THE DESIGN AND DEVELOPMENT OF AN E-MARKETING FRAMEWORK FOR THE ASIAN B2B MARKETPLACE

CHONG WOON KIAN

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ABSTRACT

Business-To-Business electronic Marketplace (B2B e-Marketplace) is an electronic platform for buyers and sellers that provide a new dimension in facilitating the marketers to work more effectively when making critical marketing decisions. However, Small to Medium Sized Enterprises (SMEs) especially in the Asian B2B marketplace who are keen to compete in the electronic environment remain concerned about how their businesses can benefit from the B2B e-Marketplace.

This study focuses on the SMEs operating in a number of Asian economies, specifically in China, Malaysia, Philippines, Singapore, Thailand and India. The rational for choosing these countries is based on their advanced and well-developed B2B e-Marketplaces. This study employed a triangulated methodology containing both quantitative (online survey) and qualitative (interview) data collection mechanisms. A key finding is the development of a theoretical framework for SMEs, emerging from the analysis of 406 companies from various industrial sectors.

Based on the findings, an e-Marketing (electronic marketing) framework derived from B2B e-Marketplace, termed as B2B e-MF, was developed for practising e-Marketing in SMEs. The framework emerged from a review of literature in the fields of e-Marketing and the B2B e-Marketplace and was empirically tested from SMEs who participated in the B2B e-Marketplace. The analysis performed in this study shows that interaction with the B2B e-MF is an important dimension and has a positive and significant impact for the business efficiency and service improvement of Asian SMEs. The findings indicate that B2B e-MF is essentially the refinement of e-Marketing practices for SMEs in order to achieve performance advantages.
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# TABLE OF CONTENTS

LIST OF FIGURES ..............................................................................................7
LIST OF TABLES .................................................................................................8
LIST OF ABBREVIATIONS ..............................................................................10

CHAPTER 1 : INTRODUCTION .........................................................................12
Overview ...........................................................................................................12
1.1 Research Background ................................................................................12
1.2 Motivation for This Study .........................................................................14
1.3 Research Problems ...................................................................................16
  1.3.1 Major SMEs’ Constraints .................................................................18
  1.3.2 Lack of Understanding of the ‘e’ Environment ...............................18
  1.3.3 Lack of Exploration of e-Marketing Services ..................................18
  1.3.4 Identification of Critical Success Factors (CFSs) ...........19
  1.3.5 Absence of the Standard e-Marketing Framework ...............19
1.4 Research Questions, and Objectives .........................................................20
1.6 Methodology ..............................................................................................21
1.7 Research Contributions ...........................................................................22
1.8 Structure of the Research .........................................................................23
Summary ............................................................................................................25

CHAPTER 2 : LITERATURE REVIEW .................................................................26
Overview ...........................................................................................................26
2.1 The B2B e-Marketplace .........................................................................27
  2.1.1 Main Idea .........................................................................................30
  2.1.2 B2B Business Relationships ..........................................................33
  2.1.3 Essential Technologies of B2B e-Marketplace ............................35
  2.1.4 SMEs and B2B e-Marketplace .......................................................36
  2.1.5 B2B e-Marketplace Adoption in Asia .......................................41
2.2 e-Marketing ...............................................................................................43
  2.2.1 e-Marketing Frameworks ...............................................................44
  2.2.2 B2B e-Marketing ..........................................................................48
2.2.3 SMEs and B2B e-Marketing Activities .......................................................... 50
2.3 Performances of e-Marketing Services in B2B e-Marketplace ........................ 51
  2.3.1 Dimensions of e-Marketing Services .......................................................... 52
  2.3.2 The e-Marketing Tools ................................................................................. 55
  2.3.3 B2B e-Marketing Challenges for SMEs ...................................................... 57
2.4 B2B e-Marketing Critical Success Factor ....................................................... 59
  2.4.1 Factors Discussion ....................................................................................... 59
  2.4.2 The New B2B-eM-CSF ............................................................................... 63
2.5 The Need of e-Marketing Framework Development ........................................ 64
  2.5.1 Research Gaps in the Current Literature .................................................... 64
  2.5.2 A New e-Marketing Framework Derived from B2B e-Marketplace ............. 64

Summary .................................................................................................................. 68

CHAPTER 3 : RESEARCH METHODS ....................................................................... 69
Overview .................................................................................................................. 69
  3.1 Research Philosophies and Approaches ......................................................... 70
    3.1.1 Qualitative and Quantitative Research Methods ....................................... 73
    3.1.2 Triangulation of Research Approaches ...................................................... 76
  3.2 The Application of the Methodology ............................................................... 79
    3.2.1 Surveys ........................................................................................................ 80
      3.2.1.1 Development of the Questionnaire ...................................................... 81
      3.2.1.2 Construction of the Questionnaire ...................................................... 83
      3.2.1.3 Independent Variables and Dependent Variable ............................... 85
      3.2.1.4 Quantitative Data Analysis ................................................................. 87
      3.2.1.5 Validity and Reliability in Quantitative Data Analysis ....................... 88
    3.2.2 Interviews .................................................................................................... 90
      3.2.2.1 Content Analysis ................................................................................. 91
      3.2.2.2 Data Coding Techniques .................................................................... 91
      3.2.2.3 Validity and Reliability in Qualitative Data Analysis ....................... 92
  3.3 Sample ............................................................................................................... 93
  3.4 Research Instruments’ Administration and Procedures ................................... 95
    3.4.1 Data Collection I ...................................................................................... 95
    3.4.2 Data Collection II .................................................................................... 96
    3.4.3 Data Collection III .................................................................................. 97
3.5 Research Ethics ................................................................................................................. 98
Summary ................................................................................................................................. 99

CHAPTER 4 : DATA COLLECTION AND ANALYSIS .................................................. 100
Overview ................................................................................................................................. 100

4.1 RQ1: What are the characteristics of firms that have adopted B2B e-
Marketplace? ..................................................................................................................... 101
  4.1.1 Quantitative Analysis for RQ1 .................................................................................. 102
    4.1.1.1 Descriptive Analysis for RQ1 ............................................................................ 103
    4.1.1.2 Pearson Correlation Analysis for RQ1 .......................................................... 106
    4.1.1.3 Multiple Regression Analysis for RQ1 .......................................................... 108
  4.1.2 Qualitative Data Analysis for RQ1 .......................................................................... 110
  4.1.3 Summary for RQ1 .................................................................................................... 111

4.2 RQ2: What are the dimensions of e-Marketing services of B2B e-
Marketplace for SMEs? ...................................................................................................... 113
  4.2.1 Quantitative Analysis for RQ2 ................................................................................ 113
    4.2.1.1 Descriptive Analysis for RQ2 .......................................................................... 113
    4.2.1.2 Pearson Correlation Analysis for RQ2 .......................................................... 116
    4.2.1.3 Multiple Regression Analysis for RQ2 .......................................................... 120
  4.2.2 Qualitative Data Analysis for RQ2 .......................................................................... 123
  4.2.3 Summary for RQ2 .................................................................................................... 125

4.3 RQ3: What are the Critical Success Factors (CSFs) associated with e-
Marketing service performances derived from B2B e-Marketplace? .................. 126
  4.3.1 Quantitative Data Analysis for RQ3 ...................................................................... 126
    4.3.1.1 Factor Analysis for RQ3 .................................................................................. 126
    4.3.1.2 Ranking of the CSFs ...................................................................................... 128
  4.3.2 Qualitative Data Analysis for RQ3 ........................................................................ 131
  4.3.3 Summary for RQ3 .................................................................................................... 131

4.4 The B2B e-Marketing Framework (B2B e-MF) ..................................................... 133
  4.4.1 Firms’ Characteristics in B2B e-Marketplace Adoption .................................. 134
    4.4.1.1 Government Involvements ............................................................................. 135
    4.4.1.2 Senior Management Involvements .............................................................. 136
    4.4.1.3 Size of Firm .................................................................................................. 138
  4.4.2 The e-Marketing Services Derived from B2B e-Marketplace ....................... 139
4.4.2.1 Customer Relationships Management .................................. 140
4.4.2.2 Facilitates Supply Chain .................................................. 142
4.4.2.3 Competitiveness ............................................................... 144
4.4.2.4 Transparency and Visibility of Information ......................... 145
4.4.2.5 IS/IT Integration ............................................................... 146
4.4.3 The B2B e-Marketing CSFs (B2B-eM-CSFs) ......................... 148
   4.4.3.1 Internal Factors ........................................................... 149
   4.4.3.2 External Factors ........................................................... 151
Summary ......................................................................................... 154

CHAPTER 5 : CONCLUSIONS................................................................ 155
Introduction ..................................................................................... 155
   5.1 Conclusions ............................................................................ 155
      5.1.1 Validity of Findings ......................................................... 155
      5.1.2 Dimensions of e-Marketing ............................................. 154
      5.1.3 B2B e-Marketing CSFs .................................................. 155
      5.1.4 Policy Implications ......................................................... 157
   5.2 Research Contributions .......................................................... 159
      5.2.1 Theoretical Contributions .............................................. 159
      5.2.2 Practical Contributions .................................................. 161
   5.3 Limitations ............................................................................. 162
   5.4 Avenues for Future Research .................................................. 162
Concluding Remarks ........................................................................ 164

REFERENCES ................................................................................. 165
APPENDIX A: Online Questionnaire .............................................. 179
APPENDIX B: Covering Letter ......................................................... 184
APPENDIX C: Interview Questions ............................................... 185
APPENDIX D: List of Publications .................................................. 186
LIST OF FIGURES

Figure 1.1: World region Internet usage 2010 ......................................................... 13
Figure 1.2: Sequential explanatory data collection strategy .................................... 22
Figure 1.3: The research process ............................................................................. 23
Figure 2.1: Analytical classification model ............................................................... 27
Figure 2.2: Conceptual model of B2B e-Marketplace .............................................. 28
Figure 2.3: B2B e-Marketplace .............................................................................. 30
Figure 2.4: B2B e-Marketplace embedded technology ............................................. 36
Figure 2.5: The e-Marketing strategy in the context of other plan ............................ 45
Figure 2.6: Roadmap to e-Marketing ....................................................................... 46
Figure 2.7: Digital marketing cycle ......................................................................... 47
Figure 3.1: The research ‘onion’ .............................................................................. 70
Figure 3.2: Triangulation of qualitative and quantitative research ............................ 77
Figure 3.3: Sample population ............................................................................... 93
Figure 3.4: Weekly questionnaire returned (data collection I) .................................. 96
Figure 3.5: Weekly questionnaire returned (data collection II) ................................. 97
Figure 4.1: The e-Marketing framework derived from B2B e-Marketplace .......... 134
Figure 4.2: The B2B e-Marketing CSFs (B2B-eM-CSF) ......................................... 149
| Table 2.1: B2B e-Marketplace literature | 30 |
| Table 2.2: SMEs definitions | 39 |
| Table 2.3: A compendium of e-Marketing tools | 56 |
| Table 3.1: Comparison of three research philosophies and their elements | 71 |
| Table 3.2: Deductive and inductive research approaches | 73 |
| Table 3.3: Features of qualitative and quantitative research | 75 |
| Table 3.4: Constructs and corresponding information | 84 |
| Table 3.5: The validity and reliability of quantitative data | 89 |
| Table 3.6: Selected B2B e-Marketplace providers and sample size | 94 |
| Table 4.1: Quantitative and qualitative guiding for analysis | 101 |
| Table 4.2: Descriptive characteristics of respondents for RQ1 | 103 |
| Table 4.3: Cronbach’s Alpha value test results for RQ1 | 104 |
| Table 4.4: Descriptive statistics for RQ1 | 105 |
| Table 4.5: Correlation coefficient between independent variables for RQ1 | 107 |
| Table 4.6: Correlation coefficient between dependent variable and independent variables for RQ1 | 108 |
| Table 4.7: Adjusted R square for RQ1 | 109 |
| Table 4.8: Regression analysis for RQ1 | 109 |
| Table 4.9: Descriptive statistics of interviews | 110 |
| Table 4.10: Cronbach’s Alpha value test results for RQ2 | 114 |
| Table 4.11: Descriptive statistics for RO2 | 115 |
| Table 4.12: Correlation coefficient in CRM | 117 |
| Table 4.13: Correlation coefficient in SCM | 117 |
Table 4.14: Correlation coefficient in competitiveness ................................. 118
Table 4.15: Correlation coefficient in IS/IT Integration ................................. 119
Table 4.16: Correlation coefficient in transparency of information ............... 120
Table 4.17: Adjusted R square for RQ2 .......................................................... 121
Table 4.18: Regression analysis for RQ2 ....................................................... 123
Table 4.19: KMO and Bartlett’s test ............................................................... 127
Table 4.20: Cronbach’s Alpha value test result for RQ3 .............................. 128
Table 4.21: Ranking of e-Marketing success factors ................................. 130
Table 4.22: One sample t test of statistical significance of CSFs .................. 130
LIST OF ABBREVIATIONS

B2B e-Commerce = Business-To-Business Electronic Commerce
B2C = Business-To-Customer
CRM = Customer Relationships Management
CSFs = Critical Success Factors
EDI = Electronic Data Interchange
E-Marketing = Electronic Marketing
ERP = Enterprise Resources Planning
EU = European Union
GDP = Gross Domestic Product
HRM = Human Resources Management
ICT = Information and Communication Technology
IQ = Interview Question of This Study
IS/IT = Information System/Information Technology
Q = Survey Question of This Study
RQ = Research Question of This Study
SCM = Supply Chain Management
SMEs = Small to Medium Sized Enterprises
WWW = World Wide Web

XML = Extensible Markup Language
Chapter 1: Introduction

Overview
This chapter introduces the importance of the development of an e-Marketing framework for the Asian B2B marketplace. It will address the research rationale, research problem, techniques used in the solution (research objectives), provided introductory overview of the methodology, research contributions and the structure of the study.

1.1 Research Background
The development of the Internet and the World Wide Web (WWW) in the 1990s as a tool for the global sharing of information has opened up new opportunities in marketing practices. The rapid growth of Internet users has made the Internet an increasingly important and attractive platform for business transactions and improves the effectiveness and efficiency of commercial processes between organisations (Liang et al., 2004). According to the Internet World Stats (2010), by 30 June 2010, the Internet user population reached over 1.97 billion worldwide, a 444.8 percent increase in the period from 2000 to 2010 (Figure 1.1). Many academics and practitioners have emphasized that the Internet is a major platform for e-Marketing to deal with marketing mixes, which include global accessibility (Laudon and Laudon, 2002), convenience in updating (Sandeep and Singh, 2005), real-time information services (Harridge-March, 2004), interactive communications features (Chaffey, 2004), and unique customisation and personalised capabilities (Teo and Tan, 2002). The Internet is clearly constantly evolving as firms grow accustomed to doing business electronically. The Internet environment provides a more effective means by which businesses can be transacted electronically between trading partners, known as Business-To-Business Electronic Marketplace (B2B e-Marketplace).
The concept of B2B e-Marketplace provides a new dimension in facilitating marketers to work more effectively, particularly, when making critical marketing decisions. Benefiting from the Internet technologies, B2B e-Marketplace can serve both sellers and buyers as a new marketing channel to conduct or execute marketing functions such as sales and distribution. The main advantages for buyers are reported to be: the lower selection costs (Laudon and Laudon, 2000); reducing time by instant access to sellers (Harridge-March, 2004), and the ability to ensure the best buying price by comparing multiple sellers in the e-Marketplace (Chaffey, 2004). The major benefits associated with sellers are increasing exposure to global markets (Laudon and Laudon, 2004), enhancing communication (Chaffey, 2003), and reducing transaction costs (Sculley and Woods, 2001) due to the aggregation of buyers generated by the e-Marketplace. As B2B e-Marketplace provides value for both sellers and buyers, the expected transactions are potentially highly promising and indicative of significant growth. According to the Gartner Group (2007), by the end of 2007, B2B e-Marketplaces transacted US$7.3 trillion of the global trade and B2B market is estimated to be six times larger than the Business-To-Customer (B2C) market (Business Week, 2007).
However, a number of challenges related to B2B e-Marketplace adoption ventilated by several academics and practitioners. Nickles (2000) was concerned about the security and privacy of transaction data. Rodgers et al. (2002) invoked a number of risks associated with setting up electronic business mechanisms such as requiring significant investments in hardware, software, and personnel training to participate in B2B e-Marketplace. Furthermore, technical difficulties (Krishnamurthy and Singh, 2005), questions concerning the legality (Chaffey, 2003), reluctance to share data with business partners (Kalakota and Robinson, 2001), and the lack of standardization (Bacheldo, 2000) are also some of the major concerns centered on the implementation process.

1.2 Motivation for This Study
There is some debate amongst academics and practitioners as to how the firm’s e-Marketing performance relates to the success of the business performance of the firm (Oldfield, 1997; Downie, 2002). According to Chaffey et al. (2009), the performance of e-Marketing pertains to financial benefits obtained from the management process responsible for identifying, anticipating and satisfying customer needs. This definition emphasises the focus of marketing on the customer, while at the same time implying a need to link to other electronic channels (e.g. B2B e-Marketplace) by:

Identifying – the Internet can be used for marketing research to establish customers’ needs and wants.

Anticipating – the Internet provides an additional channel by which customers can access information and make purchases.

Satisfying – a key factor in the success of e-Marketing is achieving customer satisfaction through the electronic channel.

Supported by Gilmore (2007), the performance of e-Marketing is substantially linked to different technologies (e.g. e-mail, databases, wireless) to fulfil existing and emerging customer needs and preferences. Oldfield (1997) also emphasised that firms who adopt e-Marketing and integrate it into their business strategies should have superior business performance.
However, Downie (2002) suggested that e-Marketing is only one small part of a firm’s business performance and Gilmore et al (2007) claimed SMEs do not use e-Marketing to its full scope and potential, especially in relation to their business performance due to development costs. Nonetheless, several drivers have been identified as motivations for SMEs to adopt e-Marketing to improve their business performance. The opportunity to eliminate competitive disadvantages of SMEs in peripheral areas (Gilmore et al., 2007), the chance to lower operating and marketing costs (Sculley and Woods, 2001), the opportunity to promote their company better and enrich their overall marketing performance (Petersen et al., 2007) are some of the drivers that motivate firms to adopt e-Marketing to improve their business performance.

B2B e-Commerce, as one of the major business models brought about by the Internet technologies, has made a significant contribution to the e-marketeters, and larger organisations are taking advantage of the vast array of suppliers/buyers via the B2B e-Marketplace (Stockdale and Standing, 2004). However, SMEs who are keen to compete in the electronic environment remain concerned as to how their businesses can benefit from the B2B e-Marketplace. With significant online and offline publications from both academia and industry (e.g. Strauss and Frost, 2001; Sandeep and Singh, 2005; Brady et al., 2008; Chaffey, 2009), there is a growing awareness of the contribution of e-Marketing in the global environment. Nonetheless, there are both limitations and gaps on how to explore the opportunities for SMEs in benefiting from the emergent e-Marketing practices, derived from the B2B e-Marketplace.

An increasing number of Asian countries have adopted Internet economy that has bolstered their presence in the electronic marketplace. The region has witnessed increasing presence in the B2B marketplace due to the penetration and development of the Internet technology (Zeng and Pathank, 2003; Hu et al., 2004; Yu, 2007; Alam, 2009). Despite much interest from academics and business publications in western countries, a sharper focus on the B2B marketplace in Asia is timely and warranted for several reasons. First, research on B2B marketplace in Asia is limited and, given the
enormous populations and size of these markets (particularly the largest two, China and India), offer considerable opportunities for online marketing activities. Second, as Asian markets are culturally and geographically removed from the traditional business centers of North America and Europe, detailed knowledge with respect to prevailing conditions in Asian markets is often lacking. Third, Asian economies offer significant opportunities to lower costs though global sourcing or local production. Indeed, this knowledge gap has contributed to the occasional misinterpretation of reasons for marketing successes and failures in the region.

This study intends to develop an e-Marketing framework for SMEs who wish to adopt a proactive approach for business efficiency and competitive advantage, and those who wish to explore the Internet technologies for marketing activities. The proposed framework will be based on a multidisciplinary approach by integrating; traditional SMEs marketing, e-Marketing, Information System/Information Technology (IS/IT), and B2B e-Marketplace to develop an e-Marketing framework that would be widely accepted, offering greater value for SMEs to improve their marketing performances.

1.3 Research Problems
The development of B2B e-Marketplaces followed by advances in Internet technologies for marketing purposes has captured the attention of marketers in recent years. The advent of B2B e-Marketplace provides new opportunities for companies to deal with their customers and suppliers (Derfler, 2001). However, the initial proliferation of B2B e-Marketplaces proved to be unsustainable and the number of B2B e-Marketplaces in many industry sectors has been considerably few (Strauss and Frost, 2001; Stockdale and Standing, 2004; Chong et al., 2010). According to Büyüközkan (2004, p133), “the success of e-marketplaces is heavily dependent on their participants to establish values and corporations tend to be involved only in the most qualified and best performing e-marketplaces”. Hence, a successful B2B e-Marketplace is determined by the crucial role of the participants. The major participants of B2B e-Marketplace are SMEs and
there is an urgent need to understand the requirements for success and main barriers confronted by them.

Generally, the major barriers for B2B e-Marketplace adoption remain: lack of understanding of available technology (Chong and Shafaghi, 2009), lack of confidence in electronic-based marketing (Lewis and Cockrill, 2002), lack of technical knowledge and resources (Mullane et al., 2001) and the lack of e-Business recognition in some industry sectors (Chaffey et al., 2000). SMEs may fail to overcome these problems if the necessary capabilities are not evident in the B2B firms. This issue is frequently reported by many academics and practitioners (Gulledge, 2002; Stockdale and Standing, 2004; El-Gohary et al., 2008) and it limits the progress of SMEs in transforming their businesses into electronic-based entities. However, research into the effects of electronic business is beginning to examine SME involvement in B2B e-Marketplaces (Denizel et al., 2002; El-Gohary et al., 2008; Chong and Shafaghi, 2009).

In addition, the literature on the exploitation of e-Marketing services derived from the B2B e-Marketplace is limited and in the past they have often focused on a single perspective, such as its development (Albrecht et al., 2005), role and classification (Bakos, 1998; Angeles et al., 2001; Kandampully, 2003), operation (Laudon and Laudon, 2004), benefits and barriers (Stockdale and Standing, 2004), and key factors to participate (Yu, 2007). Furthermore, much of the research is focused on specific research areas of interest, often ignoring the interrelationships with others dimensions such as contextual factors for adoption, CRM, SCM, IS/IT integration, competitiveness, transparency of information, and critical success factors (CSFs). Hence, there are concerns that limited efforts have been diverted to the promotion of B2B e-Marketplace. Although SMEs who use conventional marketing practices have increased their online presence, the majority of them are still not achieving even minimal levels of adoption (Stockdale and Standing, 2004).
Specific barriers to B2B e-Marketplace participation that are considered inline with e-business adaptation are explored below from an e-Marketing perspective:

1.3.1 Major SMEs’ Constraints

Development cost is one of the major issues of implementing e-Marketing solutions. According to Rodgers et al. (2002), a SME needs to entirely reshape its current systems because ICT adoption projects are complex in nature. Hence, there are many issues that need to be addressed while implementing e-Marketing projects including: hardware, software, Human Resources Management (HRM), training, business processes, and project management. Moreover, the degree of government encouragement and senior management involvement also has a significant impact on the adaptation of B2B e-Marketplace (O’Callaghan et al., 1992; Hu et al., 2004; Yu, 2007). Consequently, SMEs are uncertain about whether they have sufficient resources, expertise, and experience to operate marketing activities in the B2B e-Marketplace.

1.3.2 Lack of Understanding of the ‘e’ Environment

SMEs have a limited understanding of the nature of B2B e-Marketplace and how it interacts with e-Marketing (Stockdale and Standing, 2004). It is crucial for SMEs to develop a better understanding of the Internet technologies and their complementary tools that can extend value for the success of Internet-based marketing activities.

1.3.3 Lack of Exploration of e-Marketing Services

Limited exploitation of e-Marketing reflects a myriad of other barriers for the adoption of B2B initiatives and would result in the potential loss of revenue streams. SMEs often adopt their own platforms without regard to the performances of e-Marketing services that hinder the development of B2B e-Commerce amongst them.
1.3.4 Identification of Critical Success Factors (CFSs)

The dynamic nature of the electronic environment hinders the progress of B2B e-Marketplace adoption. The benefits of adoption are limited at the early stages and SMEs are perhaps, insufficiently motivated to progress with the initiative. Therefore, there has to be some realistic immediate success factors to encourage SMEs to realise the benefits from the B2B e-Marketplace.

1.3.5 Absence of the Standard e-Marketing Framework

The lack of a structured e-Marketing framework is a concern for SMEs. SMEs require a framework to implement e-Marketing strategies responsible for profitably identifying, anticipating, and satisfying customer requirements. Therefore, a framework that responds to multi-dimensions including contextual factors for adoption, CRM, SCM, IS/IT integration, competitiveness, transparency of information, and critical success factors is vital for SMEs to aggressively pursue the adaptation (Chong and Shafaghi, 2009; Chong et al., 2010).

The research in the area of B2B e-Marketplace is still young and the absence of a validated e-Marketing framework for SMEs as a guideline to participate in B2B e-Marketplace would be significantly beneficial both to industry and academic. The majority of research on B2B e-Marketplace has been conducted in western countries (e.g. Chaffey et al., 2000; Eid and Trueman, 2004; Eid et al., 2006 etc.). The number of studies conducted in the Asian B2B marketplace is limited and this issue makes the research challenging due to the absence of relevant academic literature.
1.4 Research Questions, and Objectives
Motivated by the above challenges, the study attempts to answer the following research questions (RQs):

RQ1) What are the characteristics of firms that have adopted B2B e-Marketplace?
RQ2) What are the dimensions of e-Marketing services of B2B e-Marketplace for SMEs?
RQ3) What are the Critical Success Factors (CSFs) associated with B2B e-Marketplace service performance?

The first two questions (RQ1 and RQ2) were designed to address the e-Marketing framework development. By addressing these two questions, this study aims to explore the characteristics of firms and the dimensions of e-Marketing services derived from B2B e-Marketplace. A primary concern of this study is related to the conceptualisation and performance of B2B e-Marketplace for Asian SMEs. A firm survival depends on its ability to generate market value and marketing makes a fundamental contribution to long-term business success (Ching and Ellis, 2004). Therefore, RQ3 addresses the issue of the identification of CSFs which is one of the critical elements for success for business performance.

Many professionals and academics including: Deighton (1996); Chaffey (2003), and Strauss and Frost (2005) suggested that, implementing e-Marketing will increase business performance by; reducing marketing costs, enhancing customers relationships, and exposure to new market segments resulted from the use of e-Marketing tools in contacting marketing activities. The primary objective of the study was to design and develop an e-Marketing framework for SMEs operating in Asian economies. This study examines data relating to firms located in China, India, Malaysia, Philippines, Singapore and Thailand. In doing so, the study will focus on the e-Marketing services of B2B e-Marketplace used by SMEs and their contribution to business performance. In satisfying the objective, the study will address a wide range of relevant issues including:
• A critical review of the characteristics of firms that have adopted the B2B e-Marketplace.
• A critical assessment of the e-Marketing services derived from B2B e-Marketplace and their contribution to SMEs’ business performances from a marketing perspective.
• The exploitation of the dimensions of e-Marketing services of B2B e-Marketplace for SMEs.
• The exploitation of the Critical Success Factors (CSFs) associated with B2B e-Marketplace service performance.

1.6 Methodology
A research design combining both qualitative and quantitative approaches will be employed. The choice of methods for this study is motivated by the desire to combine available secondary data (literature review), surveys (online questionnaires), and interviews (semi-structured). The two general strategies which would result in the acquisition of new knowledge for this study are inductive (often associated with quantitative data) and deductive (often related with qualitative data). It is common to relate these processes to the research philosophies where deductive owes more to positivism and inductive relates more to interpretivism (Saunders et al., 2007).

A triangulation that combined qualitative and quantitative methods was determined to be the best approach to answer the research questions by enhancing the perceived quality of the research and providing the best means to explore and examine the topic under study (Cooper and Schindler, 2006). The development of the e-Marketing framework will be subjected to validation through empirical data collected from both qualitative and quantitative methods. A sequential explanatory data collection strategy was employed to this study (Figure 1.2) and the data collection phases include:
• Data Collection phase I: Online survey direct distributed to the targeted sample.
• Data Collection phase II: B2B e-Marketplace providers contacted by letter to act as a catalyst for fostering participation of their members in the survey.
• Data Collection phase III: The interviews were conducted with selected respondents from the online survey.

Figure 1.2: Sequential explanatory data collection strategy

A more detailed description of the methodology and the rationale for the adaptation is described in chapter three.

1.7 Research Contributions
This study is an original attempt to develop an e-Marketing framework for SMEs who conduct business in the Asia B2B marketplace. Based on the need for a dynamic framework for e-Marketing from the literature, this study makes the following contribution;

1) Contribution to knowledge:
   • The exploitation and review of available e-Marketing frameworks, B2B e-Marketplaces, their characteristics and the technology used by them.
   • The dissemination of results in conferences/seminars/workshops and publications in refereed journals.
2) Contribution to professional practice:
   • The proposed framework can be used by professionals, and
companies operating in the B2B marketplace for the efficient and effective management of their operations.

- Raising awareness of and the importance of B2B e-Marketplace opportunities.
- Promoting B2B e-Marketing components and techniques.

3) Contribution to policy:
- Raising awareness of the importance of government encouragement for the implementation of B2B e-Commerce.
- Suggesting governments provide a predictable and consistent legal environment to support B2B e-Commerce regardless of the jurisdiction in which particular transaction parties reside in.

1.8 Structure of the Research
The structure of the research is illustrated in Figure 1.3, and supported with a commentary about the same.
Chapter one introduces the background to the e-Marketing service performances derived from the B2B e-Marketplace. To translate the main idea into a research question, this chapter identifies the background of the study, followed by the motivation, problems, objectives, methodology, and the contributions and the structure of the study.

Chapter two provides an extensive review of literature into a theoretical foundation of e-Marketing and B2B e-Marketplace. The review of published articles, books and exploration of relevant theories and past empirical studies provide a concise description of the topic under study. Based on the dedicated database designed for this study, it is intended to provide an evolutionary picture of the performance of e-Marketplace in conducting B2B e-Marketing in the Asia’s B2B markets.

Chapter three describes the methodology used to generate relevant data that would be used to answer the research questions. The chapter provides arguments on the selection of the research methods, unit analysis of data such as deciding the population, the instruments or procedures to collect data, the administration of instruments, limitations and ethical issues.

Chapter four presents the qualitative and quantitative results and analyses them to answer the research questions. The diagrams, tables, and figures are developed to support the arguments and the research questions. Based on the findings, a dynamic e-Marketing framework will be developed for B2B e-Marketing in Asia’s SMEs markets.

Chapter five provides a conclusion to the study in order to address the research objectives. This chapter would also include information on the theoretical and practical implications, together with recommendations for further research.
Summary
This chapter laid the foundations for the proposed e-Marketing framework. It introduced the research problem and questions, and set the objectives for the study. The methodology was then briefly described and justified, and the research chapters were outlined and the limitations were given. Based on these foundations, the thesis can proceed to further chapters with a detailed description of the research.
Chapter 2 : Literature Review

Overview
This chapter reviews and analyses relevant and existing research in the area of electronic marketing (e-Marketing) and Business-To-Business electronic marketplace (B2B e-Marketplace) and aims to build a theoretical foundation upon which the research is based. It also addresses the issues that need to be explored further in the under study.

The construction of the literature review is based on Zuber-Skerritt and Knight (1986) model of knowledge (Figure 2.1). The purpose of presenting this analytical classification model is to help the readers to follow the sequence of the chapter. Initially the survey of the literature concentrates on the area of B2B e-Marketplace and e-Marketing (parent discipline/field) and demonstrates a familiarity with a wider body of knowledge. After the classification model of the parent discipline/field is developed, the immediate discipline/field of the research problem will be explored to unearth the research questions. The literature will then identify the boundaries of the research problem which focuses on Asian B2B marketplace. Finally the research questions flow at the end of the chapter.
2.1 The B2B e-Marketplace


Figure 2.1: Analytical classification model
Source adapted from Zuber-Skerritt and Knight, (1986)
Referring to Figure 2.2, the framework covers the main element of B2B business relationships, essential technologies of B2B e-Marketplace, relationships with SMEs and their operation in Asia markets. A review of the literature concerning the above is summarised in Table 2.1, indicating the description, implications, and the contributions made by the authors.

<table>
<thead>
<tr>
<th>Focus</th>
<th>Research Descriptions</th>
<th>Research Implications</th>
<th>Main Authors’ Contributions</th>
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<tr>
<td>Main Idea: Benefits and Impacts</td>
<td>• Examines the impacts by focusing on the participants for business transformation; • Explores how Internet technology affects B2B marketplace and; • Provides advice on realising the benefits of B2B e-Marketplace.</td>
<td>The ability of B2B e-Marketplaces to increase market efficiency aggregated over the entire economy makes the provision of electronic trading services an important platform with potentially large rewards.</td>
<td>O’Reily and Finnegan (2007); Laudon and Laudon(2000); Rohm et al. (2004); Murtaza et al. (2004); Turban (2006); Kandampully (2003)</td>
</tr>
<tr>
<td>B2B Business Relationships</td>
<td>• Discusses the fundamental ideas of B2B e-Commerce; • Explores the performances of B2B e-Commerce</td>
<td>B2B e-Commerce is clearly a case of evolution as firms grow accustomed to doing business electronically.</td>
<td>McIvor and Humphreys (2004); Barua et al. (1997); Albrecht et al. (2005); Kandampully</td>
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- Describes the involvement of B2B commerce in global business environment. | Consequentially, the importance of collaborative arrangements for improved value chain in B2B exchanges is extremely important for business efficiency. | (2003); Bakos (1998); Kaplan and Sawhney (2000) |
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<td>SMEs and B2B e-Marketplace</td>
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</table>
- Investigates the functionality of B2B e-Marketplace;  
- Examines the technologies involved in B2B e-Marketplace;  
- Describes the use of Internet technology in B2B e-Marketplace. | Overall, the authors believe that the technology alliances in B2B e-Marketplace improve efficiency, reduce costs, and improve overall business performances. | O’Reilly and Finnegan (2007); Dai and Kauffman (2002); Senn (2000); |
| B2B e-Marketplace Adoption in Asia markets |  
- Analyses of factors affecting adoption of B2B e-Marketplace in Asia;  
- The B2B e-Marketplace such as Alibaba.com, Asiaep.com etc. are growing and | There is a significant need for SMEs to trade in B2B e-Marketplace either to follow existing partners, compete effectively for their traditional markets or to enter new markets. | Denizel et. al. (2002); Gullelde (2002); Stockdale and Standing, (2004); Akkeren and Cavaye, (1999); Bode and Burn, (2002); Korchak and Rodman, (2001); Raisch, (2001),;  
|  |  |  | Thong, 1999; Hu et al. (2004); Li, and Li (2005); Yu (2007); Chong |
2.1.1 Main Idea

B2B transactions over public and private sectors uses the Internet as a delivery vehicle for transactions including; financial transfer, on-line exchanges, auctions, delivery of products and services (O’Reily and Finnegan, 2007). Referring to Figure 2.3, B2B transaction consists of three main elements and the B2b e-Marketplace performs the main tasks such as sourcing, automated purchasing, and processing to facilitate sellers and buyers for business transactions.
Laudon and Laudon (2000) refer to B2B e-Marketplace as an electronic platform for the exchange of information, products, services and payment via the Internet between buyers and sellers. B2B e-Marketplaces are typically defined as inter-organisational information systems through which multiple buyers and sellers interact electronically to identify potential trading partners, select them and execute transactions (Rohm et al., 2004). Murtaza et al. (2004) argued that, B2B e-Marketplace is able to remove some of the inefficiency of traditional business functionality and allows partners to streamline their marketing activities by sharing information instantaneously. Chaffey (2002) stated that B2B e-Marketplace electronically integrates and manages purchase request, ordering, delivery, and payment with a set of value propositions offered to its stakeholders (e.g. buyers and suppliers). However, buyers and suppliers are uncertain about their roles in Business-To-Business electronic commerce (B2B e-Commerce). Thus, participants must investigate whether there is a need to clarify their roles before participating in this new business model. B2B e-Marketplace enables firms to purchase goods and services and allow suppliers to manage and communicate the fulfilment of the purchase orders to ensure their situation are on trend by competency, competitive advantage, and profitability (Dyer, 2000; Kandampully, 2003).

Many contributions from the literature focus on the benefits of the adoption of B2B e-Marketplace. B2B e-Marketplace has improved the effectiveness and efficiency of B2B processes between buyers and sellers, radically changing traditional procurement activities, and restructuring supply chains, organisations, and industries (Balocco et al., 2010). According to Rohm et al. (2004), B2B e-Marketplace builds value propositions based on three elements: increased market efficiencies, increased supply chain, and new value creation. Increased market efficiencies occur as B2B e-Marketplace use the Internet’s speed and transparency to intensify competition, bringing prices closer to theoretical equilibrium. Increased supply chain efficiencies occur as B2B e-Marketplace provides increased visibility across the supply chain, facilitating improved demand forecasting, inventory management, and production planning. New value creation occurs as B2B e-Marketplace
promotes collaboration and allows increased information availability. The benefits of B2B e-Marketplace as reported by many academics and practitioners include:

- Reducing search costs by facilitating comparison of price, products, and services (Kandampully, 2003; Bakos, 1998; Kaplan and Sawhney, 2000).
- Improving production and supply capability (Barua et al., 1997; Albrecht et al., 2005).
- Improving personalisation and customisation of product offerings (Bakos, 1998).
- Enhancing customer relationships (Kierzkowski et al. 1996).
- Reducing marketing costs compared to traditional marketing media (Sculley and Woods, 2001).
- Reducing the number of marketing staff (Gloor, 2000).
- Operating 24/7 and round the clock on 365 days (Ngai, 2003).
- Facilitating global presence (Laudon and Laudon, 2002).
- Exploring new market segments (Murtaza et al., 2004).
- Interacting more effectively in terms of services marketing communication (Petersen et al., 2007).

A small number of authors (Bakos, 1998; Kaplan and Sawhney, 2000) take the view that B2B e-Marketplace improves and enhances the extent of e-Marketing activities, particularly in relation to SMEs. Recent studies (Narayanasamy et al., 2008; Pavaloaia, 2009) indicate that SMEs have started to respond positively to the changes brought about by the B2B e-Marketplace. While the main concerns of SMEs are related to the generic SMEs characteristics of limited time, resources and expertise, B2B e-Marketplace provides a favorable environment for SMEs to lower operating and marketing costs, better opportunity to promote their products/services, and enrich their overall marketing communications mix. Overall, the ability of B2B e-Marketplaces to increase market efficiency aggregated over the entire economy makes the provision of electronic trading services an important platform with potentially large rewards.
2.1.2 B2B Business Relationships

The development and use of B2B e-Commerce enabling technologies in the e-Business environment have been in existence since the late 1970s. The main challenge for many companies today is to learn how to organise, manage, co-ordinate and advance daily business activities to find leverage points to improve the B2B e-Commerce performance. In addition, in order to provide additional value to both sellers and buyers in B2B e-Marketplace, the notion of e-Commerce technologies including interactive web site, email, intranets, extranet can be envisaged (Cannon and Perreault, 1999; McIvor and Humphreys, 2004).

The evolution of B2B e-Commerce technologies reduces the costs of closely integrating buyers and suppliers activities through the Internet. Efficiency is achieved through many activities such as reducing procurement costs by making it easier to find lower price suppliers; and it is much less costly for buyers to place an order on the Internet. Furthermore, electronic intermediaries which provide a platform for B2B transactions will bring the large number of buyers and sellers in one standard gateway to perform their daily business activities (Zwass, 2000; Wong et al., 2010). Aberdeen Group (1999) carried out research on the performance of B2B e-Commerce and found an average 5 – 10 percent cost reduction on a firm's business operations.

B2B e-Commerce generally refers to the business transactions between business parties. The exchange of both products and services including selling raw materials from one firm to another, and the purchasing of services from one firm to another, is primarily facilitated by the digital media. For example, primary activities associated with the production of an automobile might involve activities such as the production of material inputs and the assembly of inputs into a final product. Support activities might include the development and use of human resource systems designed to manage the labour force, and the development and use of procurement systems employed to facilitate the purchase and distribution of material inputs.
The primary economic advantage of B2B e-Commerce is increased efficiency in the area of value-added activities. More specifically, B2B e-Commerce streamlines the procurement process adding efficiency to this aspect of the overall business performances (Barua et al., 1997; Albrecht et al., 2005). From a marketing perspective, B2B e-Commerce lowers the cost of procurement before transaction by reducing the search costs associated with procuring inputs and by increasing the ease of price setting (Kandampully, 2003; Bakos, 1998; Kaplan and Sawhney, 2000) and product comparison. B2B e-Commerce also reduces the cost of procurement during the transaction by reducing the level of communication needed to facilitate the completion of the transaction (Kandampully, 2003). Finally, it can reduce the costs of marketing associated with monitoring contractual performance and confirming product or service delivery (Kaplan and Sawhney, 2000).

The world marketplace is facing a plethora of technological advancement which is beyond the capacity of any firm to control or absorb. Consumer satisfaction, new products development and technology innovation are well-known driving forces but their rapid mutation and turmoil are making them unpredictable. Companies have to radically alter their marketing strategy and process goals to keep up with this volatile market. In this turbulent environment, B2B business relationship has evolved as the most promising approach for designing organisations. B2B business relationship exploits the available technologies ‘wave’ to provide customers with instant access to all the products/services at any time and place. It is extremely important for companies to understand the driving forces and the success factors to access to the digital business environment.

B2B e-Commerce is clearly a case of business model evolution as firms grow accustomed to do business electronically. Consequentially, the importance of collaborative arrangements for improved value chain in B2B exchanges is extremely important for business efficiency.
2.1.3 Essential Technologies of B2B e-Marketplace

Technological developments on B2B e-Commerce demanded by customers open up tremendous opportunities for innovative services (Matthing et al., 2006). The Internet environment provides more effective means for businesses to transact electronically between trading partners. Hence, Internet technology-based services are now crucial in order to enhance the B2B e-Commerce development processes (Fisk et al., 1993; Murtaza et al., 2004; Chaffey, 2009).

The explosive growth in the Internet, communications and other digital technologies has had a major impact on providing a crucial service feature in allowing both buyers/sellers an opportunity to gain information and allowing comparison among various products/services. Marketers have new ways to learn how to track customers and to create products and services tailored to individual customer needs. Compared with traditional distribution channels, web services recognise and exploit the potential of advanced interactive technology to link up sellers and buyers (Vandermerwe, 1999). For example, an organisation offering a range of products and services can now create an electronic catalogue on its website in order to achieve global reach at significantly lower costs than with previous technologies.

Electronic Data Interchange (EDI) is described by Chen and William (1998) as the electronic transmission of information or documents between computer systems in different organisations based on a standard, structured, and machine retrievable format. EDI has become an important tool for companies to transfer data between each other by using the Internet or computer networking (O’Callaghan et al., 1992; Sanchez and Perez, 2003). However, compared with B2B e-Marketplace, the technical capabilities of EDI only focus on technology and functional parameters, ignoring the important aspects: collaborative functions to overlook the importance of inter-firm relationships, and the ability to facilitate supply chain by integrating people, IS/IT, business processes, products/services. (Chelariu and Sangtani, 2009).
B2B e-Marketplace as a technological approach to market operations is an effective platform to improve the relationship between buyers and sellers and to bring about the benefits from closer and integrated relationships in the supply chain. B2B e-Marketplace technical solutions such as the Internet, IS/IT, and Extensible Markup Language (XML) make it more efficient and effective for users to link to electronic marketplaces. The solutions with buy-side and sell-side application will allow for portability, flexibility (e.g., adding, removing or substituting components), sustainability and investment protection for SMEs. Referring to Figure 2.4, XML serves as the most natural evolution of Web technologies used for catalog hosting and management as well as transaction services such as auctions, logistics and payments (Weller, 2000).

Figure 2.4 : B2B e-Marketplace embedded technology
Source adapted from Weller (2000)

2.1.4 SMEs and B2B e-Marketplace
The characteristics of SMEs vary according to industry, geographical location and the researcher. For instance, in the European Union (EU), a simplified version of the EU-derived definition of SMEs is that the staff headcount must be less than 250 employees. According to several academics and practitioners, EU SMEs have long been studied and typically summarised below:
• Flat with few layers of management (Ghobadian and Gallear, 1997).
• Flexible structure and information flow (Welsh and White, 1981).
• Top management very visible (Hadjimanolis, 1999).
• Top management close to point of delivery (Bartlett and Bukvi, 2001).
• High incidence of innovativeness (Voss et al., 1998).
• Personnel authority high (Welsh and White, 1981).
• Limited access to human and financial resources (Voss et al., 1998).
• Negligible resistance to change (Ghobadian and Gallear, 1997).
• Individual creativity encouraged (Bartlett and Bukvi, 2001).

As a result, EU SMEs hold a number of significant advantages and exhibit a greater level of confidence over SMEs from other regions. For instance in Asia, SMEs have to overcome some significant disadvantages in order to survive in the digital business environment including lack of access to resources (Chong and Shafaghi, 2009), lack of confidence in decision-making process (Lewis and Cockrill, 2002), and resistance to change (Chaffey, 2004). Consequently, larger companies with greater functional integration, less resistance to change and a more innovative and friendly atmosphere are taking advantage of the vast array of benefits provided by the Internet.

However, according to many academics and practitioners (Kailer and Scheff, 1999; Barry and Milner, 2002; Rao et al., 2003; Palmer, 2005), SMEs in Asia play an increasingly important role in the economy. For instance in China, SMEs contributed over 66 percent of the total industrial income in 2007 (ERIA, 2008) and the contribution of Malaysian SMEs to the manufacturing sector was 29.3 percent of their Gross Domestic Product (GDP) or RM75.2 billion (£15.3 billion) in December, 2005 (Alam, 2009). In India, nearly two-thirds of the retail outlets are single-branch businesses (Palmer, 2005). Thus, the Asian SMEs are now a significant area of interest for research, development, and contribution, in terms of the attitude and perception to the economy. Despite much interest from academics and business publications
in the EU, a bigger research focus on the SMEs in Asia is timely and warranted. According to Zeng and Pathank (2003), research on the SMEs in Asia is limited. Furthermore, because Asian markets are culturally and geographically removed from the traditional business centers of well developed countries, more detailed literature with respect to prevailing conditions of Asian SMEs is urgently demanded (Alam, 2009).

It has been a consensus among academics and researchers that there is no uniform definition for a SME nationally or internationally and definitions vary from country to country. As this study is conducted in the Asian context, the definition used in Asian countries is of great importance for the investigation. Whilst it is important to recognise the proliferation of SMEs, it must also be recognised that they are different from large firms. Their unique characteristics do not always endow them with great market influence but nonetheless it must be considered that their size might often provide them with competitive advantage. Much of the literature which is concerned with SMEs definition is inextricably linked with the measurement of size, such as number of employees, sales turnover, profitability etc. In Asia, different countries have their own SMEs definitions as shown in Table 2.2.

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<th>Countries</th>
<th>SMEs Standard</th>
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<tr>
<td></td>
<td>Annual turnover less than £2.8 million and/or less than 300 employees</td>
<td>Annual turnover between £2.8 million to £28 million and/or 300 to 2000 employees</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Annual turnover between £45,000 and £1.8 million 5-50 number of employees</td>
<td>Annual turnover between £1.8 million and £4.5 million 5-50 number of employees</td>
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<tr>
<td>Philippines</td>
<td>Annual turnover between £40,000 and £200,000</td>
<td>Annual turnover between £200,000 and £1.3 million</td>
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</tr>
<tr>
<td></td>
<td>10-99 number of employees</td>
<td>100-199 number of employees</td>
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<td></td>
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<tr>
<td>Singapore</td>
<td>Those with £6.1 million or less in fixed asset investment and, for non-manufacturing enterprises, 200 or fewer employees.</td>
<td>Spring Singapore</td>
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<td></td>
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<tr>
<td>Thailand</td>
<td>Capital not more than £930,000 and/or employees not more than 50</td>
<td>Capital not more than £3.6 million and/or employees not more than 200</td>
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<tr>
<td>India</td>
<td>Investment in equipment between £32,000 and £680,000</td>
<td>Investment in equipment between £680,000 and £1.3 million</td>
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Table 2.2: SMEs definitions

Many academics and practitioners (e.g. Oldfield, 1997; Chaffey, 2004; Eid et al., 2006; Chong et al., 2010) predicted that SMEs and B2B e-Commerce expected to have massive growth. Oldfield (1997) reported that SMEs have to keep pace with technological changes if they want to keep a competitive edge. With the large number and significant contribution in the business world, SMEs are eager to seek a new business model for the source of revenue. B2B e-Marketplace remains a popular online trading platform for SMEs (e.g. Hu et al., 2004; Gebauer et al., 2007, Chong et al., 2010). For
instance, Alibaba.com has received much attention from SMEs in Asia. To date, Alibaba.com has 531,471 paying members, and accounted for total revenue of RMB908.3 million (£85.6 million) in the second quarter of 2009 (Alibaba.com, 2009). Alibaba.com now is becoming the priority destination for buyers and sellers especially SMEs to find trade opportunities, promote their businesses and conduct transactions online (Hu et al., 2004).

While the larger organisations are taking advantage of the vast array of information/products/services, SMEs remain concerned with how their businesses can gain advantages from B2B e-Marketplace. However, similar to many countries, SMEs in Asia are faced with resource constraints. They also have to respond to specific challenges. Generally, the major barriers for B2B e-Marketplace adoption include: lack of understanding of available technology (Chong and Shafaghí, 2009), lack of confidence in electronic-based marketing (Lewis and Cockrill, 2002), lack of technical and knowledge resources (Mullane et al., 2001) and the lack of e-Business recognition in some industry sectors (Chaffey, 2004).

The literature on the exploitation of B2B e-Marketplace services in SMEs is limited; and SMEs remain concerned about how their products/services can reach the world marketplace. The majority of the B2B e-Marketplace service providers in Asia have yet to respond to specific challenges. For instance, most B2B e-Marketplaces only provide an information platform for buyers/sellers to exchange information on products/services via the Internet. They have no actual facilities through the web site (Hu et al., 2004). Hence, there are higher levels of online business activities and electronic-based features, especially in providing a comprehensive guideline for SMEs to trade on the electronic environment. However, research in the area of B2B e-Marketplace in Asia is limited and there is no clear strategy or framework that can be used as a guide for them to adapt. The challenges for Asian SMEs to identify and understand the factors for success in business in utilising B2B e-Marketplace remain sustaining to organisation’s competitive advantages. Hence, there are concerns that limited efforts have been diverted to the promotion of B2B e-Marketplace. Although SMEs who use conventional
marketing practices have increased their online presence, the majority of them are still not achieving even minimal levels of adoption (Stockdale and Standing, 2004).

2.1.5 B2B e-Marketplace Adoption in Asia

The development of B2B e-Commerce has been nothing short of explosive in recent years in Asia. The Internet economy in Asia is interrelated and interconnected because of well-established business ties between private/public sectors throughout the region. Many believe that its growth and impact will become more prevailing to the world economic in the future. According to the Internet World Stats (2010), by June 2010, the Internet user population in Asia reached 825 million, which makes it the largest Internet user population compared with other continents. B2B e-Marketplace also would become the priority destination for buyers and sellers, especially SMEs, to find trade opportunities, promote their businesses and conduct transactions online.

Over the last decade, an increasing number of Asian companies have adopted B2B e-Marketplaces that have significantly increased their presence in the global marketplace. This development has received a great deal of press coverage and academicians are demonstrating greater interest in pursuing Asia-based projects. Despite such coverage, little attention seems to have been paid to B2B e-Marketing developments in Asian SMEs that have positioned them for an even greater success in the years to come.

Asian markets include the two most populous nations of the world (China and India), which possess over one-third of the world's population as well as enormous natural and human resources. More importantly, Asian B2B marketplaces are developing at an accelerated rate (Hu et al., 2004; Li, and Li, 2005; Yu, 2007; Chong et al., 2010) that cause rapidly expanding demand for all types of products and services. Concomitant with these developments, there is the need to pursue an intensive research agenda in Asia B2B contexts.
Despite governmental intervention in Asian countries, B2B e-Commerce has become an integral part of the business environment. According to Hu et al. (2004), a country’s readiness for electronic-based businesses fundamentally depends on government encouragement: promotion activities, government grants and the regulation standards for creating an online trading environment. The Asian’s government has made enormous investments in ICT and as a result B2B e-Commerce is very much integrated into firm’s operations and consumer lifestyles (Chao et al., 2003). For instance in Malaysia, the Ninth Malaysian Plans (Malaysia economy development plans from 2006 - 2010) emphasize ICT innovation which was undertaken by the government and made various funds available for ICT development. Such initiatives have created new opportunities for SMEs. Furthermore, the Multimedia Super Corridor Malaysia (MSC Malaysia) introduced by former Prime Minister Tun Dr. Mahathir Mohammad offered an ideal ICT deployment for SMEs to transform their businesses to information and knowledge environment (Alam, 2009).

A number of academics and practitioners (e.g. O’Callaghan et al., 1992; Thong 1999; Yu, 2007) have emphasised the involvement of senior management members on the adoption of B2B e-Commerce. They have argued that senior management members’ characteristics, behaviour and attitudes are usually directly and/or indirectly involved in all decision making for B2B e-Commerce adoption. The studies also revealed that individual characteristics such as innovators, leaders and other individuals in key positions have been found to have significant impacts on explaining differences in the degree of B2B e-Marketplace adoption. Senior management involvement is typically expected to have a positive impact on the achievement of B2B e-Marketplace adoption (Yu, 2007). Hence, senior management involvement is considered another important element to push firms to adopt B2B e-Marketplace.
Although most of the developing countries in Asia have been relatively slow in B2B e-Commerce adoption, SMEs still have high expectations of the government and their senior management members to further explore the opportunities provided by B2B e-Marketplace.

2.2 e-Marketing

Electronic marketing (e-Marketing) refers to the use of digital interactive technologies and information technology to conduct a firm’s marketing activities (Coupey, 2001). It is a term often used synonymously with e-Commerce and e-Business (Kandampully, 2003; Chaffey, 2004). E-Marketing specifically makes use of the same technologies as a logical extension to fulfill the traditional market practices of creating, communicating and delivering value to customers. Closely aligned with this, e-Commerce refers specifically to the facilitation of transactions created by the businesses marketing activities. In the same manner, Internet marketing and e-Marketing are often used synonymously and taken to mean the same thing (Chaffey, 2003; Strauss and Frost, 2005). The Internet is the venue where e-Commerce takes place; it provides information via the World Wide Web, e-mail, allows for real-time communications and enables the sharing of databases.

E-Marketing also refers to the use of electronic methods or media to build upon and maintain customer relationships through electronic platforms (e.g. B2B e-Marketplaces) that facilitates the exchange of ideas, products, and services to satisfy both buyers and sellers (Ngai, 2003). Strauss and Frost (2001) support the above statement and suggested that sales, public relations, direct marketing, and advertising are marketing communications that comprise the crucial components of e-Marketing strategy. According to Eid et al., (2006), the contribution of the Internet to marketing strategy is often regarded as a vehicle for competitive advantages and a vital contributor to the marketing efficiency. Furthermore, e-Marketing has been considered an important propriety asset to compete in the global marketplace. The need to make use of marketing in order to gain a competitive edge in global markets is the main reason for marketers to participate in e-Marketing.
2.2.1 e-Marketing Frameworks

There is widespread recognition of the significance and the need for e-
Marketing management. SMEs need an applicable and comprehensive
framework for “e” transformation. With the advent of Internet technologies,
traditional marketing frameworks are redesigned and supported by electronic
technologies to create innovative marketing models (Chaffey, 2004;
Lagrosen, 2005). The widely recognised e-Marketing frameworks of Chaffey,
(2004); Gloor, (2000); Kierzkowski et al., (1996) are described below;


Chaffey (2004) suggests the e-Marketing plan should be linked to other
corporate plans to support marketing activities. Referring to Figure 2.5, the e-
Marketing plan in an organisation should integrate with other corporate or
business strategies to inform specific market plans for different products or
geographical markets. This framework is also integrated with IS/IT and e-
Business strategy to fulfil the traditional marketing practices of creating,
communicating, and delivering value to customers. In addition, e-Marketing
will include other technologies such as the Internet to enable CRM, Supply
Chain Management (SCM), and Enterprise Resources Planning (ERP) to
help to define the organisation’s marketing objectives (Strauss and Frost,
2001; Chaffey, 2004). However, many organisations are still not fully aware
of the benefits and opportunities provided by e-Marketing. The main concern
is the presence of financial constraints and technological expertise especially
for SMEs who have limited resources. Gilmore et al., (2007) identified
several drivers to motivate SMEs in the adoption of e-Marketing including
lower operating and marketing costs, an enriched overall marketing
communications mix, and gaining competitive disadvantages in peripheral
areas. In addition, SMEs have been experiencing difficulties in implementing
e-Marketing due to the lack of specialism in e-Marketing, resulting in
difficulties in responding to competitive threats.
Gloor (2000) - Roadmap of e-Marketing:

Gloor (2000) emphasizes that business and technology are fundamental factors to complete the e-Marketing vision, and the transformation process to electronic businesses has to consider various aspects including the potential of e-Marketing technology (Figure 2.6). The business vision must be clearly defined, and the decision makers including functional managers should work together to complete the transformation plan. Based on the roadmap proposed by Gloor (2000), there is a need for high level ICT expertise, and the business experts play a crucial role to ensure the development of flexible, scalable and extensible marketing architecture to support current needs and future business requirements. The framework in Figure 2.6 indicates the interactive nature of the e-Marketing process, which is never completed but rather is an on-going activity. Furthermore, marketers are now looking at the extended marketing strategy that comprises diagnostic assessment and the future vision of the organisations that provide additional business efficiencies and business leverage to maintain their competitive positions. This attention needs to be directed towards the objectives of choosing the right e-Marketing
resources (including tools, people, techniques and technology as indicated in Gloor’s framework). The right e-Marketing resources should be a vehicle for marketing firms to learn and enhance their knowledge and understanding of the e-Marketing strategies to complete the reinvention of organisation’s business models.

Figure 2.6: Roadmap to e-Marketing
Source adapted from Gloor (2000)

Kierzkowski et al. (1996) – Digital Marketing Cycle:
Kierzkowski et al. (1996) proposed an e-Marketing cycle (Figure 2.7) that applies to the Internet and consists of the following 4 activities:

- engage them;
- retain them;
- learn from them; and
- relate to them.

Kierzkowski et al. (1996) used a circular pattern to illustrate their framework. The relationship of each of the elements contributes to marketing activities and is aimed at achieving profitable acquisition and retention of customers. The application of technology to achieve CRM is a key element of e-
Marketing (Kierzkowski et al., 1996; Laudon and Laudon, 2002). Building long-term relationships with customers is essential for any sustainable business. Hence, this cycle is strongly linked to CRM in terms of making profit, gaining and retaining customer knowledge such as their behaviour, value added, and loyalty drivers. In order to survive in the global competitive market, many consumer marketers depend on their capacity to create value, and this value is defined by consumers. This is supported by Strauss and Frost (2001), who suggest that e-Marketing comprises electronic data and applications for planning and executing marketing activities and marketers can distribute ideas, goods and services to fulfill the consumer's needs.

Figure 2.7: Digital marketing cycle
Source adapted from Kierzkowski et al. (1996)

Researchers above have traditionally examined the influence of Internet technology on organisational structure by investigating the effects of the e-Marketing. However, the approaches suggested were based upon a limited view which will lead to incompletion and inflexibility for marketers. A more evolved perspective especially the relationships between e-Marketing and B2B e-Marketplace should be proposed to influence the design, implementation and appropriate use of technology to suit the organisation's requirement.
Whilst the above authors have made a significant contribution to knowledge in the area, a clear and comprehensive picture of e-Marketing adoption would be instrumental in priding a road map for the same. Many practitioners and academics (e.g. Laudon and Laudon, 2002; Stockdale and Standing, 2004; Gilmore et. al., 2007) have suggested that most organisations especially SMEs are uncertain about whether they have sufficient resources/expertise/experiences to use the Internet and e-Marketing as their marketing tool. The e-Marketer needs to be aware of the current issues and trends including the effectiveness of current e-Marketing strategies/policies adoption (Gebauer et. al., 2007), the main reasons for e-Marketing adoption (Stockdale and Standing, 2004), the major components of e-Marketing strategies (Gloor, 2000) and its critical success factors (Sculley and Woods, 2001). Furthermore, it is also important to respond positively to the current and on-going technological innovations and changes in marketing practices. One of the most heralded e-Marketing developments in recent years is B2B e-Marketplace and this virtual technology-enabled trading platform has made a significant contribution to e-Marketers.

2.2.2 B2B e-Marketing

The linkage between B2B and e-Marketing has received significant attention both as a technological innovation and as a major element for marketing performance (e.g. Kierzkowski et al., 1996; Xu et al., 2002; Zeng et al., 2003; Chaffey, 2004; Noori and Salimi, 2005; Eid et al., 2006; Gabauer et al., 2007). Generally, both B2B and e-Marketing are online-based operations that reflect the flexibility of Internet technologies; which application is available to customers anytime and anywhere. Software embedding such as content management, SCM, CRM, transaction platform and business intelligence allows various kinds of collaborations between buyers/sellers to obtain competitive advantages in the digital business environment. Deighton (1996) of Harvard Business School identified the following advantages of B2B e-Marketing:
- The customer initiates contact;
- The customer is seeking information;
- It is a high intensity medium- the marketer will have 100 per cent of the individual’s attention when he or she visits the website;
- A company can gather and store the response of the individual;
- Individual needs of the customer can be addressed and taken into account in future dialogues.

To date, B2B e-Marketing has become the hottest marketing medium ever known. For instance in the Asia Pacific region, B2B online advertising continues to grow at a rapid pace. The Nielsen Company recently reported that, China has spent RMB4.06 billion (£400 million) on B2B online advertising in the first quarter of 2010 (Ma, 2010). Furthermore, countries such as Indonesia (26 percent), Singapore (30.2 percent), and Thailand (10.8 percent) are indicative of double digit growth from 2009 to 2010 (Nelsen Company cited by Froggatt, 2010).

Academics and practitioners are demonstrating greater interest in pursuing B2B e-Marketing as an alternative marketing and distribution channel. Marketers can target a wide range of information at customers, and customers can then select the information of interest to them. Developing, implementing, and maintaining B2B e-Marketing strategy can yield reduced administrative costs, more efficient marketing campaigns, increased customer responsiveness, and ease for marketers to sell into new markets.

The benefits of B2B e-Marketing to businesses are the flow of information for goods, services and knowledge as well as payment and credit. The functionality of B2B e-Marketing integrated with Internet technology increases revenue and productivity. With the growth of the companies using the Internet as part of the media mix in their marketing activities, marketers have realised that the Web has become a new marketing channel for them. In order to communicate with customers, a company website is typically used to provide products information. Briggs and Hollis (1997) stated that web
advertising is aimed at creating mere exposure effects. The effectiveness of companies advertising is dependent on the ability of the company’s website to convert a visitor into a customer (Warren et al., 2003). Web advertisers are able to measure the amount of advertising delivered, and even track the amount consumed. Leong et al. (1998) found that a website is regarded as being most distinctive out of the TV, magazines, newspapers and the radio.

B2B e-Marketing is an online business interaction that leads to cooperation or competition between businesses. For example, two sellers may compete for the same service or two sellers may cooperate to provide a single framework for related services. In these kind of settings, it becomes vital to clearly define the objectives and constraints of the B2B e-Marketing and equip it with a set of features that facilitate the interactions between the participants.

2.2.3 SMEs and B2B e-Marketing Activities
The Internet technologies that have created the B2B e-Marketplace have improved efficiency in the development and richness of the marketing activities; providing all companies, including SMEs, with business opportunities (Palmer and McCole, 2000). According to Ching and Ellis, (2004), the B2B e-Marketing technologies adoption model can be used to predict an individual acceptance based upon perceived usefulness and usage intentions. Furthermore, studies also point to additional factors such as marketing orientation and learning orientation of the organisation as potential indicators of intention to adopt the Internet (Ching and Ellis, 2004). However, due to limited literature on SMEs and e-Marketing in Asia B2B marketplace, as such this study makes a useful contribution to the regional economy.

SMEs are different compared to larger companies when dealing with e-Marketing (Gallagher and Gilmore, 2004). SMEs are considered to be more intuitive, competency based, revolving around networking and operating under financial/expertise/people/time constraints (Gilmore et al., 2007). Whilst the traditional strengths of SMEs are their ability to serve niche
markets and develop strong relationships with customers, these are diluted by Internet enabled businesses of any size. The threat of entry from larger regional, national and international firms is greater because of the lower transaction costs involved in entering markets dominated by SMEs.

Earlier studies indicated that SMEs could benefit from implementing e-Marketing into their marketing mix, for example, marketing products and services by providing online quotes, advertising in more markets with less expense, using e-mail as a marketing tool and decreasing the costs of printing materials such as catalogues and glossy brochures. They could also enhance their credibility by creating a professional image through the presence of an efficient web site, answer questions about products and services in several languages and conduct research in foreign markets (Kula and Tatoglu, 2003).

A study of SMEs from Gallagher and Gilmore (2004) indicated that despite the opportunities that it offers and the benefits predicted from employing B2B e-Marketing strategy, SMEs were slow to respond to the changes brought about by the B2B e-Marketplace and were not yet making effective use of it. However, SMEs have realised that B2B e-Marketing and the Internet technologies are distinct and effective entities as opposed to integrating them within the whole organisation (Avlonitis and Karayanni, 2000).

2.3 Performances of e-Marketing Services in B2B e-Marketplace
Manardo (2000) refers to B2B e-Marketplace as a virtual, dynamic and real time platform enabling both buyers and sellers to communicate with raw material suppliers, manufacturers and distributors by adopting the Internet technologies. Hence, the B2B e-Marketplace is regarded as one important part of e-Business solutions in the process of enabling supply chain integration to maintain the business value and growing competitive necessity. He highlighted several aspects of the impact and importance of the B2B e-Marketplace including:
• Share the experiences with their companies powerfully shaped by the speed and flexibility of the Internet.
• New concepts of customers and markets relatively unhindered by time or distance.
• A global shift of speed and responsiveness.
• A trend toward global process visibility and virtualisation.
• The benefits of global knowledge integration.
• Changing power and responsibility of the individual.

It is believed that firms that adopted B2B e-Marketing exhibit more concern in gathering information about customers and competitors and are more willing to perform well in their businesses. The B2B e-Marketplace is one of the effective tools to convey messages and reduce marketing costs compared with traditional marketing media (Petersen, 2007).

2.3.1 Dimensions of e-Marketing Services
The development and usage of B2B e-Commerce enabling technology in the e-Business environment have been in existence since the late 1970s (Bakos, 1998). Explosive growth of the WWW and the B2B e-Marketplace has greatly facilitated the development of online commercial applications. Consequently, the emergence and usage of B2B e-Marketplace enabling technology has caused profound changes to the e-Marketing activities. The increasing deployment of B2B e-Marketplace for SMEs in marketing practice provides a new opportunity to facilitate the marketers work more intelligently in order to make the right marketing decisions and enhance sales and provide better returns on their marketing investments.

E-marketing is a fundamental feature in the B2B e-Marketplace, and the integration of CRM and B2B e-Marketplace have long been studied by practitioners, academics and researchers (e.g. Kierzkowski et al., 1996; Xu et al., 2002; Zeng et al., 2003; Chaffey, 2004; Saini et al., 2010). According to Chong et al., (2010), B2B e-Marketplace is the main e-Marketing resource for SMEs. Yu (2007) also agreed that e-Marketing is no longer new but
rather becoming a well-established marketing practice within SMEs for customer relationships. Generally, SMEs are the main element to investigate the extent of usage in terms of the attitude and perception to B2B e-Marketplace. CRM impelled the growth of B2B markets and e-Marketing solutions will tout as drivers of the new SMEs’ business world. In order to achieve this wider perspective, there is a need to review the benefits of B2B e-Marketplace for SMEs, and improved e-Marketing ability and results due to increased use of CRM technology. It is also crucial to study best practices for SMEs to capitalise on the opportunities provided by B2B e-Marketplace by the integration of e-Marketing with their existing marketing channels and practices to increase consumer satisfaction, loyalty and profitability.

The integration of SCM with B2B e-Marketplace has already been explicitly recognised and deliberately included on e-Marketing studies (Serve et al., 2002; Zeng and Pathank, 2003; Albrecht et al., 2005; Angeles and Nath, 2007; Yan, 2010). SMEs have realised that B2B e-Marketplace is emerging as a platform that is highly integrated with SCM technology, and thus enhances the performance of their existing marketing practices. The adoption level of B2B e-Marketplace will be high if the understanding of the benefits for SMEs to archive and the realistic expectations of SCM technology to fit their supply chain networks. Among the benefits of developing supply chain efficiencies using B2B are improved demand forecasts (Zeng and Pathank, 2003), promoted efficient logistics information management (Angeles and Nath, 2007), and reduced cycle times (Petersen et al., 2007). Traditionally, supply chain network do not achieve this without cost. Even in the case where each participant shows evident willingness to cooperate, businesses are still subject to the problem of if one link fails, the entire chain is defunct. As suggested by (Serve et al., 2002; Albrecht et al., 2005), in order to make SCM more resistant to unexpected failure, it is useful to use B2B e-Marketplace as a substitute for each participating business.
The ability of the B2B e-Marketplace to explore new markets is gradually becoming a powerful tool for enhancing operational effectiveness. B2B e-Marketplace provides effective e-Marketing services for SMEs to sustain higher levels of operational effectiveness than its competitors (Eid et al., 2006). The B2B e-Marketplace can establish various kinds of collaborations between buyers and sellers to achieve competitive advantages in the digital business environment (Porter, 2001; Rohm et al., 2004; Laudon and Laudon, 2004). IS/IT is a necessary component for collaboration among firms, markets and products/services (Fong and Hui, 2006; O’Reilly and Finnegan, 2007). However, many firms especially SMEs are not fully aware of the opportunities provided. Therefore, the framework with IS/IT integrated will definitely benefit the business process and avoid the obvious weaknesses of the traditional supply chain. Furthermore, the transparency and visibility of marketing information of B2B e-Marketplace are crucial for competitive advantage (Sinha, 2000; Petersen et al., 2007; Angeles and Nath, 2007; Carter and Curry, 2010). According to Petersen et al., (2007), B2B e-Marketplace provides marketing information about trading parties, markets, procurement and competition in the electronic business environment. The transparency and visibility environment enable buyers/sellers to obtain competitive information. Hence, the investigation of transparency of information in B2B e-Marketplace is crucial to streamline business information flow.

To fully exploit the potential of e-Marketing services derived from B2B e-Marketplace, this study needs to address the issues of integration, interoperability, and verification. The e-Marketing services which are applicable to SMEs, allow for interoperability, and verifying desirable properties of a trading platform are useful in open B2B e-Commerce environments. Future work includes that of providing a suitable specification framework to work as a guideline for SMEs.
2.3.2 The e-Marketing Tools

B2B e-Marketplace integrates a firm’s marketing activities and serves both the seller and the buyer as a new marketing channel to automate marketing functions such as sales and distribution. The literature review of e-Marketing tools has adopted standard industry terminology in naming and describing these tools as illustrated in Table 2.3.

<table>
<thead>
<tr>
<th>e-Marketing Tool</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personalisation</td>
<td>Denotes any aspect of e-Marketing that is modified to an individual customer</td>
<td>When Mary logs in to the Alibaba.com site, it responds, &quot;Hello Mary?&quot;</td>
</tr>
<tr>
<td>Customisation</td>
<td>Modification of what is presented based on preferences that are set by the user</td>
<td>My Yahoo!</td>
</tr>
<tr>
<td>Individualisation</td>
<td>Modification of what is presented based on the user's exhibited behaviour</td>
<td>We know that you buy furniture. Would you like us to give you advance notice of new arrival?</td>
</tr>
<tr>
<td>Navigation and search tools</td>
<td>The tools that customers use to navigate the contents of the site and search its contents</td>
<td>The browse, search, and sitemap buttons</td>
</tr>
<tr>
<td>Ordering tools</td>
<td>Tools that are used to purchase the product</td>
<td>Shopping baskets and checkouts on any e-Commerce site</td>
</tr>
<tr>
<td>Banner advertising</td>
<td>The rectangular box that appears at the top of a Web page and contains an advertisement</td>
<td>The typical ad that appears on the top of any Web page</td>
</tr>
<tr>
<td>Search engine marketing</td>
<td>Tied to the content of the page or the keyword that is being used in a search</td>
<td>Search result for a Toyota Land Cruiser that appears when you search for “SUVs”</td>
</tr>
<tr>
<td>Sponsored links</td>
<td>Results on a search page that are presented to highlight a particular sponsor</td>
<td>The sponsored links that appear on a search on Google.com</td>
</tr>
</tbody>
</table>
e-mail advertising  Electronic mails that are sent out to customers  An electronic message from Amazon.com listing the items that are on sale for the summer season

Viral marketing  An approach in which current customers drive the adoption by prospective customers of a company's product or service  Hotmail pioneered this technique when it launched a free Web-based e-mail service with the tagline (at the bottom of each e-mail), "Get your free e-mail at Hotmail."

Table 2.3: A compendium of e-Marketing tools
Source adapted from Cartellieri et al. (1997); Imber and Betsy-Ann (2000); Kleindl (2001); Haig, (2001); Kalyanam and McIntyre, (2002)

Several authors have focused on the field of e-Marketing tools. Bakos (1998) has provided one of the earliest ideas relating to the emerging roles of the electronic marketplace on marketing activities. Chaffey et al., (2000) emphasized the advantages of electronic purchasing and manufacturer incentives to participate in the electronic marketplace. Frost and Strauss (2002); Goldsmith and Lafferty (2002) focused on developing a Web site for cyber branding. Hoffman and Novak (1996); Grazer (1999); Porter (2001) analysed the new marketing paradigm for Internet economies. Kaplan and Sawhney (2000) also argued that the Internet has produced a highly visible and prolific technological marketing tool for businesses.

However, the literature reveals a lack of evidence regarding the performance of the B2B e-Marketing in relation to organisations of marketing activities and business performance. While there have been increasing numbers of studies on the use of the Internet, there is a lack of actual research on such issues as constraints, successful B2B e-Marketing techniques, the role of the B2B e-Marketplace in relation to organisations marketing activities, and indeed the viability of B2B e-Marketing for SMEs. The literature is also limited in incorporating with others dimensions such as contextual factors for adoption, CRM, SCM, IS/IT integration, competitiveness, transparency of information, and critical success factors (CSFs). Hence, SMEs will need a standard
guideline of carrying out these online interactions relying on a set of marketing features. With the notion of interoperability for this study, the integration of traditional SMEs marketing, B2B e-Marketing, IS/IT, CRM, SCM and B2B e-Marketplace to develop an e-Marketing framework will offer a greater insight into SMEs marketing practices.

2.3.3 B2B e-Marketing Challenges for SMEs

SMEs need to perceive that benefits of B2B e-Marketing will outweigh the costs of marketing. In order to reap the advantages of B2B e-Marketplace, SMEs must fully embrace it by releasing the potentials of the Internet (Sharma and Seth, 2005).

A major challenge of B2B e-Marketplace is security. Nickles (2000) stated that hackers can wreak havoc across the global computer network. B2B e-Marketplace is totally exposed to the Internet, and therefore the information assets need to be protected via the security technology. Thus, marketers need to be aware of all stages of security development especially in payment transactions. In addition, marketers should also consider improving security by implementing every aspect of the applications including system software and networks.

Development cost is one of the major issues of implementing B2B e-Marketing solutions. According to Rodgers et al. (2002), B2B e-Marketing projects are complex, hence, there are many issues which need to be considered including hardware, software, and human factors (employees need to be trained). Moreover, the company must aware of the failure risks, because it will become a burden to the company. According to a study by Chong et. al., (2010), over 24 percent of 315 B2B companies rated e-Marketing implementation as a medium of high cost and risk, and 90 percent of these firms were concerned about budget to implement e-Marketing solutions. Thus, before the adoption of e-Marketing solutions, the company’s management need to recognise the feedback of their competitors, and recognise the potential benefits.
A number of day-to-day operational practicalities regarding the implementation and maintenance of e-Marketing related technologies are creating potential problems for SMEs that could result in disastrous consequences (Krishnamurthy and Singh, 2005). The creation of a web presence, and its maintenance, is very costly for SMEs (Bacheldo, 2000). Costs and challenges include the size of the website, how often it needs updating, should the company buy the hardware and software to create it themselves, or the question of whether they should contract professionals to provide the services. The disadvantage of creating it themselves lies in their inability to keep it updated due to the stretching of staff resources and lack of specialist skills associated with most SMEs. Poor customer service in the form of irregular updating and maintenance and a lack of staff training and awareness of the web presence will provide little incentive for repeat visits by a customer and have serious financial implications for that company (Kalakota and Robinson, 2001; Downie, 2002).

During implementation, many SMEs have experienced “information overload”, inappropriate web design, problems in effectiveness measurement and inappropriate links and banners that have all been shown to have had deleterious effects (Downie, 2002). Many SMEs whose site content had been created by IT departments were dissatisfied with the way the site was structured. Also, whilst the adoption of a website among SMEs is widespread, there is a notable lack of knowledge on the degree to which e-Marketing (integrated with their website) can be considered to offer a genuine replacement or supplement to traditional marketing activities and tools (Chaffey, 2003).

The low cost of the internet's communication permits firms with limited capital like SMEs to become global marketers at the early stages of development. However, it can be considered potentially harmful for an SME to open up to a global market if the company is not ready and so the value of e-Marketing for SMEs has been questioned. For instance, the small nature of SMEs and the close proximity of employees mean that they cannot benefit to the same
extent from the advantages or internal communication via e-mail that the workforces of many large companies experience due to their size.

2.4 B2B e-Marketing Critical Success Factor

Literature is indicative of the growth of the B2B sectors in all industries, and B2B e-Marketplace is one of the sectors that have witnessed a rapid increase. B2B e-Commerce is clearly a case of evolution as firms grow accustomed to doing business electronically. Hence, identifying the Business-To-Business Critical Success Factor (B2B CSF) for business efficiency and improved value chain in B2B exchanges is important. However, the literature is limited and most research in the past has been either descriptive or theoretical and often ignores the development of a solid B2B CSF framework to guide SMEs for “e” transformation.

Limited literature can provide strong theoretical or statistical support in this field, often because they are of an exploratory or purely theoretical nature. The absence of a valid B2B CSF framework for SMEs as a guideline to participate in B2B e-Commerce become a major research gap. Consequently marketing academics and practitioners have devoted considerable effort to identifying the critical factors. Furthermore, the majority of research on B2B e-Commerce has been conducted in western countries (e.g. Chaffey et. al., 2000; Lu and Antony, 2003; Eid and Trueman, 2004; Eid et al., 2006 etc.). Only a limited number of studies have addressed some of the issues associated with the Asian B2B marketplace, and as such this study makes a useful contribution to this area of knowledge.

2.4.1 Factors Discussion

B2B CSF has received much attention in the past decade (e.g.; Chan and Swatman, 2000; Eid and Trueman, 2004; Gengatharen and Standing, 2005; Li and Li, 2005; Angeles and Nath, 2007). The main implication from the above is indicative of the need to understand the CSFs that are affecting business processes to ensure business efficiency in the B2B e-Commerce environment.
Eid and Trueman (2004) identified 21 factors that affect the successful implementation of the B2B Internet marketing. These factors were classified into five categories: marketing strategy, website, global competitiveness, internal, and external. Chan and Swatman (2000) suggested buyers and sellers involvement, cultural considerations, and the use of both conventional and Internet marketing are the key factors to success in B2B implementation. O’Reily and Finnegan (2007) believed that selecting the suitable IS/IT infrastructure is the key to improve B2B efficiencies, reduce marketing costs, and improve overall business performances.

Gengatharen and Standing (2005) had employed in-depth case studies and successfully identified four main success factors: E-marketplace characteristics, market makers’ characteristics, participants’ characteristics, and environmental factors. Li and Li (2005) investigated CSFs for operating B2B e-Marketplaces from different perspectives. Based on their in-depth literature analysis, functional factors (e.g. transparency of trading information), strategic factors (e.g. development of customer relationships) and technical factors (e.g. security matter) were the foundation for the success of B2B e-Commerce. Yu (2007) identified three main factors that drive a company to adopt B2B e-Marketplace: firm characteristics, competitiveness of the business environment, and the promotion from top management, while Hu et al., (2004) emphasised government encouragement and commitment is crucial to implement B2B e-Commerce. Finally, Angeles and Nath (2007) conducted a factor analysis to seek an understanding of the success factors that have direct impact on B2B e-procurement practices. They successfully identified three success factors: supplier and contract management; end-user behaviour and e-procurement business processes; and information and e-procurement infrastructure.

The motivation for this study is influenced by the exploratory nature of the topic and the limitation of strong theoretical, practical, statistical (empirical quantitative study) support for the B2B CSF literature from above authors. It is conceivable that by identifying a comprehensive/definitive B2B CSF can be one of the important strategies to raise the awareness and encourage
SME participation in B2B e-Commerce. Furthermore, an absence of standard B2B CSF model is a concern for SMEs. SMEs need a comprehensive model, or guidelines that can assist them in the implementation of B2B strategies. Therefore, the proposed B2B CSF framework should be simple, applicable, and understandable by covering an extensive area of B2B e-Commerce knowledge for SMEs.

Following the extensive literature review, this study was able to identified nine broad factors that have direct impact on successful B2B e-Commerce. These factors were:

1) Successful customer relationships – Academics and practitioners such as Frook (2001), Xu et al. (2002), Zeng et al. (2003), Li and Li (2005), Gengatharen and Standing (2005) are of the view that successful customer relationships are a critical element for the development of B2B e-Commerce. They also considered that CRM will benefit all the stakeholders (e.g. buyers, sellers, B2B e-Marketplace service providers) in business relationships, information sharing, sales, marketing and customer service.

2) Supply chain facilities – B2B e-Commerce can be achieved effectively via B2B e-Marketplace by integration with SCM (Rudberg et al., 2002; Serve et al., 2002; Zeng and Pathak, 2003; Angeles and Nath, 2007). The authors above support the notion that SCM has a major impact on the success or failure of B2B implementation.

3) Global competitiveness – Chan and Swatman (2000), Eid and Trueman (2004), Day et al. (2003), and Rohm et al. (2004) emphasized that global competitiveness is the key factor affecting the success of B2B e-Commerce. They also suggested that the Internet could increase the market size and improve global competitiveness.

4) IS/IT performances – Frook (2001), Li and Li (2005), Fong and Hui (2006), and O'Reily and Finnegan (2007) indicated that IS/IT infrastructures (e.g. CRM, ERP etc.) are the main resource to success in B2B e-Commerce. The
IS/IT services integrated in the B2B e-Marketplace can support the entire level of B2B activities including business processes or supply chain activities.

5) Transparency and visibility of information – Li and Li (2005), Petersen et al., (2007); Angeles and Nath (2007) described transparency of information in B2B business environment offer unbiased, complete and accurate market information and is critical to determine the success in B2B e-Commerce.

6) Top management support and commitment – Xu et al. (2002), Eid and Trueman (2004), and Yu (2007) all agreed that senior management involvement has a significant impact on the success of B2B e-Commerce implementation.

7) Government encouragement and commitment – Chissick and Kelman (1999), Hu et al., (2004), Chong and Shafaghi (2009) indicated a company’s readiness for B2B e-Commerce to some extent depends on government encouragement: promotion activities, government grants and the regulation standards, would all be important factors in the success or failure in an online trading environment.

8) Security and trust –May (2000), Papadopoulou et al. (2000), Bidgoli (2002) and Li and Li (2005) emphasised that Internet and transaction security and trust are the most important areas that affect the success in B2B e-Commerce.

9) Cultural consideration – Laudon and Laudon (2002), Prasad and Sounderpandian (2003), and Shelton et al. (2003) considered culture a key factor for B2B e-Commerce implementation. They also considered that different languages in the different countries may lead to communication problems related to B2B activities.

The findings above provide new theoretical grounds for research into B2B relationships in the digital business environment. It also provides a literature
assessment of the essential components in B2B e-Commerce adaptation, and implications for the means to prioritize CSF.

2.4.2 The New B2B-eM-CSF

The findings generally consider nine factors to emerge from the literature search. Successful customer relationships, global competitiveness, government encouragement and commitment, transparency and visibility of information, IS/IT performances, top management support and commitment, supply chain facilities, cultural considerations, and security are considered in relation to the perceived success of B2B e-Commerce.

The literature review provided an original attempt to develop the new Business-To-Business e-Marketing Critical Success Factor (B2B-eM-CSF) for the Asian B2B marketplace. Academic research on the CSF for B2B e-Commerce is still at a developing stage. However, this study has contributed to the cumulative body of research in both CSF concept and technique in the use of B2B e-Marketplace for B2B e-Commerce purposes.

It is important that SMEs develop a systematic approach to identify and prioritise CSF in the implementation process and in line with the environment in which the adaptation is located. Therefore, SMEs need to establish a comprehensive approach to manipulate and adopt each factor based on the findings and interpretation of this study.

In addition, the CSFs in this study serve as building blocks for B2B e-Marketing framework development. It provides a guideline for academics and practitioners and highlights the significant role of each factor in developing and sustaining effective B2B e-Marketing practice for SMEs. SME managers can derive a better understanding and measurement of marketing activities that appropriately balance traditional and B2B e-Commerce practice. At the same time, CSF can be integrated into the companies to determine the level of marketing performance in B2B e-Marketplace.
Whilst larger companies are gaining a variety of benefits from this electronic platform, SMEs remain concerned on how their products/services could be best exposed to the global marketplace. However, research in the area of CSF in Asian B2B marketplace is limited and there is no clear strategy to facilitate the adaptation. The challenges for Asian SMEs to identify and understand the factors that is essential in conducting business in the B2B e-Marketplace with a view to sustainability and competitive advantages.

2.5 The Need of e-Marketing Framework Development

An in-depth literature review of the current B2B e-Marketplace and e-Marketing has identified more limitations in this research field. The theoretical inadequacies and the challenges faced by SMEs in B2B e-Marketing offer enormous scope for further research. The theories, concepts and frameworks discussed above make a useful contribution to the field of B2B e-Marketing. However, in the context of SMEs, more research is needed discussed in the following sections.

2.5.1 Research Gaps in the Current Literature

Whilst the above authors have made a significant contribution to knowledge in the area, a clear and comprehensive picture of B2B e-Marketing adoption would be instrumental in providing a road map for “e” transformation. Many practitioners and academics (e.g. Laudon and Laudon, 2002; Stockdale and Standing, 2004; Gilmore et. al., 2007) have suggested that most organisations especially SMEs are uncertain about whether they have sufficient resources/expertises/periences to use the Internet and e-Marketing as their marketing tool.

2.5.2 A New e-Marketing Framework Derived from B2B e-Marketplace

The inadequacies of e-Marketing services derived from B2B e-Marketplace are considered a catalyst for the development of a comprehensive e-Marketing framework for SMEs. The proposed e-Marketing framework for SMEs should focus on achieving the following objectives:
1) Application for SMEs

The technologies that have created the Internet have improved efficiency in the development and richness of the current marketing activities (Wu; 2001) providing all companies, including SMEs, with business opportunities. However, e-Marketing in SMEs is different from e-Marketing in larger organisations. It is considered to be more intuitive, competency based, revolved around networking and operating under financial and human resource/time constraints. Whilst the traditional strengths of SMEs are their ability to serve niche markets and develop strong relationships with customers, these are (to some extent) diluted by internet enabled businesses of any size.

With this in mind the proposed e-Marketing framework should be developed by considering SMEs generic constrains and their strengths. The e-Marketing framework designed with the adoption of B2B e-marketplace should be able to complement traditional marketing activities and tools particularly for SMEs.

2) Multidisciplinary Approach

The proposed e-Marketing framework should be developed on the basis of a multidisciplinary approach derived from the B2B e-Marketplace, integrating; CRM, SCM, IS/IT, and competitive factors;

e-CRM - Since B2B and CRM are online-based operations, they share many similarities such as relationships management (Kierzkowski et al., 1996; Xu et al., 2002), sales force automations (Chaffey, 2004), operations such as marketing, billing, shipping and customer services (Zeng et al., 2003). As B2B and CRM become more in demand by customers (Saini et al., 2010), it can be predicted that the integration of CRM into the e-Marketing framework will be value-added to the SMEs.

e-SCM - Many academics and practitioners (Serve et al., 2002; Zeng and Pathak, 2003; Albrecht et al., 2005; Petersen et al., 2007; Angeles and Nath, 2007) believe that by integrating SCM with B2B e-Marketplace, companies
can change their traditional B2B exchange methods to collaborate and share information via the Internet. The main purpose of SCM is to link the manufacturer’s operations with their suppliers, customers and intermediaries (Angeles and Nath, 2007). Hence, the exploration on how B2B e-Marketplace links with companies’ procurement process, operations, sales and marketing, and distributions process in different supply levels in partnerships with their stakeholders becomes important.

e-Competitiveness - The ability of companies to explore new markets is gradually becoming a main tool in marketing activities (Eid et al., 2006). The Internet can establish various kinds of collaborations between companies to achieve sustainable competitive advantages in the global business environment (Porter, 2001; Rohm et al., 2004; Laudon and Laudon, 2004). However, the openness of the Internet and advances in software and applications means that companies can develop, design and copy best practices very quickly. Therefore, it is difficult for a firm to stay ahead from its rivals, because many companies can end up following similar marketing strategies. Hence, the proposed e-Marketing framework that will integrate sustainable competitive’ marketing technologies becomes increasingly important.

IS/IT integration - IS/IT is a necessary component for collaboration among firms, markets and products/services in B2B e-Marketplace (Fong and Hui, 2006; O’Reilly and Finnegan, 2007). The B2B e-Marketplace is an intermediary that provides information for trading parties, markets, procurement and competition (Petersen et al., 2007; Angeles and Nath, 2007) for both buyers and sellers with the integration of IS/IT. However, many firms especially SMEs are not fully aware of the opportunities provided. Therefore, the framework with IS/IT integrated will definitely benefit the business process and avoid the obvious weaknesses of the traditional supply chain.

Transparency of Information - The abundance of data available in B2B e-Marketplace is intended to make more information about trading parties, markets, procurement and competition in the electronic business environment(Sinha, 2000; Petersen et al., 2007; Angeles and Nath, 2007;
Carter and Curry, 2010). In such a transparent environment, it is easier for buyers/sellers to obtain competitive information. Hence, the investigation of transparency of information in B2B e-Marketplace is crucial to streamline business’s information flow.

3) Flexibility and Comprehensive
One of the most vivid implications of the e-Marketing framework for SMEs is the flexibility for external communication and information gathering for market and product research. Although the breadth of research activities pursued in e-Marketing and SMEs is limited at present, the continued growth of e-Marketing will enable SMEs to engage in currently underutilised applications. SMEs need to perceive that the flexibility of B2B e-Marketing will outweigh the costs of marketing. Hence, the proposed framework should be effective by covering an extensive area of e-Marketing knowledge for SMEs.
Summary
The literature provides insights into the current level of Internet-enabled marketing technologies from B2B e-Marketplace to the marketers. The online and offline publications from both academics and practitioners indicated that B2B e-Marketing is a modern marketing practice for buying and selling goods, services, information and ideas via the Internet associated with communication and promotional purposes. The frameworks suggested by various authors including Chaffey, (2004); Gloor, (2000); Kierzkowski et al., (1996) make a significant contribution to knowledge in the areas of B2B e-Marketing that has the potential to create competitive advantage and enhance customer value. However, it appears that there is limited exploitation of such frameworks by academics and industry professionals. In order to develop a better understanding of the topic under study, this study will adapt a multidisciplinary approach by integrating traditional SMEs marketing, e-Marketing, IS/IT, CRM, SCM, competitiveness and B2B e-Marketplace to develop an e-Marketing framework that will offer greater value for SMEs.
Chapter 3: Research Methods

Overview
Chapter three describes and provides the rationale for the methodology used for the study. It is based on the discussion and exploration of the philosophical and theoretical elements of conducting research and their relation to the study. This chapter focuses on a two-stage research design, combining qualitative and quantitative strategies.

Many academics and practitioners are concerned with the alternatives in data collection. They suggested that questions of research methods are of secondary importance to questions of which philosophies and approaches of the research (Easterby-Smith et. al., 1991; Guba and Lincoln, 1994). The adoption of research philosophy contains important assumptions about the way researchers underpin the research strategy and select suitable research methods (Saunders et. al., 2009). It is therefore crucial to examine the research philosophy before embarking on the selection of research methods.

The overall research design for this study is motivated by the research ‘onion’ (Figure 3.1) suggested by Saunders et al. (2007). The model is used to enhance the understanding of the research process for the study, as each layer contains important differences which will influence the process.
3.1 Research Philosophies and Approaches

In essence, the aim of social science research is to describe and explain complex phenomena. A selection of appropriate research paradigm is important to address the gap of research quality for validity and reliability (Perry et al., 1999; Saunders et al., 2009). Research paradigm is “overall frameworks within which some researchers work, that is, a paradigm is a world-view or a set of linked assumptions about the world which is shared by a community of scientists investigating the world” (Deshpande, 1983, p. 101). There is widespread agreement in the social science research community that research paradigms should be synthesised into three categories: positivism, realism, and Interpretivism. Each paradigm should be illustrated with three elements: ontology, epistemology, methodology which summarised in Table 3.1.
<table>
<thead>
<tr>
<th>Paradigms</th>
<th>Elements</th>
<th>Positivism</th>
<th>Realism</th>
<th>Interpretivism</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ontology:</strong> the researcher’s view of the nature of reality or being</td>
<td>External, objective and independent of social actors</td>
<td>Is objective. Exists independently of human thoughts and beliefs or knowledge</td>
<td>Socially constructed, subjective, may change, multiple</td>
<td></td>
</tr>
<tr>
<td><strong>Epistemology:</strong> the researcher’s view regarding what constitutes acceptable knowledge</td>
<td>Only observable phenomena can provide credible data, facts. Focus on causality and law like generalisations, reducing phenomena to simplest elements</td>
<td>Observable phenomena provide credible data, facts. Insufficient data means inaccuracies in sensations. Alternatively, phenomena create sensations which are open to misinterpretation.</td>
<td>Subjective meanings and social phenomena. Focus upon the details of situation, a reality behind these details, subjective meanings motivating actions</td>
<td></td>
</tr>
<tr>
<td><strong>Common methodologies:</strong> guides the research design and data collection</td>
<td>Experiments/surveys: verification of hypotheses/research questions, chiefly quantitative or qualitative methods. Highly structured and large samples</td>
<td>Methods chosen must fit the subject matter, quantitative or qualitative</td>
<td>Small samples, in-depth investigations, qualitative</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.1: Comparison of three research philosophies and their elements
Source adapted from Burrell and Morgan, (1982); Deshpande, (1983); Cohen and Manion (1994); Perry et al., (1999); Lincoln, (2000); Saunders et al., (2009)
The essence of realism is that what the senses show as reality is the truth. According to Bryman (2001), realism believes and attempts to find out about the real world. However, realism refers to a rational edifice built by scientists to explain human behaviour which has limited applicability in the electronic marketing discipline (Cohen and Manion, 1994). Generally, realism is an important research paradigm in social science, but the criteria with which to explicitly judge its quality have not been developed (Cohen and Manion, 1994; Bryman, 2001; Saunders et al., 2009). Furthermore, realists accept that there is a real world to discover even if it is only imperfectly and probabilistically apprehensible which is in contrast to the objective nature of this study.

Interpretivist refers to real direct experiences that happen daily and can interpret the experience of participants in order to understand the essence of the experience as perceived by the participants (Cohen and Manion, 1994). According to Saunders et al. (2009), interpretivism advocates that it is necessary for researchers to understand differences between humans in their role as social actors. Thus, this paradigm may be suitable for some social science and consumer behaviour research, but it is rarely appropriate for electronic marketing research because the approach excludes concerns about the important for economic and technological dimensions of business (Hunt, 1991).

Positivist argues for the universal application of the scientific method, making no distinction between the physical sciences and the social sciences (Hunt, 1999). Essentially, positivism is suitable to both quantitative and qualitative research (Perry et al., 1999; Lincoln, 2000; Saunders et al., 2009). According to Lincoln (2000), positivism predominates in social science and assumes that social science quantitatively measures large sample size. Hunt (1999) ascertains that a positivism view is appropriate when approaching social science phenomena like marketing networks which involve large scale surveys. These characteristics improve the compatibility of positivist paradigm with this study in order to better understand and express its emergent properties and features.
Therefore, the research paradigm adopted in this study draws from positivism which is a relevant paradigm for much quantitative and qualitative research in marketing. The combination of quantitative and qualitative analysis is based on an epistemological and ontological view to measure and analyse causal relationships between variables and the e-Marketing framework. Hence, the positivist paradigm is adopted to examine the way in which e-Marketing occurs both within and between firms.

### 3.1.1 Qualitative and Quantitative Research Methods

Inductive studies involve making observations, usually to develop a new hypothesis or contribute to a new theory, whereas deductive research begins with known theory and usually develops by attempting to provide evidence for or against a pre-specified hypothesis (Patton, 2002). Inductive analysis often involves discovering patterns, themes, and categories, whereby deductive analysis are analysed according to an existing frameworks (Patton, 2002). Saunders et al. (2007) identified the major differences between deductive and inductive research approaches as shown in Table 3.2.

<table>
<thead>
<tr>
<th>Deduction emphasizes</th>
<th>Induction emphasizes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientific principles</td>
<td>Gaining understanding of the meanings of human</td>
</tr>
<tr>
<td>Moving from theory to data</td>
<td>A close understanding of the research context</td>
</tr>
<tr>
<td>The collection of quantitative data</td>
<td>The collection of qualitative data</td>
</tr>
<tr>
<td>The application of controls to ensure validity of data</td>
<td>A more flexible structure to permit changes of research</td>
</tr>
<tr>
<td>Researcher independence of what is being researched</td>
<td>A realisation that the researcher is part of the research process</td>
</tr>
<tr>
<td>The necessity to select samples of sufficient size in order to generalise conclusions</td>
<td>Less concern with the need to generalise</td>
</tr>
</tbody>
</table>

Table 3.2: Deductive and inductive research approaches

Source: Saunders et al. (2007)
For deductive research, data collection is often associated with quantitative data. It is normally possible to predict the time schedules accurately (Easterby-Smith et al., 2008). On the other hand, inductive research which is often associated with qualitative data, can be more protracted and require a longer period of data collection (Saunders et al., 2007). Many researchers (e.g. Marshall and Rossman, 1999; Lincoln, 2000; Amaratunga et al., 2002) have examined both qualitative and quantitative methodology and realised that mixed methods approach (generally combining qualitative and quantitative data collection techniques and analysis) provide better opportunities to evaluate the extent of the research findings.

In most cases, quantitative research is a method adopted from physical science that is designed to ensure objectivity, generalisability and reliability (Amaratunga et al., 2002). The standardised questionnaire and the statistical methods are the some of the good examples to test predetermined hypotheses. The strengths of the quantitative paradigm are that its methods produce quantifiable, reliable data that are usually generalisable to some larger population. Quantitative measures are often most appropriate for conducting needs assessments or for evaluations comparing outcomes with baseline data. This paradigm breaks down when the phenomenon under study is difficult to measure or quantify. For instance, without human behaviour in a way that removes the event from its real world setting and ignores the effects of variables that have not been included in the model would be the greatest weakness of the quantitative approach (Marshall and Rossman, 1999).

Qualitative research methodologies are designed to provide the researcher with the perspective of target audience members through immersion in a culture or situation and direct interaction with the people under study (Amaratunga et al., 2002). Qualitative methods used in social marketing include observations, in-depth interviews and focus groups. These methods are designed to help researchers understand the meanings people assign to social phenomena and to elucidate the mental processes underlying behaviors (Crabtree and Miller, 1999). Hypotheses are generated during
data collection and analysis, and measurement tends to be subjective. In the qualitative paradigm, the researcher becomes the instrument of data collection, and results may vary greatly depending upon who conducts the research.

An examination of the qualitative and quantitative paradigms will help to identify their strengths and weaknesses and how their divergent approaches can complement each other. Particularly, both of these research methods can help to extend the understanding of the study to build broad range of research perspectives and skills.

<table>
<thead>
<tr>
<th><strong>Qualitative</strong></th>
<th><strong>Quantitative</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The aim of qualitative analysis is a complete, detailed description.</td>
<td>In quantitative research we classify features, count them, and construct statistical models in an attempt to explain what is observed.</td>
</tr>
<tr>
<td>Recommended during earlier phases of research projects.</td>
<td>Recommended during latter phases of research projects.</td>
</tr>
<tr>
<td>Researcher may only know roughly in advance what he/she is looking for.</td>
<td>Researcher knows clearly in advance what he/she is looking for.</td>
</tr>
<tr>
<td>The design emerges as the study unfolds.</td>
<td>All aspects of the study are carefully designed before data is collected.</td>
</tr>
<tr>
<td>Researcher is the data gathering instrument.</td>
<td>Researcher uses tools, such as questionnaires or equipment to collect numerical data.</td>
</tr>
<tr>
<td>Data is in the form of words, pictures or objects.</td>
<td>Data is in the form of numbers and statistics.</td>
</tr>
<tr>
<td>Qualitative data is more 'rich', time consuming, and less able to be generalized.</td>
<td>Quantitative data is more efficient, able to test hypotheses, but may miss contextual detail.</td>
</tr>
<tr>
<td>Researcher tends to become subjectively immersed in the subject matter.</td>
<td>Researcher tends to remain objectively separated from the subject matter.</td>
</tr>
</tbody>
</table>

Table 3.3: Features of qualitative and quantitative research

Source adapted from Kelle and Erzberger, (2004); Rossman and Wilson, (1991); Flick (2006)
Qualitative researchers are concerned primarily with process, rather than outcomes or products, and are interested in real lives, experiences, and the structure of the real world. Moreover, the qualitative researcher physically goes to the people, setting, site, or institution to observe, or record the behaviour. As mentioned in Section 3.1, the process of qualitative research is inductive in which the researcher builds abstractions, concepts, hypotheses, and theories from details. In quantitative research, statistical models explain what is observed. Rossman and Wilson (1991) stated that quantitative refers to numerical representation and manipulation of observation. Applying quantitative data will involve numerical estimation and statistical inferences from samples in the particular population of interest. A summary of the kinds of distinctions concerning the use and value of both methods is provided in Table 3.3.

3.1.2 Triangulation of Research Approaches

Based on the general principle of the research philosophy above, mixed methodologies (triangulation) are proposed to be employed for this study. There is a strong suggestion within the research community that, both quantitative and qualitative data are best mixed in majority of the research field (e.g. Rossman and Wilson, 1991; Marshall and Rossman, 1999; Lincoln, 2000; Amaratunga et al., 2002). Rossman and Wilson (1991) suggested that the advantages of combining qualitative and quantitative data are as followed:

- Enables confirmation or corroboration with each other via triangulation.
- Elaborate or develop analysis to provide richer details.
- Initiate new lines of thinking through attention to surprises or paradoxes, “turning ideas around”, providing fresh insights.

In addition, Amaratunga et al. (2002) recognised that quantitative data can help with the qualitative side of a study by finding a representative sample and locating deviant samples, while qualitative data can help the quantitative side of the study during design by aiding conceptual development and instrumentation. Both results focus on different aspects of an issue but are
complementary to each other which are divergent or contradictory. Qualitative and quantitative mutually confirm and support the same conclusions (Kelle and Erzberger, 2004).

![Image: Figure 3.2: Triangulation of qualitative and quantitative research](source)

Figure 3.2: Triangulation of qualitative and quantitative research
Source adapted from Flick (2006)

Triangulation is often used to demonstrate different data sources or inquiry approaches that will lead to the same result (Patton, 2002). The purpose of triangulation is to increase the credibility and validity of the research results. By combining multiple research methods, researchers can overcome weaknesses or problems stemming from a single method. Referring to Figure 3.2, a triangulation approach is the combination of methodologies in the study of a single case. Moreover, the results from both methods can be interpreted into a single set of data. For instance, the same participants are interviewed and fill out an online questionnaire. Both of the answers are then compared with each other, collated, and refer to each other in the data analysis. Denzin (1989) has identified four basic types of triangulations as follows:

- Data triangulation – the use of a variety of data sources in a study.
- Investigator triangulation – the use of several different researchers or evaluators.
- Theory triangulation – the use of multiple perspectives to interpret a single set of data.
• Methodological triangulation – the use of multiple methods to study a single research problem.

Addressing the relationships, combination or the distinctiveness of qualitative and quantitative research methods has led to controversy in the past few decades. Qualitative research is used to explore and understand people’s beliefs, experiences, attitudes, behaviours and characteristics and quantitative research generates numerical data or data that can be converted into numbers. In many cases, qualitative methods were developed in the context of a critique of quantitative methods. The study from Lincoln (2000) indicated that qualitative methods are independent compared to quantitative and both of these methods can be established on different levels as follows:

• Epistemology (and epistemological incompatibilities) and methodology.
• Research design combining or integrating the use of qualitative and quantitative data and or/ methods.
• Research methods that are both qualitative and quantitative.
• Linking findings of qualitative and quantitative research.
• Generalisation of findings.
• Assessing the quality of research-applying quantitative criteria to qualitative research or vice versa.

Combining qualitative with quantitative is becoming increasingly common. ICT research is complex and the strength of a combined method of analysis is particularly helpful. According to Tashakkori and Teddlie (2003), a triangulation research method provides better opportunities to evaluate the extent to which the research findings can be trusted and inferences made from them. There are various advantages for combining both types of research. For example, semi-structured interviews analysed qualitatively can be used to clarify the content of some of the questionnaire results.
This study aims to combine detailed qualitative and quantitative analysis to describe the phenomena of interest. The next section details a triangulation approach for this study for collection and analysis of quantitative and qualitative data depending on a combined research strategy based on surveys and interviews to address different levels of the study.

3.2 The Application of the Methodology

There are a wide range of strategies for data collection available which include; Survey, Statistical/data analysis, Semi-structured interviews, Observations, Case studies, Ethnographic studies, In-depth interviews, Focus groups, Content analysis, Action research, Personal reflection, Participant observations, Telephone surveys, Online focus groups, E-phone surveys, Internet surveys and Mystery shoppers. The choice of methods for this study was motivated by the desire to combine the literature review (secondary data), surveys (online questionnaire), and interviews.

The study applies a triangulated methodology with qualitative and quantitative data collection mechanisms. More specifically, a quantitative method of analysis will be used as the primary means of analysis to obtain an understanding of the e-Marketing services derived from B2B e-Marketplace, while the qualitative data set act as a supporting instrument. A mixed methods approach was determined to be paramount for this study. The data collection phase is based on the inquiry on the assumption that collecting diverse types of data sequentially, through triangulation of quantitative data and qualitative data provides a better understanding of the research problem. According to Creswell (2003), priority is usually given to quantitative data, but integration of both methods occurs during the final interpretation phase. The first phase of the data collection was instigated with an extensive survey in order to generalise the results to a population. It then concentrated, in the second phase, on the collection and analysis of specific qualitative data through open-ended telephone interviews, face-to-face interviews, and interviews via Webcam in naturalistic settings, observations, and documentation. In the first phase, the researcher used quantitative research questions from the survey instrument to determine the relationship
between e-Marketing services derived from B2B e-Marketplace and the development of e-Marketing framework for SMEs in the Asian B2B marketplace. In the second phase, the researcher employed qualitative data collection to examine the results in more detail. Data received from both interviews and online surveys were used to interpret and compare to develop a triangulated method in e-Marketing. Quantitative data were analysed qualitatively and qualitative data were analysed quantitatively. Hence, qualitative data can be converted into narrative that can be analysed qualitatively and qualitative data can be converted into numerical codes so that it can analyse statistically.

The online survey (Appendix B) was designed and aimed at directors, general managers, IT managers, sales/marketing managers and export/import managers in selected organisations who participated in B2B e-Marketplace. Their full details including name, designation, full address, email address, contact number, and number of employees of the recipients were obtained from the B2B e-Marketplaces and through the researcher’s contacts in the Asia B2B marketplace. Accompanied by a covering letter, all companies were contacted by email during the first week of data collection, and this was then followed by the ‘follow-ups’ emails to foster participation. Furthermore, the B2B e-Marketplace service providers were contacted by postal letter to act as a catalyst for fostering participation of their members in the survey. The interviews were conducted with a selected sample from the online questionnaire who expressed their interest in taking part in an interview. These were considered based on their response to the questionnaire, and their suitability and potential contribution. The following sections will further illustrate the rationale of selecting the research instruments for this study.

3.2.1 Surveys
Surveys are considered the most appropriate tool for making interference about a large group of people to compare, explain knowledge, attitudes and behaviour (Marshall and Rossman, 1999; Zikmund, 2000; Hoyle, 2002). The fundamental idea of a survey is to descript and explain statistically and
variability certain features in a particular population. The advantages of survey research suggested by Kelle and Erberger, (2004) include:

- **Accuracy** - measurement in quantification and reliability of particular population.
- **Generalisability** - generalised to a larger population with minimisation of error.
- **Convenience** - amenable to rapid statistical analysis.

Since the study covers a wide geographic area in Asia, an online survey was considered the most suitable technique for data collection. The greatest strengths of online surveys are the potential to collect a large amount of data in a relatively short amount of time. Furthermore, Cavana et al. (2001) emphasized that online surveys are easy to design for the data collection and analysis process in quantitative research approach. An online survey provides a quick, efficient, and accurate means of assessing information with expanded geographic coverage without increase in cost.

### 3.2.1.1 Development of the Questionnaire

The questions used in questionnaires need to be precisely defined prior to data collection because only one chance is offered to collect the data. Thus, the development of the questionnaire is crucial to answer the research questions and to address the research objectives. Dillman (2000) stated that researchers should carefully consider the type, content, wording and order of the questions before distributing it to the participants. To ensure the validity and reliability of the data collection and the response rate, this research adopted the following steps for the designing of the questionnaire as recommended by Bourque and Clark (1994); Dillman (2000); DeVaus (2002); Fink, (2003); Bell (2005); Saunders et. al., (2007):

1. **Designing individual questions** – According to Bourque and Clark (1994), designing questions in a questionnaire should be determined by the need of the data collection. In order to obtain valid feedback from the
recipients, the designed questions need to be precise and unambiguous to allow both reliability and validity to be assessed. According to Saunders et al. (2007), in a large population, closed questions, sometimes referred to as closed-ended questions or forced-choice questions (DeVaus, 2002), are more appropriate because they are quicker, easier to answer, and require minimal writing from the respondents. In addition, responses are also easier to compare especially to the large population as they have been predetermined. Based on a closed-ended scale format questions, the Likert Scale technique was used to collect opinion data. Saunders et al. (2007) stated that it is often makes sense to adopt or adapt an existing scale rather than create new scaling techniques. Thus, in this study, a 1 to 5 Likert Scale was used to obtain the opinions from the respondents where; 1= Strongly disagree, 2= Disagree, 3= Neutral, 4= Agree and 5= Strongly disagree. These questions could then be statistically analysed by the methods of descriptive, correlation, and multiple regression analyses. In general, closed-ended questions and 1 to 5 Likert Scale techniques were employed in the survey questions.

2. **Designing the survey forms** – According to Fink (2003), illogical-order and long questionnaires may cause low response rates. Thus, a logical, short (less than 15 minutes to complete), and user-friendly questionnaire was designed to improve the response rates. The layout of the questionnaire designed by online software tools (Freeonlinesurveys.com) contains a series of stylish and attractive page layouts which were helpful in producing a professional-looking questionnaire. Freeonlinesurveys.com offers several features such as view individual responses, spreadsheet (SPSS V.13.0) download, protection against duplicate responses and comparison of results to each question which are helpful for the researchers to capture the opinions from the recipients.
3. **Pilot testing and assessing validity** – The questionnaire was piloted prior to its distribution. The purpose of the pilot was to refine and establish the validity of the content in the questionnaire. This study adapted Bell (2005)’s technique to identify:

- How long the questionnaire took;
- The clarity of instructions;
- Which of the questions were unclear;
- Whether in their opinion there were any major topic omissions;
- Whether the layout was clear and any other comments.

The questionnaires were distributed by email together with the covering letter. The messages contained in a covering letter to introduce the survey will affect the response rate (Dillman, 2000; Cooper and Schindler, 2006; Saunders et. al., 2007). A well-explained, short and comprehensive covering letter is presented in Appendix B.

### 3.2.1.2 Construction of the Questionnaire

The operational definitions for each construct and the research questions (RQs) were drawn from the literature and the experience of the researcher to address the research objectives are shown in Table 3.4. These constructs are considered to be the foundation for the development of the e-Marketing framework.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Corresponding Questionnaire</th>
<th>Operational Descriptions</th>
<th>Literature Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQ1: What are the characteristics of firms that have adopted B2B e-Marketplace?</td>
<td>Questionnaire: Q7 (a-d), Q8 (a-d), Q11, Q12, Q13, Q14</td>
<td>Demographic information and the degree of demands to push a firm to adopt B2B e-Marketplace</td>
<td>O’Callaghan et al., 1992; Hu et al., 2004; Yu, 2007;</td>
</tr>
<tr>
<td>Firm characteristics</td>
<td>Interview: Q1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

RQ2:
### What are the dimensions of e-Marketing services of B2B e-Marketplace for SMEs?

<table>
<thead>
<tr>
<th>Customer Relationships Management (CRM)</th>
<th>Questionnaire: Q2 (a-d)</th>
<th>The degree of e-Marketing services from CRM perspective</th>
<th>Kierzkowski et al., 1996; Xu et al., 2002; Zeng et al., 2003; Chaffey, 2004.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Chain Management (SCM)</td>
<td>Questionnaire: Q3 (a-d)</td>
<td>The degree of e-Marketing services from SCM perspective</td>
<td>Serve et al., 2002; Zeng and Pathak, 2003; Albrecht et al., 2005; Petersen et al., 2007; Angeles and Nath, 2007.</td>
</tr>
<tr>
<td>IS/IT Integration</td>
<td>Questionnaire: Q5 (a-j)</td>
<td>The degree of e-Marketing services when integrated with IS/IT</td>
<td>Fong and Hui, 2006; O’Reilly and Finnegan, 2007.</td>
</tr>
</tbody>
</table>

**RQ3:** What are the Critical Success Factors (CSFs) associated with e-Marketing service performances derive from B2B e-Marketplace?

<table>
<thead>
<tr>
<th>Critical Success Factors (CSFs)</th>
<th>Questionnaire: Q9 (a-g)</th>
<th>The degree of satisfactory results of certain areas or functions to ensure successful competitiveness for an organisation.</th>
<th>Eid et al., 2002; Eid and Trueman 2004; Li and Li 2005.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Interview: Q7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q10 was designed to measure the degree of need for an e-Marketing framework to be used as a guideline to help SMEs to adopt B2B e-Marketplace to achieve their marketing objectives.

**Interview: Q8**

| Table 3.4: Constructs and corresponding information |
The questionnaire (Appendix A) included 15 questions (Q). Q1 started with the name, email address and position held in the organisation. Q7, Q8, Q11, Q12, Q13, and Q14 were used to solicit opinions to answer RQ1 for capturing the companies’ demographic information and the degree of demands to push a firm to adopt B2B e-Marketplace. Q2 to Q6 pertained directly to the dimensions of e-Marketing services for answering RQ2. Q9 was intended to respond to RQ3, that elicited the Critical Success Factors (CSFs) associated with e-Marketing service performances derived from B2B e-Marketplace. Q10 was designed to measure the degree of need of an e-Marketing framework to be used as a guideline to help SMEs to adopt B2B e-Marketplace to achieve their marketing objectives. The survey was supported by the interviews conducted with a selected sample of respondents from the online questionnaire who expressed their interest (Q15) in taking part in an interview; this will be discussed in Section 3.3.2.

3.2.1.3 Independent Variables and Dependent Variable
Due to the empirical nature of the study, and the fact that the independent and dependent variables work in conjunction, when developing the e-Marketing framework for this study, the variables were identified follows:

1) Number of employees
Divided into eight groups: below 5, 5-20, 21-50, 51-100, 101-150, 151-200, 201-250, and over 250.

2) Annual turnover
Divided into eight groups: below US$ 100,000, US$ 100,000 - 500,000, US$ 500,000 - 1 Million, US$ 1 Million - 5 Millions, US$ 5 Million - 10 Million, US$ 10 Million - 50 Million, US$ 50 Million - 100 Million, and over US$ 100 Million.

3) Annual revenue derived from B2B e-Marketplace
Divided into ten groups: 0%-10%, 10%-20%, 20%-30%, 30%-40%, 40%-50%, 50%-60%, 60%-70%, 70%-80%, 80%-90%, and 90%-100%.
4) **Government encouragement**
The definition of this variable for this study is the influence of government to push a firm’s willingness to use B2B e-Marketplace to operate their marketing activities.

5) **Senior management involvement**
The definition of this variable for this study is the degree of senior management members to push a firm to use B2B e-Marketplace to operate their marketing activities.

6) **Customer relationships management**
The definition of this variable for this study is the degree of e-Marketing service derived from B2B e-Marketing for customer relationships management purposes.

7) **Supply chain management**
The definition of this variable for this study is the degree of e-Marketing service derived from B2B e-Marketing for supply chain purposes.

8) **Competitiveness**
The definition of this variable for this study is the degree of competitive gained with e-Marketing service derived from B2B e-Marketplace.

9) **IS/IT integration**
The definition of this variable for this study is the degree of e-Marketing services when integrated with IS/IT.

10) **Transparency of Information**
The definition of this variable for this study is the degree of visibility and transparency of information from the B2B e-Marketplace.
11) Critical Success Factors (CSFs)
The definition of this variable for this study is the degree of satisfactory results of certain areas or functions to ensure successful competitiveness for an organisation.

And the dependent variable is:
*e-Marketing framework development*
The definition of this variable for this study is the degree of the need of an e-Marketing framework to be used as a guide to help SMEs to adopt B2B e-Marketplace to achieve their marketing objectives.

3.2.1.4 Quantitative Data Analysis
The data collected from the recipients were processed on SPSS V13.0 to conduct descriptive analysis, correlation analysis, independent-samples t-test analysis, and multiple regression analysis illustrated as follows:

Descriptive analysis –Following data collection using the online questionnaire, data was checked for accuracy and entered into the statistical program for database development. Descriptive analysis is the effective way to perform quantitative analysis in a standard SPSS program to interpret the validity of the data for this study. The frequency distributions of each discrete variable (e.g. number of employees, annually turnover) will be presented for data interpretations and examinations.

Correlation analysis - The purpose of performing a correlation analysis is to discover whether there is a relationship between variables. There were two purposes to conduct correlation analysis for this study: to measure whether the variables were independent from each other, and to measure the relationships strength of the variables with the dependent variable. It also enables the researchers to determine the direction of the relationship – whether it is positive, negative, or, zero. The statistic (correlation coefficient) varies from 0 (no relationship between the variables) to 1 (perfect relationship between the variables). In this study, a correlation > 0.7 is
generally described as strong, whereas a correlation < 0.4 is generally described as weak (Dancey and Reidy, 2007).

One-sample t-test analysis – In this study, the one-sample t-test was conducted to assess whether there are statistically significant differences between the CSFs and the mid-point 3.0 (Likert Scaling). If all the significant values are p=0.00, it will confirm all the variables in CSFs are positive which gives no statistic change from sampling error.

Multiple regression analysis – Regression analysis represents the relationships between variables in the form of equations, which can used to calculate the value of a dependent variable on one or more independent variable. In general, multiple regression analysis is used to discover the effect of each independent variable on the dependent variable.

3.2.1.5 Validity and Reliability in Quantitative Data Analysis

In addressing the question of the validity and reliability of quantitative data, Cooper and Schindler (2006) and Easterby-Smith et al. (2008) suggested that the role of construct validity, internal validity, external validity and reliability are the main items for generating research ideas (Table 3.5).

<table>
<thead>
<tr>
<th>Items</th>
<th>Explanation</th>
<th>Research Stage</th>
<th>Application in this Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construct Validity</td>
<td>Identifying correct operational measures for the concepts being studied</td>
<td>Research Design</td>
<td>Advice seeking from both academicians and industrial professionals to measure the validity of questionnaire.</td>
</tr>
<tr>
<td>Internal Validity</td>
<td>Seeking to establish a causal relationship whereby certain conditions are believed to lead to other conditions as distinguished from spurious relationships.</td>
<td>Data Analysis</td>
<td>Use of SPSS V13.0 software package to measure the reliability of quantitative data collection.</td>
</tr>
<tr>
<td>External Validity</td>
<td>Defining the domain to which studies findings can be generalised.</td>
<td>Data Collection</td>
<td>Boundary specification – limiting study to all SMEs that</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reliability</th>
<th>Demonstrating that the operations of a study – such as data collection procedures – can be repeated with the same results.</th>
<th>Data Collection</th>
<th>Use of SPSS V13.0 software package to measure Cronbach’s alpha value.</th>
</tr>
</thead>
</table>

Table 3.5: The validity and reliability of quantitative data
Source adapted from Cooper and Schindler (2006) and Easterby-Smith et al. (2008)

The various steps outlined in the table were incorporated in the research design and underpinned both data collection and analysis. Prior to dissemination, the online questionnaire was verified by two academicians and two practitioners, and piloted on 20 senior management members of the SMEs selected from the sample population. Minor amendments were made to the flow and phrasing of the questions. The pilot study also confirmed the relevance and clarity of the questions to ensure the findings were consistent and relevant.

The reliability and consistency of the data for this study adopted Cronbach’s alpha value which is the standard reliability measurement for quantitative data collection. Reliability analysis is a necessary contributor for data accuracy and consistency (Cooper and Schindler, 2006). Cronbach’s alpha was used to inspect the internal consistency of test items. When alpha equals 0, the true score is not measured and there is only an error component. When alpha equals 1.0, all items measure only the true score, and there is no error component. According to Nunnaly (1978), the Cronbach’s alpha value should > 0.7 for high reliability standard. Hence, this study adopted the measurement provided by Nunnaly (1978) in addressing the data validity and reliability.
3.2.2 Interviews

Interviews are one of the main data collection tools in qualitative research. They are particularly useful for obtaining the story behind a participant’s experiences. A semi-structured interview approach was adopted to collect data for this study. A semi-structured interview is non-standardised, allowing a degree of freedom and adaptability to get the information from respondents. In addition, respondents may expand their answers, and they are as open and adaptable as possible to the respondent’s nature and priorities. During an interview, the respondents are allowed to talk freely around the subject. According to Gillham (2008), the context of a semi-structured interview is to significantly support quantitative research by the adopting the following research techniques:

- The same questions are asked of all those involved.
- The kind and form of questions go through a process of development to ensure their topic focus.
- To ensure equivalent coverage, interviewers are prompted by supplementary questions if they have not dealt spontaneously with one of the sub-areas of interest.
- Approximately equivalent interview time is allowed in each case.

Three approaches were employed to collect data through interviews; face-to-face interviews, telephone interviews and interviews via Webcam. Through face to face interviews, it is easy for an investigator to obtain in-depth information by probing and controlling the situation. It also allows information exchange to remain transparent between the interviewer and the respondent. Thus, the research can gain a quality response rate by establishing rapport and motivating the respondent to answer fully and accurately (Hoyle et al., 2002). Telephone interviews are another strategy adopted for this study. “Telephone interviewing is an increasingly popular means of conducting survey research because not only does almost everyone have a telephone and it is easier to access to the particular research population.” (Frey and Oishi, 1995, p.4). Moreover, the interviewer also has the opportunity to probe
answers by asking respondents to clarify or expand on a specific response. The above strategies were supported by a video conferencing approach via Webcam. The advancement of the Webcam makes this study able to reach large and diverse sample populations at relatively low costs compared with face-to-face and telephone interviews.

3.2.2.1 Content Analysis

“Content analysis is any technique for making inferences by objectively and systematically identifying specified characteristics of messages” (Holsti, 1969, p14). One of the main strengths of content analysis, as noted by Bryman (1990), is that it is a very transparent research method and can be applied to a wide variety of different kinds of semi/unstructured information (such as information from interviews). It is also suitable for systematically evaluating the symbolic content of all forms – including verbal, visual, print and electronic communication. Thus, this analysis is particularly appropriate to this study as the interviews were conducted via face-to-face, telephone and video conferencing.

3.2.2.2 Data Coding Techniques

This section describes the procedures for interview analysis. A key approach to limit bias during interview data collection is to use numerous and highly knowledgeable informants (Eisenhardt and Graebner, 2007). In total, 56 interviews were conducted which were then analysed using content analysis techniques suggested by Bryman (2001), Eisenhardt and Graebner (2007) and Gillham (2008).

Each of the interviews was first transcribed into verbatim transcripts. A second round of checking was done by scanning each original copy of the note with the verbatim transcripts for clarification and missing sections. This was then subjected to analysis.
This study uses the text formatting features of Microsoft Word together with the find-and-replace command for the coding, categorising and data retrieval. This is similar to the approach suggested by Ryan (2004). In classic content analysis codes are assigned as values (categorical, numerical or interval) to fixed units of analysis in which one or more codes can be assigned to a unit but only in its entirety (e.g. paragraphs answers to open questions).

In order to minimise errors, the thematic coding were searched through the document using the “Find” command for occurrences of key words relevant to a particular code that can be inspected in context and coded appropriately. Blocks of text in which relevant key words occurred were then copied into a Word data table. Once this process had been completed for all transcribed interviews, the codes and quotes were checked to ensure unnecessary overlap. Subsequent adjustments were then made such as the introduction and refinement of new categories and codes. The Table/Sort function was used to group data for all the codes together for further review and analysis.

3.2.2.3 Validity and Reliability in Qualitative Data Analysis
Prior the interview, it was piloted on a selected sample. The purpose of the pilot was to refine and establish the validity of the interview questions. The interview questions were verified by two academicians and two practitioners and piloted on 5 senior management members of the SMEs selected from the sample population. The data collected via interviews was examined to remove incomplete and ambiguous information. A thorough review of interview records and post-interview communications was carried out with the respondents to ensure the data accuracy.

Many academics (Denzin, 1989; Lincoln, 2000; Patton, 2002; Creswell, 2003; Tashakkori and Teddlie, 2003) suggest using triangulation techniques at the data analysis phase to improve the validity and reliability of the research findings. According to Denzin (1989), the usage of different approaches, methods, and techniques in the same study can overcome the potential bias and sterility. Therefore, data triangulation as mentioned in Section 3.2 will be employed in this study to improve the accuracy, reliability, and validity of the
findings. As part of data triangulation, the results from both qualitative and quantitative methods will be interpreted into a single set of data. For instance, the interview data will be verified and evaluated by constant comparisons with the data collected from the online questionnaire. Both of the answers will be analysed, compared, and compared to each other in the data analysis.

### 3.3 Sample

As part of this study, the questionnaire was designed and targeted at general managers, managing directors, IT managers, sales and marketing managers and other professionals in selected organisations that participated in B2B e-Marketplace in the Asia B2B marketplace. This was supported by interviews with selected individuals’ from the above sample.

![Targeted countries: China, Malaysia, Philippines, Singapore, Thailand and India](image)

Figure 3.3: Sample population

The study focused on the SMEs operating in the Asia B2B marketplace as illustrated in Figure 3.3. The rational for choosing the above countries (China, Malaysia, Philippines, Singapore, Thailand and India) for this study was based on their advanced and well-developed B2B e-Marketplaces with large and transparent SMEs databases. The Internet is the main medium for identifying the potential B2B e-Marketplaces as shown in Table 3.6.
<table>
<thead>
<tr>
<th>Countries</th>
<th>Websites</th>
<th>Descriptions</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td><a href="http://www.alibaba.com">www.alibaba.com</a></td>
<td>B2B business portal: provide platform for seller and buyer.</td>
<td>333</td>
</tr>
<tr>
<td>Malaysia</td>
<td><a href="http://www.asiaep.com">www.asiaep.com</a></td>
<td>Asia e-Business partner, B2B e-Marketplace provider.</td>
<td>100</td>
</tr>
<tr>
<td>Philippines</td>
<td><a href="http://www.b2bpricenow.com">www.b2bpricenow.com</a></td>
<td>Suppliers/Buyers network.</td>
<td>100</td>
</tr>
<tr>
<td>Singapore</td>
<td>Singapore.asiannet.com</td>
<td>Business listing and matching.</td>
<td>100</td>
</tr>
<tr>
<td>Thailand</td>
<td><a href="http://www.ecthai.com">www.ecthai.com</a></td>
<td>Information on exporters and exhibitions.</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td><a href="http://www.thaitrade.com">www.thaitrade.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>India</td>
<td><a href="http://www.tradeindia.com">www.tradeindia.com</a></td>
<td>B2B business portal: provide platform for seller and buyer.</td>
<td>333</td>
</tr>
</tbody>
</table>

Table 3.6: Selected B2B e-Marketplace providers and sample size

The B2B e-Marketplaces shown above are either top of the list in the region in terms of their capital value or considered leaders in the respective countries (eMarketer, 2008). Due to the large and diverse sample sizes from the above region, it is crucial to determine an appropriate and representative sample population. Hence, the sample size determination formula suggested by Foreman (1991) for large and unknown population as follow is adopted:

\[
\text{Sample Size} = \frac{Z^2 \times (p) \times (1-p)}{c^2}
\]

Where:
- \(Z\) = Z value (assume is 1.96 or 95% confidence level)
- \(P\) = Estimate response rate, expressed as decimal (assume is 50%)
- \(C\) = confidence interval, expressed as decimal (assume is 3%)

This study assumes that the confidence interval of 3% and 50% of estimate response rate, the sample of the entire relevant population is between 47% (50-3) and 53% (50+3) would have participate in the survey. Thus, when the confidence level and the confidence intervals are put together, this survey can be 95% sure that the true response percentage of the sample is between 47% and 53%. Substituting the above value into the equation and solving it yields to:

\[
\text{Sample Size} = \frac{(3.84 \times 0.5 \times 0.5)}{(0.03 \times 0.03)}
\]
Hence, a proposed total of 1066 SMEs operating in B2B e-Marketplace in the Far East region were selected as a targeted sample. Each of the countries with smaller populations such as Malaysia, Philippines, Singapore and Thailand received 100 questionnaires respectively, and the remaining 667 questionnaires was sent to China and India equally due to their larger populations (Table 3.6). The survey was supported by the interviews conducted with the same sample frame who expressed their interest in taking part in an interview.

3.4 Research Instruments’ Administration and Procedures
This section focuses on the initial research instruments’ administration and procedures. There are three data collection phases included in the following sub-sections.

3.4.1 Data Collection I
The online survey was aimed at general managers, managing directors, IT managers, marketing managers and other professionals in selected organisations that participated in B2B e-Marketplace. The full details obtained from the B2B e-Marketplaces included name, designation, full address, email address, contact number, and number of employees of the recipients. Referring to Figure 3.4, in phase one, the questionnaire and a covering letter was e-mailed to the targets sample. This was then followed by ‘follow-up’ emails to thank early respondents and remind non-respondents, one week after emailing the questionnaire to the recipients. The third ‘follow-up’ emails were sent to recipients who had not responded after three and four weeks respectively. By the last day for receipt of the online questionnaires, a total of 210 questionnaires had been returned. However, an additional 9 questionnaires were received after the deadline, resulting in an overall response rate of 19.7 per cent. The administration of the questionnaire had taken over eight weeks until the last completed questionnaire.
3.4.2 Data Collection II

During Data Collection II, B2B e-Marketplace providers were contacted by postal letter to act as a catalyst for fostering participation of their members in the survey. The contact letters were sent to eleven B2B e-Marketplaces service providers and their full details including name, designation, company’s name, full company address, email address and contact number were obtained from their respective B2B e-Marketplaces’ website. By the end of the third week after the letters had been delivered, 51 questionnaires had been returned after the first service provider agreed to distribute the online questionnaires to their members. The response rate was increased after the second and third service providers responded that they were able to distribute the online questionnaires. A total of 215 questionnaires were returned eight weeks after the administration of the questionnaire (Figure 3.5).
3.4.3 Data Collection III

Data Collection III was allocated for interviews. The interview was subjected to a two-stage pre-test. The first stage involved academics from the University of Bolton for content validity and ease of understanding, while the second stage was involved a pilot test with 20 respondents selected from the online survey. All the respondents were very helpful in the pre-test interviews by critiquing the questions, wording, questions flow, and the length of interview session.

Many authors including Healey and Rawlinson(1994), and Easterby-Smith et al. (2002) noted that tape records may adversely affect the relationship between interviewee and interviewer by possibility ‘focusing’ on the audio-recorder and inhibit the interviewee responses and reduce reliability. Moreover, some of our interviewers demanded not to adopt audio-recording while conducting the interview. Thus, all the interviews were recorded through notes taken during or after interviews where appropriate.

Figure 3.5: Weekly questionnaire returned (data collection II)
A total of 56 interviews were conducted including 15 face-to-face interviews, 30 telephone interviews, and 11 video conferencing interviews. All the interviews were arranged one week before the interview date. During the interview, the interviewer created a rapport with the interviewees by discussing the weather and the latest breaking news in Asia and Europe. Then, interviewees were informed about the purpose of the interview and permission to take notes of the content of the interview. The interviewer also assured the confidentiality of information and that the study was only for academic purposes. The interview focused on the research objective with eight interdependent themes and each interview took between 45 minutes and one hour.

3.5 Research Ethics
Ethical consideration is an integral part of conducting research that involves human participation. Ethical concerns will emerge during research planning, seeking access to individuals/organisations, and collecting, analysing, and reporting data (Bryman, 2004; Saunders et al., 2009). Many researchers (e.g. Frey and Oishi, 1995; Dillman, 2000; Bryman, 2004; Saunders et al., 2009) note that the following key ethical issues which arise across the stages and duration of a research project are related to the:

- Privacy of possible and actual participants.
- Obtaining the informed consent of the participants.
- Maintenance of the confidentiality of data.
- Ensuring the accuracy of data while publishing the research findings.

As part of the ethical consideration for this project, the researcher has attended the relevant research ethics training/seminar/workshop at the University of Bolton and others universities and completed Form RE1 provided by the research ethics committee at Bolton Business School.
Summary
This chapter provided the major research methods used to collect relevant data for the study. After careful consideration, a two-stage research design, combining qualitative and quantitative phases was considered as a triangulation application that appropriately employed for this study. SPSS V13.0 was employed to interpret all the data collected to make a logical conclusions and recommendations for the study.
Chapter 4: Data Collection and Analysis

Overview
Chapter four presents patterns of results and analyses them to develop the proposed e-Marketing framework. The proposed framework is constructed by combining the analytical findings from the empirical results with the expertise obtained from the contemporary B2B e-Marketplace and e-Marketing literature. The research design employed a triangulation approach which combined quantitative and qualitative methods.

The quantitative method used closed-ended questions based on online survey instruments. The sampling frame of this study contained 1066 SMEs randomly selected from the B2B e-Marketplaces, who were active members (based on their transaction volumes). All the SMEs were contacted by email together with the covering letter. A total of 423 questionnaires were returned of which 406 were valid (17 were considered invalid due to incomplete nature of the response), providing a response rate of 38.1%. Respondents were instructed to indicate how strongly they agree or disagree with a number of statements by using 5-point Likert scale (1= Strongly disagree, 2= Disagree, 3= Neutral, 4= Agree and 5= Strongly disagree).

For the qualitative method, interviews were conducted to support a better understanding of the relationship between SMEs and e-Marketing framework development. Qualitative data was collected via telephone, face-to-face interviews, and video-conferencing selected from 406 valid respondents from the survey. A total of 56 respondents that took the survey agreed to participate in the interview. In order to avoid bias, participants were given the option of selecting the types of interview (telephone, face-to-face, or video-conferencing), in a mutually agreed upon location. Due to the limited resources, face-to-face interviews were only conducted in Malaysia.
The study aimed to address the following research questions (RQs):

RQ1) What are the characteristics of firms that have adopted B2B e-Marketplace?
RQ2) What are the dimensions of e-Marketing services of B2B e-Marketplace for SMEs?
RQ3) What are the Critical Success Factors (CSFs) associated with B2B e-Marketplace service performance?

The qualitative and quantitative analysis was structured in relation to the research questions. Table 4.1 illustrates the relationship between the research questions, and generated qualitative and quantitative data.

<table>
<thead>
<tr>
<th>Survey Questions (Q) Guiding for Quantitative Analysis</th>
<th>Interview Questions (IQ) Guiding for Qualitative Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQ1 Q7, Q8, Q10, Q11, Q12, Q13, Q14</td>
<td>IQ1, IQ8</td>
</tr>
<tr>
<td>RQ2 Q2, Q3, Q4, Q5, Q6, Q10</td>
<td>IQ2, IQ2, IQ3, IQ4, IQ5, IQ6, IQ8</td>
</tr>
<tr>
<td>RQ3 Q9, Q10</td>
<td>IQ7, IQ8</td>
</tr>
</tbody>
</table>

Note: Q1 and Q15 are not included in the above illustration
Q1 = descriptive data about the respondent
Q15 = descriptive response about the willingness of the participant for further data collection opportunity

Table 4.1: Quantitative and qualitative guiding for analysis

4.1 RQ1: What are the characteristics of firms that have adopted B2B e-Marketplace?
This section presents demographic information and the degree of demands for the adaptation of B2B e-Marketplace. In order to answer this question, a triangulation approach combining quantitative and qualitative data analysis was appropriately employed.
4.1.1 Quantitative Analysis for RQ1
For quantitative data analysis, three different statistical analyses were employed to answer RQ1. These were descriptive analysis, correlation analysis, and multiple regression analysis. The last four questions of the survey's demographic profile reflected a companies’ number of employees, annual turnover, annual revenue derived from B2B e-Marketplace and country of origin. The sample was captured with an “N” count of 406. Referring to Table 4.2, the selected sample demonstrated the following characteristics:

All participated in B2B e-Marketplace.

- All are considered as SMEs based on the definition of SME particularly for each country (see Table 2.2).

- Majority of the participants (33.7%) employed 51 to 100 people, whereby only eight participants (2.0%) employed below five people.

- For annual turnover, all of the firms benefited from an annual turnover of under £10 million consistent with definition of SME on each country.

- Most respondents (41.1%) had an annual turnover of between £1 million to £5 million, and only 21 of them (5.2%) had an annual turnover below £100,000 on their annual turnover.

- A sizeable majority (36.4%) had generated 20% – 30% of their total annual revenue from B2B e-Marketplace, and only 20 of them (4.9%) generated 40%-50%.

- India accounted for the biggest (35%) response’s rate compared to the other countries, followed by Malaysia (20.7%), China (16.3%), Philippines (10.8%), Thailand (12.1%) and Singapore (5.2%).
<table>
<thead>
<tr>
<th>Q11: Number of Employee</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 5</td>
<td>8</td>
<td>2.0%</td>
</tr>
<tr>
<td>5 - 20</td>
<td>54</td>
<td>13.3%</td>
</tr>
<tr>
<td>21 - 50</td>
<td>119</td>
<td>29.3%</td>
</tr>
<tr>
<td>51 - 100</td>
<td>137</td>
<td>33.7%</td>
</tr>
<tr>
<td>101 - 150</td>
<td>55</td>
<td>13.5%</td>
</tr>
<tr>
<td>151 - 200</td>
<td>20</td>
<td>4.9%</td>
</tr>
<tr>
<td>201 - 250</td>
<td>13</td>
<td>3.3%</td>
</tr>
<tr>
<td>Group Total (N)</td>
<td>406</td>
<td>100.0%</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Q12: Annual Turnover</th>
<th></th>
<th></th>
</tr>
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<tbody>
<tr>
<td>Below £100,000</td>
<td>21</td>
<td>5.2%</td>
</tr>
<tr>
<td>£100,000 - £500,000</td>
<td>36</td>
<td>8.9%</td>
</tr>
<tr>
<td>£500,000 - £1 million</td>
<td>114</td>
<td>28.1%</td>
</tr>
<tr>
<td>£1 million -£5 million</td>
<td>167</td>
<td>41.1%</td>
</tr>
<tr>
<td>£5 million - £10 million</td>
<td>68</td>
<td>16.7%</td>
</tr>
<tr>
<td>Group Total (N)</td>
<td>406</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Q13: Annual Revenue</th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Derived from</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B2B e-Marketplace</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0%-10%</td>
<td>140</td>
<td>34.5%</td>
</tr>
<tr>
<td>10%-20%</td>
<td>71</td>
<td>17.5%</td>
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<tr>
<td>20%-30%</td>
<td>148</td>
<td>36.4%</td>
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<tr>
<td>30%-40%</td>
<td>27</td>
<td>6.7%</td>
</tr>
<tr>
<td>40%-50%</td>
<td>20</td>
<td>4.9%</td>
</tr>
<tr>
<td>Group Total (N)</td>
<td>406</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q14: Country of Origin</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>66</td>
<td>16.3%</td>
</tr>
<tr>
<td>Malaysia</td>
<td>84</td>
<td>20.7%</td>
</tr>
<tr>
<td>Philippines</td>
<td>44</td>
<td>10.8%</td>
</tr>
<tr>
<td>Singapore</td>
<td>21</td>
<td>5.2%</td>
</tr>
<tr>
<td>Thailand</td>
<td>49</td>
<td>12.1%</td>
</tr>
<tr>
<td>India</td>
<td>142</td>
<td>35.0%</td>
</tr>
<tr>
<td>Group Total (N)</td>
<td>406</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Table 4.2: Descriptive characteristics of respondents for RQ1

4.1.1.1 Descriptive Analysis for RQ1
The reliability and consistency of the data was scrutinised. As suggested in chapter three, the internal consistency analysis was tested by using Cronbach’s Alpha value for standard reliability measurement. According to Nunnaly (1978), the Cronbach’s Alpha value should > 0.7 for high reliability standard. Table 4.3 shows the Cronbach’s Alpha Value Test Results > 0.7, indicating the existence of internal consistency or homogeneity among the variables for the analysis for RQ1.
<table>
<thead>
<tr>
<th>Constructs</th>
<th>Cronbach's Alpha Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q7: Government Encouragements</td>
<td></td>
</tr>
<tr>
<td>Q7a: The government is actively promoting B2B e-Marketplace.</td>
<td>0.822</td>
</tr>
<tr>
<td>Q7b: Using e-Marketplace is easier to get government grants.</td>
<td>0.841</td>
</tr>
<tr>
<td>Q7c: The government encouraged SMEs to participate in B2B e-Marketplace.</td>
<td>0.811</td>
</tr>
<tr>
<td>Q7d: The government regulates the online trading environment (e.g. protect trading privacy).</td>
<td>0.822</td>
</tr>
<tr>
<td>Q8: Senior Management Involvements</td>
<td></td>
</tr>
<tr>
<td>Q8a: Senior management's knowledge/experience in B2B e-Marketplace is significant.</td>
<td>0.852</td>
</tr>
<tr>
<td>Q8b: Senior management highly recognises B2B e-Marketplace can enhance the firm’s competitiveness.</td>
<td>0.841</td>
</tr>
<tr>
<td>Q8c: Senior management allocates the required resources for B2B e-Marketplace every year.</td>
<td>0.788</td>
</tr>
<tr>
<td>Q8d: Senior management explores B2B e-Marketplace regularly with staff.</td>
<td>0.751</td>
</tr>
</tbody>
</table>

Table 4.3: Cronbach’s Alpha value test results for RQ1

The section presents the frequencies count on eight independent variables under “government encouragements and senior management involvements”. Based on the mean scores from the sample population (Table 4.4), the higher score is “Q7a: The government is actively promoting B2B e-Marketplace.” (mean=3.419, SD=0.724). This is followed by “Q7b: Using e-Marketplace is easier to get government grants.” (mean=3.298, SD=.787), “Q7c: The government encouraged SMEs to participate in B2B e-Marketplace” (mean=3.079, SD=.794), and “Q7d: The government regulates the online trading environment (e.g. protect trading privacy)” (mean=2.970, SD=.812). Senior management involvement is another important element to push firms to adopt B2B e-Marketplace (Yu, 2007). The means scale score that is more than 3.0 indicate an agreement with a particular item. Among the four variables, “Q8a: Senior management's knowledge/experience in B2B e-Marketplace is significant” had the highest mean score of 3.628 (SD=.645). This is followed by “Q8b: Senior management highly recognises B2B e-Marketplace can enhance the firm’s competitiveness”, “Q8c: Senior management allocates the required resources for B2B e-Marketplace every
The findings suggest that government encouragement and senior management involvement has a significant impact on the adaptation of B2B e-Marketplace. The means range from eight variables of 2.970 to 3.628 is indicative of a moderate attempt to push SMEs to adopt B2B e-Marketplace as noted by O’Callaghan et al. (1992); Hu et al. (2004) and Yu (2007).
Notably, the results are also reflected in Hu et al. (2004), Yu (2007) and Alam (2009), in which the Asian SMEs needed more resources (means under constructs “using e-Marketplace is easier to get government grants” and “senior management allocates the required resources for B2B e-Marketplace every year” scored reasonable high) to transform their businesses into the electronic environment. Hence, government and senior management members play an important role in developing suitable strategies to drive SMEs to adopt B2B e-Marketplace services. Although the majority of the participants indicated that they only generated less than 30% of their total annual revenue from B2B e-Marketplace, SMEs still have high expectations of the government and their senior management members to further explore the opportunities provided B2B e-Marketplace especially in e-Marketing services.

4.1.1.2 Pearson Correlation Analysis for RQ1

Pearson’s Correlation Coefficient (Pearson’s $r$) is a method of calculating the relationship between variables. Correlation analysis was used to measure the degree of relationship between the eight main independent variables of RQ1. There were two purposes to conduct correlation analysis for RQ1: to measure whether the eight main variables were independent from each other, and to measure the strength of the eight variables with the dependent variable (B2B e-Marketplace adoption). As a rule of thumb, if a correlation coefficient value of $r$ indicates 0 to .2, there is a weak relationship between the variables. If $r$ values of .3 to .6, generally considered moderate, and .7 to 1 is strong (Dancey and Reidy, 2007).

The results shown in Table 4.5 indicate there are no correlation coefficients greater than .6 with an overall significant correlation at 0.01 level. This means there is a 99% probability that these relationships are free from sampling errors. Therefore, the eight main variables were fairly independent from each other without multicollinearity issue. Multicollinearity occurs when a high correlation is detected between two or more independent variables (will cause them dependent on each other).
Table 4.5: Correlation coefficient between independent variables for RQ1

<table>
<thead>
<tr>
<th></th>
<th>Q7a</th>
<th>Q7b</th>
<th>Q7c</th>
<th>Q7d</th>
<th>Q8a</th>
<th>Q8b</th>
<th>Q8c</th>
<th>Q8d</th>
</tr>
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<tbody>
<tr>
<td>Q7a</td>
<td>1</td>
<td>.577(*)</td>
<td>.559(*)</td>
<td>.508(*)</td>
<td>.360(*)</td>
<td>.402(*)</td>
<td>.232(*)</td>
<td>.135(*)</td>
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<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
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<td>.000</td>
<td>.000</td>
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<td>.000</td>
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<tr>
<td>Q7b</td>
<td>.576(*)</td>
<td>1</td>
<td>.597(*)</td>
<td>.554(*)</td>
<td>.403(*)</td>
<td>.446(*)</td>
<td>.295(*)</td>
<td>.191(*)</td>
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<tr>
<td>Sig. (2-tailed)</td>
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<td>.000</td>
<td>.000</td>
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<td>.000</td>
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<tr>
<td>Q7c</td>
<td>.559(*)</td>
<td>.597(*)</td>
<td>1</td>
<td>.595(*)</td>
<td>.442(*)</td>
<td>.449(*)</td>
<td>.338(*)</td>
<td>.264(*)</td>
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<tr>
<td>Sig. (2-tailed)</td>
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<td>.000</td>
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<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Q7d</td>
<td>.508(*)</td>
<td>.554(*)</td>
<td>.595(*)</td>
<td>1</td>
<td>.412(*)</td>
<td>.429(*)</td>
<td>.323(*)</td>
<td>.280(*)</td>
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<tr>
<td>Sig. (2-tailed)</td>
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<tr>
<td>Q8a</td>
<td>.360(*)</td>
<td>.403(*)</td>
<td>.442(*)</td>
<td>.412(*)</td>
<td>1</td>
<td>.458(*)</td>
<td>.476(*)</td>
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<tr>
<td>Sig. (2-tailed)</td>
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<td>.000</td>
</tr>
<tr>
<td>Q8b</td>
<td>.402(*)</td>
<td>.446(*)</td>
<td>.449(*)</td>
<td>.429(*)</td>
<td>.558(*)</td>
<td>1</td>
<td>.504(*)</td>
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<tr>
<td>Sig. (2-tailed)</td>
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<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Q8c</td>
<td>.232(*)</td>
<td>.295(*)</td>
<td>.338(*)</td>
<td>.323(*)</td>
<td>.476(*)</td>
<td>.504(*)</td>
<td>1</td>
<td>.455(*)</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Q8d</td>
<td>.135(*)</td>
<td>.191(*)</td>
<td>.264(*)</td>
<td>.280(*)</td>
<td>.478(*)</td>
<td>.483(*)</td>
<td>.455(*)</td>
<td>1</td>
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</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.007</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).

The strength of correlation is indicated by the value of the correlation coefficient which varies between 1 and 0. A perfect negative correlation would have a coefficient of -1, and a perfect positive correlation would have a coefficient of +1. Referring to Table 4.6, Pearson correlation analysis indicates that all the independent variables have a positive correlation with the dependent variable and statistic significantly at 0.01 levels. The highest score ($r=.810$) of correlation coefficient was between B2B e-Marketplace adoption and Q8b (senior management highly recognises B2B e-Marketplace can enhance the firm’s competitiveness). This is followed by Q7a ($r=.593$), Q8a ($r=.514$), Q8c ($r=.463$), Q8d ($r=.376$), Q7c ($r=.349$), Q7b ($r=.330$) and Q7d ($r=.330$).
The findings from Pearson Correlation show that the independent variable (e-Marketing framework development) is positively related to the eight main independent variables. The scores of Pearson’s $r$ between them were statistically significant at 0.01 levels, which mean they had a fairly strong positive correlation. This result illustrates that the eight independent variables were significant contributors to the development of e-Marketing framework derived from B2B e-Marketplace.

### 4.1.1.3 Multiple Regression Analysis for RQ1

Multiple regression is a statistical technique that allows the researcher to predict the influence of each of the independent variables on the dependent variable. In essence, this is a measure of how good a prediction of the independent variable make by knowing the independent variables. Table 4.7 displays the result of regression analysis for the eight independents variables and e-Marketing development (dependent variable). The adjusted R square value is .652. This means that 65.2% of variation of the dependent variable can be interpreted from the eight independent variables. These percentage figures are substantiated by several academics and practitioners (O’Callaghan et al., 1992; Thong 1999; Chao et al., 2003; Hu et al., 2004; Yu, 2007; Alam, 2009), who claim that these variables have great influence on B2B e-Marketplace adoption. The influence of these eight characteristics on the dependent variable is significant at 0.01 levels, which make the findings statistically robust. Therefore, there is evidence that the eight characteristics in the study significantly affect the B2B e-Marketplace adoption among SMEs in the selected Asia sample population.
Referring to Table 4.8, Beta weight presents the level of strength on individual effect of eight characteristics against e-Marketing framework development. Q8b (B=.864) emerges as the most important characteristic that affects the willingness of SMEs to adopt B2B e-Marketplace. Q8c ranked second (B=.540), followed by Q7b (B=.527), Q7a (B=.332), Q8a (B=.233), Q8d (B=.231), Q7c (B=.226) and Q7d (B=.201). With p-value at 0.01 and 0.05 levels, all the variables are proven to be statistically significant.

The findings imply a strong link between the eight independent variables and the dependent variable. The adoption of B2B e-Marketplace may spur SME businesses to focus on long-term marketing planning and business success. The results indicate a willingness among SMEs for B2B e-Marketplace adoption to foster their marketing activities. This result illustrates that the eight independent variables were significant contributors to the development of e-Marketing framework derived from B2B e-Marketplace.
4.1.2 Qualitative Data Analysis for RQ1
The interviews were conducted from January 2009 to June 2009. A total of 56 interviews were conducted including 15 face-to-face interviews, 30 telephone interviews, and 11 video conferencing interviews (Table 4.9). The sample population included 8 managing directors, 10 general managers, 10 sales managers, 13 marketing managers, 10 export managers, and 5 IT managers. Malaysia accounted for the highest response rate (26.8%) compared to other countries, followed by India (19.6%), China (17.9%), Thailand (17.9%). Finally Philippines and Singapore both accounted 8.9% respectively.

<table>
<thead>
<tr>
<th>Types of Interview</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face-to-Face</td>
<td>15</td>
<td>26.8%</td>
</tr>
<tr>
<td>Telephone</td>
<td>30</td>
<td>53.6%</td>
</tr>
<tr>
<td>Video Conferencing</td>
<td>11</td>
<td>19.6%</td>
</tr>
<tr>
<td>Group Total (N)</td>
<td>56</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Position Held</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing Director</td>
<td>8</td>
<td>14.2%</td>
</tr>
<tr>
<td>General Manager</td>
<td>10</td>
<td>17.9%</td>
</tr>
<tr>
<td>Sales Manager</td>
<td>10</td>
<td>17.9%</td>
</tr>
<tr>
<td>Marketing Manager</td>
<td>13</td>
<td>23.2%</td>
</tr>
<tr>
<td>Export Manager</td>
<td>10</td>
<td>17.9%</td>
</tr>
<tr>
<td>IT Manager</td>
<td>5</td>
<td>8.9%</td>
</tr>
<tr>
<td>Group Total (N)</td>
<td>56</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q14: Country of Origin</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>10</td>
<td>17.9%</td>
</tr>
<tr>
<td>Malaysia</td>
<td>15</td>
<td>26.8%</td>
</tr>
<tr>
<td>Philippines</td>
<td>5</td>
<td>8.9%</td>
</tr>
<tr>
<td>Singapore</td>
<td>5</td>
<td>8.9%</td>
</tr>
<tr>
<td>Thailand</td>
<td>10</td>
<td>17.9%</td>
</tr>
<tr>
<td>India</td>
<td>11</td>
<td>19.6%</td>
</tr>
<tr>
<td>Group Total (N)</td>
<td>56</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Table 4.9: Descriptive statistics of interviews

Seventeen of the interviewees indicated that the use of e-Marketplace is influenced by government encouraging businesses to adopt B2B e-Marketplaces. Fifteen of the interviewees noted that a willingness to use B2B e-Marketplace is affected by the strength of support from senior management. Nine interviewees said that firms' characteristics such as their size determine whether to transform their current marketing activities to B2B e-Marketplace. Another eight interviewees suggested that globalisation is the
key influence to adopt B2B e-Marketplace. Five interviewees adamantly indicated that business exposure is crucial for SMEs, and they argued that B2B e-Marketplace is a cost-effective platform for their businesses. One interviewee said “the promotion from the government and senior management involvement determine the adaptation of B2B e-Marketplace for SMEs”. Finally, a managing director stated that a competitive advantage is their main purpose for adopting B2B e-Marketplaces.

In summary, the qualitative analysis of interviews and comments made by participants reflects that government and senior management play an important role towards successful B2B e-Marketplace adaptation. Promotion from government and top management significantly influences the likelihood of a firm to utilise B2B e-Marketplace. In addition, firm characteristics such as their size is also affect firm decision to adopt B2B e-Marketplace.

4.1.3 Summary for RQ1

The correlation between B2B e-Marketplace adoption and the eight independent variables indicated a strong positive relationship to each other. Respondents indicated that “Senior management highly recognises that B2B e-Marketplace can enhance the firm’s competitiveness” had the strongest relationship with B2B e-Marketplace adoption. This variable was strongly reflected in O’Callaghan et al. (1992); Hu et al. (2004), and Yu (2007), suggested that senior managements’ knowledge and experience in B2B e-Marketplace can improve the firm’s competitiveness. A multiple regression analysis of all variables resulted in an R square=.652 at the 0.01 level. The analysis shows that the study had an appropriate set of independent variables to predict the dependent variable. All quantitative analysis results are supported by qualitative data obtained from 56 interviewees whom stated that the degree of demand to push a firm to adopt B2B e-Marketplace is determined by a firm characteristics such as their size, encouragement from government and senior management involvement.
The findings suggested that government encouragement and senior management involvement has a significant impact on the adaptation of B2B e-Marketplace. According to Hu et al., (2004), a country’s readiness for e-Business fundamentally depends on government encouragement: promotion activities, government grants and the regulation standards are all crucial for creating an online trading environment. The means range from eight variables of 2.970 to 3.628 shows that SMEs have high initiative to adopt B2B e-Marketplace, as reflected in O’Callaghan et al. (1992); Hu et al. (2004) and Yu (2007). The results indicated that SMEs require more support from government and senior management to foster their businesses to compete in the world business environment. Hence, government and the role of senior management becomes a major driver for SMEs to adopt B2B e-Marketplace services. Furthermore, a majority of the respondents (over 50% of the sample population) indicated that they only generated 0%-20% of their total annual revenue from B2B e-Marketplace. Notably, SMEs still have high expectations to further explore business opportunities provided by the B2B e-Marketplace especially in e-Marketing services. Therefore, there is an immediate need to explore the e-Marketing services derived from the B2B e-Marketplace which will be illustrated in Section 4.2.
4.2 RQ2: What are the dimensions of e-Marketing services of B2B e-Marketplace for SMEs?
This section presents the findings in answer to RQ2 by exploring the dimensions of e-Marketing services of B2B e-Marketplace. A combination of qualitative and quantitative techniques was applied in order to answer this question.

4.2.1 Quantitative Analysis for RQ2
For quantitative data analysis, three different statistical analyses were employed to answer RQ2. These were descriptive analysis, correlation analysis, and multiple regression analysis. Content analysis was performed for qualitative data analysis to further explore the dimensions of e-Marketing services derived from B2B e-Marketplace.

4.2.1.1 Descriptive Analysis for RQ2
The reliability and consistency of the data for RQ2 was based on Cronbach’s Alpha value for standard reliability measurement. Table 4.10 shows the Cronbach’s Alpha Value Test Results > 0.7, indicating the existence of internal consistency or homogeneity among the variables for the analysis for RQ2.
<table>
<thead>
<tr>
<th>Constructs</th>
<th>Cronbach’s Alpha Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2: Customer Relationships Management</td>
<td>0.820</td>
</tr>
<tr>
<td>Q2a: Relationships Management</td>
<td>0.820</td>
</tr>
<tr>
<td>Q2b: Reduce Marketing Costs</td>
<td>0.822</td>
</tr>
<tr>
<td>Q2c: Sales Force Automation</td>
<td>0.832</td>
</tr>
<tr>
<td>Q2d: Customers’ characteristics Identification</td>
<td>0.801</td>
</tr>
<tr>
<td>Q3: Supply Chain Management</td>
<td>0.811</td>
</tr>
<tr>
<td>Q3a: Procurement</td>
<td>0.820</td>
</tr>
<tr>
<td>Q3b: Operations</td>
<td>0.842</td>
</tr>
<tr>
<td>Q3c: Sales and Marketing</td>
<td>0.810</td>
</tr>
<tr>
<td>Q3d: Distribution</td>
<td>0.832</td>
</tr>
<tr>
<td>Q4: Global Competitiveness</td>
<td>0.820</td>
</tr>
<tr>
<td>Q4a: Easy to reach new markets</td>
<td>0.820</td>
</tr>
<tr>
<td>Q4b: Explore new products</td>
<td>0.834</td>
</tr>
<tr>
<td>Q4c: Technological innovation</td>
<td>0.822</td>
</tr>
<tr>
<td>Q4d: Global presence</td>
<td>0.843</td>
</tr>
<tr>
<td>Q5: IS/IT Integration</td>
<td>0.877</td>
</tr>
<tr>
<td>Q5a: Search Engine Optimization</td>
<td>0.872</td>
</tr>
<tr>
<td>Q5b: E-mail</td>
<td>0.878</td>
</tr>
<tr>
<td>Q5c: Personalization / Customization</td>
<td>0.823</td>
</tr>
<tr>
<td>Q5d: Management Information System</td>
<td>0.746</td>
</tr>
<tr>
<td>Q5e: Data Warehousing / Mining</td>
<td>0.877</td>
</tr>
<tr>
<td>Q5f: Customer Relationship Management</td>
<td>0.810</td>
</tr>
<tr>
<td>Q5g: E-catalogue</td>
<td>0.811</td>
</tr>
<tr>
<td>Q5h: Information Management (e.g. XML)</td>
<td>0.742</td>
</tr>
<tr>
<td>Q5i: Educational Training</td>
<td>0.741</td>
</tr>
<tr>
<td>Q5j: Legal, licensing and Administrative Services</td>
<td>0.735</td>
</tr>
<tr>
<td>Q6: Transparency of Information</td>
<td>0.844</td>
</tr>
<tr>
<td>Q6a: Market information</td>
<td>0.827</td>
</tr>
<tr>
<td>Q6b: Trading party information</td>
<td>0.741</td>
</tr>
<tr>
<td>Q6c: Procurement information</td>
<td>0.721</td>
</tr>
<tr>
<td>Q6d: Competition information</td>
<td>0.735</td>
</tr>
<tr>
<td>Q6e: Legal information (e.g. trading regulation)</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.10: Cronbach’s Alpha value test results for RQ2

An analysis of 27 variables is shown in Table 4.11. Except variables from Q5d, Q5e, Q5h, Q5j, and Q6e, all others had a mean score > 3.5. This suggests the expectations of SMEs on the performance of e-Marketing dimensions are optimistic. The arithmetic means also showing 7 variables > 4.0, which confirm that the respondents had high expectations from their B2B e-Marketplace in “Q2a: Relationships Management”, “Q2b: Reduce Marketing Costs”, “Q3a: Procurement”, “Q3c: Sales and marketing”, “Q4a: Easy to reach new markets” and IS/IT integration dimension in “Q5a: Search Engine Optimisation”, “Q5b: E-mail services”, “Q5f: Customer Relationship Management” and “E-catalogue”. Besides, the respondents also expected B2B e-Marketplace providers would focus on the development of IS/IT integration as they only score “Q5d: Management Information System” (mean=3.088, SD=.829), “Q5h: Information Management” (mean=3.071, SD=.039), and “Supply Chain Management” (mean=3.188, SD=.827). In
terms of transparency of information in the B2B e-Marketplace, most respondents are likely to agree with the four variables with mean > 3.5 and only “Q6e: Legal information” with mean score =3.076.

<table>
<thead>
<tr>
<th>Q2: CRM</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2a: Relationships Management</td>
<td>406</td>
<td>4.327</td>
<td>.025</td>
</tr>
<tr>
<td>Q2b: Reduce Marketing Costs</td>
<td>406</td>
<td>4.061</td>
<td>.026</td>
</tr>
<tr>
<td>Q2c: Sales Force Automation</td>
<td>406</td>
<td>3.936</td>
<td>.029</td>
</tr>
<tr>
<td>Q2d: Customers’ characteristics Identification</td>
<td>406</td>
<td>3.825</td>
<td>.029</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Q3: SCM</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3a: Procurement</td>
<td>406</td>
<td>4.064</td>
<td>.027</td>
</tr>
<tr>
<td>Q3b: Operations</td>
<td>406</td>
<td>3.943</td>
<td>.026</td>
</tr>
<tr>
<td>Q3c: Sales and Marketing</td>
<td>406</td>
<td>4.229</td>
<td>.037</td>
</tr>
<tr>
<td>Q3d: Distribution</td>
<td>406</td>
<td>3.628</td>
<td>.035</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q4: Competitiveness</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4a: Easy to reach new markets</td>
<td>406</td>
<td>4.009</td>
<td>.026</td>
</tr>
<tr>
<td>Q4b: Explore new products</td>
<td>406</td>
<td>3.911</td>
<td>.027</td>
</tr>
<tr>
<td>Q4c: Technological innovation</td>
<td>406</td>
<td>3.768</td>
<td>.035</td>
</tr>
<tr>
<td>Q4d: Global presence</td>
<td>406</td>
<td>3.677</td>
<td>.039</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q5: IS/IT Integration</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q5a: Search Engine Optimisation</td>
<td>406</td>
<td>4.325</td>
<td>.026</td>
</tr>
<tr>
<td>Q5b: E-mail</td>
<td>406</td>
<td>4.125</td>
<td>.029</td>
</tr>
<tr>
<td>Q5c: Personalisation / Customisation</td>
<td>406</td>
<td>3.689</td>
<td>.040</td>
</tr>
<tr>
<td>Q5d: Management Information System</td>
<td>406</td>
<td>3.088</td>
<td>.041</td>
</tr>
<tr>
<td>Q5e: Data Warehousing / Mining</td>
<td>406</td>
<td>3.066</td>
<td>.041</td>
</tr>
<tr>
<td>Q5f: Customer Relationship Management</td>
<td>406</td>
<td>4.347</td>
<td>.027</td>
</tr>
<tr>
<td>Q5g: E-catalogue</td>
<td>406</td>
<td>4.369</td>
<td>.026</td>
</tr>
<tr>
<td>Q5h: Information Management (e.g. XML)</td>
<td>406</td>
<td>3.071</td>
<td>.039</td>
</tr>
<tr>
<td>Q5i: Educational Training</td>
<td>406</td>
<td>3.682</td>
<td>.032</td>
</tr>
<tr>
<td>Q5j: Supply Chain Management</td>
<td>406</td>
<td>3.188</td>
<td>.041</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q6: Transparency of Information</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q6a: Market information</td>
<td>406</td>
<td>3.724</td>
<td>.029</td>
</tr>
<tr>
<td>Q6b: Trading party information</td>
<td>406</td>
<td>3.618</td>
<td>.029</td>
</tr>
<tr>
<td>Q6c: Procurement information</td>
<td>406</td>
<td>3.645</td>
<td>.032</td>
</tr>
<tr>
<td>Q6d: Competition information</td>
<td>406</td>
<td>3.518</td>
<td>.031</td>
</tr>
<tr>
<td>Q6e: Legal information (e.g. trading regulation)</td>
<td>406</td>
<td>3.076</td>
<td>.039</td>
</tr>
</tbody>
</table>

Valid N (listwise) | 406

Table 4.11: Descriptive statistics for RO2
The findings imply a strong link between SMEs and the e-Marketing services derived from B2B e-Marketplace. The results indicate a willingness among SMEs for B2B e-Marketplace adoption to support their marketing activities. Based on the results, the effectiveness of e-Marketing services is highly determined by several dimensions such as CRM, SCM, competitiveness, IS/IT integration and transparency of information, as pointed out earlier.

4.2.1.2 Pearson Correlation Analysis for RQ2
The main purpose of correlation analysis operated in this section was to determine the degree of relationship between the independent variables. If a correlation coefficient score is higher than .7, then in essence, the variables are the same. There are five e-Marketing services (CRM, SCM, Competitiveness, IS/IT integration, and Transparency of information) to be tested derived from B2B e-Marketplace. The results of the five e-Marketing services shown are as follows:

1) Customer Relationship Management (CRM) – Referring to Table 4.12, the score of correlation between the four variables in CRM < .484. There are therefore independent from each other, and multicollinearity is not occurring at all. The score of correlation coefficient between the four variables had a significant positive correlation to e-Marketing framework (dependent variable): Q2a: .500*, Q2b: .322*, Q2c: .134** and Q2d: .102*. Among the four variables, Q2a (Relationships management) had the strongest relationship with the dependent variable. This means the respondents agreed that relationship management is the key variable for the development of e-Marketing framework derived from B2B e-Marketplace.
<table>
<thead>
<tr>
<th></th>
<th>Q2a</th>
<th>Q2b</th>
<th>Q2c</th>
<th>Q2d</th>
<th>EM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2a</td>
<td>Pearson</td>
<td>.228(**)</td>
<td>.221(**)</td>
<td>.217(**)</td>
<td>.500(*)</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Q2b</td>
<td>Pearson</td>
<td>.228(**)</td>
<td>1</td>
<td>.241(**)</td>
<td>.275(**)</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Q2c</td>
<td>Pearson</td>
<td>.221(**)</td>
<td>.241(**)</td>
<td>1</td>
<td>.484(**)</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Q2d</td>
<td>Pearson</td>
<td>.217(**)</td>
<td>.275(**)</td>
<td>.484(**)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>EM</td>
<td>Pearson</td>
<td>.500(*)</td>
<td>.322(*)</td>
<td>.134(**)</td>
<td>.102(*)</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
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<td></td>
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<td></td>
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<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.043</td>
<td>.014</td>
<td>.007</td>
<td>.040</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
*Correlation is significant at the 0.05 level (2-tailed).
Dependent Variable: e-Marketing Framework Development

Table 4.12: Correlation coefficient in CRM

2) Supply Chain Management (SCM) - The score of the correlation between the four variables in SCM was < .469, therefore they are independent from each other, and multicollinearity is not occurring at all. The score of correlation coefficient between the four variables had a significantly positive correlation to e-Marketing framework development (dependent variable) as the results illustrate in Table 4.13.

<table>
<thead>
<tr>
<th></th>
<th>Q3a</th>
<th>Q3b</th>
<th>Q3c</th>
<th>Q3d</th>
<th>EM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3a</td>
<td>Pearson</td>
<td>1</td>
<td>.433(**)</td>
<td>.337(**)</td>
<td>.283(**)</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Q3b</td>
<td>Pearson</td>
<td>.633(**)</td>
<td>1</td>
<td>.398(**)</td>
<td>.420(**)</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Q3c</td>
<td>Pearson</td>
<td>.337(**)</td>
<td>.398(**)</td>
<td>1</td>
<td>.469(**)</td>
</tr>
<tr>
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<td>Correlation</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Q3d</td>
<td>Pearson</td>
<td>.283(**)</td>
<td>.420(**)</td>
<td>.469(**)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>EM</td>
<td>Pearson</td>
<td>.187(*)</td>
<td>.162(**)</td>
<td>.125(*)</td>
<td>.190(*)</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.042</td>
<td>.001</td>
<td>.012</td>
<td>.041</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
Dependent Variable: e-Marketing Framework Development

Table 4.13: Correlation coefficient in SCM
3) Competitiveness - The score of correlation between the four variables in Competitiveness was < .460, therefore they are significantly independent from each other and there is no problem with multicollinearity. Referring to Table 4.14, except Q4c, all the score of correlation coefficient between the variables had a significantly positive correlation to dependent variable. The result illustrated as: Q4a: .111*, Q4b: .101*, Q4c: .078 and Q4d: .492**. Among the four variables, Q4d (Global presence) had the strongest relationship with the dependent variable. This means the respondents agreed that exposure to the global marketplace is important for the development of e-Marketing framework derived from B2B e-Marketplace.

<table>
<thead>
<tr>
<th></th>
<th>Q4a</th>
<th>Q4b</th>
<th>Q4c</th>
<th>Q4d</th>
<th>EM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4a</td>
<td>Pearson</td>
<td>Correlation</td>
<td>.111(*)</td>
<td>.438(**)</td>
<td>.424(**)</td>
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<td></td>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.393(**)</td>
</tr>
<tr>
<td>Q4b</td>
<td>Pearson</td>
<td>Correlation</td>
<td>.000</td>
<td>.000</td>
<td>.078</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.492**</td>
</tr>
<tr>
<td>Q4c</td>
<td>Pearson</td>
<td>Correlation</td>
<td>.000</td>
<td>.000</td>
<td>.115</td>
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<tr>
<td></td>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.492**</td>
</tr>
<tr>
<td>Q4d</td>
<td>Pearson</td>
<td>Correlation</td>
<td>.111(*)</td>
<td>.101(*)</td>
<td>.078</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.026</td>
<td>.042</td>
<td>.115</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
Dependent Variable: e-Marketing Framework Development

Table 4.14: Correlation coefficient in competitiveness

4) IS/IT Integration - The score of correlation between the four variables in IS/IT integration was < .470, therefore they are independent from each other and multicollinearity is not occurring. Except Q5d and Q5e, all the score of correlation coefficient between the variables had a significant positive correlation to dependent variable (Table 4.15). Among the ten variables, Q5a (Search engine optimisation) had the strongest relationship with the dependent variable. Hence, the respondents agreed that the search engine optimisation is an important e-Marketing element for their businesses.
Table 4.15: Correlation coefficient in IS/IT Integration

5) Transparency of Information - The score of correlation between five variables was < .498 at .0.01 level, therefore they are independent from each other and there is a 99% probability that these relationship scores were not produced by change. Referring to Table 4.16, the score of correlation coefficient between the five independent variables had a significant positive correlation to e-Marketing framework (dependent variable) illustrated as: Q6a: .189**, Q6b: .202**, Q6c: .168**, Q6d: .225** and Q6e: .128**. Among the five variables, Q6d (Competition information) had the strongest relationship with the dependent variable. This means that the degree of transparency in competition information obtained from the B2B e-Marketplace is highly important for the development of e-Marketing framework for this study.
### Table 4.16: Correlation coefficient in transparency of information

<table>
<thead>
<tr>
<th></th>
<th>Q6a</th>
<th>Q6b</th>
<th>Q6c</th>
<th>Q6d</th>
<th>Q6e</th>
<th>EM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q6a</td>
<td>Pearson Correlation</td>
<td>.487(**)</td>
<td>.498(**)</td>
<td>.310(**)</td>
<td>.415(**)</td>
<td>.189(**)</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Q6b</td>
<td>Pearson Correlation</td>
<td>.487(**)</td>
<td>1</td>
<td>.318(**)</td>
<td>.238(**)</td>
<td>.382(**)</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Q6c</td>
<td>Pearson Correlation</td>
<td>.398(**)</td>
<td>.418(**)</td>
<td>1</td>
<td>.403(**)</td>
<td>.327(**)</td>
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<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.168(**)</td>
</tr>
<tr>
<td>Q6d</td>
<td>Pearson Correlation</td>
<td>.310(**)</td>
<td>.338(**)</td>
<td>.403(**)</td>
<td>1</td>
<td>.290(**)</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.225(**)</td>
</tr>
<tr>
<td>Q6e</td>
<td>Pearson Correlation</td>
<td>.415(**)</td>
<td>.382(**)</td>
<td>.327(**)</td>
<td>.390(**)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.128(**)</td>
</tr>
<tr>
<td>EM</td>
<td>Pearson Correlation</td>
<td>.189(**)</td>
<td>.202(**)</td>
<td>.168(**)</td>
<td>.225(**)</td>
<td>.128(**)</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.001</td>
<td>.000</td>
<td>.010</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).

Dependent Variable: e-Marketing Framework

### 4.2.1.3 Multiple Regression Analysis for RQ2

A multiple regression analysis was adopted to determine the effect of a set of independent variables on the dependent variable. As shown in Table 4.17, the adjusted R square=54.6, which means that 54.6% of variation of the dependent variables can be interpreted from the 27 independent variables at significant 0.01 level. This result indicates that this study has an appropriate set of independent variables to predict the dependent variable. The figures are substantiated by several academics and practitioners (e.g. Kierzkowski et al., 1996; Serve et al., 2002; Xu et al., 2002; Zeng and Pathank, 2003; Zeng et al., 2003; Chaffey, 2004; Eid et al., 2006), who claim that these variables have great influence on e-Marketing framework development derived from B2B e-Marketplace. The influence of the 27 characteristics on the dependent variable is significant at 0.01 levels, which makes the findings statistically robust. Therefore, there is evidence that the 27 characteristics in the study significantly affect the development of e-Marketing framework among SMEs in the selected Asia sample population.
<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.759(a)</td>
<td>.576</td>
<td>.546</td>
<td>.000**</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Q6e, Q5g, Q3d, Q5b, Q5c, Q5i, Q2d, Q3a, Q6c, Q2c, Q3c, Q4a, Q5e, Q3b, Q4b, Q5f, Q4c, Q6d, Q6b, Q2b, Q2a, Q5j, Q5h, Q6a, Q4d, Q5a, Q5d

Table 4.17: Adjusted R square for RQ2

Beta weight presented the level of strength on the individual effect of the 27 characteristics against the dependent variable (Table 4.18). After reviewing the regression analysis, Beta weight presented the level at which the independent variable is a predictor of the dependent variable. The score of Beta weight showed that among the 27 independent variables, only four variables had a negative influence on e-Marketing framework development. The result regression analysis of five e-Marketing services (CRM, SCM, Competitiveness, IS/IT Integration and Transparency of Information) are shown as follows:

1) CRM – CRM had a positive standardized Beta weight with e-Marketing framework. There are four variables related to CRM. Q2a (Relationships management) scores the highest (B=.611), followed by Q2b, Q2d and Q2c. Therefore respondents who participated in B2B e-Marketplace felt that CRM is one of the key elements affecting their e-Marketing strategic development

2) SCM – The four variables related to SCM had a positive standardized Beta weight with e-Marketing framework. The result from highest to lowest was: Q3c, Q3a, Q3b and Q3d. The respondents reacted that all the variables under SCM influence the development of e-Marketing framework.

3) Competitiveness – Except Q4c (Technological innovation), all other independent variables had positive standardized Beta weight with the e-Marketing framework. The highest score is Q4d (B= .419) which indicates that the respondents are demonstrating greater interest in obtaining global competitiveness through the e-Marketing framework.
4) IS/IT Integration – Q5d (Management Information System) and Q5e (Data warehousing / mining) had negative standardize Beta weight to the e-Marketing framework. The highest score was Q5a (Search engine optimisation), and the lowest was Q5h (Information management). Once again, respondents agreed that exposure to the world marketplace is the main reason to participate in B2B e-Marketplace. IS/IT elements which will contribute to global exposure are crucial to integrate into B2B e-Marketplace.

5) Transparency of Information – All the variables had a positive standardized Beta weight with e-Marketing framework. The result from highest to lowest was: Q6d, Q6e, Q6c, Q6b and Q6a. Respondents reported that all the variables under transparency of information in B2B e-Marketplace influence the development of e-Marketing framework.
<table>
<thead>
<tr>
<th></th>
<th>Standardized Coefficients</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>CRM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q2a</td>
<td>.611</td>
<td>.000**</td>
</tr>
<tr>
<td>Q2b</td>
<td>.365</td>
<td>.001**</td>
</tr>
<tr>
<td>Q2c</td>
<td>.184</td>
<td>.008**</td>
</tr>
<tr>
<td>Q2d</td>
<td>.317</td>
<td>.022*</td>
</tr>
<tr>
<td>SCM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q3a</td>
<td>.294</td>
<td>.025*</td>
</tr>
<tr>
<td>Q3b</td>
<td>.113</td>
<td>.005**</td>
</tr>
<tr>
<td>Q3c</td>
<td>.372</td>
<td>.048*</td>
</tr>
<tr>
<td>Q3d</td>
<td>.111</td>
<td>.040*</td>
</tr>
<tr>
<td>Competitiveness</td>
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<td></td>
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<tr>
<td>Q4a</td>
<td>.310</td>
<td>.040*</td>
</tr>
<tr>
<td>Q4b</td>
<td>.225</td>
<td>.026*</td>
</tr>
<tr>
<td>Q4c</td>
<td>-.155</td>
<td>.081</td>
</tr>
<tr>
<td>Q4d</td>
<td>.419</td>
<td>.000**</td>
</tr>
<tr>
<td>IS/IT Integration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q5a</td>
<td>.579</td>
<td>.006**</td>
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<tr>
<td>Q5b</td>
<td>.493</td>
<td>.023*</td>
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<tr>
<td>Q5c</td>
<td>.247</td>
<td>.025*</td>
</tr>
<tr>
<td>Q5d</td>
<td>-.179</td>
<td>.051</td>
</tr>
<tr>
<td>Q5e</td>
<td>-.212</td>
<td>.318</td>
</tr>
<tr>
<td>Q5f</td>
<td>.496</td>
<td>.021*</td>
</tr>
<tr>
<td>Q5g</td>
<td>.178</td>
<td>.045*</td>
</tr>
<tr>
<td>Q5h</td>
<td>.102</td>
<td>.027*</td>
</tr>
<tr>
<td>Q5i</td>
<td>.138</td>
<td>.002**</td>
</tr>
<tr>
<td>Q5j</td>
<td>.305</td>
<td>.041*</td>
</tr>
<tr>
<td>Transparency of Information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q6a</td>
<td>.101</td>
<td>.004**</td>
</tr>
<tr>
<td>Q6b</td>
<td>.127</td>
<td>.026*</td>
</tr>
<tr>
<td>Q6c</td>
<td>.140</td>
<td>.027*</td>
</tr>
<tr>
<td>Q6d</td>
<td>.378</td>
<td>.017*</td>
</tr>
<tr>
<td>Q6e</td>
<td>.156</td>
<td>.003**</td>
</tr>
</tbody>
</table>

* Dependent Variable: e-Marketing framework  
N=406  *p=<.05  **p=<.01

Table 4.18: Regression analysis for RQ2

4.2.2 Qualitative Data Analysis for RQ2

Interviews were conducted to qualitatively analyse the data. In order to answer RQ2, interviewees were asked what main incentives/benefits are derived from the B2B e-Marketplace from a CRM perspective. Data revealed that 100% of participants agreed that CRM is important to the success of their business, particularly in marketing activities. Ten of the interviewees believed that e-Marketing resources derived from the B2B e-Marketplace have improved their sales and developed more effective marketing activities. In addition, one executive said “the organisations will adopt B2B e-Marketplace immediately if the CRM system suited their marketing strategy”.
A majority of interviewees (46) reported that B2B e-Marketplace provides a clear understanding of their business processes in terms of procurement, transaction, sales and marketing, and distribution processes. However, ten interviewees suggested that their service providers do not have the facilities for transaction through the website. In other words, the B2B e-Marketplace only provides an information platform for buyers and sellers. The actual deals are struck offline or via e-mail.

Twenty of the interviewees indicated that the degree of compatibility for capturing new markets is the main advantage gained from B2B e-Marketplaces. Sixteen of the interviewees stated that the use of B2B e-Marketplaces is likely if their customers or competitors in the same industry adopt it. Another ten interviewees commented that the marketplace is complex and volatile; SMEs are likely to adopt innovative new technologies to maintain their competitive edge. Finally, ten of the interviewees agreed that e-Marketing services derived from B2B e-Marketplace provide better opportunities to develop new products/services.

All interviewees agreed that B2B e-Marketplaces with well-established IS/IT equipment are important to help SMEs in marketing activities. One marketing manager said that, “IS/IT integration in B2B e-Marketplace can definitely enhance the firms’ competitiveness”. Another marketing manager said “all our data communication tasks including marketing reports, and procurement processes are generated via IS/IT integrated with the B2B e-Marketplace, and its works brilliantly”.

A majority of respondents saw the transparency of information in B2B e-Marketplace as an important factor for enhancing their marketing strategy. One respondent stated that “the transparency of market, trading party, and procurement is very high in my industry”. However, five interviewees noted that legal information such as trading regulations are very limited.
4.2.3 Summary for RQ2

Findings in relations to RQ2 reveal that five dimensions, namely CRM, SCM, Competitiveness, IS/IT integration and Transparency of information had a positive effect on e-Marketing framework development for SMEs. The R square was .546 with an overall significant at the 0.01 level made the findings statistically robust. As reported by the respondents, CRM (average positive standardized Beta weight of .369) was the most desirable for SMEs, so it is predictable that the integration of B2B and CRM will be a continuous trend. This result was reflected in Kierzkowski et al. (1996); Xu et al. (2002); Zeng et al. (2003); and Chaffey (2004) who all stated that a successful e-Marketing framework needs to have an effective CRM system.

There were three independent variables namely technological innovation, Management Information System and Data warehousing / mining had a negative Beta weight with the dependent variable - e-Marketing framework development. These negative relationships indicate that as the value of these variables increases, the value of e-Marketing framework decreases. Hence, these four variables do not appear as positive dominant factors in developing e-Marketing framework in this study.
4.3 RQ3: What are the Critical Success Factors (CSFs) associated with e-Marketing service performances derived from B2B e-Marketplace?

The main purpose of this section is to identify CSFs associated with e-Marketing performances derived from B2B e-Marketplace. Factor analysis was performed for quantitative data analysis, while, content analysis was employed for qualitative data analysis.

4.3.1 Quantitative Data Analysis for RQ3

Factor analysis can identify whether a factor structure underlies correlations between a numbers of variables. There were nine variables namely successful customer relationships, supply chain facilities, global competitiveness, IS/IT infrastructures, transparency and visibility of information, top management support and commitment, government encouragement and commitment, security, and cultural consideration.

4.3.1.1 Factor Analysis for RQ3

The data validity and data reduction for this study was processed using SPSS principal component factor analysis. Bartlett’s Test of Sphericity (BTS) and Kaiser-Meyer-Olkin (KMO) tests were carried out to ensure the validity of the factor analysis. All the BTS results were significance at $P=.000$ indicating that the data are statistic significantly for the purpose of factor analysis (Table 4.19). In addition, the KMO was performed to measure the sampling adequacy. As a measure of factorability, a value > .6 is acceptable for factor analysis. The KMO results were in the range of .701 to .921, reflecting a high level of sampling adequacy. The extracted factors were loaded using eigenvalue of greater than 1, and the tested results were in the range of 54.428% to 81.623% (>35% considered statistical significant) which indicates that the data can be considered statistically significant and ready for factor analysis.
<table>
<thead>
<tr>
<th>Factors</th>
<th>KMO</th>
<th>Bartlett’s test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Chi-square</td>
<td>Sig</td>
</tr>
<tr>
<td>Q9a: Successful customer relationships</td>
<td>.701</td>
<td>385.927</td>
</tr>
<tr>
<td>Q9b: Supply chain facilities</td>
<td>.921</td>
<td>988.425</td>
</tr>
<tr>
<td>Q9c: Global competitiveness</td>
<td>.882</td>
<td>1043.808</td>
</tr>
<tr>
<td>Q9d: IS/IT infrastructures</td>
<td>.747</td>
<td>3198.885</td>
</tr>
<tr>
<td>Q9e: Transparency and visibility of information</td>
<td>.749</td>
<td>1037.373</td>
</tr>
<tr>
<td>Q9f: Top Management support and commitment</td>
<td>.755</td>
<td>1112.555</td>
</tr>
<tr>
<td>Q9g: Government encouragement and commitment</td>
<td>.709</td>
<td>672.473</td>
</tr>
<tr>
<td>Q9h: Security</td>
<td>.710</td>
<td>680.574</td>
</tr>
<tr>
<td>Q9i: Cultural consideration</td>
<td>.708</td>
<td>670.342</td>
</tr>
</tbody>
</table>

Table 4.19: KMO and Bartlett’s test

The reliability and consistency of the data was then scrutinised. Internal consistency analysis using Cronbach’s alpha value is the standard reliability measurement for quantitative data collection. According to Nunnaly (1978), the Cronbach’s alpha value should be > 0.7 for high reliability standard. Table 4.20 shows the Cronbach’s Alpha Value Test Results > 0.7 which indicates the existence of internal consistency or homogeneity among the variables for this study.
### Table 4.20: Cronbach’s Alpha value test result for RQ3

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q9a: Successful customer relationships</td>
<td>0.871</td>
</tr>
<tr>
<td>Q9b: Supply chain facilities</td>
<td>0.804</td>
</tr>
<tr>
<td>Q9c: Global competitiveness</td>
<td>0.829</td>
</tr>
<tr>
<td>Q9d: IS/IT infrastructures</td>
<td>0.784</td>
</tr>
<tr>
<td>Q9e: Transparency and visibility of information</td>
<td>0.811</td>
</tr>
<tr>
<td>Q9f: Top management support and commitment</td>
<td>0.843</td>
</tr>
<tr>
<td>Q9g: Government encouragement and commitment</td>
<td>0.700</td>
</tr>
<tr>
<td>Q9h: Security</td>
<td>0.778</td>
</tr>
<tr>
<td>Q9i: Cultural consideration</td>
<td>0.771</td>
</tr>
</tbody>
</table>

#### 4.3.1.2 Ranking of the CSFs

The questionnaire required the respondents to indicate the value according to the Likert-scale standard; 1 (Not critical), 2 (Minor critical), 3 (Neutral), 4 (Critical), and 5 (Highly critical). The results in Table 4.21 indicate a high level of CSFs (means range between 3.546 and 4.157) associated with e-Marketing services derived from B2B e-Marketplace. Nine CSFs were drawn from the literature (e.g. Eid et al., 2002; Eid and Trueman 2004; Li and Li 2005). Noted that the nine factors listed are not equally important and the top four CSFs variables were rated above 4.0 (“Successful customer relationships”, “Global competitiveness”, “Government Encouragement and commitment”, and “Security”). The remaining five success factors variables were also rated > 3.5 and these are “Cultural consideration”, “Transparency and visibility of information”, “IS/IT infrastructures”, “Top management support and commitment” and “Supply chain facilities”.

SMEs that have the opportunities to compete in the global marketplace are those participating in the B2B e-Marketplace. B2B e-Marketplace provides a large number of buyers to trade on their platform and this will attract more suppliers. By attracting large numbers of buyers and suppliers from around the globe, a marketplace can become very strong and this will provide an opportunity for the participants to compete in the world marketplace. For instance, Asiep.com, Malaysia’s leading B2B e-Marketplace service provider has a buying value of over £160 billion covering 203 countries since they
were established in 1996 (Asiaep.com, 2011). The respondents also considered CRM to be a critical factor for them especially in the virtual business environment that is becoming more saturated and competitive. According to Xu (2002), the marketing model is gradually changing from product to customer centered. Thus, a successful company in the ‘e’ environment will use customer information wisely to develop long-term relationships. The government and senior management members’ involvement is also crucial for SMEs to be encouraged and motivated to ensure successful e-transformation. They need to ensure SMEs are clear with regards to the conditions of their adoption and are committed to transforming their businesses to the electronic environment. As indicated by the respondents, the framework has many efficiency gains which must achieved by B2B e-Marketplaces for IS/IT alliances such as reducing hosting, software, and technical resources costs for SMEs. IS/IT integration would be beneficial to B2B e-Marketplace participants to maximise their Return on Investment (ROI) on infrastructure technology.

In terms of transparency of information, respondents demanded a higher degree of transparency and visibility of information to foster developments on their e-Marketing strategy. The standardised and visibility of information in markets, trading parties, procurement, competition, and legal administration are important for addressing marketers’ requirements. For security, B2B e-Marketplace is totally exposed to the Internet, and therefore information assets need to be protected via the security technology. Thus, marketers need to be aware of all stages of security development especially in payment transactions. Furthermore, due to the inherently global nature of the digital business environment, respondents indicated the importance of cultural impact of any online advertising and promotional materials via the Internet. Lastly, the needs of the supply chain have recognised the e-Marketplace as a main data transaction technology, which is described as the electronic transmission of information or documents for buyers/sellers based on a standard electronic format, which is also considered as essential for B2B adaptation.
Table 4.21: Ranking of e-Marketing success factors

One-sample t-test was conducted to assess whether there are statistically significant differences between the CSFs and the mid-point 3.0. As shown in Table 4.22, all the significant values are \( p = 0.00 \), which confirms that all the variables in CSFs are positive which gives no statistic change from sampling error. The overall t-test was significantly at 0.00 levels; therefore, the effectiveness of these elements is appropriate to constitute an e-Marketing framework for SMEs.

Table 4.22: One sample t test of statistical significance of CSFs
4.3.2 Qualitative Data Analysis for RQ3

This section presents the data collected from the interviews for qualitative analysis. All interviewees were asked to provide their opinions about the CSFs derived from e-Marketing services of B2B e-Marketplace. Twenty six interviewees indicated that a successful customer relationship is the key to ensuring successful competitiveness for an organisation especially in the “e-environment”. Twelve noted that “globalisation” significantly influences SMEs to adopt B2B e-Marketplace. In analysing the responses, the major themes in the content of the interviews emerged as:

- Customer Relationships Management
- Globalisation
- IS/IT performances
- Top management support and commitment
- Government encouragement and support

One marketing manager firmly expressed that “the e-Marketing facilities provided by B2B e-Marketplace are the most critical element for marketing decision-making”.

4.3.3 Summary for RQ3

The findings were able to identify CSF by empirically testing these factors using a large-scale survey of the Asian market in different industrial sectors. It is important that SMEs develop a systematic approach to identify prioritising CSFs in the implementation process and inline with the environment in which the adaptation is located. Therefore, SMEs can establish a comprehensive approach to manipulate each factor based on the findings and interpretation of this study.

In addition, the CSFs in this study serve as building blocks for the e-Marketing framework development. It provides a guideline for academics and practitioners and highlights the significant role of each factor in developing and sustaining effective e-Marketing practice for SMEs. SME managers can
derive a better understanding and measurement of marketing activities that appropriately balance traditional and e-Marketing practices. At the same time, CSF can be integrated into companies to determine the level of marketing performance in B2B e-Marketplace.

Generally these findings provide new theoretical grounds for research into e-Marketing services derived from B2B e-Marketplace. It provides an empirical assessment of the essential elements in B2B e-Marketplace adaptation and implications for the means to prioritising CSF. In short, this study provides a thorough analysis of CSF that enhances or detracts from the e-Marketing framework development in the following section.

The main purpose of the development of this framework is to provide a clear understanding of the performances of B2B e-Marketplace in conducting e-Marketing in the global business environment. This e-Marketing framework is developed based on the empirical findings from both quantitative and qualitative data analysis. The development process is initially derived from the literature.

The framework is described in relation to the key theme of this study; to develop an e-Marketing framework derived from B2B e-Marketplace for SMEs who wish to be proactive in the use of ICT for business efficiency and competitive advantage and those who wish to explore the Internet technologies for marketing activities. Referring to Figure 4.1, the framework is integrated with firms’ characteristics which illustrate the degree of demands to push a firm to adopt B2B e-Marketplace. The framework also suggests a variety of dimensions in e-Marketing services namely; e-CRM, e-SCM, e-Competitiveness, IS/IT integration, and transparency of information for business efficiency and competitive advantage. SMEs such as distributors, importers, manufacturers, and wholesalers need to consider these dimensions as their marketing element to fulfill their business requirements. Each of the dimensions provides a solution for their existing or potential marketing problems. Hence, the framework is ready to assist businesses especially for SMEs for “e” transformation.

The framework was divided into two sections. The first section illustrates the characteristics of the firm that have adopted the B2B e-Marketplace. Secondly, an exploration of e-Marketing services derived from B2B e-Marketplace (Figure 4.2).
4.4.1 Firms’ Characteristics in B2B e-Marketplace Adoption

The initial stage of the e-Marketing framework is to identify the degree of demands (internal/external) to encourage a firm to adopt B2B e-Marketplace. This stage aims to provide a better understanding for SMEs regarding the major forces that affect the adoption of new e-Marketing technologies. Based on the empirical result, the key attributes driving a firm to adopt B2B e-Marketplace are the involvement of and support from the government and senior management within the SMEs. The following sections provide a more detailed level of understanding for each force of B2B e-Marketplace adoption.
4.4.1.1 Government Involvements

A country's readiness for B2B e-Commerce depends fundamentally on the infrastructure especially networking and Internet technology. The formation and enforcement of the “e” development including legal and technical standards must be taken into account by government for providing an e-Commerce environment. Nations have endorsed different approaches to foster “e” transformation and governments play an important role in establishing a comprehensive and uniform framework for various measurements for this purpose at both national and international level.

For SMEs that want to take share of revenues from B2B e-Marketplace and catch up with large-scale companies in the new economy, it is essential for governments to accelerate the B2B e-Commerce promotion and encouragement. The promotion from government in B2B e-Marketplace adoption will lead SMEs to push their businesses forward to a higher level of B2B e-Marketplace adoption. Nevertheless, the legal environment for e-Business is still unclear in certain countries. Compared with B2B e-Commerce in developed countries, those in emerging economies are facing highly uncertain legal environment. For instance, in China there are several elements hindering the development of B2B e-Commerce including lack of network security, insufficient telecommunication infrastructure, lack of trust, lack of law and regulations in e-environment, problems with standardisation, payment issues, and lack of awareness of the benefits of an e-environment. Thus, for developing countries, it is a must for governments to accelerate their legal-making process and develop a sustainable and stable legal environment in supporting B2B e-Marketplace adoption.

With the increasing pressure on accountability for government encouragement, the growing interests of B2B e-Commerce adoption have contributed to rapid progress towards the digitisation of conventional brick and mortar organisations. For instance, the Multimedia Super Corridor Malaysia (MSC Malaysia) undertaken by the Malaysian government made various funds available for B2B e-Commerce development and created new opportunities for SMEs. Such initiatives not only to help individual firms
understand the value for their investment in ICT adoption, they also facilitate identifying the relative performance of the governments in ICT development so that effective strategies and policies can be formulated for improving the performance of firms in the digital business environment.

In addition, governments can actively encourage the diffusion of B2B e-Marketplace by providing more grants to help SMEs enhancing electronic trading awareness. As “government grant” has the highest score of beta weight (B=.527), SMEs demanded government to reap the benefits of B2B e-Marketplace by providing more grants to encourage and influence the adoption of B2B e-Marketplace. As suggested by several interviewees, government can develop an e-Commerce master plan or a series of initiatives by establishing a provision of grant aimed at enhancing B2B e-Marketplace usage for local SMEs or providing tax incentives for foreign companies to use their B2B e-Marketplace as the main base of the world marketplace.

4.4.1.2 Senior Management Involvements
Embarking on a B2B e-Marketplace adoption initiative is a strategic decision and can be taken only by senior management. Senior executives’ understanding of B2B e-Marketplace’s operations and their knowledge/experience together with their leadership are among the important element of the adoption initiatives. Based on the study, the respondents have given four variables that push them to adopt B2B e-Marketplace, namely “knowledge/experience of senior management, senior management’s B2B e-Marketplace recognition, senior management allocation of the required resources for B2B e-Marketplace, and senior management exploring B2B e-Marketplace regularly with staff”. An example of this element was provided by a respondent who noticed that top management should take action on request, assist in conflict resolution, and provide continuous feedback for project implementation. In addition, top managers play a critical role to provide direction, authority, resources and participate during and after the implementation of B2B e-Commerce.
There is a very strong relationship between the business achievements and ambitions of an organisation and senior managements' recognition of the B2B e-Marketplace adoption. Respondents scored highest (B=.864; r=.810**) in “senior management highly recognises B2B e-Marketplace can enhance the firm’s competitiveness”, which is reflected in O'Callaghan et al. (1992); Hu et al. (2004); Yu (2007), suggests senior management are critical to success by recognising B2B e-Marketplace to explore and integrate competing technological and customer-oriented e-Marketing resources.

The findings also indicate resources allocation and exploration the B2B e-Marketplace with staffs could be considered integral to the internal relationship management within a firm. To achieve this broadened perspective, senior management need to explore the potential benefits of marketing from B2B e-Marketplace by providing resources to improve firms’ marketing ability.

In general, top management stresses the importance of “knowing what the others are doing” in order to streamline B2B e-Commerce operations. An effective example given by one of the interviewees was “frequent top management meetings for cross functional teamwork (e.g. IT department) are therefore seen as important ingredients for facilitating B2B e-Commerce adoption”. Specifically, close contact and sharing of information with manufacturers as well as distributors including participation on B2B e-Marketplace are important for implementation. According to Premkumar and Roberts (1999), the top management's vision and commitment to B2B e-Commerce adoption are essential in small businesses. Their perception of ICT benefits appears to be crucial to the successful adoption and development of a new business model, particularly at the initial stage. It also determines the different innovative attitudes of small firms, albeit based on the development of particular competencies.
4.4.1.3 Size of Firm

The technologies that have created the B2B e-Marketplace have improved efficiency in the development and richness of the marketing activities for SMEs. The findings pointed out that marketing orientation and learning orientation of the SMEs was a main indicator of intention to adopt the B2B e-Marketplace. Marketing in a small firm is different to marketing in the larger organisation (Gilmore et al., 2007). SMEs considered to be more intuitive, competency based, revolving around networking and operating under financial and human resource/time constraints. The findings also indicated that despite the opportunities that it offers and the benefits predicted from employing B2B e-Marketplace, SMEs were slow to respond to the changes brought about by the internet. SMEs view the Internet mainly as an additional promotional tool, instead of developing marketing plans for its future use. Thus, they were failing to use it to create real competitive advantage and simply made do with the direct operational benefits that it had to offer in terms of marketing communications.

In order to address the research objective, this framework was developed by considering SMEs generic constraints and their strengths. Based on the findings, B2B e-Marketplace has improved efficiency in the development and richness on marketing activities in a cost effective way. Therefore, reflected on the arguments from Kailer and Scheff, 1999; Barry and Milner, 2002; Rao et al., 2003; Palmer, 2005; Chong et al., 2011, B2B e-Commerce remains a popular online business model for SMEs.

The findings indicate that SMEs are ready to commit to the “e” way to develop appropriate marketing strategies. SMEs must improve its decision-making or implement more adaptive strategies to achieve their marketing goals by adopting B2B e-Marketplace. It is also proven that understanding the impact of e-Marketing services in B2B e-Marketplace can yield valuable insight into marketing performance for SMEs.
4.4.2 The e-Marketing Services Derived from B2B e-Marketplace

The implementation of e-Marketing is relatively inexpensive when compared to the ratio of cost against the benefit of reaching global target audience. Companies can reach a wide audience for a fraction of traditional advertising budgets and the nature of the B2B e-Marketplace allows consumers to research and purchase products and services at their own convenience (Laudon and Laudon, 2004; O’Reily and Finnegan, 2007). Therefore, businesses have the advantage of appealing to consumers in a medium that can bring results quickly.

The fundamental idea of the e-Marketing framework is similar to the concept of Chaffey, (2004); Gloor, (2000); Kierzkowski et al., (1996) model which also emphasizes the integration of Internet technology and businesses for e-Marketing implementation. SMEs need to perceive that benefits of B2B e-Marketing will outweigh the costs of marketing. The framework therefore provides various incentives to help SMEs engage in e-Marketing with minimal investment and costs. In order to reap the advantages of B2B e-marketplace, SMEs must fully embrace it by releasing the potentials of the Internet. The respondents of this study confirmed the view that the B2B e-Marketplace can reduce the barriers faced by SMEs by lowering the costs of extending their geographic reach, enhancing customer relationships, improving sales, increasing web traffic, providing a competitive advantage, and efficiency gains. The managers of SMEs should, then, ensure that they are able to acquire the enabling and enlightening technical and management skills related to B2B e-Marketplace usage.

As shown in Figure 4.1, the B2B e-Marketplace works as a platform for distributors, wholesalers, exporters, manufacturers and importers to communicate and the company’s website playing an important role in the success for the operation of B2B e-Marketplace. The e-Marketing tools in the B2B e-Marketplace enable the businesses position strategically in international context and obtain enormous benefits in cost savings, stimulated competition, and productivity gains. In addition, the understanding of the B2B e-Marketplace environment by the SMEs is important.
Recognition of the e-Marketing services derived from B2B e-Marketplace will extend their businesses beyond conventional marketing boundaries, and more effectively plan the participation into the e-environment. The following sections will illustrate the operations and contributions of e-Marketing services to SMEs.

4.4.2.1 Customer Relationships Management

E-marketing is a fundamental feature in the B2B e-Marketplace, and the integration of CRM and B2B e-Marketplace have long been studied by practitioners, academics and researchers during past decade. B2B e-Marketplace is one of the service sectors that provide an electronic platform to link buyers and sellers to exchange information, products, services and the transactions conducted at any time and any way as long as both parties are connected to the Internet.

Based on the study, CRM is the main element in investigating the extent of usage in terms of the e-Marketing performances derived from the B2B e-Marketplace. CRM drives the growth of B2B markets and allows the application of the electronic-based business solutions. Thus, there is a need to review the benefits of B2B e-Marketplace for SMEs, and the use of CRM technology to improve their e-Marketing ability. It is also crucial to study best practices for SMEs to capitalise on the opportunities provided by B2B e-Marketplace by integrating of e-Marketing with their existing marketing channels and practices to increase consumer satisfaction, loyalty and profitability.

The response from general managers, managing directors, IT managers, sales and marketing managers and other professionals in selected organisations that participated in B2B e-Marketplace indicated that CRM is one of the major e-Marketing services provided by B2B e-Marketplace. In particular, the majority of participants strongly believed that e-Marketing resources (e.g. corporate website, search engine optimisation, e-mails etc.) enable them to “communicate more effectively with their customers”. They also agreed that, e-Marketing is no longer new but rather becoming a well-
established marketing practice within SMEs. Furthermore, the findings also showed a positive relationship with the operational costs, and the respondents agreed that, “e-Marketing enables them to reduce marketing operational costs” (B=.365, r=.322*). Particularly, by adopting B2B e-Marketplace marketers can lower the cost of procurement before the transaction by reducing the searching costs associated with procuring inputs and by increasing the ease of price setting and product comparison. It also reduces the cost of procurement during the transaction by reducing the level of interpersonal communication needed to facilitate the completion of the transaction.

The increasing deployment of B2B e-Marketplace for SMEs in marketing practice provides a new opportunity to facilitate the marketers work more intelligently in order to make the right marketing decisions and enhance sales and provide a better return on their marketing investments. The majority of respondents strongly agreed that “The adoption of e-Marketing has improved their sales and developed more effective marketing activities”. In terms of customer retention, especially the identification of the customer’s characteristics (B=.317, r=.102*), participants agreed “e-Marketing resources enable them to identify customers’ characteristics and their purchase behaviours”.

In an e-Marketing context, the increased B2B e-Marketplace adoption has already been explicitly recognised and the integration of CRM deliberately included on the e-Marketing studies. These results concur with several academics and practitioners’ conclusions (e.g. Kierzkowski et al. (1996); Xu et al. (2002), Zeng et al. (2003), Chaffey, (2004) who suggest CRM has a positive connection with B2B e-Marketplace adoption. SMEs also have realised that B2B e-Marketplace is emerging as a platform that is highly integrated with CRM technology and thus enhances the performance of their existing marketing practices.

The adoption level of B2B e-Marketplace is high and this is lead by the understanding of the benefits for SMEs to archive the realistic expectations
of CRM technology in their e-Marketing practices. From a research perspective, the finding is an original attempt to seek/identify the e-Marketing service dimensions of B2B e-Marketplace to SMEs. Therefore, e-CRM contributes to SMEs who wish to explore the Internet technologies for their marketing activities. From a practical perspective, managers can use the results to highlight the benefits to enhance their businesses by trading beyond their traditional customer bases.

4.4.2.2 Facilitates Supply Chain

The framework has four elements in SCM including: e-Procurement, transaction, sales and marketing, and distribution. Procurement initially emerged as a main function in terms of SCM in B2B e-Marketplace. According to Zeng and Pathank (2003), B2B e-Marketplace provides inter-organisational information system which enables multiple buyers and sellers to communicate and establish marketing and corporate purchasing activities. For instance, B2B e-Marketplace service providers (e.g. Alibaba.com, Asiaep.com, Tradeindia.com) facilitates online platform for both buyers and sellers to perform e-procurement activities. Suppliers can create their e-catalogue, identify their customers, give access privilege to different buyers, and offer e-letters to promote their goods/services. In the other hands, buyers can see the availability of the products and track their order status online. Based on the respondents’ comments, the procurement services offered by their service providers help in reducing their transaction costs and products search time.

The second element of SCM in the framework is transaction. The rise of the B2B e-Marketplace has made transaction integrate virtually with various channel members. All participants can transfer the information in real time with low transaction costs and global reach by using the B2B e-Marketplace. From the SCM perspective, B2B e-Marketplace is a main data transaction technology, and electronic transmission of information/documents between computer systems in different organisations based on a standard electronic format. The main advantages of B2B e-Marketplace in transferring data is reduction in paper-based processing and reducing time and cost when
transmitting digital data based on a standard, structured and machine-retrievable format.

Sales and marketing, which has the highest score of beta weight (B=.372), significantly influences the e-Marketing framework. The main function of sales and marketing in B2B e-Marketplace is to establish a consensus e-Marketing plan for SMEs to promote their products/services. For instance, supplier can upload the sales, forecasting and order related information to the B2B e-Marketplace and this compiled information can be available in real time to various buyers from the same or different industrial sectors. Moreover, sellers can also retrieve sales and forecasting reports which are useful for their future sales and marketing activities planning.

Distribution or transportation is another important element in SCM. This element focuses on the physical movement of goods from one point to another. Time and cost are considered two major factors for SMEs. Hence, materials or finished goods delivered at the right time and place are highly demanded by SMEs. According to a view from one of the respondents, “B2B e-Marketplaces such as Alibaba.com provided a systematic distribution channel that incorporates suppliers, buyers and carriers to help their members to deliver their goods/services on time. Furthermore, they also provide transportation management system (TMS), which can develop a systematic shipment transaction between buyers and sellers”. TMS allows shippers and carriers to post, search and negotiate their shipping requirements. In addition, the software also offers variety of SCM solutions including transportation planning, scheduling, and consolidating shipments.

In short, SCM in B2B e-Marketplace represents an attempt to establish a unified supply chain process for both buyers and sellers. The close relationship of the trading partners of the supply chain with respect to their marketing decisions and activities is the key to success of B2B e-Marketplace. To cope with the demands for SMEs, B2B e-Marketplace connects all trading partners with the supporting technologies such as SCM
system. These technologies with their existing features and functions can collectively provide the ultimate supply chain facilities to users.

4.4.2.3 Competitiveness

The B2B e-Marketplace has made new markets viable for SMEs. Based on the research findings, the respondents reported that they can use the e-Marketing services offered by B2B e-Marketplace to retain their customers. The network provided by B2B e-Marketplace facilitates global sellers with an effective platform to reach a vast array of new markets. As reported by one of the respondents, “more than any other marketing medium, the B2B e-Marketplace is the best interactive marketing tool to reach new markets”. B2B e-Marketplace provides an opportunity for SMEs to capture customers and benefits in the sense of creating strong presence in product awareness.

The increasing adoption of B2B e-Marketplace by SMEs has opened an opportunity to view the market as a global village. “The B2B e-Marketplace has major impacts on virtually all sectors of modern society, including business, education, healthcare, entertainment, and social interactions” a view from one of the respondents. The advances of the e-Marketing services and the transmission speeds like optical fibres, the reducing costs of computer hardware and software plus the enhancement of human knowledge provide a better marketing strategy for SMEs in the global business environment. Internet technology will no doubt improve the collaboration of both buyers and sellers all over the world.

Facing competition often requires drastic measures. E-marketing can be no less than a revolution in the company leading to, at least, reduced cycle times and in many cases reductions in cost, and increased sales and better relationships with the customers. The understanding gained from the framework presented in this study provides a strong foundation for identifying the likely competitive advantages from the marketing perspective including:
• Making companies a global presence.
• Exposure to new markets.
• Exploring new products.

As the respondents were from different industries, this framework is not specific to a particular industry but potentially it is a generic roadmap for various industrial sectors. E-Marketing via the B2B e-Marketplace not only offers a cheaper, more cost-effective way to transact business, but also brings a more efficient marketing mechanism for competitive advantage because it is not constrained by geographical distance or time. Furthermore, B2B e-Marketplace may allow to the creation of new markets that did not exist or were not possible previously.

4.4.2.4 Transparency and Visibility of Information
As indicated, respondents demanded a higher degree of transparency and visibility of information to foster improvements in their e-Marketing strategy. The standardised and visibility of information in markets, trading parties, procurement, competition, and legal administration are important for addressing marketers’ requirements. B2B e-Marketplace service providers should acknowledge market transparency as a top policy priority and work with their members to make market information available to both sellers and buyers in a timely, comprehensive, and meaningful fashion. Among the items to be considered are their users, quality of products/services, types of industry, as well as the geographical market information.

In the B2B markets, transparency along with price information, competing suppliers, and alternative products can radically change the dynamics of the buyers and sellers relationships. Both sellers and buyers can share information, which increases competition and reduces costs for searching, bargaining, decision-making, policing, and enforcement. The facilities in B2B e-Marketplace can reveal unprecedented market and transparency process from all dimensions which increases the effectiveness of marketing for participants. Such information also enables marketers to develop, manage,
and monitor their internal and external marketing processes. This will improve the coordination to get the products/services to the right places at the right times with lower costs.

4.4.2.5 IS/IT Integration
The identification of current IS/IT integration in B2B e-Marketplace is essential because it is an important element of success in attracting, converting, and retaining customers. There are several IS/IT services derived from B2B e-Marketplaces identified by the respondents:

- Search engine optimisation – Search engine optimisation is one of the major IS/IT integration in B2B e-Marketplace for business exposure. B2B e-Marketplace service providers ensure permanent high rankings and traffic from the major search engines such as Google and Yahoo using their well-developed “broadcasting” systems. The system is used to help SMEs to boost sales and encourage buyers’ involvement and repeated access to their web site.

- Corporate e-mail – E-mail remains the most important communication technique for building customer relationships. The main purpose of corporate e-mail provided by B2B e-Marketplace can be used for various marketing purposes, for example to share information about products and services, to promote them, to build brands, to guide customers to web sites, to alert customers, and to tell the status of orders. As one of the respondent suggests, “e-mail is perhaps the most common vehicles for establishing ongoing dialogue with customers, probably because they provide a simple mechanism for communicating a highly personalised blend of information, entertainment, and promotions.”

- Personalisation/Customisation – B2B e-Marketplace provides personalisation/customisation for their users. Products/services, marketing communication messages, and dynamic pricing can all be tailored to individuals and delivered to the B2B e-Marketplace in a timely manner.
- e-CRM – using IS/IT communications technologies such as web-based e-mail, information management, and personalisation/customisation techniques to maximise benefits for both sellers/buyers and encourage customers retention. CRM system is a well-established technology which seamlessly integrates sales, marketing, customer service, field support and other functions that can communicate with customers. By integrating people, business process, and technologies and leveraging the B2B e-Marketplace, the relationships management with all customers and suppliers is maximised.

- e-SCM – the IS/IT services integrated in the B2B e-Marketplace can upstream SCM activities particularly in e-Procurement. This system can support all procurement activities including purchase, request, ordering, and delivery between sellers and buyers. SCM system coordinates within and between different supply chain members and adjusts interdependent decision-making processes for B2B e-Marketplace participants. The integration of the key supply chain members including suppliers, manufacturers, distributors and carriers provides composite solutions for supply chain needs. For instance, distributors upload sales, forecasting, and order related information to the e-hub. The compiled information can be available in real time to various supply chain members. Manufacturers can retrieve uploaded reports which are useful for their sales, marketing, forecasting, production, and distribution functions. For carriers, they can access the information so that their scheduling, packaging, and routing become more responsive and timely.

- e-Catalogue – An e-Catalogue is the most important tool for users from identification to controlling inventory. According to the respondents, the main advantage of an e-Catalogue provided by the B2B e-Marketplace is to facilitate easy searching, comparing and evaluating of products/services.
• Information management – The application of information management with B2B e-Marketplace as a technological approach is used to improve the relationship between buyers and sellers, bringing it closer to the integrated relationships in the supply chain. Information management technical solutions such as the Internet, IS/IT integration, and Extensible Markup Language (XML) make it more efficient and effective for users to link to B2B e-Marketplace. The solutions will benefit both buy-side and sell-side applications which allow for portability, flexibility (e.g., adding, removing or substituting components), sustainability and transaction protection for users.

• Educational training – educational training provided by B2B e-Marketplace offers unbiased, complete and accurate marketing activities for their users. The users required a systematic platform that can facilitate to operate in the B2B e-Marketplace from the electronic marketing perspective. B2B e-Marketplace adopts an e-Learning system thorough their web site that integrates various kind of multimedia content for SMEs to learn all the related information.

The exploration of e-Marketing services in the B2B e-Marketplace represents an original attempt to develop a well e-Marketing strategy to all trading partners in this framework. SMEs who struggle to compete in the world marketplace may utilise these findings to develop their sales and promotion strategies and establish an effective marketing plan.

4.4.3 The B2B e-Marketing CSFs (B2B-eM-CSFs)

The main purpose of this section was to present the frame of B2B-eM-CSFs. The findings were both from the literature and empirically tested by using the online questionnaires through a large scale sample that representing different industries in Asian B2B marketplace. Based on a result, seven factors showed a direct relationship within successful B2B-eM-CSFs. A rank order of CSF is shown in Figure 4.2. This displays the seven success factors ranked on a mean range of between 3.546 and 4.157, which represents a high level of critically.
The findings generally consider nine factors to provide an indication of what CSFs underlie implementation of B2B e-Marketing. The analysis confirmed the significant positive relationships of successful customer relationships, global competitiveness, government encouragement and commitment, transparency and visibility of information, IS/IT performances, top management support and commitment, and security are engaged with the perceived success of the resultant findings. The nine factors identified by the respondents have been grouped into two: internal and external factors.

![Diagram of B2B e-Marketing CSFs (B2B-eM-CSFs)](image)

### 4.4.3.1 Internal Factors

The internal factors identified include successful customer relationships, IS/IT infrastructures, top management support, transparency and visibility of information, security and supply chain facilities.

Building relationships with customers (rank 1) is critical to the success of B2B e-Commerce. The B2B e-Marketplace is shaping relationships between
buyers and sellers to exchange information on products/services, marketing, and the technology used. This will facilitate marketing campaigns to achieve firm’s marketing goals. The successful B2B relationship between sellers and buyers create a shared vision for global B2B e-Commerce.

The lack of security and trust (rank 4) will generally act a bottleneck and would hamper the successful implementation of B2B e-Commerce. Internet and financial transaction security is considered to be one of the most critical issues affecting the success of B2B e-Commerce. Papadopoulou et al., (2000) stated that customer trust depends on effective brand-oriented strategies based on broadcast promotion and advertising techniques and parameters such as the firm’s size and reputation, the sales force, and the physical location and appearance of a store. A distrust in B2B e-Commerce environment will lead to an average visceral attitude of the development of B2B e-Commerce. Hence, security and trust are considered as a “must” in bonding with the on-line customers.

Transparency and visibility of information (rank 6) are important for B2B e-Commerce to make more information available about trading party, markets, procurement, and competition in the electronic business environment. In such a transparent environment, buyers/sellers are keen to conduct and manage their marketing initiatives more effectively; hence, the transparency of information in B2B e-Marketplace becomes more important for streamlining their business information flow.

The IS/IT infrastructure (rank 7) has been the key element for implementing e-Marketing framework. Technologies offer direct links to customers/suppliers/distributors and it will facilitate electronic transactions, information sharing, providing opportunities to develop new products/services for existing and new customers.

Top management support and commitment (rank 8) is another key factor for successful implementation of B2B e-Commerce strategy for SMEs. This is a highly demanded factor and heavily depends on the personal and
managerial knowledge of B2B e-Commerce and the commitment in internal diffusion. The key support in promoting B2B activities is finance and technology support and this plays a major role in ensuring the success of B2B e-Commerce.

Supply Chain Facilities (rank 9) on B2B e-Marketplace can change the traditional B2B exchange methods to collaborate and share information via the Internet technologies. The main purpose of SCM is to link the manufacturer’s operations with their suppliers, customers and intermediaries. While B2B e-Marketplace provides an effective platform to links with a companies’ procurement process, operations, sales and marketing, and distributions process according to actual supply levels in partnerships with their customers and accounts. Since SCM is one of the main services in the B2B e-Marketplace, it is crucial to understand the SCM engagement in order to succeed in B2B e-Commerce.

4.4.3.2 External Factors
Based on the findings, the external factors included global competitiveness, government encouragement and commitment, and cultural consideration.

Global Competitiveness (rank 2) is one of the most important factors for SMEs to perform electronic-based marketing activities. By using B2B e-Marketplace facilities, SMEs can access more general contextual information including corporate intelligence to assist in global competitiveness. This factor sought to examine the Internet usage by addressing the provision and usage of information for B2B activities. This is contrary to the results, given the commitment of the SMEs to support the information society through the provision of information and the associated publicity generated to encourage businesses to expose to the world marketplace. Through the effectiveness of usage of the B2B e-Marketplace by businesses in e-Marketing and the nature and quality of the technology opportunities, SMEs will likely understand the real needs of their customers by implementing B2B e-Commerce.
Government Encouragement and Commitment (rank 3) is an essential factor for the success of B2B e-Commerce. Governments should facilitate and assist in the provision of information for the development and adaptation of B2B e-Commerce at international level. Governments play a vital role in creating favourable and consistent commercial e-environment.

Cultural Consideration (rank 5) is another key factor that must be taken into account in the digital business environment. Development of a suitable B2B e-Commerce strategy via the Internet which overcomes cultural barriers is considered a critical factor to B2B implementation success. Failure to do so could result in communication problems. If the advertisers involved in e-Marketing are not aware of the potential problems, they are even more likely to fall victims to them. This is because cultures provide people with different ways of thinking, seeing and interpreting the world. Thus, due to the inherently global nature of the Internet, e-Marketers should evaluate the cultural impact of any online advertising and promotional materials via the Internet. Languages are the most often cited barrier to cross-cultural business communication. Thus, the findings suggest that learning about a country’s culture is one of the opportunities to facilitating organisations knowledge of cultural barriers in implementing B2B e-Commerce.

Academic research on the CSFs for B2B e-Marketing is still at a developing stage, however, early evidence suggested by several academics and practitioners has had a great impact on the conduct of e-Marketing in the B2B e-Marketplace. This finding has contributed to the cumulative body of research in both CSF concept and technique in the use of B2B e-Marketplace for e-Marketing purposes. The findings also provide new theoretical grounds for research into B2B relationships and provide an empirical assessment of the essential components in B2B e-Commerce adaptation, and implications for the means to prioritize CSF.

In addition, the CSFs provide a guideline for academics and practitioners and highlight the significant role of each factor in developing and sustaining effective B2B e-Commerce practice for SMEs. SME managers can derive a
better understanding and measurement of marketing activities that appropriately balance traditional and B2B e-Commerce practices. At the same time, CSF can be integrated to determine the level of marketing performance in B2B e-Marketplace. As part of a follow up to this study it is intended to explore the above CSFs including internal and external factors to develop a richer picture of B2B e-commerce in Asia region.
Summary
This chapter presented the empirical findings of this study. This study was able to find the answers for the three RQs which are identifying the characteristics of firms that have adopted B2B e-Marketplace (RQ1); exploring the dimensions of e-Marketing services of B2B e-Marketplace for SMEs (RQ2), and identifying the CSFs associated with e-Marketing service performances derived from B2B e-Marketplace (RQ3). Based on the findings, an e-Marketing framework derived from B2B e-Marketplace, termed as B2B e-MF, was developed for practising e-Marketing in SMEs.

The analysis performed in this thesis shows that interaction with the B2B e-MF is an important dimension and has a positive and significant impact for Asian SMEs for business efficiency and service improvement. The chapter provided an examination for 406 SMEs comprising 38.1% response rate (survey) and fifty six interviews. The framework is emerged from a review of literature in the fields of e-Marketing and B2B e-Marketplace and empirically tested from SMEs that participated in B2B e-Marketplace. Insights from both fields led to the establishment of an e-Marketing framework for SMEs who wish to adopt a proactive approach in the use of ICT for business efficiency and competitive advantage. B2B e-MF is essentially the refinement of e-Marketing practices for SMEs in order to achieve performance advantages.
Chapter 5: Conclusions

Introduction
This chapter provides a conclusive review of the study. The subsequent sections are summarised into four headings: conclusions, research contributions, limitations and further research.

5.1 Conclusions
The framework was developed based on qualitative and quantitative research methodology. As the respondents were from different industries, this framework is not specific to a particular industry, but potentially it is a generic roadmap for facilitating B2B e-Marketing for various types of industry. One of the most interesting aspects of B2B e-Marketplace for SMEs is the potential for enhancing communication and information gathering for market and product research. Although the breadth of activities pursued in the e-Marketing field is limited at present, the continued growth of e-Marketing will enable SMEs to engage in currently under utilised applications. SMEs need to perceive that the benefits of B2B e-Marketing outweigh the costs of marketing. The framework therefore provides various incentives to help SMEs engage in e-Marketing by lowering the costs of extending their geographic reach, enhancing customer relationships, improving sales, increasing web traffic, competitive advantage, and efficiency gains. In order to reap the benefits of B2B e-marketplace, SMEs must fully embrace it by releasing the potentials of the Internet (Sharma and Seth, 2005).

5.1.1 Validity of Findings
Based upon an understanding of the analysis of the quantitative data, this study demonstrates the positive and significant correlations between B2B e-Marketplace adoption (independent variable) and the dependent variables. All the quantitative analysis results are supported by qualitative data obtained from the interviewees to answer the three RQs. For RQ1, the
respondents identified the degree of demand needed to push a firm to adopt B2B e-Marketplace is determined by firm characteristics which include the firm’s size, the encouragement from government and senior management involvement. The qualitative analysis of interviews and comments made by participants reflect that, government and senior management play an important role towards successful B2B e-Marketplace adaptation. Consequently, promotion from government and top management significantly influences the likelihood of a firm utilising B2B e-Marketplace.

5.1.2 Dimensions of e-Marketing
To answer RQ2, the study suggests that the five major dimensions (CRM, SCM, Competitiveness, IS/IT integration and Transparency of information) had an average positive effect on e-Marketing framework development for SMEs. The strongest relation of e-Marketing framework was CRM. There were three independent variables which had a negative Beta weight with e-Marketing framework (Technological innovation, Management Information System and Data warehousing / Mining). These negative relationships indicated that as the value of these variables increases, the value of the e-Marketing framework tends to decrease. Hence, these four variables do not appear as positive dominant factors in developing an e-Marketing framework in this study. The findings from the interviews also imply a strong link between SMEs and the e-Marketing services derived from B2B e-Marketplace. The adoption of B2B e-Marketplace may spur SME’s businesses to focus on long-term marketing planning and business success. The results also indicate the willingness among SMEs for B2B e-Marketplace adoption to foster their marketing activities. In short, the effectiveness of e-Marketing services are highly determined by e-Marketing dimensions; CRM, SCM, competitiveness, IS/IT integration and transparency of information, as pointed out earlier.
5.1.3 B2B e-Marketing CSFs

To answer RQ3, the study also identifies CSF by empirically tested these factors using a large-scale survey of the Asian B2B marketplace in different industrial sectors. It is important that SMEs develop a systematic approach to identify prioritising CSFs in the implementation process and bring it inline with the environment in which the adaptation is located. The proposed model consists of a set of internal and external factors. The internal factors include; successful customer relationships, IS/IT infrastructures, top management supports, transparency and visibility of information, security and supply chain facilities. The external focus is directed at; global competitiveness, government encouragement and commitment, and cultural consideration.

Overall, these findings provide new theoretical grounds for research into e-Marketing services derived from B2B e-Marketplace by addressing the three RQs. It also provides an empirical assessment of the essential elements in B2B e-Marketplace adaptation, and a thorough analysis that enhances or detracts from a new e-Marketing framework development. Given the increasing prevalence of various forms of digital business environment, this is an important knowledge advancement.

5.1.4 Policy Implications

Policy and businesses are always interacting. In general, the development of socio-economics affects the policymaking process, and the effectiveness of the law leads to economic efficiency and social justice. In order to enhance the performances of B2B e-Commerce in Asia, the government can assist their national businesses to help ensure the continued expansion of B2B e-Commerce as an efficient and effective form of commerce. According to Castañeda et. al. (2007), the government generally plays an important role in assisting the firms’ growth by effectively taking the following steps:
• Removing existing uncertainties affecting the legal status of e-Commerce transaction.
• Enforcing laws for e-Commerce and paper-based commerce equally.
• Providing all forms of technology aid for e-Commerce firms.
• The use of authentication and encryption technology.
• Coordinating laws with other governments.

The government has also recognised that B2B e-Commerce is a vital commodity which can assist and support economic success. This has been clearly acknowledged in past decades when the government in several Asia countries has actively supported and organised international information-related seminars and conferences (Hu et. al., 2004). Such events have been prompted by demands from domestic and foreign B2B companies in order to develop effective information services and systems to assist international trading activities electronically.

Governments should provide support and direction to firms on how to implement B2B e-Commerce. Without any guidance, firms may fail to adopt best practices to transform their businesses into electronic environment. When policy plays an important role in creating a predictable environment for B2B e-Commerce, its conclusive function is to erase factors that caused business inefficacy, and to create a perfectly competitive environment for electronic businesses to minimise legal risks and transaction costs and to maximise the economic and social benefits. A modern B2B e-Commerce business model requires laws that are constantly able to redefine rights and market relationships when new forms of corporate structure emerge, to provide ever-changing determinations of contractual obligations, and to redefine and enforce the rights of victims of new technologies and activities.

Nevertheless, the law usually lags behind economic and technological development. The reality of B2B e-Commerce is that technology is developing at a rapid pace and laws soon become outdated. Therefore, B2B
e-Commerce provides businesses with greater possibility of both profit making and risk bearing.

For Asian countries that want to take a share of revenues from B2B e-Commerce and catch up with developed countries in the new economy, it is essential for governments to accelerate their policy-making process and establish a predictable and consistent legal environment supporting B2B e-Commerce regardless of the jurisdiction in which particular transaction parties reside. On the one hand, governments should update their law to adapt to the development of electronic technology and e-commerce. Many countries, such as the United States of America, members of the European Union, and Canada, and Australia, have already made attempts at regulation and prompted e-Commerce by adjusting their legal systems. On the other hand, they must act in concert with each other at the international level to create a favorable and consistent commercial environment.

5.2 Research Contributions
The contributions of this study are both theoretical and substantive in nature. This study has resulted in the development of B2B e-MF, an e-Marketing framework designed to guide SMEs to practice their e-Marketing strategy using B2B e-Marketplace. The framework is original and makes a unique contribution because it encompasses various dimensions (CRM, SCM, global competitiveness, transparency, and IS/IT integration). It thus furthers academic knowledge. The contributions gained from B2B e-MF presented in the following sections provide a sound foundation on which such research can build. The dissemination mechanism for this study focuses on publication in relevant journals and attending/presenting in international conferences/workshops/seminars (see Appendix D).

5.2.1 Theoretical Contributions
This study makes important theoretical contributions to the marketing literature. Marketing on the Internet has been widely discussed for decades but studies of e-Marketing derived from B2B e-Marketplace are particularly limited. The major theoretical contributions of this study include:
• **New definition of B2B e-Marketing**

Based upon a sound understanding of many terms in this framework with the ‘e’ prefix, this study tends to define B2B e-Marketing originally from the empirical results as:

“B2B e-Marketing involves integrating online communications technologies (e.g. B2B e-Marketplace, Web-based e-mail, e-CRM, e-SCM etc.) that facilitate electronic marketing media, responsible for identifying, recognising and fulfilling both sellers/buyers requirements in the B2B e-Context”.

• **Analytical findings from literature review**

This study provides a distinct stream of literature incorporating a statistical analysis in order to create a rich and deep understanding of the fields of B2B Marketing, e-Marketing, and B2B e-Marketplace. In addition to the specific contributions outlined above, this study provides an example of how quantitative and qualitative methods can be combined in a consistent and complementary fashion to provide a holistic understanding of B2B e-Marketing services derived from B2B e-Marketplace.

• **Providing a set of CSFs associated with B2B e-Marketing**

The findings also reveal a set of CSFs in the B2B e-Marketing implementation in line with the environment in which the adaptation is located. The available literature on CSFs for SMEs is limited and most previous research has been either descriptive or theoretical, often ignoring the development of a solid CSF framework to guide SMEs for “e” transformation. This study has further contributed to the cumulative body of research in relation to both CSF concept and practical technique in the use of B2B e-Marketplace for B2B e-Marketing purposes.

• **Contribution to the Asian B2B marketplace literature**

The B2B e-Marketplace has a profound impact on the global business environment. However, it raises many unsolved questions for marketers especially in the Asian B2B marketplace. This research is related to one of
the most important topics of marketing, which contributes to the Asian B2B marketplace literature by further demonstrating the B2B e-Marketing activities conducted by SMEs.

5.2.2 Practical Contributions
The empirical results provided an analysis of the efforts of B2B e-Marketplace to B2B transactions and collaborations. The impact of the B2B e-Marketplace may be causing SMEs to radically overhaul their marketing strategy formulation. The major practical contributions are described as follows:

- **Broaden the direction for SMEs on B2B e-Marketplace adoption**
  The ideas presented in this study offer a complementary perspective to many existing theories advocated by practitioners. Current studies indicate that SMEs are still investigating whether or not they should implement e-Marketing. Based on the need for a dynamic framework for e-Marketing from the literature, this study is significant to SMEs, marketers, IT practitioners and other stakeholders that use the Internet and other electronic means for B2B marketing purposes.

- **Identification of benefits to gain competitive advantages**
  Facing competition often requires drastic measures. E-marketing can be no less than a revolution in a company, which can lead to, reduced cycle times and in many cases reductions in cost, and increased sales and better relationships with the customers. The understanding gained from the framework presented in this study provides a strong foundation for identifying the likely benefits from a marketing perspective.

- **Providing a new coordination avenue for supply chain**
  This study has also demonstrated that an examination of B2B e-Marketplace is relevant to SMEs operating in low technology environments. The exploitation of e-Marketing services derived from B2B e-Marketplace used by SMEs can cause profound changes to their business performance. If SMEs
know that their profits could be increased by adopting e-Marketing, they would feel the urge to cooperate with B2B e-Marketplace service providers to improve channel coordination. The findings are also useful for supply chain players by helping them identify the value of B2B e-Marketplace to improve their marketing decisions. Since e-Marketing is becoming increasingly common, it is managerially important to develop a coordination mechanism between SMEs and B2B e-Marketplace.

5.3 Limitations
The limitations may be viewed as the sample size of SME participation in the study. Although the literature findings were international, the empirical study was restricted to China, Malaysia, Philippines, Singapore, Thailand and India. The wider applicability of the findings to other countries may therefore require additional consideration to the environment in which B2B are located. The representativeness and generalisability of the research is only applied to SMEs from the selected countries and the respondents who participated were SMEs, hence, the applicability of findings to others countries and large-scale organisations may be limited. Future studies may place further emphasis on cross-country perspectives with focus on large scale organisations for result comparisons. Nevertheless, this study contributes a major step towards the systematic adoption of e-Marketing on SMEs’ business performances, which adds value to this research. Implementing the model would be another area for future.

5.4 Avenues for Future Research
To further understand the e-Marketing services derived from the B2B e-Marketplace, future work may be done at both pedagogical and practical level. This study provides many opportunities for future research including:

a) Additional empirical studies can be conducted on other countries to compare the study in cross-cultural differences. Such replication will help academic and practitioners to understand which geographical influences play a specific role to the study.
b) This study has identified three elements on the degree of demands to push a firm to adopt B2B e-Marketplace. Five main e-Marketing services and nine CSFs have been identified. Future work could be done by exploring more dimensions. It may deepen the understanding of B2B e-Marketplace participants.

c) A valuable extension of this study would be to choose a sample of SMEs and spend a period of time as a participant observer within the firm as part of an ethnographic study examining their B2B e-Marketing operation.

d) Since the characteristics of SMEs differ from large companies in terms of their business processes, less-standardised procedures, low-specialised and innovative structures, it is likely that SMEs use B2B e-Marketing practices and information sources differently. A possible area for future study may also place further emphasis on large scale organisations for result comparisons.
Concluding Remarks
The contributions of this study are substantive for SME managers. The development of the e-Marketing framework empirically from the research is considered beneficial for SMEs from a marketing perspective. The chapter concluded by providing an overview on how the research questions were addressed. In summation, this study thus contributes an enhanced understanding of the relationship between B2B e-Marketing and SMEs, in particular for the Asian B2B marketplace. Furthermore, the exploration of the key avenues for future research identified in section 5.4 is expected to yield further significant contributions.
REFERENCES


Bell, J. (2005), Doing your research project, 4th edn, Buckingham, Open University Press.


Coupey, E. (2001), Marketing and the Internet, New Jersey, Prentice-Hall.


SME Corp Malaysia (2010), Definition of SMEs, Available at: http://www.smecorp.gov.my/node/33, [Accessed 4 May 2011].


Appendix A: Online Questionnaire

This survey is aimed at the Small to Medium Sized Enterprises (SMEs) that participated in B2B e-Marketplace.

Please answer all questions marked with *

<table>
<thead>
<tr>
<th>Question 1: E-mail address and name (optional)</th>
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<tbody>
<tr>
<td>If you are interested to obtain a copy of the final report, please include your detail in the space provided below.</td>
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</table>

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Position Held</td>
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<tr>
<td>E-mail</td>
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<table>
<thead>
<tr>
<th>Question 2: Customer Relationship Management (CRM)</th>
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<tbody>
<tr>
<td>Please review the statements below and indicate the degree of e-Marketing services from B2B e-Marketplace (CRM perspective) in your organisation. (Please rate as 1= Strongly disagree and 5= Strongly agree)</td>
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</tbody>
</table>

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<tbody>
<tr>
<td>a. e-Marketing resources (e.g. Web Site and E-mail) enable us to communicate more effectively with our customers.</td>
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<td>b. e-Marketing enables us to reduce operational costs (e.g. Online Customer Service).</td>
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<tr>
<td>c. The adoption of e-Marketing has improved our sales and developed more effective marketing activities.</td>
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<tr>
<td>d. e-Marketing resources (e.g. data warehousing/data mining) enable us to identify customers’ characteristics and their purchase behaviours.</td>
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<thead>
<tr>
<th>Question 3: Supply Chain Management (SCM)</th>
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<tbody>
<tr>
<td>B2B e-Marketplace enables us to have a clear understanding of our business processes as follow: (Please rate as 1= Strongly disagree and 5= Strongly agree)</td>
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<th>2</th>
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<th>4</th>
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</thead>
<tbody>
<tr>
<td>a. Procurement processes</td>
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<td>b. Transaction Processes</td>
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<tr>
<td>c. Sales and Marketing</td>
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<td>d. Distribution processes</td>
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</tbody>
</table>
### Question 4: Competitiveness

Please review the statements below and indicate the level to which you agree or disagree (1= Strongly disagree and 5= Strongly agree).

<table>
<thead>
<tr>
<th>e-Marketing services from B2B e-Marketplace enable us:</th>
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<th>2</th>
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<tbody>
<tr>
<td>a. better equip/organise to capture new market.</td>
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<td>b. better opportunity to develop new products/services.</td>
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<td>c. aware of leading edge in technological innovation.</td>
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<td>d. equip to compete with other players in the marketplace.</td>
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### Question 5: Information System/Information Technology (IS/IT) Integration

Please indicate the IS/IT services provided by the B2B e-Marketplace to your company. Please tick as appropriate.

- Search Engine Optimisation
- E-mail
- Personalisation / Customisation
- Management Information System
- Data Warehousing / Mining
- Customer Relationship Management
- E-catalogue
- Information Management (e.g. XML)
- Educational Training
- Legal, licensing and Administrative Services
- Other (Please Specify):

### Question 6: Transparency of Information

B2B e-Marketplace provides more transparent information on: (Please rate as 1= Strongly disagree and 5= Strongly agree)

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<tbody>
<tr>
<td>a. Market information</td>
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<td>b. Trading party information</td>
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<td>c. Procurement information</td>
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<tr>
<td>d. Competition information</td>
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<tr>
<td>e. Legal information (e.g. trading regulation)</td>
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</table>
### Question 7: Government Encouragement

Please review the statements below and indicates the level to which you agree or disagree (1= Strongly disagree and 5= Strongly agree).

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<tr>
<td>b. Using e-Marketplace is easier to get government grants.</td>
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<td>c. The government encouraged SMEs to participate in B2B e-Marketplace.</td>
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<td>d. The government regulates the online trading environment (e.g. protect trading privacy).</td>
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### Question 8: Senior Management Involvement

Please review the statements below and indicate the level to which you agree or disagree (1= Strongly disagree and 5= Strongly agree).

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<tbody>
<tr>
<td>a. Senior management's knowledge/experience in B2B e-Marketplace is significant.</td>
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<td>b. Senior management highly recognizes B2B e-Marketplace can enhance the firm's competitiveness.</td>
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<td>c. Senior management allocates the required resources for B2B e-Marketplace every year.</td>
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### Question 9: Critical Success Factors (CSFs)

- CSFs refers to the satisfactory results of certain areas or functions to ensure successful competitiveness for an organisation.

In your point of view, what are the CSFs derived from the e-Marketing service performances of B2B e-Marketplace? Please rate as 1= Strongly disagree and 5= Strongly agree.

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<tbody>
<tr>
<td>a. Customer Relationship Management</td>
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<tr>
<td>b. Supply Chain Management</td>
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<td>c. Global competitiveness</td>
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<td>d. IS/IT performances</td>
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<td>e. Transparency of information</td>
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<tr>
<td>f. Top management support and commitment</td>
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<tr>
<td>g. Security and trust</td>
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<td>h. Cultural consideration</td>
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**Question 10: e-Marketing Framework**

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<tbody>
<tr>
<td>We need an e-Marketing framework to be used as a guideline to help us to adopt B2B e-Marketplace to achieve our marketing objectives.</td>
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**Question 11: Number of Employees**

Please indicates the number of employees from the following ranges.

- Below 5
- 5 - 20
- 21 - 50
- 51 - 100
- 101 - 150
- 151 - 200
- 201 - 250
- Over 250

**Question 12: Annual Turnover**

If possible, please indicates your company annual turnover from the following ranges.

- Below USD$ 100,000
- USD$ 100,000 - 500,000
- USD$ 500,000 - 1 Million
- USD$ 1 Million - 5 Million
- USD$ 5 Million - 10 Million
- USD$ 10 Million - 50 Million
- USD$ 50 Million - 100 Million
- Over USD$ 100 Million

**Question 13: Annual Revenue**

If possible, please indicates what percentage of the annual revenue is derived from the B2B e-Marketplace.

- 0%-10%
- 10%-20%
- 20%-30%
- 30%-40%
<table>
<thead>
<tr>
<th>Percentage</th>
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<tbody>
<tr>
<td>40%-50%</td>
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<td>50%-60%</td>
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<td>60%-70%</td>
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<td>70%-80%</td>
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<tr>
<td>80%-90%</td>
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<tr>
<td>90%-100%</td>
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**Question 14: Country of Origin**

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<th>Country</th>
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<tbody>
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<td>China</td>
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<td>Malaysia</td>
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<td>Philippines</td>
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<td>Singapore</td>
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<td>Thailand</td>
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<td>India</td>
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**Question 15: Interview Session**

Do you want to take part in our interview session?

<table>
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<tr>
<th>Yes</th>
<th>No</th>
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</table>
Appendix B: Covering Letter

Date

Dear…

To Whom It May Concern:

My name is Tristan Chong, PhD. research student at Bolton Business School, University of Bolton, UK. As apart of my research project, I am conducting a survey regarding to the performance of e-Marketing services of Business-To-Business e-Marketplace. This survey will take approximately five minutes. You views are extremely important to help us improve the e-Marketing development in the Asia region.

There is no commercial interest and all answers would be treated confidential.
Please click on the following link:
http://FreeOnlineSurveys.com/rendersurvey.asp?sid=z30qrdge7cveensi482361

For your contribution I would be happy to share my findings with you, and provide you with a copy of my report. If you wish to obtain the same, please provide me with your e-mail address.

Tristan Chong
PhD. Research Student
Bolton Business School
The University of Bolton
Email: WC1LIS@bolton.ac.uk

Dr. Mathew Shafaghi
Director of Studies
Bolton Business School
The University of Bolton
Email: M.Shafaghi@bolton.ac.uk
Appendix C: Interview Questions

1) How do you conduct your marketing activities? Why do you want to conduct your marketing activities via B2B e-Marketplace? (e.g. size of your firm / government encouragement / senior management involvement etc.)

2) Do you think e-Marketing services derived from B2B e-Marketplace benefits your organisation from the CRM perspective?

3) Do you think e-Marketing services derived from B2B e-Marketplace benefits your organisation from the SCM perspective?

4) How do you intend to gain competitive advantages from e-Marketing services derived from B2B e-Marketplace?

5) How IS/IT services from B2B e-Marketplace adopted by your organisation can support your organisation’s marketing activities?

6) What do you consider to be the main incentives/benefits that you can see in terms of transparency of information via B2B e-Marketplace? (e.g. market, trading, competition information etc.)

7) Critical Success Factors (CSFs) refers to the satisfactory results of certain areas or functions to ensure successful competitiveness for an organisation. In your view, what are the CSFs derived from the e-Marketing service performances of B2B e-Marketplace?

8) In your opinion, do you think SMEs need an e-Marketing framework to be used as a guideline to adopt B2B e-Marketplace to achieve their marketing objectives? Why?
Appendix D: List of Publications

Refereed Journals: (most recent at the top)


Conferences/workshops/seminars: (most recent at the top)


