top five e-marketplaces from the content analysis findings. As the oldest e-marketplace in Malaysia and among the world top 10 e-marketplace on Biz/Trade category by Ranking.com, learning the experience of AsiaEp in ensuring the growth and survival of the e-marketplace is crucial. Besides AsiaEp, MyBiz is also selected to look into the growth of horizontal e-marketplaces as many of the e-marketplaces in Malaysia are in this category. Finally, Agribazaar is selected to analyze the development of vertical e-marketplace. The success factors for the

**Table 7: Recognition of Key Success Factors by Market Makers**

Success Factors	Evidence of Recognition		
	AsiaEp	MyBiz	Agribazaar
Industry	<ul style="list-style-type: none"> <li>Various industries worldwide especially manufacturing for various products</li> </ul>	<ul style="list-style-type: none"> <li>Various Small-and-Medium industries in Malaysia for various products</li> </ul>	<ul style="list-style-type: none"> <li>Agriculture industry for farmers in Malaysia and agriculture members specifically for agriculture produce</li> </ul>
Operators	<ul style="list-style-type: none"> <li>AsiaEp Bhd</li> </ul>	<ul style="list-style-type: none"> <li>MyBiz Sdn Bhd</li> </ul>	<ul style="list-style-type: none"> <li>MIMOS Bhd (government)</li> </ul>
Region	<ul style="list-style-type: none"> <li>International</li> </ul>	<ul style="list-style-type: none"> <li>Local, Asia to International</li> </ul>	<ul style="list-style-type: none"> <li>Local</li> </ul>
Strategic	<ul style="list-style-type: none"> <li>Advantage for being the pioneer in e-marketplace</li> <li>Strategic marketing activities</li> <li>Government agency as marketing engine</li> </ul>	<ul style="list-style-type: none"> <li>Create business e-community</li> <li>Government initiatives to raise IT literacy and awareness among SMEs</li> </ul>	<ul style="list-style-type: none"> <li>Government initiatives to conduct pilot study</li> <li>Government initiatives to go nationwide to promote online trade of farm products</li> </ul>
Functional	<ul style="list-style-type: none"> <li>30 e-marketplace features</li> </ul>	<ul style="list-style-type: none"> <li>24 e-marketplace features</li> </ul>	<ul style="list-style-type: none"> <li>25 e-marketplace features</li> </ul>
Technical	<ul style="list-style-type: none"> <li>No major problem with technology issue</li> <li>Has good capital</li> </ul>	<ul style="list-style-type: none"> <li>No major problem with technology issue.</li> <li>Easy-to-use interface</li> </ul>	<ul style="list-style-type: none"> <li>No major problem with technology issue.</li> <li>User-friendly portal</li> </ul>
Build Liquidity	<ul style="list-style-type: none"> <li>As pioneer, experiences little local competition</li> <li>Keep on innovating and developing new services</li> <li>Marketing activities</li> </ul>	<ul style="list-style-type: none"> <li>Acquired grant from government so that services can be given at no cost to members</li> <li>Provides free training to member</li> <li>Marketing activities</li> </ul>	<ul style="list-style-type: none"> <li>A socio-economy portal</li> <li>The pilot study helps to attract more participants</li> <li>Government initiatives continue to promote the usage of the portal nationwide</li> </ul>
Create value	<ul style="list-style-type: none"> <li>Membership fee</li> <li>Online transaction fee</li> <li>Other fees</li> </ul>	<ul style="list-style-type: none"> <li>No fees imposed (government grant)</li> </ul>	<ul style="list-style-type: none"> <li>No fees imposed (government initiative)</li> </ul>
Others	<ul style="list-style-type: none"> <li>Many organizations join as business partners</li> </ul>	<ul style="list-style-type: none"> <li>Strategic partnership</li> </ul>	<ul style="list-style-type: none"> <li>Cash being the main payment method as farmers do not use credit card and lack of preparedness from local banks</li> </ul>

case studies are analyzed based on factors of strategic, functional, technological, liquidity, value creation and others - industry type, operators, region, stage and other specific conditions as summarized in Table 7.

All three e-marketplaces are targeting at different target markets even though for some industries it could be overlapping. AsiaEp are targeting at businesses from all over the world from various industries especially the manufacturers



that lead to the trading of various products. Similar to AsiaEp, MyBiz is for trading various products from various industries. However, unlike AsiaEp, MyBiz target market is specifically targeted to Small-and-Medium Enterprises (SMEs) in Malaysia to join as participants. For Agribazaar that is initially for farmers, it is now open to other businesses specific from Agriculture industry in Malaysia to become members. Therefore, it is only trading agriculture produce between the members. AsiaEp is operated by AsiaEp Bhd that is opening its e-marketplace to various industries especially for manufacturing industries from around the globe. Therefore, the members of the e-marketplace are for international region. Even though MyBiz that is operated by MyBiz Sdn. Bhd. is also open to various industries, unlike AsiaEp it is mainly targeting for Small-and-Medium Industries in Malaysia to perform online trading for local market as well as to go to Asia and international market. Agribazaar is a vertical marketplace that is specific for Agriculture industry in Malaysia.

It is operated by MIMOS Bhd with the main idea to join all agriculture communities in Malaysia to trade online for local market. Each of the e-marketplace has other strategic factors that are essential for their survival and growth. Early existence of AsiaEp has made the market always in the front.

Other than that, careful study of Malaysia Internet habit becomes the guideline for the survival of AsiaEp. AsiaEp finds MDEC is important as a marketing engine to help it gets more customers and partners. To further make the market well known, MyBiz creates a competitive advantage by establishing business e-community centered on a Business Relationship Network to its members. As for Agribazaar, the pilot study helped a lot in improving the effectiveness of the portal. All three e-marketplaces indicate the importance of going to potential participants and make the e-marketplaces well known to them: AsiaEp involves in many marketing activities from exhibitions, conferences and media; MyBiz depends on NITC (National Information Technology Council) under research and development organization of MIMOS Bhd to improve IT literacy and awareness among SMEs. MIMOS Bhd and Department of Agriculture always go nationwide to promote online trade of farm products to all communities of Agriculture industry.

From the functional factor, all these three e-marketplaces are among the top five lists from the content analysis findings that have shown many B2B features and functions are present in the e-marketplaces with AsiaEp 30, MyBiz 24 and Agribazaar 25 features. In general, AsiaEp provides industry-related info, e-solutions, helps to move participants' business through technology change and brings participants' business to the global market. MyBiz provides source of info and intelligence, online trading tools, support services, customer care, training and events to participants. As for Agribazaar, it provides agriculture-related info, e-buy/e-sell, e-logistic, e-stock, e-make, e-plan, e-payment and e-support. Nonetheless, AsiaEp has a competitive advantage when it does not obligate participants to make online payments when it makes consideration for

companies that already have excellent offsite payment structure. Normally, when e-payment is available in many e-commerce websites, the users or participants have to perform online payment to buy.

From the technical factor, all three e-marketplaces have no major problem with technological issues. AsiaEp has advantage for having good capital to invest in technology. Besides that, almost all the employees and CEOs have good knowledge in business and technical area. Other than that, with the e-marketplace it allows many Malaysia companies to go worldwide without having to spend a lot of money on technical expertise. Both MyBiz and Agribazaar said that their websites are easy to use. In cases where participants want to learn to better use the website, both e-marketplaces provide training and courses. For MyBiz, other than training, customers care and support services are also available to help participants use its e-marketplace.

From the build liquidity factors, each of the e-marketplace has different approach on how to reach critical mass to the e-marketplace. For being the pioneer, AsiaEp experiences little competition because it has grown so quickly and enables it to enjoy 86 percent customer retention by keep on innovating and developing new services. To further build critical mass, AsiaEp perform many marketing activities through exhibitions, conferences and media. As for MyBiz, Hitechniaga Sdn. Bhd. (developer of MyBiz) spent 10 million for marketing purposes during the first year after it was launched. Other than that, with the Perdana Application Grant, MyBiz provides free services and training to members. For Agribazaar, the pilot study did not only use to improve the effectiveness of the portal but also to attract more farmers to use the portal. MIMOS Bhd and Department Agriculture do marketing activities to promote the usage of the portal nationwide

From the create value factor, AsiaEp is the only e-marketplaces that create income and profit from membership fee, transaction fee, marketing fee, training fee, software setup and other activities. MyBiz and Agribazaar do not imposed any fees to the members. For both e-marketplaces, the funds come from MIMOS Berhad where MyBiz get the fund through Perdana Demonstrator Grant.

For other factors, partnership is found relevant in two of the e-marketplaces. AsiaEp has companies that join not only as customers but also as business partners while MyBiz has strategic partnership with Citicorp Capital Asia and A.T. Kearney as growth engines. Interestingly, all three e-marketplaces recognize the roles of government agencies. AsiaEp finds MDEC is important as a marketing engine to help it gets more customers and partners. MyBiz relies on NITC to improve raising the IT literacy and awareness among SMEs. Agribazaar that is operated by MIMOS Bhd as technology provider is approached by Department of Agriculture as subject matter expert and content partner. One important thing that needs to be highlighted about Agribazaar is that e-payment still remains a thorny issue and the e-payment module has been held back. Main reason is because cash is still the main method of payment, as many

farmers do not have credit cards. Another reason is due to the lack of preparedness on the part of local banks. That is why from the content analysis finding, Agribazaar does not yet reach Transact Stage even though being at the top five from all the ten e-marketplaces being analyzed.

The cyber marketplace is completely different compared to the markets in the real world. Standing (2001) noted that too many e-marketplaces could become a challenge for e-marketplaces. Although many e-marketplaces are emerging, AsiaEp as a first mover has an added advantage for already having trusted customers and partners, where it can be considered for having a good base in Malaysia. MyBiz and Agribazaar are also in good condition for focusing on different target market for SMIs and agriculture community respectively. The issues of critical mass of participants (Standing, 2001), and to fulfill participant needs with value added information services such as e-catalog and extensive online customer support contribute to the success of B2B e-marketplaces (Standing, 2001; Asleena, 2001). To attract more participants to join the e-marketplaces, all case studies show that the e-marketplaces either provide training, technical and business support and/or customer care to the participants of the e-marketplaces. In addition, to date, the impact of technology such as limited as limited bandwidth, low teledensity and old technologies probably give a small impact to the development of B2B e-marketplaces because more services have been given by many Internet providers to improve and mitigate those problems. Kang and Han (2002) stated that users who are not computer experts might find electronic transaction rather confusing and awkward. It is true but e-market makers, to help the participants realize the importance of joining the B2B e-marketplaces, should provide the initiatives. Agribazaar for example gives free guidance to the farmers to go online. Similarly, MyBiz provides free training to its members. All case studies show that the e-marketplaces perform many marketing activities to promote the usage of the e-marketplaces. Other than that, Standing (2001) believes that the B2B e-marketplaces success was recognized from multiple income streams in model. Through case studies, it is agreed that local B2B e-marketplaces like AsiaEp also have multiple income streams such as membership fees, transaction fees and advertising fees. Agribazaar and MyBiz receive funds from MIMOS Bhd to manage and maintain the e-marketplaces. Poon and Swatman (1999) noted that many governments are taking initiatives to fund many activities to increase SMEs use of Internet commerce. This case studies show that Malaysia government initiatives in implementing the e-commerce awareness can also be witnessed from the MyBiz e-marketplace in attracting SMEs to the sites. Other than that, government involvements are prominent in marketing and promotion activities.

## **Conclusions**

Malaysia B2B e-marketplaces have shown positive growth development stages across time. Overall, all e-marketplaces have effectively utilized the Broadcast stage with further improvement are needed on the Interact stage. With some e-marketplaces that have made effort to enter Transact stage and with some are still not entering or using the stage, it is not surprising that the Collaborate stage features are not available in all of the e-marketplaces. In the future, the type of market, ownership, B2B features adoption and B2B stages of model might change either because more e-marketplaces arise or the e-marketplaces enhance their business models.

Using the key success factors, it has been possible to find that the e-marketplaces are recognizing many of the factors to develop the e-marketplaces potential. Marketing activities like exhibitions, conferences, media and promotions are important in building liquidity to the e-marketplaces.

Multiple income streams such as membership fees, transaction fee, marketing fee, training fee and software setup fee on the sites enable e-marketplaces to cover costs and make profits. These two factors can be easily achieved by having good strategic and technical factors by providing business support, technical support and training. In addition to that, functional factors must always be restructured with many value added information services for competitive advantage. Above all, government involvement and initiatives have helped the e-marketplaces achieve mass participants with many marketing activities. For some e-marketplaces, government funding is available without having to be concerned about income streams and enabling them to provide free services.

As a matter of fact, all key success factors are inter-related with each other. Excellent combinations of all key success factors are vital for e-marketplaces growth and survival in the long run.

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