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E-MAIL MARKETING SYSTEM ADOPTION IN E-COMMERCE STARTUPS

Master of Science Thesis

ABSTRACT

YIBIN LIU: E-MAIL MARKETING SYSTEM ADOPTION IN E-COMMERCE STARTUPS
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More and more leading-edge information technology has penetrated the market in conjunction with the arrival of information times. However, there is still a reluctance to adopt some of these best practices. Furthermore, the rate of diffusion has remained below expectations. Take for example the explosive growth of the adoption of e-mail marketing systems in Chinese business-to-consumer e-commerce startups whose target markets are overseas. At the same time there has been a relatively sluggish response to this commercial communication technology in those sectors of e-commerce startups that focus on local consumers and business-to-business segments. This disparity reveals the fact that the acceptance and diffusion of communication innovation are subject to many negative external factors and contexts. To e-mail marketing system providers in Chinese market, it is essential to understand the process and to identify and contrast the distinct barriers perceived by marketers across the types of e-commerce mentioned above in order to discuss the reasons behind adoption inconsistencies.

The research in this thesis is conducted through a multi-method interpretive approach. The author uses prior theories in order to draw on a combination to build a new framework. A series of interviews with e-mail advertising system users is conducted and based on the results, the new framework is validated and external negative variables emerged. The nature of these negative factors are then discussed by a group of experts to account for their existence. Finally, different hindrances impacting the adoption across clusters of e-commerce marketers are identified.

This thesis posits a theoretical framework, a combination of technology acceptance model and media choice factors. The key factors considered in this new framework include perceived usefulness, perceived ease-of-use, critical mass, perceived accessibility and social influences. This study contributes to the existing literature by creating a new streamlined technology acceptance model that can be used as a theoretical framework to analyze the adoption of the e-mail marketing system. Moreover, it also addresses explicitly the hindrances presenting different barriers that may affect e-commerce startups' adoption of this technology.

PREFACE

In front of you is my thesis as a conclusion to the Master of Science programme in business and technology.

It is the result of a dozen all-nighters pulled, a hundred sketches crumpled and a thousand thoughts extracted.

When kicking off the master dissertation, I have been a general manager in China for a global business. As a result, a few paragraphs of this dissertation were finished within the cabin of a high-speed train on my business trips.

I would like to thank Dr. S. Nokelainen and Baggström Minna whom I met by chance but at the right time. They are the ones encouraged me to carry on this graduation process.

The completion of this thesis would be impossible if I had not had the support of my supervisor, Dr. M. Martinsuo. I was able to bounce ideas of her and often get back to reality, after being lost in irrational thoughts and ideas. I would like to express sincere gratitude to her.

Also, I am so grateful to my colleagues who had shared burdens with me when I was in this dilemma. Thanks, Elaine, Doris, Cheryl. Further, I appreciate my bosses Peter, Chris and Lukas granting me the privilege to use the data of our business in China.

Plus, my thanks go to all respondents who took the time to attend interviews as well.

Finally, I would like to thank my family and my dear girlfriend Vera for being there during this whole process. This thesis is for you.

Beijing, 16.5.2016

Yibin Liu

CONTENT

LIST OF SYMBOLS AND ABBREVIATIONS

ACC	Accessibility
API	Application Programming Interface
B2B	Business-to-business
B2C	Business-to-consumer
CASA	China Anti-Spam Alliance
CM	Critical Mass
CTR	Click Through Rate
EEC	E-mail Experience Council
ESP	E-mail Service Provider
ESPC	E-mail Sender & Provider Coalition
HTML	Hyper Text Markup Language
IM	Instant Messaging
IP address	Internet Protocol address
ISP	Internet Service Provider
IT	Information Technology
MAAWG	Malware and Mobile Anti-Abuse Working Group
Marcom	Marketing communications
N/A	Not Applicable
OS	Operating System
PACC	Perceived Accessibility
PCM	Perceived Critical Mass
PEOU	Perceived Ease-of-use
PRC	People's Republic of China
PU	Perceived Usefulness
ROI	Return on Investment
SaaS	Software as a Service
SI	Social Influences
SMS	Short Message Service
UK	United Kingdom of Great Britain and Northern Ireland
URL	Uniform Resource Locator
WWW	World Wide Web
WYSIWYG	What You See Is What You Get
£	Currency of the UK
¥	Currency of the PRC
KB	Kilobyte
MB	Megabyte

1 INTRODUCTION

1.1 Background for the research

In this age of the "artificial intelligence", "big data" or "virtual reality", the topic related with e-mail seems almost ancient. But e-mail is in no way antiquated. The decentralization of e-mail service is the cause of it to be an evergreen (Crocker 2006). The e-mail communication system represents the open, interoperable, less-controlled medium. It may sound paradoxical but e-mail, as a product belongs to no one, belongs to everyone. It makes the e-mail a perfect choice to be one's "passport" for the Internet community. Before social network account becoming a true alternative for verifying one's identity on the web, providing one's e-mail address was the path that to accomplish series tasks on the Internet. To verify a bank account, register to be a user of a website, retrieve password for a forum, e-mail is the only route. Even now, during its heyday, social network account itself requests e-mail to finish the registration process.

Since its inception, the e-mail has been regarded as a tool for communication—initially for strategic military communication and then for the exchange of research by universities (Kennedy 2004). In 1990s, tracked the explosive growth of households with a personal computer and access to the internet (Chuang & Sollenberger 1997), e-mail steadily progressed from a tool used by academics to a mainstream technology used by end-users as well as businesses (Peter 2004). E-mail has the ability to form the private links between people and the capability being as a digital document-delivery service. Taking the above points into account, e-mail was soon used for personal communication as well as work related messages (Van Vleck 2012).

The personal and professional use of e-mail is one thing, but commercial use is rather different. By the explosion of e-commerce, e-mail had already become a significant medium that is defined by the marketers as "the most powerful tool for marketing, branding, direct response, and building customer relationships [is e-mail]" (Sterne & Priore 2000, p.1). How did e-mail grow from messages between friends and peers to a marketing channel? It may be unexpected; nevertheless, the origin of e-mail marketing was the "spam" that is now widely accepted as illegal behaviors that involving sending electronic junk mail (Moustakas 2007, p.11). However, the activity of spam in April, 1994 is the first recorded business practice of e-mail by two lawyers from Phoenix, Laurence Carter and Martha Siegel, who posted a mass advertisement in order to promote their law practice (Maravilla 2002). They were doing so successfully - making a fortune via e-mail advertising back to then (Canter & Siegel 1995). But that kind of commercial e-mail communication is assumed to be unsolicited by recipients which caused tremendous

problems (Uys 2009). According to Azmi & Kamarulzaman (2010), such as loss of valuable time, information privacy, glitches on the system's performance could be the issues. Hence, with the improvement of the anti-spam technology and the progress of the legislation and regulations, the spam e-mails have been curbed in an acceptable level nowadays (Sullivan & De Leeuw 2004; Subramaniam et al. 2010; Hoanga 2006). Most of spam has been filtered out by Internet Service Providers (ISP) whose responsibility is to protect inbox from that. Scholarship suggests that response rates for spam e-mail stand lower than 1 percent of the e-mail sent out by lawless advertisers currently, whereas the average engagement for permission-based e-mails is between five and eight percent (Martin et al. 2003). Therefore, as this thesis, we will research in the legitimate direction that is the on-permission e-mail marketing.

In contrast to the spam commercial e-mails, within legitimate promotional marketing realm, all the promotional messaging should be permission-based. Permission-based is defined as information that has been requested by the customer as part of an opt-in scheme (e.g., a client fills in their e-mail address on a website and agrees to receive information of interest) (Pavlov et al. 2008). In effect, marketers are receiving the customer's permission to market to them.

Thus, the e-mail marketing in this study is referring to the direct marketing a commercial message to a group of people who using e-mail and have signed up to the marketer' e-commerce sites. It involves using e-mail to send ads or solicit sales from an information system to the registered recipients and is meant to build loyalty, trust, or brand awareness. The comparison of e-mail and other direct marketing techniques listed below:

Table 1.   *Comparison of Direct and Internet Marketing Techniques*

	Direct Mail	Telemarketing	E-mail	SMS	Website Advertising
Reach	All households	Most households	Internet users	Mobile users	Internet users
Response rate	2%	10% -20%	3.5%-10%	10%- 20%	0.3%
Cost per message	Medium 0.6£	High 6£	Very Low 0.03£	Low 0.06£	Very Low 0.01£/impression
Time to organize	Slowest – print/post	Slow/ brief	Quick	Quick	Medium
List availability	Very good	Good	Limited	Very limited	N/A
Response time	Slow	Quick	Quick	Quickest	Quick
Materials	Any: visual, objects	Voice only	Text, video visual, audio	Short text only	Text, visuals, video
Personalization	Yes	One on one	Yes	Yes	No
Consistency	Consistent	Variable	Consistent	Consistent	Consistent
Persuasive impact	Medium	High	Low	Low	Low
Interactivity	No	Yes	Yes	Yes	Yes
Access	Home	Everywhere	Everywhere	Everywhere	Everywhere
Intrusive	Low	High	Medium	Medium-high	Very low

Sources: Author, Stone & Jacobs (2007), Yeshin (1998), Niall (2000), Peppers & Rodgers (2000), Rask & Dholakia (2000) and industry sources.

Table 1 compares e-mail marketing to other forms of direct marketing. The basic characteristics of e-mail marketing are the low cost, the fewer amounts of turnaround time and the ability to be personalized to suit each customer's taste or need. The HTML, audio and video being increasingly used improves the scope for creativity in the content of e-mail.

The proliferation of the Internet and WWW as vehicles for business has made China the world's e-commerce driver with no doubt (Lloyd & Zhang 2000). In 2015, China is believed to account for over 40% of the world's e-commerce sales (eMarketer 2016). It is tracked that the scale of e-commerce, rose 42.1% in the year end (2015) to $672.01 billion, made China the world's largest e-commerce market (eMarketer 2016). According to eMarketer study (2016) e-commerce will continue to represent a growing share. It is estimated to grow from 15.9% in 2016 to nearly 30% in 2018 (eMarketer 2016) regarding the total retail sales.

Meanwhile, as the indispensable new blood on this section, the number of emerging e-commerce startups increased from 1915 to 3163 in 2015 according to a report (IT orange 2016a). It is further noticeable that the international cross-border e-commerce acted as a

strong driving force to this trend. According to the "2015 annual Chinese e-commerce market data monitoring report (H1)" released by the third-party e-commerce research institute - China Electronic Commerce Research Center (2015): by the end of June 2015, the scale of China's international cross-border e-commerce has risen up to 2 trillion ¥, increased 42.8% from a year earlier. That was accounting for 17.3% of the total export of the H1 from this country. Being resident in a country with large scale of manufacturing, Chinese entrepreneurs seemingly have strong faith in the fast-growing of either carrying out cross-border e-commerce or domestic online retailing. Because of these reasons e-commerce startups of all sectors attracted the most funding in China. The number of investments into e-commerce startups jumps 78% to 627 from 353 of 2014 (IT orange 2016b). Thus it seems the great deal of instability from which China's economy as a whole has suffered in 2015 did not curb entrepreneurs and investors' passion in this internet-based business.

But the startups of e-commerce have their own set of problems. Most of the entrepreneurs are cash-strapped, face a stiff competition from bigger counterparts, badly need publicity, and have a pressing need to target customers. All these factors are combined to make marketing for e-commerce startups extremely challenging. Under this circumstance, the best fit happens to be the e-mail marketing.

- The low costs involved in e-mail marketing make it suitable for e-commerce startups. Promotion for products in mainstream media is expensive and does not guarantee results. E-mail marketing is free of media, print and postage costs. Thousands of newsletters about the new listing can be sent at a fraction of other marketing channels as Table 1 illustrated. The expenses involved in could be considered as negligible compared to the enormous reach of the marketing drive.
- The shorter turnaround time is another reason for fitness, which means there is easiness. There are bundles of cost-effective e-mail advertising systems available to use to generate campaign or marketing workflow at a glance. There are also countless ready-made HTML templates available that marketers can fill in with desired content and adapt to required e-commerce scenarios.
- As outlined, prior 'permission' is mandatory for e-mail marketing which only engages customers with intention. The existed interest on the part of the prospects makes it easier for startup businesses to speak about their products and engage customers effectively with more customized content and offers. Marketing to target segments via personalized campaign gives better results and returns on investment.
- E-mail marketing is expected to be very effective for building a brand image and driving word-of-mouth publicity that online stores are keen to. Especially, to accelerate the expansion of new startups needs to garner much-needed referrals. E-mail is where most opinion-leaders live online universally. For affecting opinion leaders, to use e-mail campaign to gain access to them is the best practice. The key is to encourage them to share the advertisements, and establish social chatter surrounding new e-commerce sites. Once websites have earned the trust of the kernel customers it becomes easy to promote and recommend the products.

In summary, e-mail marketing is an extremely powerful tool for e-commerce startup marketers to directly reach out to their customers. It is highly cost-efficient and has a global reach. Startups can use it to increase their benefit and build lasting customer relationships, and win brand loyalty.

However, it has not always been problem free when e-commerce startups accepted e-mail advertising system, even if e-mail marketing is an indispensable tool. The study originates from the assumption that there are distinguishable hindrances for successful e-mail marketing system adoption perceived by marketers from various Chinese e-commerce startups. It is vital to judge what a reasonable model is for understanding the process and elucidating the factors that differentiate e-commerce startup websites in terms of the patterns of their reluctance to accept e-mail marketing system.

1.2 Objectives of the study and research questions

There are three aims of this study: to clearly understand the hindrances that exert negative effect on the use through the main mediatory constructs; to make out the natures of those hindrances; to induct the hindrances as differentiators across three types of e-commerce startups. So the aims are approached from the advertisement originators' perspective with the aid of three questions:

‐ What are the hindrances that exert negative effect on the e-mail advertising system adoption through the mediatory constructs?
‐ What are the natures of those hindrances in e-mail marketing context?
‐ Which hindrances perceived by marcom managers are able to account for the differentiators across types of e-commerce startups?

Whereas past research has been valuable in explaining how the perceived usefulness and perceived ease-of-use lead to system use, this study examines what hinder these beliefs develop in social psychological context. This thesis also reports on a study of the hindrances to e-mail advertising system adoption that can be considered as differentiators among marcom managers from different types of e-commerce startups, namely B2C (business-to-consumer) domestic e-commerce, B2C cross-border e-commerce and B2B (business-to-business) cross-border e-commerce, based on the author's fieldwork.

In order to find the differentiating traits, it requires identifying the context determinants with reference to a theoretical framework based on the adoption theories and other constructs. The underlying assumption in conducting this research was that multiple theoretical perspectives can help to interpret advertising media choice; rather than theories being competing, it was assumed that they would be complementary (Kraut et al. 1998; Sitkin et al. 1992; Webster & Trevino 1995). The start point for this study began with one theoretical perspective: core constructs of the Technology Acceptance Model. As the case study unfolded, it became apparent that other theoretical perspectives were

needed to help explain the findings. Therefore, factors from media choice literatures helped induce the results of the empirical study part.

In the academic sense, the thesis aims to contribute to the literature on the adoption theories focusing on technology for marketing and advertising and especially the aspects that make these technologies confines in various business contexts. What essence of the factors are hindering online advertising system to be accepted and when there are barriers to be expected.

In regards to the practical aspect, the objective of the study is to shed light on the modification of the target market and the product of an e-mail marketing system provider. Especially interesting is to find out which sectors of the market should be valued more accordingly and if there is need to offer other media channel in Chinese market.

1.3 Structure of the thesis

The thesis is divided in to six chapters. To start with, excluding this chapter, literature review is organized as the second chapter. Previous frameworks related to technology adoption are presented, and the reason Technology Acceptance Model and media choice factors chosen for this study is discussed elaborately. In the end of the second chapter, conceptual framework is proposed as well. The aim of the literature review is to provide insights to the setting of the thesis as well as to understand the central concepts. The literature review also functions as the theoretical foundation for the empirical part of this study.

The next one is the research methods chapter. In this study, the case study approach was chosen as the main strategy. Case study relies on many techniques, but interviews of the subjects involved in the event can be added as sources of evidence (Yin 2003, pp.5-10). The data collection methodologies used for the results of case study are observation and interviews. To analyze the initial data, the coding scheme in a table-based form leads to summarize and tabulate the evidence. Subsequently, focus group discussion as supplementary data collection method is introduced in this chapter.

The fourth chapter first presents the results of the initial data collection. Next, the supplementary data is summarized to guide research into explaining the nature of each negative external variables of e-mail advertising system acceptance. At last, analysis initial data collection is presented in the chapter as the validation of the previous conceptual framework and the hindrances as differentiators.

The fifth section is the discussion chapter. This chapter analyzes the results of the study for testing the proposed framework. The discussion employs the analytical results in the previous chapter to confirm or dismiss the emergent dividers between groups of marketers from different types of e-commerce startups. Thus, the content of this chapter responds to the research questions.

The last chapter is naturally the conclusion of the thesis. The conclusion chapter examines how the objectives of the thesis were met. It also presents the academic contributions and the managerial implications of the study and discusses the limitations of the research. Lastly, in this chapter the ideas for future research and practice are drawn.

1.4 Definitions of key terms

E-commerce

Electronic commerce, commonly written as e-commerce, is the trading or facilitation of trading in products or services using computer networks, such as the Internet. Electronic commerce draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange, inventory management systems, and automated data collection systems. Modern electronic commerce typically uses the World Wide Web for at least one part of the transaction's life cycle, although it may also use other technologies such as e-mail.

Startup

Startup means the companies that are in the early stage in the life cycle of an enterprise where it moves from the idea stage to securing financing, laying down the basis structure of the business, and initiating operations or trading.

Marcom

Marcom, sometimes spelled "marcomm", is an abbreviation for "marketing communications." Marcom is targeted interaction with customers and prospects using one or more media, such as direct mail, newspapers and magazines, television, radio, billboards, telemarketing, and the Internet.

Marcom manager of e-commerce startup

The role of a marcom manager in a startup team is using various media channels to develop marketing campaigns (e-mail, mobile, SMS, etc.). The ultimate goal is for testing various marketing programs to help startups determine what driving awareness is, customer acquisition and how can the startup shape the brand identity. Marcom manager also needs to nurture existing relationships and develop customer data pool. Plus, she has to oversee content creation for marketing channels, ensuring consistency with a distinction of terminology and tone of voice.

E-mail marketing system

E-mail marketing system is the software that is utilized to send e-mail in large quantities. It is generally used for legitimate mailings, such as for e-mail list subscribers. It brings response rate as the indicator for conversion or retention that will determine the

effectiveness of e-mail marketing. The success of e-mail campaign is measured by open rate and click rate (CTR) as well as return on investment (ROI).

E-mail marketing system usually counts the opens by a one-pixel icon hiding in the header of the content for each mail sent. If this image displays, then it will be counted as one open. The links in the mail when it is being sent will be replaced with masking uniform resource locator (URL) that e-mail marketing system uses for counting the clicks.

E-mail marketing system usually refers to web-based sending platforms, while there is standalone software as well. Most e-mail marketing systems are hosted by third party companies who sell access to their system. Users pay per send or at a fixed monthly rate to have their own user account from which they can manage their contacts and send out e-mail campaigns.

Cross-border e-commerce

International e-commerce website is called cross-border e-commerce website, when customers buy online from merchants, located in other countries and jurisdictions. For international B2C e-commerce websites in our research, this kind of online commercial transaction happens between western individual customers and Chinese vendors who speak in customers' language in terms of commercial communication. LightInTheBox, an international online retail company that delivers products to customers in over 200 countries and territories (Lowry et al. n.d.). It is just one typical example of the sort of business, but for this thesis we are focusing on the startup ones who are just the "pawns in the game".

Permission-based e-mail campaign

Unlike one-to-one personal e-mail, legitimate e-mail campaign encompass primarily sending one message to many people—hundreds, thousands, or even millions of people. It is permission-based, which means the recipients must sign-up to the websites, and websites owners need to explain to the audience why they are receiving it. Because personal e-mail services like Hotmail or Gmail limit the amount of people marketer can send to at one time, an e-mail service provider (ESP) like XR (The anonymous company, on behalf of which the thesis was conducted) is the best way to send e-mail marketing. Thanks to participating in the industry organizations ESPs are granted with the whitelist solution for IP channels recorded and approved by the major ISPs who have algorithm rating senders' reputation. Thus, with ESPs' management of the delivery infrastructure and help for keeping commercial messages out of general spam filters, the not-fun-but-necessary work is tackled for users.

2 LITERATURE REVIEW

Theories and models may provide frameworks to guide research design and interpret research results. Eisenhardt (1989) identifies three distinct uses of theory: as an initial guide to research design and data collection; as part of an iterative process of data collection and analysis; and as a final product of the research. Since this study mainly employ positivist approach, theories will be used at the beginning stage in order to conduct the tour of the research and models will be the framework to induct the results of the empirical part (Punch 2005).

A crucial series of research achievements in understanding of the acceptance process of information technology in a certain community has been developed as adoption theories. A wide body of research focuses on identifying factors affecting people's intentions to use these systems and system use (Davis et al. 1989). Since the coming out of those major innovation adoption models, they have been applied by researchers in a comprehensive range due to the rigorous structure, highly reliability and effectiveness, and, of course, its substantial value that those various empirical studies proved (Agarwal & Prasad 1999). The followings summarize the major models.

2.1 Frameworks of technology adoption

2.1.1 Theory of reasoned action

As a well-known social psychology theory, theory of reasoned action (TRA) has been used in technology adoption and use research as a fundamental theoretical framework. It was invented by social psychologists for revealing the decisive factors in deliberate conscious action (Fisbein & Ajzen 1975). For the intentional behaviors of different areas, it can make a good prediction and explanation (Sheppard et al. 1988). TRA is one of the most influential theories as the rationale in the research field of human behavior (Ajzen & Fishbein 1980).

According to TRA, the person to perform a behavior is decided by behavioral intention. Behavioral intention is used to measure the strength of one's intention to perform a certain behavior. Then the behavioral intentions are determined by her attitude and her subjective norm (Fisbein & Ajzen 1975).

Attitude is defined as a person's positive or negative feelings involves conducting the target activity (Fisbein & Ajzen 1975). In the TRA, a person's prominent beliefs to the consequences result from performing specified behavior and the evaluation of those consequences determine her attitude (Ajzen & Fishbein 1980). Subjective norm, quote from the article of Fishbein & Ajzen (1975, p. 302), is "the person's perception that most

people who are important to him think he should or should not perform the behavior in question". According to the TRA, the normative beliefs and the motivation to comply determine the subjective norms of a person (Ajzen & Fishbein 1980). The definitions and core constructs are shown in Table 2:

Table 2. *Key variables in the Theory of Reasoned Action.*

Core constructs	Definitions References	References
Attitude toward behavior	"An individual's positive or negative feelings (evaluative effect) about performing the target behavior"	Fishbein & Ajzen (1975)
Subjective norm	"The person's perception that most people who are important to her think she should or should not perform the behavior in question"	
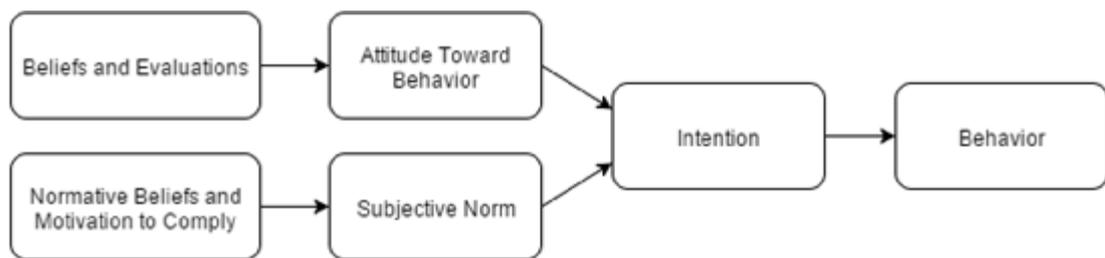
Figure 1. *Relationships between variables in TRA (Fisbein & Ajzen 1975)*

Previous research had provided empirical evidence on the relationships within the model: both attitude and subjective norm were found to be important determinants of peoples' intentions to use certain new technology (Brown et al. 2002; Karahanna et al. 1999). Intention was found to have a significant influence on the behavior (Bhattacherjee & Premkumar 2004; Hsieh et al. 2008).

2.1.2 Theory of planned behavior

Similar to TRA, theory of planned behavior (TPB) is a well-established social psychology theory that also states that specific salient beliefs influence behavioral intentions and subsequent behavior (Ajzen 1991). Compared to TRA, TPB added new construct, perceived behavioral control, which can be defined as a perception of subjects' situation dependent ability in relation to a perceived task difficulty (Ajzen 1991).

Table 3.   *Key variables in the Theory of Planned Behavior.*

Core constructs	Definitions References	References
Attitude toward behavior	Adapted from TRA.	Ajzen (1991)
Subjective norm	Adapted from TRA.	
Perceived behavioral control	"One's perceptions of his/her ability to act out a given behavior easily"	
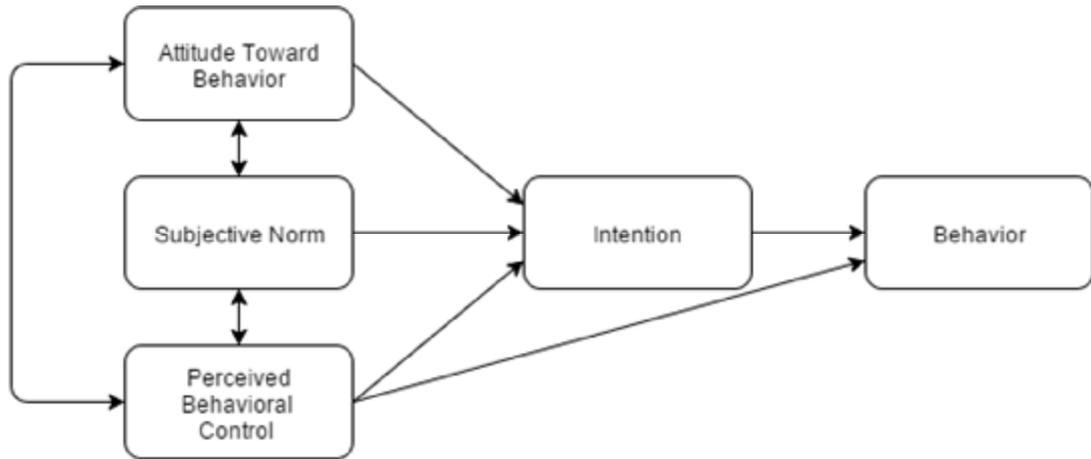
Figure 2. *Relationships between variables in TPB (Ajzen 1991)*

Being like the extension of TRA, TPB is complemented with the "perceived behavioral control" as a new component (Table 3). This factor as an additional construct in TPB shed light on the importance of the perceived difficulty of the behavior and the individual's perceived ability to act out the behavior. The list of the research for intentions and behaviors of human being that fits the TPB model well is rather comprehensive. The application and acceptance of some technology have been effactually and perfectly estimated and demonstrated by TPB (Harrison et al. 1997). Similar to studies using TRA, these studies also found significant relationships between attitude, perceived behavioral control and behavioral intention. A good number of studies also found that perceived behavioral control directly influences the technology adoption and use (Chau & Hu 2001; Wu & Chen 2005).

2.1.3 Technology acceptance model

Technology Acceptance Model (TAM), is developed by Davis (1989) based on the TRA model. It is a theory mainly focusing on the field of information technology. The initial purpose is to do a detailed explanation about the decisive factors for the widely acceptance of computers. But finally, it turns out that TAM can be used to explain the receptiveness to other information technologies more widely (Davis 1989; Karahanna et

al. 1999; Venkatesh & Davis 2000; Bhattacherjee 2001; Rogers 1983; Venkatesh et al. 2003; Chan & Lu 2004; Ahuja & Thatcher 2005; Hsieh et al. 2008; Svendsen et al. 2013).

Table 4.   *Key variables in the Technology Acceptance Model.*

Core constructs	Definitions References	References
Perceived usefulness	"The degree to which a person believes that using a particular system would enhance her job performance"	Davis (1989)
Perceived ease-of-use	"The degree to which a person believes that using a particular system would be free of effort"	
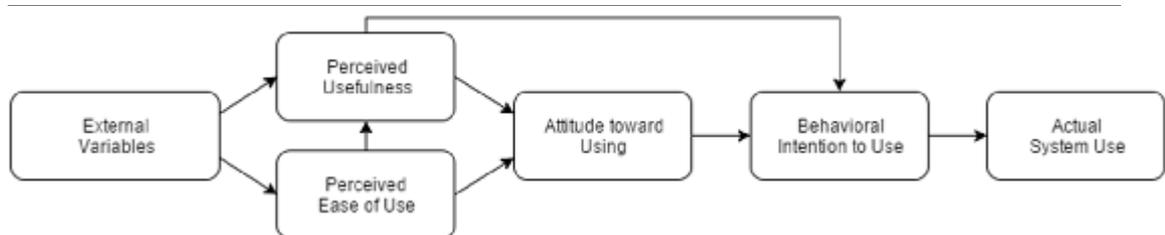
Figure 3. *Relationships between variables in TAM (Davis 1989)*

There are two core constructs in TAM (Table 4) (Davis 1986; Davis 1989): Perceived usefulness, reflects what the extent a person is thinking that the use of a specific system to improve her work performance; Perceived ease-of-use, refers to the degree to which a person considers that to use a specific system in her work is free of effort.

According to the original model of TAM, as illustrated in Figure 3, the actual system use is determined by the behavioral intention to use. The perceived usefulness and perceived ease-of-use decide the attitude toward using. Meanwhile, the components - external variables are helping to establish links between the environmental incentive or ambient constraints, the core constructs - perceived usefulness and perceived ease-of-use, which exist in the TAM model (Igbaria et al. 1997; Sussman & Siegal 2003).

2.1.4 Extended technology acceptance model

Davis and Venkatech (2000) revised and expanded the original TAM model to the new model TAM2. First, TAM2 is excluding the attitude toward using variable on the basis of TAM. It retains other variables from the TAM model. Meantime, subjective norm, output quality, job relevance, image and result demonstrability are being involved as the additional predictor of intention (Venkatesh & Davis 2000). We can see that, in Figure 4, it provides a detailed explanation of the key forces underlying judgments of perceived usefulness (Venkatesh & Davis 2000).

Table 5.   *Key variables in Extended Technology Acceptance Model (TAM2).*

Core constructs	Definitions	References
Perceived usefulness	"The degree to which a person believes that using a particular system would enhance his or her job performance"	Venkatesh & Davis (2000)
Perceived ease-of-use	"The degree to which a person believes that using a particular system would be free of effort"	
Subjective norm	Adapted from TRA/TPB.	
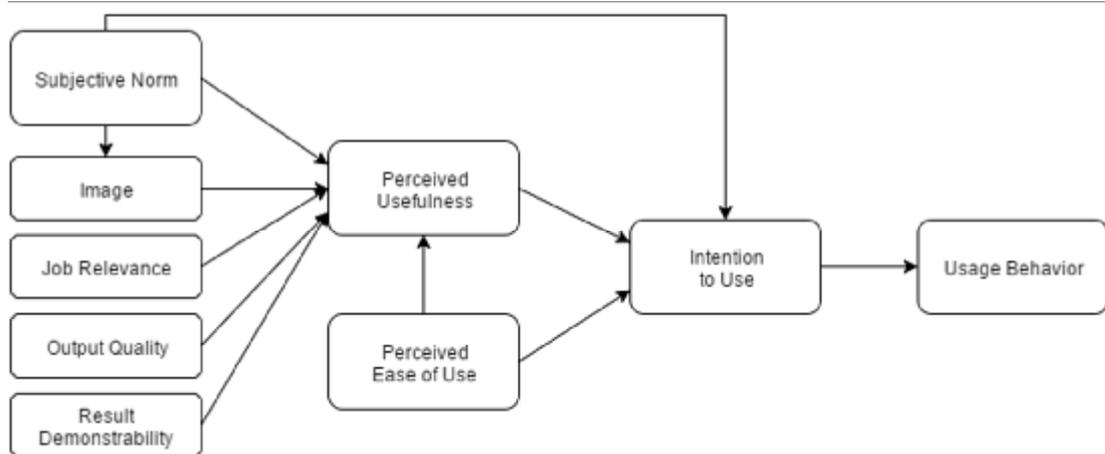
Figure 4. *Relationships between variables in TAM2 (Venkatesh & Davis 2000).*

Thus, TAM2 incorporated image, job relevance, output quality and result demonstrability into a person's perceptions of usefulness (Venkatesh & Davis 2000). Subjective norm is the same construct that has been studied in TRA and TPB (Table 5). Compared to subjective norm, image can be defined as the way that people want to be seen. While TAM2 has included diverse variables in order to enhance the explanatory power, for many times, it fails in elucidation of information technologies' adoption (Lu et al. 2005).

2.1.5 Innovation diffusion theory

Innovation diffusion theory (IDT) is a theory raised by Rogers (1983) for interpret and predict the penetration of innovations. Rogers (1983, p.5) also defined innovation as "an idea, practice, or object that is perceived as new by an individual or other unit of adoption." That means the essence of innovation is the method and solution to address the problem for adopters. Diffusion of innovation refers to the process of new product or new concept transfer between members within the social system in a certain way over time (Rogers 1983).

In the research of innovation diffusion, it divides the characters of the new instance into five constructs: relative advantage, compatibility, complexity, observability and

trialability. The five core concepts are the most important factors in the consideration to illustrate the spreading in terms of the innovation itself (Rogers 1983).

The theory's outline is shown in Table 6 and Figure 5. Since decades ago, it has been put into practical use for research in a diverse range of topics from agricultural tools to modern organization management (Tornatzky & Klein 1982).

Table 6. *Key variables in the Innovation Diffusion Theory.*

Core constructs	Definitions	References
Relative advantage	"The degree to which an innovation is perceived to be better than the idea it supersedes"	Rogers (1983)
Compatibility	"The degree to which an innovation is perceived as consistent with the existing values, past experiences and needs of potential adopters"	
Complexity	"The degree to which an innovation is perceived as relatively difficult to understand and use"	
Trialability	"The degree to which an innovation may be experimented with on a limited basis"	
Observability	"The degree to which the results of an innovation are visible to others"	
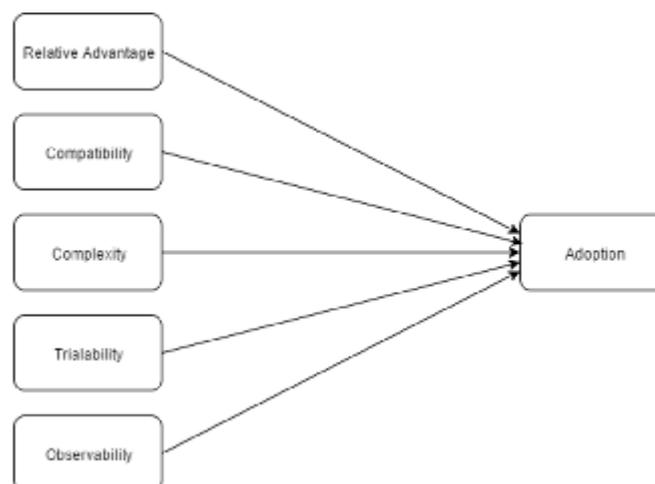
Figure 5. *Relationships between variables in IDT (Rogers 1983).*

To information system discipline, Moore & Benbasat (1991) introduced a new model with two additional factors along with Rogers' (1983) five factors. So as shown as Table7 and Figure 6, the refined IDT model has adapted from the original IDT model to seven core constructs.

Table 7. *Key variables in Refined Innovation Diffusion Theory.*

Core constructs	Definitions	References
Relative advantage	"The degree to which an innovation is perceived as being better than its precursor"	Moore & Benbasat (1991)
Ease-of-use	"The degree to which an innovation is perceived as being difficult to use"	
Image	"The degree to which use of an innovation is perceived to enhance one's image or status in one's social system"	
Visibility	"The degree to which one can see others using the system in the organization"	
Compatibility	"The degree to which an innovation is perceived as being consistent with the existing values and past experiences of potential adopters"	
Results demonstrability	"The tangibility of the results of using the innovation, including their observability and communicability"	
Voluntariness of use	"The degree to which use of the innovation is perceived as being voluntary or through one's free will"	
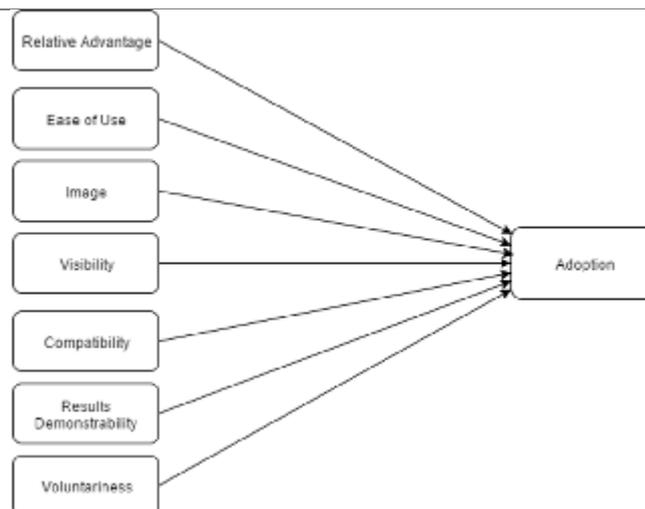
Figure 6. *Relationships between variables in the Refined IDT (Moore & Benbasat 1991).*

These main constructs of IDT were employed and found to have significant relationships with the information system related technologies usage. Relative advantage was found to

have a positive relationship with use (Lin et al. 2006). Complexity was found to have a negative relationship with the technology adoption (Beatty et al. 2001; Son & Benbasat 2007).

2.1.6 Unified theory of acceptance and use of technology

For integrating the different perspectives on individual adoption of information system technologies into a formulated theoretical model, previous models and theories were unified by Venkatesh et al. (2003) as the unified theory of acceptance and use of technology (UTAUT) model (Figure 7). Each of the constructs related to individual acceptance mentioned in prior models was incorporated into the main constructs and measurement factors correspondingly (Table 8). Also, UTAUT enlarged original models by adding four mediators to account for dynamic influences, including gender, age, voluntariness, and experience (Venkatesh et al. 2003).

Table 8. *Key variables in the Unified Theory of Acceptance and Use of Technology.*

Core constructs	Definitions	References
Performance expectancy	"The degree to which an individual believes that using the system will help him or her attain gains in job performance"	Venkatesh et al. (2003)
Effort expectancy	"The degree of ease associated with the use of the system"	
Social influence	"The degree to which an individual perceives that important others believe he or she should use the new system"	
Facilitating conditions	"The degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system"	
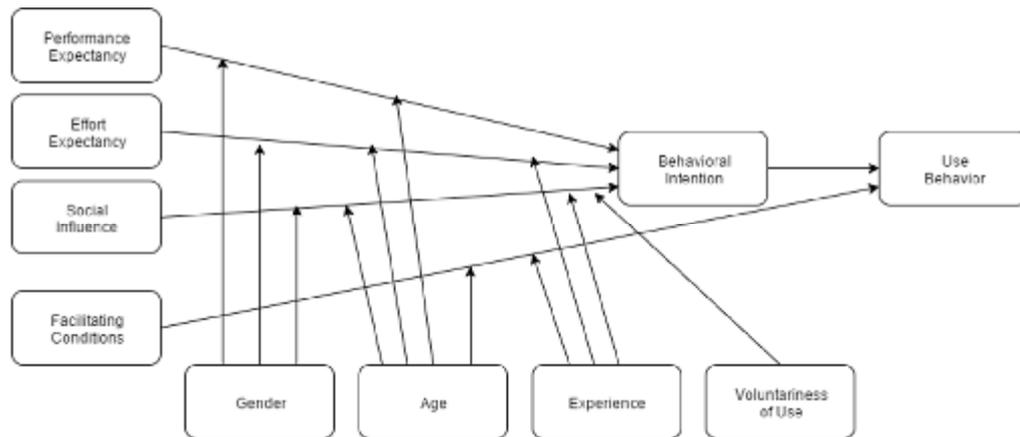
Figure 7. *Relationships between variables in UTAUT (Venkatesh et al. 2003).*

UTAUT provides a refined view of how the determinants of intention and behavior evolve over time. Empirical testing of UTAUT shows that performance expectancy, effort expectancy, and social influence have significant relationships with the intention to use technologies (Venkatesh et al. 2003). Hong & Tam (2006) and Lu et al. (2005) argue that use behavior depends on performance expectancy and effort expectancy. Scholars also reported significant moderating effects by individual differences such as gender (Morris et al. 2005; Venkatesh & Morris 2000; Venkatesh et al. 2003), age (Morris & Venkatesh 2000), prior experience (Venkatesh & Davis 1996), and voluntariness of use (Venkatesh et al. 2003).

2.2 Comparison of previous models and focus on the technology acceptance model

To develop the conceptual framework for our research, it is crucial to choose one model as the key constructs after examining each of the six theories above. By absorbing the predominance of TRA and TPB, TAM is granted capability to outperform its predecessors and mainly focus on the information technology. While TAM has been expanded to TAM2 and UTAUT it is still a valid model and had been widely accepted as successful in explaining new technology adoption. Plus, the TAM is a commonly used model in the information technologies literature on users' innovation adoption behavior (Adams et al. 1992; Agarwal & Karahanna 2000; Karahanna et al. 2006; Venkatesh & Bala 2008) and is regarded as a core theory in the information system discipline. Moreover, there are a number of studies have extended the TAM with other factors, such as trust in online shopping (Gefen et al. 2003), perceived risk in online transactions (Pavlou 2003), and playfulness in a World Wide Web (WWW) context (Moon & Kim 2001). However, since the aforementioned six models are derivatives to each other and consequently use many of the similar factors, a transverse comparison is justified. So that we elaborate the comparison between other models and TAM further below to check if it is the best choice for our research.

TAM vs TRA

Result from the research by Davis et al. (1989) is one of the reasons we consider TAM within appropriateness in this study. In Davis and his colleagues' study, the TRA model did not perform as well as TAM in elucidating innovation adoption. In addition, to be one of the most influential extensions of the TRA, TAM evolved from the TRA by decomposing the unique confluence of attitude to the two critical theoretical constructs: perceived usefulness and perceived ease-of-use. That makes TAM promise to have feasibility in more contexts (Davis et al. 1989). Generally, such comparisons establish that TAM is more compact and simple to use in various research settings than TRA.

TAM vs TPB

Mathieson (1991) suggested that TAM is better able to explicate the innovation adoption than TPB. Furthermore, TAM is easier to use because of its compact structure. In addition, the TPB is more difficult to apply across different contexts than TAM, since the TPB requires pilot studies to identify different relevant outcomes, reference groups, and control variables (Mathieson 1991). This thesis exactly has carried out an analysis on cross-sectional contexts in certain degree.

TAM vs TAM2 & UTAUT

According to El-Gohary (2012), TAM2 and UTAUT are tested and believed to be more suitable to investigate technology adoption by individuals as can be seen in their constructs. Those extra variables compared with TAM, as image, voluntariness of use, etc. are obviously more personal-oriented. Hence for the purpose of conducting research of an innovation for commercial use, it is believed that TAM is more suitable to be applied in a business scenario.

TAM vs IDT

Although TAM and IDT originated in different disciplines, Jie et al. (2007), Yi et al. (2006) and Looi (2004) found they are similar as two adoption theories. As the innovation is the research object, both theories share the view that the adoption of a particular innovation is determined by its perceived attributes. Furthermore, it is clear that "relative advantage" and "complexity" from one side (IDT) are conceptually similar to "perceived usefulness" and "perceived ease of use" on the other side (TAM) respectively. PU and relative advantage both encapsulate the degree to which the perception of the target technology is better than the current practice. PEOU is sharply opposite to the complexity. Thus TAM and IDT partially reconfirm each other's findings. So to select core constructs from either of them should be unbiased. However, "[while] IDT incorporates more comprehensive factors, accumulated empirical evidence has shown that TAM provides a better mechanism for explaining user acceptance recognition and behavior." (Zhang et al. 2008, p.306)

Therefore for the purpose of conducting this research, it is believed that TAM is more suitable to investigate e-mail marketing system adoption by Chinese e-commerce startups. However, Davis (1989) initially included attitudes as a mediatory variable in TAM, but this was later dropped due to its weak role between the perceptions and behavioral intention (Venkatesh & Davis 2000). Furthermore, Limayem et al. (2003) argued that the constructs of different stages in technology adoption are inconsistent. For example, at the stage of people examining a new technology and thinking about to accept it, behavioral intention is significant. But it is meaningless in the stage when the user has formed an intention to adopt and even used it for some time. The latter one is exactly the scenario of this article. Hence the parallels of attitude and behavioral intention in TAM will be left out. Consequently, as illustrated in Figure 8, a streamlined theoretical framework addressing e-mail marketing adoption from the perspectives of perceived usefulness (PU), perceived ease-of-use (PEOU) is established.
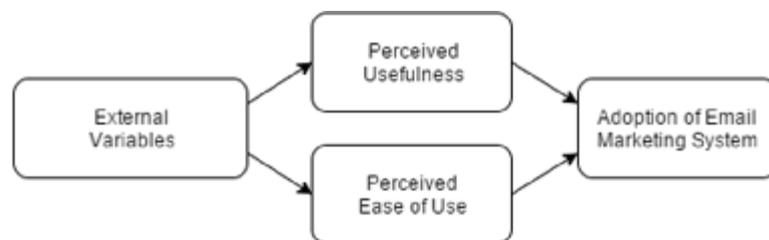
Figure 8. Streamlined TAM for study the e-mail marketing system adoption

As the TAM is solid theoretical model that has been tested rigorously, it is not the intention of this study to test the internal correlations again but to use them as the basis to build a new model for e-mail marketing context. However it needs to be noticed that the TAM2 model indicates PU and PEOU are correlated. Davis (1989) suggested that the primary impact of PEOU on use was expressed indirectly through its effect on PU as well. In addition, Davis et al. (1989) also conducted several studies that provided empirical evidence on the relationship that exists between PU and PEOU. Even though all of the research mentioned above had been acknowledged, according to miscellaneous context, the correlation between PU and PEOU was always being challenged because of conflicting results (Adams et al. 1992). Moore & Benbasat's (1991) factor analysis has shown that PEOU and PU are separable constructs. Furthermore, almost all of the modified or extended PU/PEOU-centralized model based on other adoption models in varieties of directions have proved that it is better to consider that PU and PEOU are two separate and distinct constructs that affect adoption independently (Subramanian 1994). Many extensions are integrating other theories have invoked PU/PEOU as two parallel factors to explain innovation adoption and use (Zhang et al. 2008; Alam et al. 2011; El-Gohary 2012). Thus as an initial design, the aim of this research is exactly going to integrated TAM model with other theories. Therefore the effects of PU and PEOU are regarded as two independent core constructs to the innovation adoption in this study.

The series of research that apply TAM to explicate the innovation acceptance in different systems context can be considered as bloom (Davis 1989; Karahanna et al. 1999;

Venkatesh & Davis 2000; Bhattacherjee 2001; Rogers 1983; Venkatesh et al. 2003; Chan & Lu 2004; Ahuja & Thatcher 2005; Hsieh et al. 2008; Svendsen et al. 2013). Moreover, there are a number of studies that has tested TAM in the acceptance and diffusion of electronic commercial transactions. Seyal & Rahman (2003), Schillewaert et al. (2005), Tsang et al. (2004), Vijayasarathy (2004), Zhu & Kraemer (2005), Stockdale & Standing (2006), Ha & Stoel (2009), Homburg et al.(2010) are examples of these studies.

Within this respect, Tsang et al. (2004) carried out a study on customer acceptance of mobile advertising system in which they extended the original TAM by using other constructs on purpose to improve its ability to explain the use and acceptance of new practice in online communication process. They attempted to analyze customer intention to SMS communication by extending TAM to include wireless trust environment, system complexity. Within the same line, Hausman & Siekpe (2009) conducted a study to investigate the different factors affecting the adoption of website display promotional info of undergraduate business students from a receiver aspect. They attempted to explain website display adoption by extending TAM to include some computer factors (e.g. security and informativeness) and human factors (e.g. language options, feedback features, familiarity).

But by reviewing the literature it is noticed that there is very limited number of studies that have been contacted to apply PU and PEOU of TAM in the originator perspective but a lot in the recipient perspective. The studies of Parthasarathy & Sohi (1997), Lapierre & Denier (2005) are examples of these studies. Parthasarathy & Sohi (1997) argued the enhancing customer retention is the expectancy from marketers/originators, which is the key factor to adopt a communication tool. Lapierre & Denier (2005) contributed that the improvement of communication with customer and customer involvement needs to be considered as the PU of a marketing communication adoption process.

Nonetheless, e-mail marketing system is not just an information system but also communication medium (Sproull & Kiesler 1986; Lee 1994). Lacking in explanation to the communication-based antecedents has been a bias in most of the TAM related literature when the research object is communication technology. However, Davis (1989) empirically tests relevant factors by examining how the effect of information availability affects PEOU in an e-mail context. On a theoretical level, Venkatesh & Davis (2000) also suggest personal familiarity and expertise as an explanation of the effect of PU on behavior in multiple-cases. Even though these studies have focused primarily on PU and PEOU alone, they are an important step in understanding the communication-based antecedents of the two mediators when the research object is communication technologies. The present study attempts to further TAM in a similar vein by bringing to carry more external contexts from the media choice literatures to the specific measures of the two mediatory variables - PU and PEOU.

2.3 Media choice factors in technology adoption

"In its broadest sense, the term 'media choice' captures all of the macro- and micro-level factors that determine a person's actual exposure to mediated content or a person's deselection of mediated content" (Hartmann 2009, p.2).

It is important to understand marcom managers' perceptions towards e-mail advertising system that does not simply convey messages electronically but also a medium for commercial communication (Sproull & Kiesler 1986; Lee 1994). Therefore, theories from the media choice theories helped generalize the constructs. Webster (1998) summarized the existing literature and outlined the media choice factors, including Critical Mass (Oliver & Marwell 1988), Perceived Medium Richness (Daft & Lengel 1983; Daft & Lengel 1986; Daft et al. 1987; Rice 1992), Social Influences (Schmitz & Fulk 1991; Fulk 1993), Situational Factors (Rice 1992) and Medium Symbolism (Trevino et al. 1990). Additionally, Perceived Accessibility of a medium is another belief that has been linked to the process of both the communication selection and information system adoption (Markus 1994; Rice & Shook 1988; Swanson 1988). Accessibility effect on medium selection or media choice; the preliminary interpretation of accessibility in media choice context can be found in some research of other media choice factors (Markus 1987; Straub & Karahanna 1998).

Those factors should describe and explain the reason; user came into contact with, or avoided coming into contact with, the very medium (Zillmann & Bryant 1985). The media choice also implies that perceiving (or not perceiving) socialization within the media (Zillmann & Bryant 1985). The decision is determined by the perceptions that user think about medium and the characteristics of the medium itself; Fulk et al. (1987) believe the social context determine the chosen medium; McLuhan (1994) stressed on the medium may have a symbolic meaning itself. From the different perspectives of medium, these interrelated studies and theories have examined a variety of factors that affect which media are chosen and how effective choices are likely to be. Several media choice theories have been developed to study individual and organizational communication and how media choice factors affect individual and organizational actual use of media (Carlson & Zmud 1994; Webster 1998; Cameron & Webster 2005).

2.3.1 Critical mass

The definition of critical mass suggests that it is the basis for producing collective actions (Oliver et al. 1985, p. 254): "a small segment of the population that chooses to make big contributions to the collective action while the majority do little or nothing". Markus (1987, p. 506) indicated that "even individuals who would prefer to use interactive media may not really perceive these media to be viable options in the absence of universal access". Moreover, Markus & Connolly (1990) demonstrated that the medium might be abandoned without securing a critical mass of users for it. Hence, the choice of a medium

is not only dependent on an initiator's preference, but on the responses from others for the selection of media. If less people are willing to receive the info initiator posted in a certain medium, it would not be effectively used. Furthermore, from the network externality perspective, critical mass refers to the effect that the value of technology to a user increases with the number of people who use it (Nault & Dexter 1994; Wang & Seidmann 1995). Applying the network externality perspective, Luo and Strong (2000) indicated that users may develop a perceived critical mass (PCM) through interaction with others. The perception of critical mass is rapidly strengthened as more people participate in the communication loop.

2.3.2 Media richness

According to Daft & Lengel (1983), medium richness is the extent to which the medium has the capacity to convey multiple verbal and nonverbal cues, allows for immediate feedback, uses natural language, and has personal focus. It is "the ability of information to change understanding within a time interval" (Daft & Lengel 1986, p.560). Consequently, the media richness of media can be measured by the set of media richness criteria provided by Daft & Lengel (1986). The four criteria defined by them are immediate feedback, multiple information cues, personalization and language verity.

Richer media are those with a greater ability to convey natural language rather than just numeric information, a greater diversity of ways in which message can be transmitted such as the tone of voice, a greater degree to personalize the information, and less interval of response (Markus 1994). So the richer the media is it will reduce more uncertainty and equivocality (Daft & Lengel 1986). Uncertainty is defined as the difference between the amount of information required to perform the task and the amount of information already possessed by the communicating (Galbraith 1977). Equivocality means that multiple and conflicting interpretations of the situation exist (Weick 1976).

The richness is as diverse as different communication media. Schmitz & Fulk (1991) ranked the order of media richness as face-to-face, telephone, SMS, e-mail, personal written letters, formal written text (for instance, documents) and formal numeric text. Face-to-face communication is the richest medium because it provides immediate feedback, multiple cues via body language and tone of voice, and the maximal message context expressed in natural language (Dennis & Valacich 1999).

2.3.3 Media symbolism

The media symbolism is a more socially based conception. It points out that the media itself becomes a part of the essential meaning of a message (McLuhan 1964). Receiver perceptions of symbolism differ by the media within which a message is delivered (Trevino et al. 2000). That means the perceived symbol of each media varies: face-to-

face, handwriting letters, e-mail, instant messenger, phone call and SMS. Handwriting letters is considered as "formality and legitimacy", while phone call indicates "intimacy and emergency" (Trevino et al. 2000). That is also demonstrated by several previous studies (Trevino et al. 1987; Markus 1994).

To the extent that individuals are conscious of these symbolic significance, their media choices to be associated with the figurative meaning carried by the very medium. The media symbolism is related to the ability of a medium to carry meaning beyond the explicit content of the message but the communication form itself. It has been demonstrated positively related to the credibility and satisfaction in the outcome of communications (Martin et al. 2003).

2.3.4 Perceived accessibility

Accessibility (ACC) is admitted to be a very vital trait of all interactive communication systems (Culnan 1985). It is another belief that has been found to be related to technology use in both the technology adoption literatures and media choice related theories (Culnan 1985; Rice & Shook 1988; Swanson 1982; Markus 1987; Straub & Karahanna 1998).

ACC is acknowledged to be a highly important characteristic of all communication computer systems (Kerr & Hiltz 1982). However, empirical studies of the effect of perceived accessibility (PACC) on the adoption and usage of technology have multi-dimensional aspects (Karahanna & Straub 1999; Culnan 1984; Rice & Shook 1988; Teo et al. 2003):

- **Terminal Accessibility**: the extent to which someone has physical access to the hardware needed to use the system;
- **Information Accessibility:** the ability to retrieve the desired information from the system;
- **System Reliability**: the probability the system keeps "up" and functioning;
- **Ease of Learning The Control Language**: the effort needed to use the interface to manipulate the system

This is partially due to the different emphasis by which ACC can be applied in the nature of technologies (Karahanna & Limayem 2000). In this study, we examine all four critical aspects of the PACC and their relationship to perceptions about e-mail adverting system.

2.3.5 Situational factors

Markus (1994) defined the distance between communication partners as a situational factor. Watson-Manheim & Belanger (2007) outlined the task urgency as a situational factor. In addition, Straub & Karahanna (1998) claimed that the recipient availability to be a key situational factor. Thus, these factors should be considered to situational conditions in media choice context.

2.3.6 Social influences

According to previous social influence studies, perceptions toward communication media are influenced by actions and statements of significant audience (Aydin & Rice 1991; Compeau & Higgins 1991; Fulk et al. 1990; Rice et al. 1990). Specifically, in their research of social influence, Fulk et al. (1990) identified multiple factors in the social context can positively or negatively influence perceptions of new media. According to their social psychological theory, perceptions of media are proposed to vary and be, at least in part, socially constructed in communities. This consequence has found empirical support in a number of communication technology studies later (Fulk 1993; Fulk & Boyd 1991). Schmitz (1987) also found that the differentiation of supervisors' usage explained the variation in usage patterns by subordinates. Additionally, Rice (1993) and Kraut et al. (1998) discovered that co-worker use of electronic meeting systems and supervisors' perceptions of usefulness had an effect on PU of the users, which in turn influenced perceptions. Other research has demonstrated that social influences (SI) can affect media choice in general (Sitkin et al. 1992).

2.4 Limitation of previous theoretical synthesis

Many scholars have extended media choice factors and PU and PEOU in an attempt to improve the ability to understand media use and adoption (Carlson & Zmud 1994; Fulk et al. 1995; Cameron & Webster 2005). Those prior works on adoption theories, which concentrated on media communication technologies, have somehow been extended on those media choice theories, or vice versa.

Moreover, there are a number of papers that had explicitly tested the combined models. The frameworks for those empirical studies have been presented in the following table:

Table 9. *Key Media Choice Antecedents Effect on PU and/or PEOU*

Proposed antecedents	Core constructs	The subjects of empirical study	Medium	Prior Literature
Perceived Accessibility (Terminal accessibility; information accessibility; ease of learning the control language)	PEOU	Recipients	E-mail	Culnan (1984, 1985)
Perceived Accessibility (Terminal accessibility; information accessibility; system reliability)	PU	Originators/Recipients	E-mail	Karahanna & Limayem (2000)
Medium Richness	PU/PEOU			
Social Influences	PEOU			
Situational Factors	PEOU	Originators	Voice-mail	Reinsch & Beswick (1990)
Medium Experience				
Social Influences Medium Richness	PU	Originators	Blogs	Chang & Yang (2010)
Social Influences	PU	Originators	Face-to-face, e-mail, phone call, voice-mail, fax	Straub & Karahanna (1998)
Perceived Accessibility (Terminal accessibility)	PEOU			
Social influences	PEOU	Recipients	SMS	Muk (2007)
Perceived critical mass	PU	Originators	Groupware (including e-mail)	Lou et al. (2000)
	PEOU			
Medium Richness Medium Symbolism	PU	Originators	Face-to-face, phone call, e-mail, written notes letter	Trevino et al. (1990)

As we can see in Table 9, the PU and PEOU are core constructs when studying media technology adoptions, but the involved media choice factors are variant according to the specific research objects or perspectives. For example, in order to facilitate managerial interventions, Reinsch & Beswick (1990) have created a multi-factor combination model based on previous literature. They proved the correlations of media choice factors to PU for identifying viable antecedents to PU in the diffusion of voice mail communication in organizations. Chang & Yang (2013) also list four different media choice factors with PU and PEOU to create a model for explicating the blog use.

By reviewing the literature, it is noticed that although there are some studies that have been conducted to apply the combined models in the e-mail channel. But there is no single study that has investigated from originators' perspective particularly. It is also noticed that none of them includes adequate media factors that are needed and relevant for

commercial messaging transaction. The above reflects gaps in the field of finding the media choice antecedents behind PU and PEOU of TAM in a commercial e-mail communication context on originator/initiator side. To cover such gaps there is a need to create a new summary model based on prior literature and have it to be validated in empirical study.

2.5 The selected media choice factors as antecedents to usefulness and ease-of-use

2.5.1 Perceived critical mass

Lou et al. (2000) conducted a study of the use of the groupware among students. A central conclusion derived from their research is that perceived critical mass (PCM) affects senders' perceptions of a groupware application's usefulness and ease-of-use. Though the empirical evidence is not focusing on e-mail, several studies of communication have emphasized the e-mail is one of the most common groupware applications in terms of the technical elements and technology adoption process (Lou et al. 2000; Grudin 1994; Grudin & Palen 1995; Sillince et al. 1998).

According to Lou et al (2000), the impact of PCM on PU and PEOU may be attributed to two factors. First, like most communication technologies, the utility increases dramatically as more and more people use groupware. This phenomenon is often referred to as a network externality (Katz & Shapiro 1986; Gurbaxani 1990). Second, as more people are using the technology, potential users witness more examples and different ways of employing the technology. In the study by Lou et al. (2000), the latter perspective is theorized as informational influence. Similarly, the perceived widespread use of a medium may lead potential users to believe that the communication system is probably easy to learn because so many of their peers have formed the informational influence. Hence, clearly, PCM can affect both PU and PEOU.

2.5.2 Perceived accessibility

As we mentioned above the PACC (perceived accessibility) encompasses multi-dimensional constructs, which are physical dimension accessibility, interface dimension accessibility and informational dimension accessibility and system reliability (Culnan 1984; Rice & Shook 1988; Teo et al. 2003). The more accessible an information system is, the less effort will be needed to use it. Then the choice of it is not surprising. It is just as Karahanna & Straub (1999) found that the terminal accessibility directly affects perceptions of the PEOU to the medium. On the contrary, Karahanna & Limayem (2000) found that the PU of a medium is significantly impacted by the information accessibility and system reliability. The fourth dimensional factor - ease of learning the control language has been confirmed by Culnan (1984) related to PEOU.

2.5.3 Social influences

According to Chang &Yang (2010), social influences (SI) is defined as the degree to which the participants of the communication loop approve of originators' media choice. So that it is the compliance or normative influence of recipients' expectations. Therefore, social influence is measured in terms of originators' perceptions of audience's attitudes in this study. It is also consistent with Rice &Aydin (1991), how sender perceives her receivers use of e-mail to receive information affects her use. According to the empirical study of Karahanna & Limayem (2000), the correlations between SI and PU/PEOU are both significant.

2.6 The abandoned antecedents from media choice factors

This study excludes medium richness, media symbolism and situational factors. Medium richness and media symbolism are excluded because the senders' judgments about the symbolism and richness of a promotional e-mail are not clear. The situational factors are also excluded because the communication loop of commercial e-mail is not limited by the spatial and temporal restrictions between communication partners. It will be discussed in further detail below as well.

Medium richness

First, even if media richness is an important determinant of media choices, the ways in which that concept has been theorized and measured in the context of traditional media may be inapplicable or inappropriate for the information system based media. As mentioned in above, the richness construct is believed to consist of four elements, derived from analysis of traditional media: (1) capacity for immediate feedback, (2) ability to convey multiple types of cues, (3) language variety, and (4) personal focus. There are clear differences among traditional media in their ability to support these capabilities taken as a set. For instance, face-to-face and telephone allow for immediate feedback, the transmission of multiple cues, language variety, etc., whereas written addressed communications and written unaddressed communication do not. However, the new media combine these attributes in unexpected ways. E-mail, which relies on text, is asynchronous, but fast (Sproull & Kiesler 1986). Thus, it has lower degree of language variety and fewer cues compared to face-to-face communication, but it can also allow for immediate feedback. A single standard of richness may not be able to capture the ways that new media stretch old constraints. In a similar vein, media richness theory essentially assumes that all four elements are of equal importance in the richness construct; little is known about how we may rank or weight the four elements (Fulk & Boyd 1991). Owning to the above, in this study, we discard media richness as the antecedent for PU or PEOU.

Medium symbolism

The effect of symbolic meaning is presented as a theoretical approach for understanding media choice processes during communications. McLuhan (1964) pointed out that the media becomes a crucial component of the media. For instance, handwriting letters have been considered as symbolizing formality and legitimacy, while group meetings indicate that teamwork or involvement is demanded (Trevino et al. 2000). There are "stereotypes" of certain medium that differ from different cultures and processes of media adoptions in varies communities (Webster & Trevino 1995). They can shape the role of the specific medium in a social setting (Lin 2003). The audience perception of those stereotypes influences the media choice or adoption predispositions as Lin (2003) outlined.

For this study, we are focusing on the sender/originator side. However, according to the above studies (Trevino et al. 2000; Lin 2003; Webster & Trevino 1995), apparently medium symbolism is a conception from the audience/recipient side. When the study involves speakers/initiators particularly, therefore, the medium symbolism should be excluded either.

Situation factors

According to the aforementioned literature, in particular, urgency, availability, distance are the factors of situation. Furthermore, e-mail is one of the media that are capable for both asynchronous and synchronous communication. So it is not limited by the temporal constraints (urgency and availability). Because e-mail is online based, it is not restricted by the geographical context of the communication between speakers and audience as well. Therefore, the distance is not a question here either. Summary up, this research forgoes the situational factors.

2.7 Proposed research framework

As we discussed, the selected factors PCM, PACC, and SI are suited to the general situation related to e-mail-based commercial communication, whereas medium richness, medium symbolism and situational factors are excluded. All the deployed media choice factors were introduced above and the posited relations between them and the beliefs (PU and PEU) in TAM are illustrated below in Figure 9.
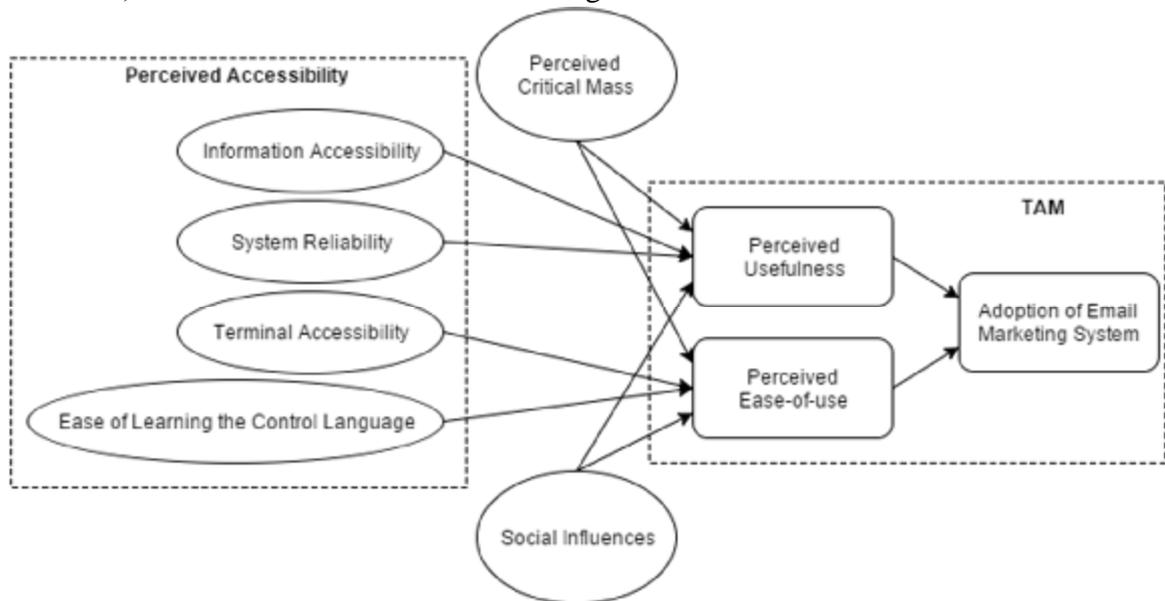
Figure 9. *Proposed framework of the factors on e-mail marketing system adoption*

However, the intrinsic value of adoption theories is not only constrained to explain the process of how technologies penetrated the market successfully, but also able to identify factors in the reluctance to adopt some of them. In our case, we need to understand the reasons why many organizations have been slow to adopt the e-mail marketing technology due to perceived barriers. Hence, TAM is our choice to identify the distinctive barriers to adoption here. The reason is not simply that TAM is a more suitable framework for this information technology, but its core constructs - PU, PEOU are more capable to capture the factors hurdle the diffusion that remained below expectations as well. Lower levels of PU and PEOU are able to reflect the external variables for negative variables as ambient constraints (Igbaria et al. 1997; Sussman & Siegal 2003; Shumaila et al. 2010). In this scenario, TAM does not merely play a major part in the elucidation of the receptiveness to a certain technology. More than that, it can explicate the negative effect on usage of a certain information innovation. The external variables of the TAM are usually expected to exert their influences to PU and/or PEOU as drivers, yet for this kind of situation they can be hindrances too.

There are many research articles that have considered a lack of the perceived usefulness and perceived ease-of-use to be the aid for understanding of troublesome information technologies that are not being assimilated as expected. One of them (Buehrer et al. 2005) highlights barriers with an expanded TAM model to investigate the hindrances of new office automatic system adoption by B2B organizations. According to the consequence

of the research, the smaller the organization size will lead to the lower perceived usefulness and more impediments to the adoption. Another empirical study of Rauniar et al. (2014) reports the significantly negative impact of perceived playfulness on PEOU by Facebook users. The respondents report when Facebook features and applications are perceived more thrilling, it is less easy-of-use perceived to do what they want to do with it and less easy to become skillful at using the social network service as well.

Thus, TAM should be considered as a comprehensive analytical tool to understand the external factors influencing the PU and PEOU both positively and negatively. In TAM, the external variables exerting influences towards the actual system use or acceptance can be a negative mechanism. Those hindrances impede expected performance and anticipated controllability of the technology. The impediment to the adoption is therefore based on the negative influences the external variables exerting on the PU, PEOU regarding the particular technology. Consequently, the external disincentives ultimately determine the negative degree of adoption (Dillon & Morris 1996; Iacovou et al. 1995).

Due to the aims of this study are to define and explain the barriers of e-mail advertising system adoption in e-commerce users, so we will examine how the low level of PU, PEOU are correlated with the hindrances.
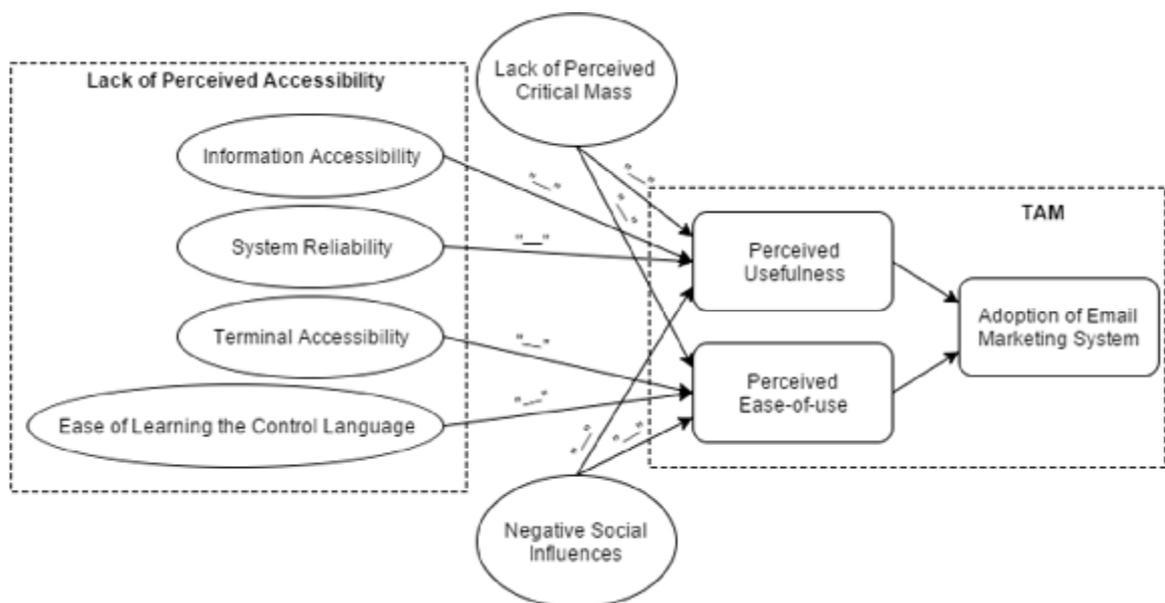
Figure 10. *Revised framework of the factors on e-mail marketing system adoption*

Based on prior literatures and the above justify a revised framework is constructed (Figure 10). It has been remodeled from the framework illustrated in Figure 9 to include PU, PEOU and the three media choice factors but negative counterparts: The lack of Perceived Critical Mass (PCM), the lack of Perceived Accessibility (PACC) and negative Social Influences (SI). It is able to investigate the negative impacts when the media choice factors perceived at low level by marcom managers from e-commerce startups towards e-mail marketing system.

3 RESEARCH METHODS

This chapter explains the research methods and analyzing techniques used in this thesis. First the research scheme is presented. The descriptions of data collection methodologies adopted in a case study are coming after. Then, how the data was analyzed is presented. Eventually, an interpretive approach – focus group discussion, which addressed the nature of the disincentives found in the results of the case study, is introduced.

3.1 Research strategy

The research strategy in this thesis was conducted as a multi-method interpretive research with interviews and focus group discussion as two methods. The former one will be the initial data collection while the latter one is used as a supplementary data collection to provide interpretation to the findings of a case study. Hennink et al. (2010, p. 9) described the interpretive research to be one of the main approaches in qualitative research.

The case study approach is chosen for this thesis because it is appropriate in the early stages of research when little is known about a phenomenon (Eisenhardt 1989). One proposal was that case studies may be used to provide the description, test theory, or generate theory (Eisenhardt 1989), while another suggested that case studies can be critical or interpretive (Myers 1995). Aspects of both critical and interpretive approaches were utilized in the conduct of the present study. In brief, the research strategy for the initial data collection draws on the roadmap for collecting statistical data from case study research (Eisenhardt 1989) and techniques for analyzing qualitative data to cluster patterns of findings (Miles & Huberman 1994), both of which extend suggestions for the design of case study research (Yin 2003).

In the interpretive method, people conduct debate and conversation with themselves and others to generate the basic for disclosing or unfolding situation as a notion gradually (Fisher 2010, p. 60). Therefore, for this thesis the focus group discussion was used. The main point was that the participants were capable of explaining the phenomenon instead of dwelling on issues themselves. This is also why the focus group discussions were chosen as a method for supplementary data collection in this research. The idea of the focus group discussion is to approach the nature of the different disincentives affecting the issues that set reluctant marcom managers apart from others.

3.2 Case study, initial data collection, and analyses

First, Miles & Huberman (1994) suggested that case study research begins with a priori specification of constructs as theoretical background. This can be used to help shape the initial design of the research (Eisenhardt 1989); however, it is important to ensure that

preordained theoretical perspectives not bias or limit the findings. Second, the selection of the case should be reasonable to fill a conceptual deficiency. Third, data collection and analysis should overlap. Numerous researchers place codes on the data and use tables to summarize the evidence (Miles & Huberman 1994). An important feature of this process is a grounded-theory approach (Glaser & Straus 1967) to compare emerging concepts and propositions with past literature (Eisenhardt 1989). Fourth, a search for patterns (that is, for within-group similarities and intergroup differences) takes place. Finally, the process reaches closure when the patterns and corresponding clusters are brought to light (Eisenhardt 1989).

3.2.1 Case description

Medium: e-mail marketing system

ESender is a SaaS solution for managing, executing and measuring e-mail advertising campaigns. The cloud hosted software is developed by a European company-XR. It is used for legitimate mailings, such as for e-mail list subscribers. It means that the ESender system helps companies in broadcasting to their potential and current clients via the e-mail channel within a prerequisite is that a company has a list of subscribers who expressed direct and explicit consent to receive commercial information from that company. ESender has been deployed by a diverse portfolio of companies' ranges from brick and mortar shops, online games, publishers and e-commerce websites, who sent over 10 billion e-mails over 2015. ESender has a full-suite of message content editor, seamless integration with websites, comprehensive management about everything and slice-and-dice analysis reporting.

The editor itself is based on WYSIWYG (What You See Is What You Get) application. The interface of message editor of ESender is an intuitive one as screenshot below (Figure 11). It is pretty much the same as a personal webmail client. Regardless of skill level of marketers, ESender will work actually as the users' personal or business mailbox to them.
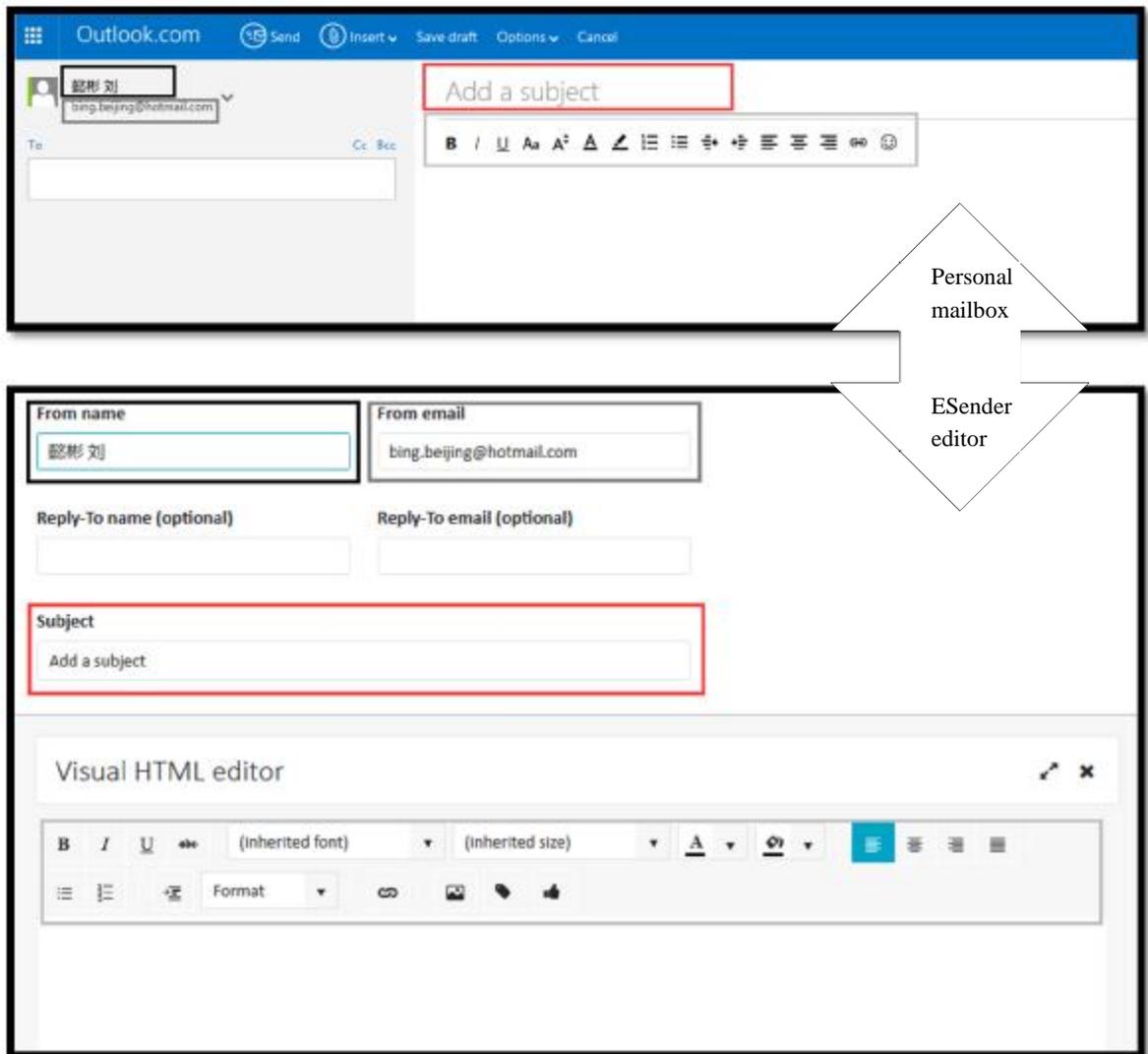
Figure 11.   *Personal webmail editor vs the WYSIWYG e-mail advertising content editor of ESender*

Every user has been required to integrate their collection of data with the cloud-based database of XR. That means the databases of users' websites and their units in ESender system are always on the same page. It usually can be achieved through the API method. Consequently, ESender platform is able to synchronize the data of the users' websites immediately. Adding subscribers into ESender will be done immediately when subscribers leave their e-mails to the integrated websites.

With dedicated IP addresses available to senders on all standard setup units, ESender minimizes the uncontrollability of e-mail sending channels by avoiding the IP addresses of each unit overlapping others'. Two-way communication is also available on the platform. For every advertising message being sent, it is able to set a "reply-to" mail address where the audience can simply reply to. To this end, ESender also contains the facility for receiving feedback from recipients. However, according to the observation from the author, rarely advertising message was replied by any subscriber in any unit. So

here in the study, we do not consider the two-way communication as interaction. The interaction conception in this research means the index in the reporting system.

ESender reporting section supports to measure sent, unsubscribed, complaints, opens, openers, clicks and clickers based on IP addresses. Meanwhile, based on IP, ESender is enabled to detect the location where the feedback action of the recipient is done. Detecting type and version of the OS, brands of mobile devices and other environmental facts that subscribers are reading e-mails with is a handy feature as well. Plus, ESender also provide a visual click map that shows which links were clicked the most. For each e-mail advertisement, the system will provide a graphical presentation of "clicks" distribution in particular elements of the message content. This widget is also known as "heat mapping" that is an effective technique for the visual exploration of perception from audience. Furthermore, if the website domain has been registered with Google Analytics, the ESender also can be used for tracking the e-mail readers 'consequence activities' on the corresponding websites.

With all features available no matter account size from day one, ESender can offer a customer-centric service by giving all the access to all the tools. There are a detailed handbook and on-site training for clients as well. The online guide hosts a simple and understood manual of all the aforementioned features of ESender in Simplified Chinese. All of the text contents is available to the public by being stored on the website that is accessible universally. Beyond that, XR's offer includes onsite training. On-site training is designed to ensure that the clients get the most out of ESender in the shortest possible time.

XR also guarantees the users an unlimited privilege of the use to distribute and store electronic or digital content in ESender system. It charges on a cost-per-send metric. So there is no restriction on the amount of storage space or data traffic customer may use within the system. ESender has entered China for more than two years since July 2013 and has more than 80 customers in Chinese market. Therefore, we can see that the ESender are qualified to be used to produce, distribute commercial e-mails and to track and trace and report of usage statistics regarding e-mail advertising related events for Chinese clients.

Participants: managers of startups who are responsible for marketing

All the subjects of our research were drawn from the pool of startup teams listed by Cheku Café, 3WCoffee.com and Guokr Space. They are the most popular startup incubators and project accelerators as so called startup "coffee shops" in China. This type of incubators provides startup teams with hardware and office space as well as the fund support from VC firms. In order to develop the Chinese market and brand influence, XR has gone partnerships with them in China by offering free trial to the startup teams the incubators assisted. Thus beyond providing business founders with office equipment and space for

common use, as well as contacts of investors, these business accelerators are able to offer free marketing tools.

While as mentioned before TAM is more suitable to be applied on a business level, researchers in the field (e.g. Yu & Tao 2009) argue that new technology adoption behavior demonstrated by a small business unit might resemble that demonstrated by a single individual. This argument is true in the case of startups where the business decision making process is highly similar to the individual decision making process. For the one who represents the business in marketing communication matters, we defined them as marcom managers. After all, in an e-commerce startup website, the marketing communication team is a "one-man army". This also goes in line with the guidance of Rogers (1983, P.5) who defined innovation as "an idea, practice, or object that is perceived as new by an individual or other unit of adoption".

Thus, the participants in this case comprise 20 free trial customers of ESender from Cheku Café, 3WCoffee.com and Guokr Space. The 20 marcom managers are from 20 startups belonging to the e-commerce section as they registered in ESender platform. Plus, they have been selected to be offered the ESender platform in full swing for their business as a three-month free trial. Using the same product and service will enable the research to control the external variables that might confound the research results (Straub 1994).

Thus, with reference to the research subjects, it is deliberately confined that all of the participants are the marcom managers from the startup teams (marketing communication managers), worked within their team for more than one year. They are involved in marketing relevant implementation within the business. The 20 marcom managers know their own business as well as the marketing task as a whole. All of them are rated as high in terms of computer skills and marketing techniques via author's observation during the on-site training and conversations on a regular basis during the 3-month free trial.

3.2.2 Initial data collection

In the phase of the initial data collection, the author conducted two series of unstructured interviews with the participants, whereas, objective observation about the use of ESender among them is executed. The definition of unstructured interviews given by Klenke (2008) is that interviews in which questions or structures are delineated roughly. Klenke (2008) explains one of the advantages of open ended questions is that more in-depth clues can be captured. On the other hand, Klenke (2008) also declares that the deficiency of the unstructured interviews is that the execution will be considerably time-consuming and expensive. As a consequence, only very small samples are possible. This is why merely 20 marcom managers were interviewed for the thesis either over the phone or in person. Interviews were conducted at two points in the timeline of the free trial:

Interview round I (10th week).

The purpose of this phase is to obtain a general picture of the degrees of two antecedents to the actual acceptance of ESender – PU and PEOU. Hence PU and PEOU are set at two levels—high and low. The categories are made to refer to this specific system adapted from Davis et al. (1989)'s original version. Higher or lower level of PU to the ESender was measured by asking participants to indicate whether or not they found ESender useful in enhancing their marketing outcome, improving communication between subscribers and themselves and satisfying their marketing goals. Higher or lower level of PEOU to the ESender was measured in terms of the positive or negative keywords or phrases responding on the usability of ESender. Most interviews lasted between 15 minutes to half an hour. Notes were taken in all interviews.

Interview round II (12th week).

The selection scheme for participants to attend the second round of semi-structured interviews was as same as the previous individual interviews. Every marcom manager who had taken part in the previous interview was telephoned by the author to request participation and they were all in place. Questions were asked such as "Why not use ESender more?" or "What media do you prefer most to communicate with the customers and why?" Most interviews lasted between half an hour and 45 minutes. The whole of the conversations was audio taped for later transcription.

3.2.3 Analyses of initial data

According to 2.2, it is reasonable to analyze the PU and PEOU separately. Being two separable variables but focusing on interpreting the same issue, PU and PEOU are perfect to be used as two dimensions for being the measurements of the degree of e-mail marketing system adoption among e-commerce users. So we proposed an analysis dimension based on high-low distinctions for PU as well as PEOU. The 2×2 factorial design is shown below in Figure 12.
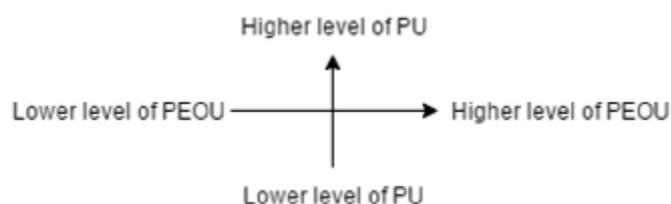
Figure 12.   *2×2 factorial Higher/Lower level of PU/PEOU*

Then, there are naturally four parameters for judging the perception degree of e-mail advertising system: lower level of perception of usefulness (Lower level of PU), lower level of perception of ease-of-use (Lower level of PEOU), higher level of perception of usefulness (Higher level of PU) and higher level perception of ease-of-use (Higher level

of PEOU). The concise explanation of coding according to Corbin & Strauss (2008, p. 66) is the activity of bringing the raw data to a concept level. Thus, Table 10 provides categories regarding the high-low distinctions within PU and PEOU and the corresponding theoretical descriptions. Following Table 11, it outlines those categories of media choice for the unconstructed interviews with participants.

Table 10. *Analytical framework of PU and PEOU informing study*

Construct	Description
Lower level of PU/Higher level of PEOU	It means the information system is generally easy to use but lack the power needed to be considered truly useful. It may have a nice user-friendly interface but there is a poor degree of task/tool fit. It provides very limited functionality but lacks the power needed to be considered truly useful by users.
Higher level of PU/Lower level of PEOU	It means the information system is lacking in usability. The whole system is proved less easy to learn or complex to use despite the fact that it is generally considered useful.
Lower level of PU/Lower level of PEOU	It means the system holds little or no appeal. Since it is perceived neither useful nor easy to use.
Higher level of PU/Higher level of PEOU	It means the system that exhibits high usefulness and high ease-of-use to users. "Powerful and user-friendly" will be used to describe it. Impression of it is a technology that providing the full functionality as well as considerably easier to use.

Table 11. *Analytical framework of media choice factors informing study*

Construct		Description
Lack of critical mass		inadequate scale of universal access or the target group of recipients is pretty inactive, lead the economic benefit failed to meet; little certainty that the intended recipients are also using the medium routinely
Lack of perceived accessibility	terminal accessibility	the extent to which someone has physical barrier to the hardware needed to use the system
	information accessibility	the insufficient ability to retrieve the desired information from the system
	system reliability	the improbability of the communication system functioning for which it was designed or intended, which is to have sender's message reach the receivers' terminal
	ease of learning the control language	the effort needed to use the interface to manipulate the system
Negative social influences		feels social pressures about using the medium; the downside of social norms affect the usage

To test the aforementioned combined model of TAM and media choice factors and to identify some differential impacts of ESender adoption among e-commerce startups, tables are used to summarize and tabulate the evidence from initial data (Miles & Huberman 1994). The recordings from the second round interviews were transcribed. To search for patterns, this is, according to Eisenhardt (1989) and Kirsch & Beath (1996), for finding within group similarities and intergroup differences. By examining the transcriptions, commonalities among the transcripts were identified. The commonalities were clustered and placed in the table. Saunders et al. (2009, p. 492) define this process as "categorizing". In the step of categorizing for the notes of the first round of interviews, data were initially split into two clusters according to the target markets of e-commerce websites (domestic or international). However, in the step of categorizing for the transcripts of second round unconstructed interviews, another new cluster emerged as author categorizing according to commonalities.

Specific coding procedures for analyzing raw data in the process above are: first, likely constructs, along with their descriptions, were placed in the table, and coding of the transcripts of the first round of interviews began. This was an iterative process. Every set of notes from each interview was coded by the author to determine which category this quote belonging (columns of Table 10). Next, the literature was revisited, and new categories were added based on the selected media choice factors. The recording of the second round of interviews was coded and transcribed simultaneously using the modified coding scheme (columns of Table 11). Then the literature was revisited again to finalize the codes. The author ultimately went through all transcriptions again using the new coding scheme. All constructs were coded from the transcriptions in the end. If there were quotes from the interviews of Round II related to the abandoned media choice factors, then those parts of transcripts would be neglected accordingly.

The results are summarized in Chapter 4, built from the data of two series of interviews, as they both played an equal role in testing the proposed framework. Meanwhile, in the result chapter, the differential disincentives as a whole will be analyzed and the nature will be illustrated via the focus group discussion with experts.

3.3 Supplementary data collection

In the second phase – the supplementary data collection, we used the focus group of experts to discuss natures of the hindrances confirmed by the result of the initial data collection and identify the disincentives to different clusters of marcom managers from different types of e-commerce startups. This phase of supplementary data collection generated lots of qualitative data addressing the nature of the hindrance and the differential disincentives between clusters.

The interview was conducted as focus group discussions with experts that have a wide understanding of their own fields that are relevant to e-mail or e-mail advertising.

According to Krueger & Casey (2014), a scope of particular common characteristics that related to the topic is usually encouraged to be as the principle in the selection of participants for focus group discussion sessions. In the case of this thesis, the specific characteristics are the participants' extensive knowledge of e-mail marketing as well as the context of Chinese e-commerce websites. The participants are all experts specifically chosen in the field of e-mail or e-mail advertising. They have a wide understanding of e-mail advertising and e-mail and also have the expertise to explain the various contexts of e-commerce startup websites with authority. The spectrum of them is from the practice pioneers with technical background in e-mail to the ones who held higher managerial positions in e-commerce website. The idea is to find the nature of the hindrances in the results of initial data. Another aim of the discussion is to identify the factors that can account for differential impacts across the clusters of marcom managers who works for the various types of e-commerce startup websites collection.

According to Krueger & Casey (2014), the researcher should hold complete neutrality to create an atmosphere for the contributors to share ideas and perceptions without persuasion to reach any consensus in any specific "direction". They also reminded that the group discussion should have about five to ten people taking apart in and be led by a well-trained interviewer or moderator.

In this thesis, a focus group consisted of six participants was organized. Bigger group was not feasible. As suggested, a priori specification of constructs can be used to help shape the initial design of the discussion (Eisenhardt 1989). Thus, past research we had mentioned in Chapter 2 and the results of initial data collection helped inform the questions. During the discussion experts were encouraged to explain their points of view and to probe into further explanations. The participants were free to do phenomenon-describing, recall practical cases, and provide public data. The kick-off of the session was by a round of participants' self-introductions. Then a brief description to the aim of the session was explained. After that, the interviewer opens the floor to everyone who wanted to give his/her first impressions of the results of the initial data collection. The situation on its own was kept as a spontaneous conversation from then on where the participants could draw on opinions mutually. Stewart & Shamdasani (2014) actually stated that one of the advantages of a focus group is that the group members can build on and react to each other's ideas.

As Stewart & Shamdasani (2014) outlined, building on and reacting to each other's ideas is the cause make focus group discussion better than other forms of qualitative research in the interpretive approach. This is an especially big advantage in the case of this thesis as that no one has provided any explanation to those disincentives in this setting, allowing the outcome from the discussion session to be richer.

Silverman (2013) says in his book that typically the discussions are recorded and transcribed for further analysis. Hence, the conversations between the focus group

members during the full session were recorded accordingly. However, it was requested that the participants remain anonymous. The author only acted as facilitator of the focus group and recorded on the discussion. The action was only taken when clarifications were required. The entire session lasted for 3 hours in the end.

4 RESULTS

The author of this study is the general manager of XR in China, who has the full access to all the units of the research objects (20 marcom managers from e-commerce startups). The author obtained company approvals for the research. Every piece of data, content, feature in use by each customer therefore can be reached by the privileges that author holding and be utilized in this thesis. Plus, in ESender system, all the customers' titles, profiles, details of their databases, official websites and business registration information are recorded and open to the author. So the author is able to know all the accounts and background of the 20 marcom managers inside out. Hence, the clusters are organized as the columns based on the material of the companies the marcom managers represent.

4.1 Experiences of e-mail marketing system adoption

Results are summarized here by rounds of interviews. The descriptive elucidations of them in more details are presented below. By checking the profiles and official website of those units, the author is able to split the interviewees and their sets of notes into two groups (Table 12): (marcom managers from) domestic e-commerce websites and international e-commerce websites.

Table 12. *Experiences of usefulness and ease of use based on the first round interviews (Interview round I)*

Category	Domestic e-commerce websites	International e-commerce websites
Number of Marcom managers	8	12
Lower level of PU/Higher level of PEOU	0.0%	0.0%
Higher level of PU/Lower level of PEOU	87.5%	8.3%
Lower level of PU/Lower level of PEOU	0.0%	41.7%
Higher level of PU/Higher level of PEOU	12.5%	50.0%

*Percentages represent the percentage of users in a group who fell in a category.

Seven of the eight marcom managers work for domestic online retailers who responded that they felt more EOU than usefulness when using ESender. For instance, one interviewee stated:

 "Using ESender doesn't increase my productivity… but it is really fun to play with."

However, for the users whose e-commerce websites targeting the international market, the distribution of them is pretty uniform between lower level of PEOU and higher level of PEOU categories as a little more than 40% and 50.0%. The contrast can be seen from the following statements:

"I believe that ESender is cumbersome to use even it enables me to accomplish tasks I aborted before. The expectation from me is that it should enable marketers execute complex campaigns without a need for any extra IT support. Yet I still ask help from my account consultant or tech blogs."

"It's perfect for me and my aim. A handy sophisticated tool, in my mind. For the advertisement we want to present to our customers abroad, ESender can make it done easily and well. Actually, promotional e-mail is now our best sales tool."

Initially, the research was designed for identifying and explaining the patterns of PU and PEOU between marcom managers of Chinese domestic e-commerce websites and their counterparts from cross-border Chinese e-commerce websites. Whereas in the search for why half of the marcom managers from cross-border Chinese e-commerce startups perceived less PEOU, the analysis of data was extended from a comparison of users from domestic and international e-commerce startups to: marcom managers from domestic B2C e-commerce, international B2C e-commerce and international B2B e-commerce startups for the following reason:

Although, we can see in Table 12, the users from international e-commerce startups found that e-mail advertising is with great advantage. At the same time, 41.7% of marcom managers in this group expressed their less confidence in the efficiency metrics. As someone said:

"There are always more than 25% e-mails rejected in one batch sending. Even worse, we believe that half of the 75% left messages are put into the spam folder due to the disappointing unique open rate with such a fascinating subject line."

"The communication loop is not controllable. Also, you have no idea how many of the newsletters ended up within spam folders."

Thus, occasionally, the channel is far from stable. So the rate of successfully sent advertising to some e-mail service domains has its volatility. Sometime it is really well delivered to the recipients' mailboxes, but sometimes not. Therefore, it could make connectivity problem in some marketers' minds. As the unexpected and unpredictable communication loop was an issue, it has become apparent that this study needs to call for media choice factors to categorize accessibility issues about the medium. Therefore Round II of interviews was implemented and the coding was done in Table 13.

What are the patterns of these three groups of e-commerce startups? Table 11 provides constructs within each theoretical description, while Table 13 compares the quotes of marketers in each of the three groups relate to selected media choice categories.

Table 13. *Experiences of barriers to usefulness and ease-of-use based on the second round interviews (Interview Round II)*

Category		Domestic e-commerce websites	International e-commerce websites	
		B2C sector	**B2C sector**	**B2B sector**
Number of marcom managers		8	5	7
Lack of critical mass		62.5%	0.0%	28.6%
Lack of (perceived accessibility)	terminal accessibility	12.5%	0.0%	0.0%
	information accessibility	25.0%	20%	14.3%
	system reliability	37.5%	0.0%	71.4%
	ease of learning the control language	0.0%	20.0%	0.0%
Negative social influences		75.0%	0.0%	42.9%

*Percentages represent the percentage of users in a group who fell in a category.

If the percentages across columns are compared, which disincentives stand out as the dividers for e-commerce startups? What discriminates between the clusters? These issues are explored in the following section.

4.2 Media choice factors with different degrees of e-mail marketing system adoption

By merging two tables (Table 12 and Table 13) where the header about types of e-commerce startups matches in content, the PU and PEOU and selected media choice factors are placed at the same board. It compares, in each of the three groups of e-commerce startups, the percentages of marcom managers' comments relate to media choice categories. The table below (Table 14) showed the results of the comparison of Table 12 and Table 13.

Table 14.   *A comparison among different degrees of e-mail marketing adoption*

Category		Lower level of PU/Higher level of PEOU	Higher level of PU/Lower level of PEOU	Higher level of PU/Higher level of PEOU
Number of Marcom managers		8	5	7
Lack of perceived critical mass		62.5%	0.0%	28.6%
Lack of accessibility	terminal accessibility	12.5%	0.0%	0.0%
	information accessibility	25.0%	20.0%	14.3%
	system reliability	25.0%	100.0%	14.3%
	ease of learning the control language	0.0%	20.0%	0.0%
Negative social influences		75.0%	20.0%	28.6%

*Percentages represent the percentage of interviewees in a group who fell in a category.

62.5% of the marcom managers who hold lower level of PU mentioned the lack of PCM was an issue. None of the interviewees who perceived lower level of ease-of-use considered lacking critical mass affected PEOU negatively. Thus, lack of PCM negatively affected PU solely. Examination of the statistics also indicated important influence: the social pressures about using the medium did appear to be negatively related to the performance expectancy from users. Almost 80% of the ones who perceived lower level of PU reported this issue. So that we can see negative SI affected marcom managers' less perception of usefulness to ESender. The table also told the shortage of system reliability has emerged as the barrier for marcom managers to perceive ease-of-use. Every single one (100%) of the group in which marcom managers perceived less usability reported they sensed the lack of system reliability. Thus, less perception of system reliability has a negative effect on PEOU of ESender. It also revealed that a lack of the other three dimensions of perceived accessibility had significant negative effect on neither PU nor PEOU.

4.3 The nature of the disincentives for adoption

Based on the comparison of the last section, negative SI, lack of PCM and system reliability portray important negative roles to users' adoption. For addressing the natures of the aforementioned factors hindering degrees about e-mail marketing system adoption, the supplementary experts' group interview was conducted. The previously table (Table 13) contains initial data with media choice categories were checked by the experts. They had the three disincentives decomposed in detail with explanations. The experts ignored the negative factors in which no differentiation were found across marcom managers from three types of e-commerce websites. Discernible figures in the categories that are found discriminating between clusters were marked in gray.

According to experts, the conceptions of acquisition and retention imply the SI and PCM:

"The ultimate goal of e-mail marketing is acquisition and retention. So when we talk about the perceived social influences and critical mass of e-mail marketing, it should involve the two conceptions." **(Expert interviewee)**

This quote goes in line with Rettie & Chittenden's (2002) article. He argues the customer acquisition and customer retention are the two major elements of digital marketing. So the marketers who are in this field and conduct e-mail marketing should mainly care about these two factors. However, it is an indisputable fact that the e-mail marketing starts with acquisition. The following comment of expert elaborated the process:

"People hear about an e-commerce website and land on it. For the purpose of direct marketing, marketers try everything to convince the users leave the contacts." **(Expert interviewee)**

"The initiative of the e-mail marketing process for a website is the step so called 'signed up' when the visitor is converted to a user from a visitor of an e-commerce website." **(Expert interviewee)**

Therefore, subscriber list growth is an important component to ensure long-term health in any e-mail marketing program by marcom managers. The SI is defined as the degree to which the marketer perceives that recipients approve of promotional material sending via e-mail in this study. This is aligned with the conception of acquisition provided by experts who indicated marketers perceived their website visitors will register as a user with her e-mail. So the nature of SI is increasingly clear. It is the degree of marcom managers' perception to the growth of the mailbox database of their e-commerce websites.

E-mail marketing is an extremely effective tool for reaching agglutinant increment, because its interactivity facilitates the mass communication. Retention means the registered users stick with the website over time and develop an understanding of the benefits the website provided as the reason they stay with. For a new emerging e-commerce site, customer also may invite their contacts to visit it. Several experts mention a number of indicators for retention:

"Engagement is the index that has the closest link to retention. Audience shares the content, or maybe they're inviting friends for an incentive. That counts as engagement too." **(Expert interviewee)**

"Opening the e-mail, then paying attention to the commercial content, normally offer, clicking through URL are the determinants of daily response rates for e-mail marketing campaigns. According to these metrics, you can tell how successful an e-mail campaign is or how well the audience engagement looks like." **(Expert interviewee)**

Hence, the performance of e-mail campaign reflects customer engagement through the scheme of the marketing program. For reporting the engagement, the relevant parameters of e-mail campaign performance as the sharing or forwarding rate (the percentage of recipients who post e-mail content to a social network), click-through rate (the proportion of the audience who clicked on links), conversion rate (the percentage of respondents who completed the desired action), revenue per e-mail sent (the cost per e-mail) are measurable in ESender system. Additionally, one expert reminded:

"The cost of designing and producing thousands of newsletters is equal to one e-mail. That means you send more then you save more in the cost. To create more engaging campaigns for massive sending means produces higher ROI." (**Expert interviewee**)

Subscriber engagement is therefore importance in proving the subscribers are interested in the websites and the commercial content delivered. Furthermore, it also plays a significant role in decreasing the cost of e-mail marketing.

The experts' quotes above are dovetailed with the keywords of the description of PCM: the estimated scale of universal access, predicted active level in the target group, certainty that the intended recipients are also using the medium routinely. Therefore, the nature of PCM gradually becomes clear. It is the degree of marcom managers' perception to the engagement of the subscribers in their e-mail marketing campaigns.

E-mail reaches the recipient most of the time, but delivery is not guaranteed. It became apparent that the unexpected and unpredictable non-delivery was an issue hindering accessibility in terms of reliable communication loop. Expert's points of view were needed to help elucidating the nature of this disincentive. In the scenario of e-mail marketing, bouncing issue is the conception that matches well with less reliability regarding an advertising communication system.

"If you got bounces means some of the e-mails are undeliverable. The bounce itself works as a notification message sent from the recipients' e-mail service provider to the originator of the undeliverable mails. As a result, deliverability is the metric measure the success at which an e-mail marketer gets their promotional e-mail into subscribers' inboxes." (**Expert interviewee**)

"Deliverability defines the system's reliability. Since the 100% reliable communication is able to be guaranteed only if all the e-mail can be delivered into the inbox of every audience via e-mail marketing system. Well, that's not possible though." (**Expert interviewee**)

The deliverability – a term used to designate the rate of e-mail placed in the inbox – illustrates the dependability and consistency of an e-mail advertising system. It reflects whether the system is bounce-free, consistently straightforward in terms of connectivity, or not. Thus, it well fits with the description of system reliability in this study: the

probability the communication system functioning to have originator's message reach the recipients. Built on supplementary data from experts' group discussion, the nature of system reliability of ESender evolves incrementally. It is the degree of deliverability that the marcom managers perceived.

4.4 Comparison of intergroup differences for interview round II

4.4.1 Lack of perceived critical mass

The e-commerce market has enjoyed impressive growth in China for these years. There are millions of e-mail subscribers to the websites. However, it should be noted that subscribers do not necessarily equate to users. Some of Chinese subscribers keep a relatively low level regarding the activity within e-mail communication (Zhang & Prybutok 2005). Thus, in this context, the local online retailers as senders are not satisfied with the outcomes is hardly surprising:

"*Although we have embedded a very catchy button to stimulate audience reply us or forward the e-mail to friends, but few did so.*"

"*I always need our designer to help me out with some minute graphical works. That means nothing just a daily cost. But considered the tiny number of subscribers who engaged in our e-mail campaign, the per capita cost is unacceptable.*"

Table 13 indicated that the marcom managers from the domestic e-commerce startups expressed more concern for the lack of CM as a barrier. Those heads of domestic market seemed are more prone than the other two groups of marcom managers to mention the lack of PCM as an issue. In the supplementary focus group interview, it was stated that China is a slight penetration market of e-mail in non-work scenario. It, then, does not nourish the relevant advertising technology. It also fits with Gatignon & Robertson (1985):

"*The essential part of e-mail marketing is to understand demographics of your database. Targeting a certain market signifies to communicate with e-mail subscribers from that very market.*" (**Expert interviewee**)

"*E-mail user coverage in China is more than 125 million but Chinese customers are slow in adopting e-mail technology in terms of non-work scenario. For this case, the e-mail advertising.*" (**Expert interviewee**)

"*A lot of Chinese people get used to enterprise mailbox first. So the attitude to the commercial e-mail is really negative.*" (**Expert interviewee**)

*"...however, the most e-mail users in China are business users. They stick to the habit of deleting non-work messages because when they began to use e-mail they were not aware of the context for personal messages." (**Expert interviewee**)*

These quotes suggest that e-mail users in China were not fans of non-work e-mails. According to the outcome of a survey conducted by China Internet Watch in 2013, 32.35% Chinese respondents reported they delete non-work e-mails directly. Another 33.56% checked the titles and senders information only. Then, those were defined as advertisements would be deleted immediately. 26.5% would read the e-mails first then decide whether or not delete them. Only 6.15% were interested in and looking forward to receiving the advertising e-mails.

4.4.2 Lack of perceived terminal accessibility

Terminal accessibility is deemed to be critical since physical access is the necessary condition for using a technology. The more accessible an information system is, the less effort is needed to use it. Practically, only one interviewee reported her concern about the quality of this dimension in accessibility.

"Sometimes, the loading speed of the interface is pretty slow, not sure I should blame the network or the software itself."

Obviously, the lack of perceived terminal accessibility did not distinguish between clusters of users according to Table 13.

4.4.3 Lack of perceived information accessibility

Examination of the statistics shows only a few marcom managers mentioned negatively about information accessibility (see Table 13). One of them stated:

"There are some specific IP addresses generate thousands of opens and clicks. So we always need to filter them out for having a reliable report."

The results indicated that each of the three e-commerce startup groups contains users who hold negative point of view to information accessibility of ESender. Lacking in perceived information accessibility, however, did not distinguish between groups of marcom managers.

4.4.4 Lack of perceived system reliability

B2B users were more likely to mention the lack of reliability that distinguished them from other international e-commerce users. B2B users expressed that their concerns about reliability did not fit well with the effectiveness. Some indicated that e-mail advertising

is a great commercial communication channel for most of the time but with weak dependability. For instance, one noted:

*"It's not merely a newsletter but also a welcome on boarding campaign. However, w**e** have to resolve non-delivery problem from time to time."*

Instability was a significant issue for most of the B2B marcom managers (more than 70%), but only for less than a quarter of the B2C marketing officers. The deficiency of well-developed and stable communication loop implies a poor deliverability that is definitely the disincentive for marketers from B2B e-commerce startups to accept e-mail marketing system. According to one of the experts who participated in the focus groups discussion:

*"Most of the subscribers will choose to use a business e-mail address to submit field caption in B2B e-commerce websites." (**Expert interviewee**)*

Another e-mail marketing guru also stated:

*"It's common practice in B2B marketing to require business e-mail addresses on web pages or web forms." (**Expert interviewee**)*

Thus, for B2B websites, it can be assumed here major part of the subscribers signed up with the enterprise mailboxes. As a result, the system reliability for e-mail marketing to B2B e-commerce website means the dependability to send promotional e-mail into the enterprise e-mail boxes. For B2C, in contrast, almost all the subscribers are using personal e-mails.

As mentioned before, the e-mail advertising is about sending promotional messages to the ones who signed up on the websites, so that we need to know more about enterprise mailbox and personal mailbox.

*"While most individuals have long since outsourced their e-mail to a large provider on the web as Hotmail, Gmail, most businesses have kept it 'in house'. Because those providers simply don't do everything that is necessary for business." (**Expert interviewee**)*

*"It's not like Gmail or Hotmail. There is not a general rule for the dedicated domains to which B2B business are sending. Hence, nobody knows what's wrong when the e-mails get rejected by the custom enterprise e-mail boxes domain." (**Expert interviewee**)*

Thus to guarantee the deliverability of B2B communication is vastly more complex than B2C communication. For sophisticated filter, it is unnecessarily belonging to spam filters, because in this thesis we are talking about the consolidated advertisements. But filter is a filter. In some circumstance, it will filter out something with less inelastic demand as advertisements.

The profit model of personal e-mail service is advertising, whatever it is on the webmail interface, homepage (If the mailbox is provided by the news portals.) or displayed in the pop-up of customized commercial content by analyzing users' mails. According to several practitioners:

*"NetEase, a local ISP, places internal ads on the homepage of its 163 webmail. This profit model is executed by Yahoo! in the U.S. as well." (**Expert interviewee**)*

*"Users' personal data that Google mines in its free Gmail personal mailbox product enables a greater return for Google. The contextually and demographically targeted advertising will be put in until you disable or clear the cookie of your browser." (**Expert interviewee**)*

*"As a free service, Gmail exposes users to contextual advertisements, which are based on keywords found in the user's e-mail messages and the tag you are tagged when using webmail of Gmail. The logic behind it is that Gmail integrates Google's advertising platform, which scans your e-mail and gives you relevant advertisements when you are browsing." (**Expert interviewee**)*

Therefore, the goal of the corporate e-mail service is quite another story. To reduce or eliminate those dispensable messages from the human user's inbox is the "job" of these mailboxes as experts presented:

*"Jobs of an enterprise e-mail box gateway are more intelligent spam filters, more powerful management of the e-mail torrent. The filter of an enterprise e-mail service is set by the postmaster who is a human with random preference. So the filter may change any time. That's make the deliverability even worse." (**Expert interviewee**)*

Due to the intentions are differed. The enterprise mailboxes have distinguished technical concerns is unsurprising. The spam filter for B2B is not only to protect inbox from real spammer but also some legitimate advertisement, which may cause by keyword, sending speed and number of IP addresses etc. (Brain & Crosby 2007).

It should be noted that delivery into enterprise systems, compared with Gmail, Hotmail, those ISPs, is totally different and more difficult. So the perceived deliverability is the key to discriminate between marcom managers of B2B e-commerce websites and other marketers from B2C e-commerce startups.

4.4.5 Lack of perceived ease of learning the control language

For an information system, the manipulation always includes some process of transferring of a request into "non-natural" language to certain extent. For ESender, this meant use of the online interface to create a promotional e-mail. There is solely one single marcom manager described her discomfort when using the interface of ESender:

"Recently, I got a problem with my computer. When I saved the images from the Internet, all of them are downloaded as '.bmp' files. But the Drag and Drop editor of ESender doesn't support this format of picture…"

As a result, almost all of the users are as same as being unaware that control language is an issue.

4.4.6 Negative social influences

Another negative factor from media choice theories distinguished between categories of e-commerce startups is the Social Influences. As Table 13 demonstrates, marketers of domestic e-commerce were more than the ones in other two categories of perceiving negative social influences. For example, one interviewee from a fresh fruit online retailer described this influence:

"The CTO of my company said e-mail may fade away soon. He is planning to offer only phone number registration on our website in the near future."

Compared with the other two groups, the marketing officers whose customers are mainly the domestic residents were more likely to feel social pressures when using ESender. There are 75% of them mentioned negative social influences. For managers of international e-commerce startups, there is only 25% (Table 13). According to experts' interview, the demographic traits of visitors and the registration methods count:

"What cause a discrepancy between cross-border marketer and local marketer in the experience of e-mail acquisition is the visitors of their websites are different." (**Expert interviewee**)

"Most of the Chinese e-commerce websites offer e-mail address registration and optionally phone number registration. Especially, if their businesses already have gone mobile, SMS fits in well with the mobile flow and thus leads to a higher percentage of the registration flow, reducing user-acquisition costs, of course." (**Expert interviewee**)

According to the senior executive of a publicly-traded e-commerce giant that targeting local market:

"I don't know any benchmarks for mobile phone number sign-ups as a percentage of total users, but anecdotally 70% of our users choose to get the verification code via SMS whereas 30% use e-mail channel when register." (**Expert interviewee**)

Another e-commerce player as well as industry observer stated:

"While the websites offered only e-mail address registration back then, the conversion rate is rather low. For the recent years, when marketer realized SMS and IM popularized

*in a great range, some of them now offer three options to visitors: e-mail, mobile phone number registration or using social networking accounts for alternative. The rate of success in terms of customer initiation is doubled."***(Expert interviewee)**

These sayings imply that e-mail is not likely the primary choice regarding the marketing communication medium in China. According to the outcome of a survey conducted by China Internet Watch in 2013, 67.37% Chinese respondents said they only used e-mail for work scenario only, and 25.83% mainly using for work e-mail, rarely used it for commercial or personal scenario. Merely 5.2% used e-mail for commercial or personal scenario.

4.4.7 Summary

The initial data is reorganized in a table across two categories as below (Table 14). It merges the international B2B e-commerce and international B2C e-commerce as a group of which the target market is overseas.

Table 15.   *Media Choice Antecedents Comparison across markets*

	Marketers from Chinese e-commerce websites that target local market	Marketers from Chinese e-commerce websites that target overseas market
Lack of critical mass	62.5%	16.7%
Lack of system reliability	37.5%	41.7%
Negative social influences	75.0%	25.0%

*Percentages represent the percentage of users in a group who fell in a category.

Almost 65% local online retailers evaluate the lack of critical mass as the obstacle. The international businessmen, on the contrary, hold a rate lower than 17%. Following that array of figures, 75% is the percentage of marketers who targeting local market attribute their reluctance to the negative social pressure. Whereas, only a quarter of marcom managers works for international e-commerce specify it.

The initial data is also reorganized in a table across e-commerce business types as below (Table 16). As a fusion of the international B2C e-commerce and domestic online retailers, a group of B2C websites represent the e-commerce startups that sell directly to the consumers.

Table 16.   *Media Choice Antecedents Comparison across sectors*

	Marketers work for B2B e-commerce websites	Marketers work for B2C e-commerce websites
Lack of critical mass	28.6%	38.5%
Lack of system reliability	71.4%	23.1%
Negative social influences	42.9%	46.2%

*Percentages represent the percentage of users in a group who fell in a category.

As the statistics describing, more than 70% B2B users considered a lack of system reliability as a hurdle. B2C marketers, on the other hand, hold a rate at about 23% only.

5 DISCUSSION

5.1 Testing results of proposed extension of TAM

According to Table 16, the first observation is the lack of perceived critical mass negatively affected users' perceptions of usefulness. This is consistent to the previous empirical research (Lou et al. 2000), perceived widespread use of a communication system in target audience lead users to believe that the medium is probably useful since network externality (Katz & Shapiro 1986; Gurbaxani 1990) and witness of adequate successful cases (Lou et al. 2000). It also goes in line with Phelps et al. (2004) who declare the PCM affects the advertisers PU alone when the users consider this communication as a one-to-many category in the initiators' perspective. Hence, it is not surprising that there is a tight correlation between PCM and PU.

Second, the perceived terminal accessibility had an insignificant negative effect on neither PU nor PEOU. One possible explanation is being the Software as a Service, ESender runs on XR's server that is housed in a robust datacenter as well as other SaaS (Choudhary 2007; Waters 2005). It ensures high reliability with the speed and efficiency by providing dedicated bandwidth and IP addresses. The maintenance and storing data are all happening in ESender. To access to the system for conducting e-mail campaigns or fetching the reports, all the users need to do is to be online. Thus, as showed in the results, the lack of terminal accessibility did not appear to be an important influence on PU or PEOU for most users.

Information accessibility was also expected to relate to perceptions. However, this study has found no significant link between information accessibility and beliefs such as PU and PEOU. To explain the absence of the significant effect, we need to take a closer look at the elements in ESender scenario. In this system, all the feedback (reports of e-mail advertising campaigns) is displayed in an intuitive form. E-mail advertising initiators can drill down, look up, and analyze the response of the target audience from multiple perspectives. Therefore negative information accessibility did not appear to influence negatively on PU or POU.

In this scenario, perceived system reliability of ESender is if the broadcasting messages can reach out the subscribers. Similar to other research on information technologies (Wixom & Todd 2005), there was a correlation between system reliability and PEOU. However, prior studies using TAM (or variations of TAM) also found that system reliability was more likely a determinant of PU. In view of this, the lack of a significant relation between perceived system reliability and PU for ESender is rather surprising. One possible explanation for this may be the context of this study is about the commercial environment where the users considered technology as means of production rather than

daily casual events. Orlikowski & Gash (1994) pointed out that technology used to satisfy the needs of an organization rather than an individual user required a different technological frame. So it is not difficult to understand why users consider reliability as an antecedent for ease of use in terms of using ESender.

Ease of learning the control language was expected to relate to perceptions in other research (Culnan 1984; Rice & Shook 1988) as well. However, in ESender scenario, all the interviewees are using the "Drag & Drop" editors. "Drag & Drop" editor is an editor, just as its name implied, does not require any HTML coding skills. With the editor anyone can create engaging e-mail messages. Its intuitive interface allows to drag, drop and compose message content elements and to adjust their properties to ensure that they look exactly as intended. Because all the interviewees are using the "Drag & Drop" editors, this restriction in range in this feature usage resulted in nearly null findings for this factor (that is, there was no relationship between ease of learning the control language and PU or PEOU).

Moreover, supporting previous research on communication technologies, Social Influences linked with the PU of ESender. For an innovation, Gatignon & Robertson (1985) suggest that heavy users in similar product categories are more likely to consider it useful. Thus it is reasonable for the senders to believe that acceptance of e-mail advertising is influenced by their audiences' disposition towards using e-mail as a form of communication. As Cialdini & Goldstein (2003) outlined, Social Influences is to comply with the message receivers. Lengel & Daft (1988, pp.229) also stated that "Effective communication depends on the selection of a medium that has the capacity to engage both the sender and receiver". Thus, going in line with those empirical studies, perceived negative Social Influences to ESender leads to users' lower level of perception to usefulness.

Finally, all selected media choice factors have been tested via in the comparison among different degrees of e-mail marketing adoption of the three groups. More specifically, as Figure 13 illustrates, the lack of PCM, the lack of perceived system reliability (PACC) and perceived negative SI rose as important constructs within the process. Each one of them has a different negative influence on the PU or PEOU to e-mail marketing system.
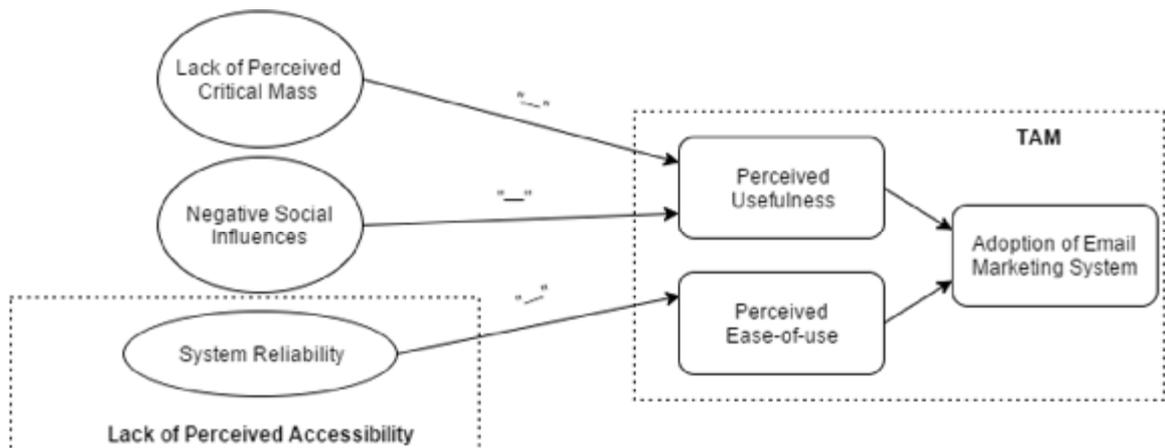
Figure 13. *Media choice factors as external variables in streamlined e-mail marketing system adoption model*

This framework has involved PU, PEOU as at its core in the constructs and the three media choice factors: perceived critical mass (PCM), social influences (SI) and perceived accessibility (PACC) (system reliability). Figure 13 also shows the "-" sign (negative) of the validated relationships to explain e-mail marketing system adoption.

5.2 Media choice factors for differential impacts across types of e-commerce startups

We have proved the framework from the inductive results of ESender case study, bringing together the relationships between media choice factors as antecedents to PU/PEOU that emerged from it. None of the theoretical perspectives alone explained the findings for the three groups of marketers. Hindrances perceived by marcom managers account for differentiators across types of e-commerce startups are distinguishable.

As compared to the other two categories of marcom managers, the domestic e-commerce users' level of perception to usefulness seems to be explained by SI and PCM. A certain amount of these local-market-based marketers mentioned other media choice factors as well, but they did not distinguish them to other two types of e-commerce users. Compared to the other marketers, B2B marcom managers' level of perception to ease-of-use seems to be explained by the less perceived accessibility. It is such a vital element for functioning as the system is designed or intended.

In contrast to domestic B2C marketers and users of overseas B2B sector, the international-market-based online retailers saw a much greater advantage and usability of the e-mail marketing system. The international B2C e-commerce marcom managers were more likely to state a positive incentive that encourages them to choose e-mail to conduct commercial communication and that they were concerned about nearly none of the negative media choice factors.

5.2.1 The different hindrances across domestic and international e-commerce startups regarding e-mail marketing system adoption

It is reasonable to assume that most of the recipients of e-mail campaigns from domestic e-commerce websites are Chinese, while the counterparts who are marketing abroad send to international subscribers. For Chinese e-commerce that targets local market, the country-specific attribute of subscribers is different from those in the database of cross-border e-commerce sites. According to experts' view, Chinese e-mail scene is not like the west: academic and business use of the e-mail was dominant in China. The personal use did not shape the market. This also agrees to Zhang & Prybutok (2005, p113) who declared Chinese "few check their [personal] e-mail regularly". As experts expressed, those e-commerce startups that market to Chinese native residents are facing the lower level of engagement of their e-mail subscribers. Gatignon & Robertson (1985) suggest that heavy users in similar product categories are more likely to be willing to be the engaged ones. Thus it is reasonable to believe that customers' engagement of e-mail advertising may be influenced by their disposition towards using e-mail as a form of personal communication. Consequently the originators' perceptions about the local audience's engagement of e-mail campaign differ from the international marketers'. The degree of perceived engagement matters. Data collected from the interview supports the qualitative interpretation above. The initial data indicates that PCM, of which the nature is the degree of marcom managers' perception to the engagement of their subscribers, differentiates domestic e-commerce marketers and the international e-commerce marcom managers (Table 15). In other words, the PCM (perceived engagement of subscribers) is confirmed as the hindrance that can be seen as differentiator across domestic and international e-commerce startups.

Built on supplementary data from selected experts, the origins of the main difference between the new user acquisition in local Chinese e-commerce and the cross-border e-commerce are their website visitors. It also meets our common knowledge and experience. For local online retailers, the visitors of the websites are mainly native residents in China. In contrast, those web pages of e-commerce startups, faced with more overseas customers, are usually browsed by western. It is also related to a very common phenomenon in Chinese Internet which is that the websites usually have phone number registration as the alternatives or even primary to sign-up with e-mail. Refer to the quote of experts, originally, there was only e-mail authentication. But due to the high penetration rate of SMS and a couple of dominant mobile IM, the procedure of registration on Chinese websites "turns to" SMS and social network apps. It is consistent with the empirical elucidation from Yan et al. (2006) and Duchon (2014). However, to comply with the will of customers, some Chinese websites even forwent e-mail. In turn, it is difficult for e-mail subscribers and leads to more subscribers using SMS and IM to sign up. A vicious circle is thereby formed. For the local e-commerce, to defy customers means the

expansion of the database is going to be very difficult. The downside of the new subscriber acquisition is surely the deterrent for marcom managers from local-market-based e-commerce startups to embrace e-mail marketing system rather than the international-market-based websites. The initial data indicates that Social Influences, of which the nature is the degree of marcom managers' perception to the growth of the mailbox database, differentiates local marketers and the overseas marcom managers (Table 15). In other words, SI (perceived subscriber list growth) is confirmed as the barrier that stands out as a differentiator between domestic and international e-mail marketing originators.

5.2.2 The different hindrance across B2B and B2C e-commerce startups regarding e-mail marketing system adoption

According to information collected from supplementary focus group discussion, we can assumed major of the subscribers signed up with enterprise mailboxes for B2B websites. As a result, the system reliability for e-mail marketing to B2B e-commerce website means to send promotional e-mail into the enterprise e-mail boxes. The deliverability is only guaranteed by the stable communication loop involved enterprise e-mail boxes. For B2C, in contrast, it signifies to send into personal e-mail steadily. To guarantee the deliverability of B2B communication is vastly more complex than B2C communication. B2B mailbox will filter out something that not inelastic demand as advertisements due to the distinguished profit model and technical origins of personal e-mail service. The spam filter for B2B is not only for protecting inbox from real spammer but also some legitimate advertisement (Brain & Crosby 2007). The "blocks" may cause by keywords, sending speed and number of IP addresses (Brain & Crosby 2007). To reach the B2B mailbox, marketers mail to an infinite number of domains that may be collocated or hosted on site. The factors that can prevent the e-mail from being delivered are usually customized by the "postmaster" rather than from a universal rule. The customized rules may include more hurdles than B2C e-mail − and do not need to be disclosed. To reach the B2C mailbox, marketers mail primarily to just their top Internet Service Providers (ISP) such as Hotmail, Gmail, or Yahoo. The factors that will prevent the e-mail from being delivered vary by ISP as well, but can be determined and addressed. It should be noted that delivery into enterprise systems, compared with Gmail, Hotmail, those ISPs, is totally different and harder.

Initial data from the interviewees supports the qualitative interpretation above. The results indicate that system reliability (deliverability), one of the four dimensions of accessibility, can be regarded as the factor differentiates B2B e-commerce marketers and the rest B2C marcom managers (Table 15). Hence, the perceived system reliability ought to be counted as a divider between B2B e-commerce managers and B2C marketers.

5.3 Practical recommendations

ESender as a SaaS has been embraced by the marcom managers in countries like Poland, UK, the United States, Brazil, Russia, and Singapore. However, contrary to expectation, a fair amount of marketers of Chinese e-commerce startups expressed their lack of PU or PEOU of ESender. According to the empirical results of Chapter 4, some certain media choice factors as external variables exert their negative influences on the PU or PEOU. These negative antecedents differentiate three types of e-commerce startups from each other. Hence, XR needs to allocate product adaptation and customized pricing policy to different e-commerce sectors. Otherwise, the process of marketing ESender to Chinese users may miss the mark.

For example, a considerable portion of marketers in domestic B2C e-commerce concern the lack of critical mass. According to the analysis of expert group discussion, the nature of the disincentive is the disengagement of subscribers from e-mail marketing campaigns.

For engaging commercial e-mail, subject line is crucial because it is the very first thing subscribers see in their inbox. If a subject line is the result based upon outright guesswork rather than conducting controlled, randomized experiments, it could also be the last thing subscribers see of that e-mail. Thus, it is reasonable to improve the open rates by split-testing the subject line. That means to set variations of subject lines across newsletters with identical contents. Then, split 10% to 20% of target subscribers into two or more segments according to the number of the subject line variants, and send each version of e-mail campaigns in terms of subject lines to the corresponding fragmented groups. Marketers end up with selecting the winning variation based on open rate and sending to the remaining 80% to 90% recipients when the test completes. Therefore, XR needs to provide features in ESender to help local online retailers by automating this process. Due to the on-going nature of e-mail campaigns it is possible to have the subject line split test working on a recurring basis. It should allow to constantly testing the current winning version (champion) with other split tested variants (contenders). In the circumstance, some randomly selected subscribers always receive one of the contending split test e-mail, while the majority continue to receive the last determined winner. If the result of any contending e-mail message starts performing better than the current winner, it automatically replaces the winner. The winning message could be determined once per hour based on the stats for opens.

Regarding the marketing strategy, XR should propose a flat fee pricing model for the domestic B2C users rather than the pay-per-send offer. This pricing structure that charges a single fixed fee for ESender, regardless of usage, will promote the user incentive to send more e-mails. In reality, most subscribers do not excessively hate e-mails from brands they trust. They like the brand enough to tolerate the e-mails until such time as they require the service or product being offered by that brand. The brand advocates will happily receive two or three e-mails a day. As a result, e-mail marketers gain more

opportunities to present their optimized subject lines to subscribers and lead them to open and engage in the sophisticated marketing campaigns simply by sending more messages.

To the marketers who work for international online retail websites, their perceptions related to the listed media choice factors are all positive. Features of ESender are satisfactory to these B2C users by now. In this case, XR should consider enhancing the competence of ESender in the global trading scenario particularly. We suggest XR develop an algorithm that can pave the way for easily reaching the globally distributed recipients. This feature should allow sending messages at each recipient's local time based on their last location (e.g. 13:45 in every time zone). The current time zone is able to be calculated based on the geolocation of subscriber's last e-mail-related activity.

Contrary to local market B2C e-commerce, to offer the Chinese international online retailers flat fee pricing model may be a restriction for XR. For making a better profit in this sector of e-commerce businesses, XR can share the gains the international B2C websites enjoyed. Thus, a more radical pricing strategy can be taken, which is the pay-per-open model. In the pay-per-open pricing model, XR charges international clients on the basis of the number of opens achieved. Unlike the pay-per-send model where clients pay the cost per e-mail sent, the pay-per-open lets client pay the cost as per the number of opens. The unit price will be higher in the circumstance. However, clients will accept it, because they will not waste any single unit cost by achieving expected opens and significantly increasing the ROI. To make the pay-per-open model a success, marketers need to communicate their message very effectively. That is exactly the scenario or characteristic in terms of the commercial e-mail communication of overseas-oriented Chinese online retailers. Either the subscriber engagement or the reliable communication loop is much comforting.

B2B users perceived the lack of accessibility of ESender, the nature of which is the bouncing problem haunting them. This problem is nearly impossible to solve because of the business subscribers' preference is in a stubborn way. The solution to the unreliable B2B e-mail bulk sending is beyond the capability of ESender as a third-party service or product but depending on the IT departments in a mass of corporations. The helplessness of product adaption could result in a stark choice of XR that is to stay out of the B2B e-commerce sector or at least to stop investing in acquiring new customers. It is only because XR can do no better within e-mail commercial communication category.

This frustration naturally leads to a proposal for the strategic redirection of the enterprise vision. If ESender can be extended and integrated with SMS channel, being a multi-channel messaging tool will avoid the hindrances that trouble local B2C businesses and international B2B e-commerce teams. It is the benefit being e-mail marketing solution alone cannot obtain. In the other words, XR needs to approach a new niche market – the text message marketing (SMS marketing) tool realm. There have never been more ways to connect with customers nowadays. As more and more forward-thinking Chinese e-

commerce websites are integrating marketing campaigns across channels, it is worthy for XR to get over its self-imposed limitations. The breakthrough will pay off, especially in China, the world's largest and liveliest e-commerce market.

6 CONCLUSION

First, the roundup of results is going to be confronted by the objectives of this study. In the second chapter, the academic contribution is presented. The third chapter sums up the managerial implications of the study and the fourth chapter discloses the limitations and some criticism in this thesis. Finally, possible future research possibilities that have arisen from this study are suggested.

6.1 Reaching the goals

When the moment Internet "stepped" into our world the e-mail direct marketing had replaced the "paper based" mail direct marketing in most cases and the trend goes on. But as the emerging new market, the biggest Internet community – China, the spread of e-mail marketing tools is not meeting expectations, and therefore it is important to figure out the factors influencing the adoption and use. This thesis concentrated on looking at three research questions in a Chinese e-commerce startup setting. These objectives that concerning e-mail marketing system adoption were proposed in this thesis are summarized and answered as following:

> - What are the hindrances that exert negative effect on the e-mail advertising system adoption through the mediatory constructs?

The answer to the first research question is answered in section 5.1 where the results indicate the presence of relationships of three negative media choice factors and TAM model. Statistical and content analyses found that lower level of PU and lower level of PEOU among e-commerce startups were significantly affected by negative SI, the lack of PCM, and the lack of PACC (system reliability). The combined framework described the SI and PCM have an effect on PU and the PACC (system reliability) is an effective antecedent for PEOU.

The next research question is as follows:

> - What are the natures of those hindrances in e-mail marketing context?

The nature of each negative variable is explained in the experts' group discussion in chapters 4.3. The section explains the essence of the three hindrances in e-commerce setting. The e-mail list growth, subscriber engagement and deliverability issues correspond to social influences, perceived critical mass and system reliability respectively. In addition one more sub question is documented:

> - Which hindrances perceived by marcom managers are able to account for the differentiators across types of e-commerce startups?

The data analysis on the percentage of users whose quotes fell in media choice categories found that the significant differences were driven by groups of different e-commerce startups. The lack of Critical Mass and negative Social Influences represent important negative effect on users from domestic e-commerce retailers, and hindrance from one of the dimensions of accessibility is most useful for describing B2B users. Thus, users from B2C domestic e-commerce startups emphasized the fact that they are unable to reach most of their current customers and leads since they are not quite interested in the e-mail campaign that used as the promotional channel. Furthermore, the e-mail database grows slowly in terms of the registration in the e-commerce retailers' websites. However, whose targets are the overseas markets, whatever their business is related to B2B or B2C, did not refer to similar issues. Participants work for B2B business concern more about stable communication circuit being violated due to the unreliability such as the bouncing. No such unstable trouble is raised in domestic B2C marketers or international online retailers.

It can be reported that research questions have been answered. While the topic still needs a lot of future research to be done, to thoroughly fulfill the research objectives in a sophisticated way, in the constraints of sources and schedule time the study reached its aims.

6.2 Academic contributions

In the discipline of users' adoption to the innovation of information technologies, TAM is commonly used as a core theory (Adams et al. 1992; Agarwal & Karahanna 2000; Karahanna et al. 2006; Venkatesh & Bala 2008). Evolving from TRA and TPB and being expanded to TAM2 and UTAUT, TAM outperforms the predecessors and primarily focus on the information system. As thoroughly explained in the current study, by unifying the predominance of "siblings" among innovation adoption theories, TAM is granted capability to be a valid model in widely explaining e-mail marketing system adoption. The core factors of it - PEOU and PU are something that exists independently and can therefore be optimized separately. Thus, it is reasonable to consider existing external variables to the perceptions of both usefulness and ease-of-use or appreciation of each. The TAM suggests that both PU and PEOU are key determinants in the adoption of technology. TAM is a successful model. Numerous studies have extended this PU/PEOU-centralized model with other constructs within various fields of information technologies (Gefen et al. 2003; Moon & Kim 2001; Pavlou 2003; Hsu & Lu 2004). Considering e-mail marketing system is not only web-based information technology but explicitly a form of communication media, factors originated in communication discipline are put into use.

Based on the above, the present literature posits an extension to TAM based on media choice literatures as regards communication technology for commercial use. Media choice factors are raised by the study including social influences, perceived critical mass and perceived accessibility. Negative social influences and the lack of perceived critical

mass exert negative effect on the degrees of adoption through PU. Inadequate accessibility perceived exerts effect negatively on the degrees of adoption through PEOU. Examining the effects of accessibility (Culnan 1984), in addition to physical accessibility and informational accessibility, this study also provides some insight as to the ways this multi-dimensional concept affects perceptions of usefulness or ease-of-use (Rice & Shook 1988).

Besides contributing a streamlined acceptance model that can be used as a theoretical framework to analyze the introduction of e-mail marketing system to Chinese e-commerce sector, this study also identifies the differentiators of e-mail marketing system acceptance across in marcom managers works for different types of Chinese e-commerce startup business. The three groups of e-commerce startups have been thoroughly compared as an exploratory investigation in this literature. Quotes of marketers in domestic B2C e-commerce, international B2C e-commerce and international B2B e-commerce groups related to the selected media choice categories are coded and clustered to against each other. The patterns are explored and juxtaposed as: social influences and perceived critical mass discriminates between the groups of local market online retailers and the foreign trade companies. Perceived accessibility (system reliability) stands out as the differentiator between B2C and B2C e-commerce startups. Therefore, current literature is connecting the distinctive types of e-commerce businesses to these disincentives.

6.3 Practical implications

While the differentiators are what can be regarded as the main academic contribution of the thesis, the author also brought to surface the practical natures of them that have not been introduced yet in any published studies. The natures of those hindrances were derived from the specific practical scenario and introduced to answer the needs of the company, on behalf of which the thesis was conducted. For e-mail marketing system adoption process: the nature of social influences is the growth of the subscriber list; the nature of perceived critical mass is the engagement of subscribers; the nature of system reliability is the deliverability of bulk e-mail advertisement sending.

By applying the natures of those antecedents, XR is able to find out if conducting modification, as adding medium channel or new features, then the barriers of technology adoption can be moderated or undermined. Thus, the results of this thesis have shed light on the improvement of XR's product and service solutions. Especially interesting, the outcomes chase down that the business opportunities cannot be fully seized through the current medium – e-mail.

By implementing the framework and the differentiators, XR can develop an effective segment-specific strategy to promote e-mail marketing systems and services in China. The thesis demonstrates that sectors of e-commerce startups should be separated or

marked off for XR's business. This literature identifies negative external variables to PU and PEU in order to facilitate XR intervene and enhance diffusion of e-mail marketing system in Chinese market. The research distinguish two batches of viable disincentives that exert lower level of perceptions of the ease-of-use and usefulness of e-mail marketing technology to influence adoption of that advertising system among local market marcom managers and B2B users. Negative social influence and the lack of critical mass hinder the marketer whose target are Chinese customers to accept the system. The lack of one dimension of accessibility, system reliability, impedes the adoption process of the ones who work for B2B e-commerce websites.

6.4 Limitations

Firstly, one of the limitations of this research is the findings were obtained from one single case study and the sample size used in the study was small. The small sample size and the fact that all the subjects were e-commerce startups based on incubators in Beijing, the capital of the country, are flaws unfortunately. There is the possibility of sampling error: the marcom managers may not represent the whole e-commerce startups community perfectly. Other e-commerce startup teams from other areas of China and non-incubator based ones should be examined further. Plus, to explore a more large scale of subjects may revise the outcomes.

Secondly, since all of the participants are provided with only one particular "innovation" in the case study, this may affect the universality of the research. Although it is understandable that the sampling is purposive and focused on a certain case (Barbour 2001), there are possible biases in the research. For instance, as members of organizations like CASA (China Anti-Spam Alliance), MAAWG (Malware and Mobile Anti-Abuse Working Group), ESPC (E-mail Sender & Provider Coalition), and EEC (E-mail Experience Council), XR holds high reputation in the e-mail community. This fact may grant those legitimated e-mails sent from ESender to Hotmail, Gmail, Yahoo and AOL without any issue regarding deliverability. It could lead to bias or limit the findings concerning deliverability. To be able to generalize the findings more broadly, the factors found and frameworks should be tested with other e-mail marketing systems. It is possible, that the self-reported results of subjects about using other e-mail marketing system would be different.

Further, although multiple data collection methods were utilized, a series of interviews were used in a longitudinal way in the case study. For example, the users perceiving low usefulness who were interviewed in Week 10 can become to hold higher level of perceptions of usefulness at week 12. However, during the interval, the variables of this study were well controlled. There is nothing should be considered as "interference", if regarding the system, subjects and e-mail communication.

6.5 Ideas for future research

By identifying the external determinants of adoption with reference to the theoretical framework based on the TAM and media choice factors, this research in its direction could merit more research to be done in the future. There are many opportunities exist, such as the issues that were not investigated in this case study (for instance, the group of marcom managers of domestic B2B e-commerce startups missing). Other constructs that have emerged in past research, such as personal innovativeness (Leonard-Barton & Deschamps 1988), also should be investigated.

For practical topics, two new potential research domains in technology for marketing and advertising based on the outcomes of this thesis are able to be explored. As the current revolution in information technology and digital communication gave us too much choice in terms of communication channels. One direction is to use the framework that this study proposed to conduct a comparison study in the e-mail and SMS marketing tools in the Chinese community. When facing diverse media, how the marcom marketers choose the media to spread the commercial information will be an intriguing topic to be investigated. Another one could be to help e-mail market tool providers to know how the degree of adoption varies when entering different markets or segments of markets. Little to no research has involved in this field. To fill the void, it will be great to develop a feasible measuring tool for e-mail marketing system providers.

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