COMPONENTS AND DIMENSIONS OF SUCCESSFUL STRATEGIC ALLIANCES FOR ELECTRONIC BUSINESSES

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DECLARATION

I hereby declare that the work has been done by myself and no portion of the work contained in this Thesis has been submitted in support of any application for any other degree or qualification of this or any other university or institution of learning.

Amirpouyan Balali Harandi

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DEDICATION

This dissertation is dedicated to my mother, Farideh Pirmohammadi, and my father Rasool Harandi. Their encouragement, love, and support have sustained me throughout my studies.

ABSTRACT

During the boost of electronic business, one of the most favourable strategies among websites, both brick and mortar and pure web based businesses, was forming alliances and partnerships. Many partnerships and alliances were formed during a very short time. However, not many could survive and successfully compete in the new competitive e-environment. One of the pitfalls many of these e-business alliances faced was paying loose attention to value creation through the Internet. Many of them did not properly plan for using alliance as a tool to improve their sustainable competitive advantage. Managers did not pay enough attention to the value creation procedures. Therefore they failed to choose the correct set of partners to help them to enhance the value they were about to offer their customers. A poor selection of partners is the main reason for many of these failures. This research has tried to propose a correct set of partners for e-business companies based on "Value Shop" value configuration (Stabell & Fjeldstad, 1998). Review of existing literature has suggested a relevant set of partners to create a successful e-business strategic alliance. A survey among managers of companies which are involved in e-business alliance has been performed. Then data analysis using Structural Equation Model (SEM) has evaluated the accuracy of the suggested model and relevance of proposed components.

The study has extended the current available researches of strategic alliances in the field of electronic business and can be considered as a development in Strategic Networks Theory. It has investigated components required for value creation in an e-business strategic alliance and explored the appropriate structure of alliance in e-business area. Moreover by considering researches in the areas of partnership and strategic alliances with different theoretical approaches such as Transactional Cost Theory, Strategic Behaviour Approach, Resource Based Theory, and Organisational Theory, this research has suggested a set of measures which together represent the success of an e-business strategic alliance. The model will help the e-business companies' managers to

better understand the strategic value of alliance formation, their company's role in the alliance and the best set of partners to choose to create a successful strategic e-business alliance.

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CHAPTER 1

INTRODUCTION

1.1   Background of Study

The internet has changed the face of our world. The way we perform many of our day-to-day activities has been altered dramatically during the past few years. People perform many of their daily tasks online without leaving their homes and yet they have wider access to suppliers of goods and services. Many business activities also have been affected by this new trend. The nature and structure of organisational tasks are now very much different from those of the last decade (Gale & Abraham, 2005). Among all kinds of internet based developments, emergence of e-business has been largely noticed by both businessmen and scholars. Even though electronic business is greatly studied in recent years, it still needs to be well understood in terms of business and management. Strategic management concepts need to be developed and adopted for this new form of business. An area which still needs further development in this aspect is the concept of partnership and strategic alliances.

Businesses create value through business processes. They give quality services to their customers and gain profit in return. Globalisation of markets together with fast and vast access via internet technology has intensified the competition. It has made it easy to find valuable goods and services for the customers and thus made it difficult to make profit in traditional competitive environment for the companies. Physical business models seemingly are not compatible in virtual environment. Hence, competition needs to be taken care of in a more thoughtful manner. In such hazardous business environments, some organisations find partnership as a solution to enhance their businesses and reduce their business risks. Partner companies share their knowledge, capabilities and resources, link their products and services, create more comprehensive solutions for customers` specific problems and co-operate to generate value through co-operative strategies. In other words, firms concentrate on their core competencies and get specialised in certain

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fields while outsourcing the rest of their non-core activities to others or use the service of their partners. This is the way they co-operate to fight common competitors or to achieve a higher market power (Ernst, Halevy, Monier, & Sarrazin, 2001).

During the revolutionary era of electronic business processes, strategic partnerships and alliances, as well as other types of strategic business solutions have been changed and challenged greatly. In 1999 companies announced a large number of e-business alliances (Manthou, Vlachopoulou, & Folinas, 2004). E-facilitated interaction between organisations creates entirely new trend in partnership. Alliance formation in virtual world seems to be much easier than before. However, despite a tremendous increase in partnership opportunities, choosing the right partner among so many choices should be a matter of concern for firms (Pisano & Verganti, 2008). It is perhaps the most important step in creating a successful alliance (Elmuti & Kathawala, 2001) and strategic alliances' success greatly depends on this critical choice (Holmberg & Cummings, 2009; Solesvik & Westhead, 2010). While selecting a proper partner is very important, it is at the same time, a very complex decision to make (Ding, 2009; Wu, Shih, & Chan, 2009). Maybe that is why soon after formation of many alliances between e-business companies in early 2000s, many of them reported to be failures and the main reason for many of these failures is nothing but poor partner selection (Ernst et al., 2001; Feng, Fan, & Mac, 2010).

Another very important issue to be addressed in this field is the meaning of success for an e-business alliance. Although success is linked to goals, yet it is a complex concept for measurement in the area of partnership. For example, when an alliance is terminated, it is either due to a failure or success in accomplishing the targeted goals. Thus, the measurement of termination rates may not properly reflect the success rate of alliances. Another example is the targeted goals. Even though it may look obvious that financial goals reflect success in partnership, "organisational learning" may be the main objective of alliance formation. Thus, even with lower or same financial outcome, an alliance may be considered successful.

Unlike conventional partnerships, the area of partnership remains under-researched in the context of e-business. There is a need to re-examine the traditional beliefs in this field to ensure that they are still relevant and compatible with the new business processes of internet era. A deeper understanding of partnership in the e-facilitated economy will decrease the probability of failure in alliances. In this research, value creation will be studied for e-business processes. In the process of finding "success factors" of alliances in the e-business context, components of a successful alliance between e-business firms will also be sought. Furthermore, dimensions of success for an alliance in the field of electronic business will also be examined and the result will be a comprehensive model which combines components and dimension of a strategically successful alliance for e-business activities.

1.2   Statement of the Problem

While the alliances remain a very popular strategy in the era of e-business, the conventional alliances in many aspects are different from alliances in e-business area. As explained in the literature review section of this research, there are several differences between conventional alliances and e-business alliances in terms of their speed of formation, their motives, their commitment concerns, their scope of collaboration, the characteristics of participating companies, the number of participating companies, and many other aspects (Duysters & Man, 2003). These differences make it critical to extend our understanding regarding alliance formation in the domain of e-business activities.

Despite a rapid increase in the number of alliances in general and alliances to perform e-business activities in particular, many of the partnerships fail to achieve the goals defined for the alliance at the formation level (Banerji & Sambharya, 1998; Brouthers, Brouthers, & Wilkinson, 1995; Chand & Katou, 2012; Dalton, 2009; Ernst et al., 2001; McCutchen, Swamidass, & Teng, 2008; Pansiri, 2008; Todeva & Knoke, 2005). This problem magnified the importance of understanding the success and failure factors of alliances (Ybarra & Turk, 2009). Though many reasons have been identified for the high failure rate, the main reason which scholars have a consensus on as the main problem is none other than poor partner selection (Banerji

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& Sambharya, 1998; Bruton & Samiee, 1998; Hughes & Beasley, 2008; Pansiri, 2008; Supphellen, 2002). Therefore many researchers have focused on finding proper selection criteria for appropriate partners in both conventional and internet business related alliances (Brooke & Oliver, 2005; Feng et al., 2010; Holmberg & Cummings, 2009; Mitsuhashi & Greve, 2009; Pansiri, 2008; Solesvik & Westhead, 2010; Zhao, 2006).

Most of the researches are conducted about the features which should be determined in partners before the selection is made. Despite the importance of knowing these features which enable the managers to determine the suitability of a partner, little attention is given to the necessary types of alliance members that a company needs to look for. Especially in e-business area, types of alliance members, or in other words, components of a strategic alliance are not well defined. To define these components required for e-business alliance, there is a need to understand e-business process which also brings up the need to have a proper model for e-business or e-business activities. Even though many scholars have remained loyal to Porter's value chain (Porter, 1998) as a basis for such models, some scholars have criticised the usage of Porter's value chain in Internet based environment for the purpose of partner selection (Águila-Obra, Padilla-Meléndez, & Serarols-Tarrés, 2007; Dyer & Singh, 2010; Hedman, Lind, Forsgren, & Albinsson, 2008; Laffey & Gandy, 2009; Payne & Holt, 2001; Stabell & Fjeldstad, 1998). However, very few alternatives have been presented and examined. The problem begins with understanding the value creation process over internet and differentiates it from conventional value creation models. Most of partner selection methods are based on conventional methods while a different business environment is being experienced in e-business business environment. Thus, a good beginning point will be a search for an appropriate model to describe value creation process of e-business activities. That will help researchers to identify a proper model for e-business processes which will extract the components required to perform these activities in a strategic alliance with Internet as its core means of business.

Another problem that needs to be investigated is the measurement of success in e-business alliance. Success itself is too vague to be measured. Termination of a

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strategic alliance is not necessarily due to lack of success and neither does the continuance of an alliance necessarily represent success (Gulati, 1998; Pansiri, 2008; Townsend, 2003). Although many researchers have tried to address this problem by proposing different measures for success of alliance (Chand & Katou, 2012; Kale, Dyer, & Singh, 2001; Kandemir, Yaprak, & Cavusgil, 2006; Lukas & Andrews, 2011; Murray & Kotabe, 2005; Nielsen, 2007; Swoboda, Meierer, Foscht, & Morschett, 2011), none are comprehensive enough to cover all aspects of activities in the area of internet based businesses. Thus, another attempt of this research is carried out to find a set of measures to represent dimensions of success of a strategic e-business alliance. These success dimensions will then be used to find the importance of each of the alliance components in the success of a partnership in the area of e-business activities.

To sum up, the problem which will be addressed in this research is lack of a comprehensive theoretical model to integrate antecedents (components) and dimensions of a successful strategic alliance for e-business activities.

1.3   Research Question

The research questions based on the identified research problems stated in the last section are:

RQ1:   Is there a proper model to illustrate the process of value creation in a strategic alliance between companies to perform e-business activities?

RQ2:   Alliance between which types of companies would result in success of strategic alliance for electronic business activities?

RQ3:   What are the appropriate dimensions of success for strategic alliance in e-business area?

The objectives proposed in the next section will be pursued in this research in order to answer the above mentioned questions.

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1.4   Objectives of the Study

This research is aimed to find the right structural configuration of companies for strategic alliances to perform e-business activities. The following objectives reflect what the present research attempts to achieve:

- To find a value configuration model to describe value creation process in strategic alliances of e-business activities.
- To develop a model to assist companies in finding right type of companies as their partners in e-business activities.
- To determine factors which can be considered as success dimensions of alliance for e-business activities

As a result of achieving these objectives, there will be a contribution to the understanding of the process of e-business activities as well as determinants of successful alliance for electronic business. This understanding will help to achieve a better partnership formation process in the e-business area which itself will lead to a more successful strategic alliance.

1.5   Significance of Study

Looking into the literature available in the area of partnership reveals gaps in the academic theories and the managerial models. Although strategic alliance volatility is not well understood, the need for creating a comprehensive theoretical and practical model to describe the dynamics of alliance is evident (Jiang, Li, & Gao, 2008). So, this research will benefit both researchers and business managers who are interested in the concept of strategic alliances in the electronic business domain.

For scholars, it will provide a better understanding of strategic alliances' structure between electronic business companies and their supporting procedures. It is noticed that there is a need for norms and processes which worked in past to be re-examined under the new rapid changing electronically boosted business environment (Duysters & Man, 2003). As an important part of business strategies, this research will focus on strategic alliances between companies aimed to perform electronic

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business activities and hopes to create a better foundation for analysis of partnership formation between e-business companies and its success factors and dimensions.

Furthermore, this research will provide a better understanding of e-business environment. This insight can then be used in other researches which aim to provide a new value configuration model for e-business environment. This is particularly important for those scholars who are trying to explain, evaluate, or predict successful strategic alliances in e-business atmosphere based on a better alternative for Porter's value chain. Categorisation of elements is required for theoretical developments in any field of knowledge as it provides a better insight for the researchers (Forbes, Kelley, & Hoffman, 2005) and thus this study will contribute to the body of knowledge in its respective field by providing such categorisation of elements.

On the other hand, it is known that choosing a wrong partner will lead the business to fall behind industry competition (Holmberg & Cummings, 2009; Pisano & Verganti, 2008). Partner selection is the first step in alliance development (Jiang et al., 2008) and at the same time, one of the most important activities of alliance formation (Bitran, Bitran, Conn, Nagel, & Nicholls, 2002). As a matter of fact, profitability of the partnership is determined by the quality of partner selection (Chand & Katou, 2012). It is necessary to build instruments which can assist managers in strategic alliance formation specially in partner selection stage (Holmberg & Cummings, 2009) and a model for partnership between e-business companies will provide a useful roadmap for better understanding, assessing, and further developing partnership relations in e-market environment (Manthou et al., 2004). Four key steps in choosing alliance partners include: 1) goal alignment between corporate and alliance, 2) creation of relevant list of key success factors, 3) identification of the suitability of industries and firms to collaborate with, and 4) evaluation of selected partners using analytical tools (Holmberg & Cummings, 2009). The present research is important because it is addressing the gaps in processing some of these steps. Knowing the success dimensions of a strategic alliance for electronic business is necessary for the second step while the categorisation of company types required for a successful e-business alliance based

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on value creation model is necessary for performing the third step. Finally listing the success indicators of e-business alliance helps companies in the last step.

As much as it is important to understand what other partners can bring into the alliance, it is also vital for the firms to comprehend their own contribution in success of an alliance (Pisano & Verganti, 2008; Young, Ahlstrom, Bruton, & Rubanik, 2011). This research can provide a relevant model that enables e-business managers to have better visualisation of successful alliance and thus a better understanding of their own company's contribution in alliance's success. In fact, this will provide them with a decision aid to choose the best set of partners because an appropriate model can help organisation to identify their strategic objective in forming alliance as well as assisting them by providing guidelines to find fitting partners (Ernst et al., 2001). While in different literature many elements of e-business alliances have been separately claimed to be important for success of an alliance, this research will find association of these separately described elements with success of an alliance with e-business objective.

It is important to notice that this research is focused on formation and partner selection stage of strategic electronic business alliances and a model for appropriate alliance formation cannot guarantee a full success of an alliance in later stages of collaboration as many other factors may later affect the success of the partnership from outside of the scope of partner selection (Jiang et al., 2008). Even if firms successfully find appropriate partners, yet they need to continuously control the progress of the alliance after partnership formation (Young et al., 2011). However creating a model to assist managers with selecting the right type of companies for successful partnership is necessary (Cravens, Piercy, & Cravens, 2000) and this research will mainly try to address this gap.

1.6   Scope of Study

This study is aimed to find appropriate components and antecedents of a strategic alliance in performing e-business activities in Malaysia. Electronic business is a growing mode of business and many firms develop their own internet based business infrastructure. As an effective way of using their limited resources, many

firms prefer to use strategic alliances to undertake lower risk and have better access to resources and international as well as local markets. The Malaysian government is concerned about using technology in achieving its long-term plans and its "Multimedia Super Corridor" provides numerous facilities for firms to move towards information technology utilisation in enhancing different aspects of Malaysians' lives. Thus, firms under Multimedia Super Corridor (MSC) status are more involved in electronic business than any other Malaysian category of firms and will be able to provide a better insight into the online business environment in Malaysia.

However, not all MSC companies are from IT industry but yet most of them are involved in a form of electronic business. This provides us even a broader insight and allows the researcher to gain more comprehensive understanding of the general business environment of the Malaysian firms.

Malaysia is chosen as the main location for the research because this country is a developing country which makes the study significant in the sense that it can provide better understanding of factors and dynamics of the electronic business in the developing countries in contrast with many other studies which focused only on developed countries.

1.7 Organisation of Thesis

This thesis is organised in five chapters. Here is a brief explanation of the organisation and content of each chapter.

- **Chapter 1:**

This chapter will briefly talk about the study, its logic, and structure. It starts by giving a quick background of the study related to the concepts of electronic business, strategic alliances, and value configuration in general and in relation with e-business. Then, the statement of problem is presented and based on that, research questions are developed follow by the development of the objectives of the research. After that, the significance of the study is presented. The scope and assumptions of

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the study are then presented. Lastly, organisation of the study and basic definitions used in this study are provided.

- **Chapter 2:**

The literature review in this chapter is to achieve a comprehensive understanding pertaining to the concepts of electronic business, value creation and configuration in general, alliances in their conventional form as well as in the electronic business. It also discovers the necessary components in e-business and alliances required for alliances of e-business to fulfil their value creation and organisational goals. Furthermore, this chapter provides us with insight into the factors we can use to measure the success of a strategic e-business alliance. The factors are both financial (like cost efficiency) and non-financial (like learning performance) and together can be considered as dimensions of success for alliances in e-business.

- **Chapter 3:**

This chapter revolves around the research's framework and methodology. The process and framework of the research, theoretical framework and its constructs and variables, sampling method, and data collection methods are reviewed and justified. Furthermore, analysis and statistical methods and tools which are applied to this research are introduced. Research hypotheses and their sub-hypotheses are formulated and the research's process is designed.

- **Chapter 4:**

This chapter provides results of data analysis for the collected data from samples of the study. All hypotheses are examined and the implication of the quantitative analysis and statistical results would be explained accordingly. The results would show the significance of each of the components suggested in the previous chapters in the success of strategic alliances which are formed to perform electronic business. It also provides us with a better understanding of factors which

can be considered as dimensions and indicators of successful strategic alliances of firms which are formed to perform e-business.

- **Chapter 5:**

This chapter provides a summary of the research and an overview of the results. It presents the conclusion of the study and its implication for researchers and organisations. It also discusses the limitation of this study together with opportunities for further researches.

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1.8   Definition of Terms

In this research, some of the main keywords need to be well defined to avoid any misunderstanding. Even though these terms are later studied in the literature review, the researcher feels a need to bring a quick definition before proceeding with the chapter.

World Wide Web	"A system of interlinked, hypertext documents accessed via the Internet." (Naik & Shivalingaiah, 2008)
E-commerce	"The process of buying, selling, or exchanging products, services, or information via computer networks." (Turban & King, 2015)
E-Business	"Business which is conducted over Internet" (Amit & Zott, 2001) "which includes buying and selling of goods and services, servicing customers, collaborating with business partners, conducting transactions within an organisation on the net" (Emory & Cooper, 2013).
Strategic Alliances	"A tailored business relationship based on mutual openness, shared risks, and share rewards that yields a competitive advantage resulting in business performance greater than would be achieved by the firms individually." (Manthou et al., 2004)
Partnership	A business network in which "two or more organisations come together to operate for mutual benefit" (Gable, 1994).
Alliance Component	(In this research) a company or business unit that is one of the individual parts of a strategic alliance.
E-Alliance or E-Partnership	A strategic alliance between two or more companies aimed to perform e-business activities collectively.
Value	The amount buyers are willing to pay for what a firm provides them and is measured in terms of revenue created for the firm (Porter, 1998)
Value configuration	"The way an organisation creates value for its

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stakeholders and clients" (Wrightsman, Cook, & Selltiz, 1976).

Social Capital	"The collective value of all "social networks" and the inclinations that arise from these networks to do things for each other" (Bell & Waters, 2014).
Intangible Assets	"Resources that have no physical existence" (Koskinen, Luomala, & Maaranen, 2012).
Business Network	In this study: a group of interlinked firms which are business partner or collaborate.
Alliance Governance	"The degree of integration that partners have pursued by using a specific governance mode" (Pateli & Lioukas, 2011).
E-Traffic Generator	In this study: Firms which can create online visitors for other websites.
E-Solution Providers	In this study: A chain of firms or business units with independent products or services which together provide a solution for a problem/need of the customers.
Firm with Common Market	A firm which has a similar target market to another firm with a product of service which is not necessarily relevant to its products or services.

1.9   Summary of Chapter

This chapter provides a brief review of the research and its structure. The study's background is presented and research justifications, problems, questions, and objectives are determined. Important definitions are presented and the organisation of the following chapters is described.

The next chapter provides a review of literature to gain a comprehensive understanding of the concepts which are required to build up the theoretical framework of the research.

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CHAPTER 2
LITERATURE REVIEW

2.1   Introduction

In this chapter the researcher will go through relevant literature in the fields related to the study. "A research literature review is a systematic, explicit, and reproducible method for identifying, evaluating and synthesising the existing body of completed and recorded work produced by researchers, scholars, and practitioners" (Fink, 2013). It should be noticed that "The terms 'review' or 'study' point to the importance of critically assessing the information you collect and making sense of it in relation to your own research question. A good literature review is a key feature by which the quality of a piece of research is judged" (Laws & Harper, 2013). Thus the literature review of this study should help the researcher to gain comprehensive insight into the fields that would help the study to achieve the objectives which have been defined in the previous chapter. Starting from the basics, this section will review more advanced researches and will try to find the foundations required to answer its research questions.

The literature review will start with a section on electronic business, its history, process, advantages and challenges. This section will provide better understanding of the business environment that this research is trying to explore. After understanding the business field related to the research, the literature review will continue in the field of alliance and partnership. This will create a firm understanding of the strategy which will be explored in the study. Having this understanding enables the researcher to build the study on the fundamentals of the partnership. Later on, the literature review will go further in the partnership field and review studies of alliances in electronic business. This will provide a bridge between the previously studied fields and helps the researcher to link the strategic partnership with the e - business field. The chapter will then continue with a review of the success factors of a strategic alliance as it is the ultimate goal of the structure this research is seeking. The next step will be to look into the value systems. This part is

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very important as it will identify the theoretical backbone of the study. The value creation systems will identify the required components, their structure, relations, and the process in which they are involved in the strategic electronic alliance for electronic business firms. Finally a comprehensive review of the literature in different fields will reveal suggested components for a strategic alliance in the field of e-business.

2.2   Electronic Business and Electronic Commerce
2.2.1   Definition and Concepts

E-commerce is a term which many people use in their daily conversation and yet there is no universal definition for e-commerce and e-business (Cullen & Taylor, 2009; Cullen & Webster, 2007). Definitions vary from simple definitions such as: "business activities conducted over Internet" (Zhu, 2004), to broad definitions such as "all business activities which use electronic data transactions" (Schneider, 2014), or "a way of conducting business by companies and their customers performing electronic transactions through computer network" (Liu & Arnettb, 2000) to narrowly specified definitions such as: "doing business electronically by completing business processes over open (non-proprietary) networks" (Weill & Vitale, 2015). Definitions include a range of activities from simple communication and information distribution activities to actual business transactions (Quaddus & Achjari, 2005). This research adopts Turban's definition of e-commerce as: "The process of buying, selling, or exchanging products, services, or information via computer networks." (Turban & King, 2015) It should be noticed that definitions for e-commerce and e-business are very close to each other and even in some cases, are exactly the same and thus interchangeable. Some literature suggests that e-commerce is a part of e-business as the former involves the exchange of goods, services, and information and the latter involves all kinds of business transaction performed by information technology within and among companies. However, some other literature regard both terms as the same and refer to them interchangeably (Cullen & Taylor, 2009; Fichter, 2002). In this research, both terms will be alternatively used for pointing out any business activity which can be brought into the frame described by Turban.
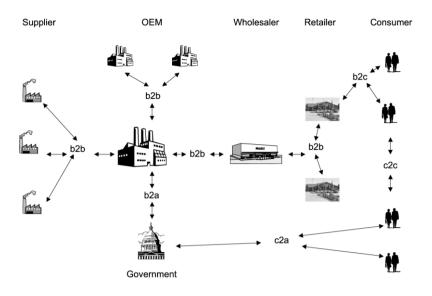
Figure 2.1: Types of E-Commerce Activities (Delfmann, Albers, & Gehring, 2002)

When talking about Internet environment, business process would be defined as "a set of activities performed co-ordinately via information system within business process to offer products/services for achievement of the defined business goals" (Y. Yang, Humphreys, & McIvor, 2006). As shown in figure 2.1, there are 3 groups of participants in e-commerce activities: Businesses, Customers, and Administration/Government. The impact of interaction between these 3 groups is 5 types of e-commerce activities: 1- Business-to-Business (b2b), 2- Business-to-Consumer (b2c), 3- Consumer-to-Consumer (c2c), 4- Business-to-Administration (b2a), and 5- Consumer-to-Administration (c2a). Thus, any e-commerce activity can fall under any one of these titles (Delfmann et al., 2002). Some other categories are also presented by other scholars such as Business-to-Employee (b2e) or Government to Citizens (g2c) and so on (Turban & King, 2015). Although this kind of categorisation of Internet activities is widely accepted and used among scholars, they are expected to disappear in the future as businesses will evolve to merge these activities and perform a combination of these activities in their business process (Weill & Vitale, 2015).

From another perspective, five distinct layers of activities are observed in telecommunication industry. The first layer belongs to the companies which provide necessary equipment as networking hardware infrastructure. Second layer is the layer

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of firms which act as network service providers and telecommunication companies. These include national telecommunication firms as well as their private rivals. Third layer includes Internet Access Providers and Internet Service Providers (IAPs and ISPs) which enable customers to connect to the internet. The next layer is the layer of companies which provide software for using and browsing the internet in a safe, easy, and effective way. The last layer belongs to the content providers such as e-commerce companies and online media. All of these layers are required to have a reliable and useful e-business experience both for customers and business owners. Since performance of each layer may affect the other layers, vertical integration and vertical specialisation are two commonly observed strategies in telecommunication industry's history (Krafft, 2003).

2.2.2 History and Trends

Electronic communication is the pillar of electronic commerce. Electronic communication in its contemporary form, started almost half a century ago when AT&T put a great effort in research and development of networking systems and military usage in connecting computers through networks which later was named ARPA. Table 2.1 illustrates selective angles of the early history of networking technology development.

Table 2.1: Internet History (Spicer, Bell, Zimmerman, Boas, & Boas, 2006)

1960: AT&T Data-phone.
1964: Online transaction processing - American Airlines.
1966: Improved the acoustically coupled modem - John van Geen
1970: Citizens and Southern National Bank installed the country´s first ATM.
1970: Computer-to-computer communication - ARPANET.
1971: The first e-mail - Ray Tomlinson – invention of "@".
1972: Wozniak´s "blue box" - free phone calls.
1973: Ethernet method - Robert Metcalfe - Xerox Palo Alto Research Center.
1976: The Queen of England sent her first e-mail.
1979: Shoch and Hupp - Xerox Palo Alto - discovered the computer "worm"
1979: USENET was established.
1979: The first Multi-User Domain, MUD1- Richard Bartle and Roy Trubshaw
1983: The ARPANET split into the ARPANET and MILNET - adoption of TCP/IP.
1985: On-line Bulletin Board System - Stewart Brand and Larry Brilliant
1990: The World Wide Web was born. Tim Berners-Lee developed HTML.
1993: Mosaic - the first commercial graphical surfer of Internet content was invented.

In the business world, companies started to spend on information technology from its early years of development. 5% of capital expenditure on IT in United States expanded to more than half of total expenditure of capital by the end of the last century. Although at the beginning, ownership of IT seems to be a strategic advantage, but with the passage of time, it becomes a commodity and in contrast, not owning information technology becomes a disadvantage for businesses. As a result, early easy expenditure turns to careful strategic spending with cautious analysis of financial ratios (Carr, 2003).

The term e-business itself has a history of nearly half a century. One might track e-business back to 1960s when IBM machines were used in American hospitals (Perrin & Conway, 2005). The term "Electronic Business" has been changed during the time to suit of the context that it explains. It started from simple electronic transaction and then covered electronic buying and selling, logistics and organisational interaction (Sung, 2006). In 1970s, this term was referred to systems such as Supply Chain Management Systems, Electronic Data Interchange (EDI) and Electronic Funds Transfer (EFT) which applications were mostly used to enhance commercial transaction process and were referred to as Inter Organisational Information Systems (IOIS) (Cullen & Taylor, 2009). In 1980s, ATM and telephone banking were also introduced under the same category. In 1990s, Enterprise Resource Planning (ERP) systems, data mining and data warehousing were included under the category of e-business. Some people regard 1993 as the birth year of electronic commerce on the web. However, it took almost 4 years for the World Wide Web to become well developed and secure enough to be widely used as a commercial tool. 1990s also witnessed the introduction of b2b web based auctions by firms such as "Free Markets" and "Commerce One". From 1998 to 2000, e-commerce bubble is growing rapidly. Unfortunately, the years of 2000 and 2001 were the collapse era for many e-commerce activities (Benbunan-Fich & Fich, 2004; Fichter, 2002; Kros, Nadler, & Chen, 2011). These years are widely known as "Dot com bubble burst" in the web history. Table 2.2 illustrates the distribution of B2B E-markets as a sample of this trend (Dai & Kauffman, 2002a).

Table 2-2: Time Distribution of B2B E-Markets (Dai & Kauffman, 2002a)

Year Founded	Number of B2B e-markets
Before 1995	22
1995	23
1996	13
1997	23
1998	35
1999	121
2000	88
2001	4
Total	329

However, a second wave of electronic business, started after the burst. In 2001, over 300 million Internet users made over 500 billion dollars mostly on business to business sector (Fichter, 2002). Some of the characteristics of this second wave included higher international orientation, use of internal funds instead of external investments; change of Internet applications due to high speed connection by the customers; sharing more data and transactions through new technologies such as RFID, biometrics, and smart cards, strategic use of email marketing as an integrated part of marketing and customer relation strategy, more Internet advertising which is now more advanced than what it used to be in the past and using legal ways for digital products such as music, video, and books which are presented and sold online (Schneider, 2014). In 2007, the Software & Information Industry Association (SIIA) announced a list of most noteworthy e-business developments which had taken place during the period of 10 years (Koerwer, 2007). The list contains the following developments:

- 1998   Starting point for Google search engine
- 2004   50% coverage of broadband in USA
- 1997   eBay started its auction and affected job market all over the world
- 1997   Amazon.com started its online bookstore

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- 2000   Google Ad Words created a new way for online advertisement
- 1997   HTML4.0 Open Standards speeded up e-business industry growth by creating an open and universal standard without any company's control and domination
- 1997   Wi-Fi 802.11 made it possible for users to connect to Internet without cable from anywhere
- 2005   YouTube enabled user generated content to be integrated into the web business model
- 2001   iTunes started an online music store which could successfully survive in a market dominated by piracy
- 1999   BlackBerry successfully attached Internet content to mobile devices

Although many of the e-business activities are in their pure web-based form, traditional businesses have also evolved and expanded in the new e-area. They bring in the assets from their physical businesses into the virtual world. Assets such as their brand and market share which also surely add value to their e-business (Weill & Vitale, 2015). Even though in recent years some reports show up to 30 % of negative e-business operational return, yet the overall return is high (MacGibbon & Schumacher, 2007) and this second wave seems to continue and the industry growth is evident (Forbes et al., 2005). The technology introduces better tools and people around the world show more interest in using the Internet as their tool in commerce. Both internal and external factors are responsible in pushing the firm towards the usage of new technologies. Internal factors include organisational and managerial concerns, perceived benefits and size, whereas external factors include market demand, environmental factors, competitive pressure, and industrial move towards technology. The result is that those companies which have not yet adopted their processes to the e-business tools will now fall behind the competition and may even have to overcome their competitive disadvantage (Rodríguez-Ardura & Meseguer-Artola, 2010).

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2.2.3 E-business Offerings

Looking from an economic perspective, information technology is the key in better linking customers to businesses via faster transferring signals of demand to suppliers and their vertically linked chain of suppliers in any industry (Krafft, 2003). Information technology, in its various forms, provides the business world with fascinating tools. Data warehousing, data mining, global communication, and data analysis are only some of the great revolutionary tools and aspects of the technology. Shopping, socialising, information acquiring, cataloguing and disseminating, using auction wares, enhanced product comparison, faster shopping with larger range of choices, and engaging in other activities are some activities which are being enhanced over Internet (Rodríguez-Ardura & Meseguer-Artola, 2010; Rosenbaum, 2005; Zhu, 2004). Private individuals, companies, and even public organisations are now benefiting from the utilisation of electronic services (Hedman et al., 2008).

Information and Communication Technology (ICT) facilitates the competition by helping firms with innovation, cost leadership, excellence in customer service, smoother business process, better time management, direct customer interaction, easier transactions, organisational resource planning, online procurement, smoother inventory supervision and order tracking (Kros et al., 2011; Liu & Arnettb, 2000; Osterwalder & Pigneur, 2002; Zhu, 2004). For example, supply chain management, intelligent agents and information technology can add to the chain's flexibility, information visibility, operational efficiency, response quality and thus generate competitiveness. Due to the wide geographical distribution of supplier around the world, it is almost impossible to manage supply chain effectively without an information system to share and integrate relevant data. It is especially more critical when considering the vast capabilities of Internet technology in facilitating organisational and manufacturing processes, marketing progress, planning activities, and information flow in a wide network of businesses (Gunasekaran & Ngai, 2004; Mangina & Vlachos, 2005). Electronic networks can also be considered as essential tools for effective organisational collaboration in the context of knowledge work (Kudaravalli & Faraj, 2008). In fact, information technology is valuable as an important organisational resource because it helps other organisational resources to

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create better value and improve firm's competitiveness (Salwani, Marthandan, Norzaidi, & Chong, 2009). Virtual markets have presented businesses with novel business opportunities with lower cost of information transaction and higher performance in an innovative platform to conduct businesses in a fresh structure (Amit & Zott, 2001). Businesses use web-based auctions to seek providers of "maintenance", "repair", "operation", and "capital equipment" (Kros et al., 2011). Over Internet, firms can easily and with much lower cost seek their aimed market as well as suppliers (Rodríguez-Ardura & Meseguer-Artola, 2010). Other offerings by the Internet for business are: flexibility, wide availability of communication, access beyond geographical boundaries, global nature, and interactivity which together will result in better business performance as well as higher customer satisfaction (Coupey, 2004; Sung, 2006).

B2B e-market places provide suppliers with e-catalogues, price discovery tools, dynamic trading process to match demand and supply, logistic arrangement, collaborative tools like data transferring standards and technical backbone, demand forecasting and production scheduling, financial services, and other marketing functions (Dai & Kauffman, 2002a). These services enable firms to find products, suppliers, e-market, and customers. B2B e-markets move offline businesses to the online environment, reducing search costs for customers, increasing market liquidity, and providing transaction facilitation tools. As illustrated in a comprehensive model for B2B activities based on connectivity (the number of potential communicating agents in the electronic business transaction) and purpose of the activity, the scope of B2B e-commerce is divided into nine sections: 1) "Individual Trading" which includes interaction between single buyers and sellers without intermediary, 2) "Collaboration" which is when selling and buying is conducted in a collaborative mode, 3) "Marketplace" where buyers and sellers can communicate in many ways, 4) "Proprietary Sales" in which buyer is restricted, 5) Private Trading Exchange where both suppliers and buyers are restricted; 6) Aggregation in which Buyers integrate to achieve a better selling performance, 7) Intranet/EDI which One-to-one relation is established through a secure network, 8) Restricted Bid where request of a product is sent to a restricted number of suppliers, and finally 9) Reverse Auction where an

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open request is sent with the intention to find the best price (Cullen & Webster, 2007).

In the firms' relation with customers, information technology has improved the data collection processes, data usage strategies for better customer service, and utilising information to discover gaps and opportunities to satisfy customers (Osterwalder & Pigneur, 2002). E-business also helps by enhancing the visibility of purchasing process and saving time which can be used for more important managerial issues (Perrin & Conway, 2005). Marketing practices are also widely influenced by information technology. Using e-mail, banners and text advertisements, e-catalogues, implementing e-retail channels, starting web-based shops and many other practices are some impact of this influence (Coupey, 2004).

To put it in a structure, e-business creates value for companies in two fields: "Front-End" where business meets customers and e-business helps organisations to create quality service and powerful customer relationship and information distribution, and "Back-End" where business operates with the utilisation of its resources within its business processes together with its suppliers and partner. E-business helps the firm to coordinate better all required information sharing and relationships (Zhu & Kraemer, 2005). Internet has also created an opportunity for extra-organisational collaboration. Expert communities and electronic networks are new informal types of knowledge generation and transaction facilities which considerably broaden the scope of firm's access to soft-resources (Kudaravalli & Faraj, 2008).

Another interesting aspect of electronic business which is noticed by scholars is its effect on environmental factors. In regards to environmental effects, e-business has its advantages and disadvantages. The need to extend IT infrastructure as an important prerequisite of web-based economic activities, may pose extra energy consumption and may need not-so-safe work to be done including the use of non-environmental friendly materials. Changes brought to the business processes by electronic business can also cause positive or negative effects on environment. These effects could be in the areas such as logistics, energy consumption, productivity, and

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public knowledge of environmental issues. Other than that, changes in lifestyle caused by electronic business may also influence environmental factors. For example, the change in the type and rate of electronic devices used by people in their daily life (Fichter, 2002). Positive ecological influences of e-business however, have been more noticed by people. Factors like reduction in environmental pollution and damage have shown a significant effect in customer's choice of selecting e-shopping over physical shopping (Torkzadeh & Dhillon, 2002).

2.2.4 E-business Processes

E-business tools influence the business nature and structure. Organisational flexibility and the decision making process are two examples of this influence. Routine tasks become automated and allow managers to freely enhance business processes and customer relations or handle exceptions (Gale & Abraham, 2005). Business processes have changed as a result of e-business (Quaddus & Achjari, 2005). Internet affects the five Cs (Company, Collaboration, Customers, Competitors, and Climate) as well as the four Ps (Product, Price, Place, and Promotion). It also influences strategic business planning by providing online real-time data gathering, mining and analysing of consumers and competitors' activities as well as the market condition. It helps strategy building process by enhancing the participation of the key people in decision making and planning processes (Coupey, 2004).

Four stages of business processing transaction which will affect buyers' satisfaction and should be of a great concern in e-business environment are: 1) Information gathering using electronic search tools, 2) negotiation using electronic collaboration devices, 3) contract fulfilment or the stage where companies go through activities like ordering, billing, transportation, payment via electrical means such as e-payment tools, or electronic order forms, and 4) collaboration where partners form collaborative activities with separated but interrelated roles which use e-Facilities such as gathering transaction information in databases or connecting business activities for partnership improvement (Y. Yang et al., 2006).

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2.2.5 E-business Issues and Challenges

Many e-commerce companies fail to achieve their goals shortly after a fast growth in the industry. Internet cannot bring any competitive advantage unless it is used as an integral part of the tools which are used to implement different strategies. In fact Internet has reduced the profit margin for many companies (Águila-Obra et al., 2007). There are several shortcomings of Internet-based activities comparing to conventional business processes including: lack of face to face contact, absence of physical experimenting the product, elimination of skilled knowledgeable workers, increment in bargaining power of suppliers and buyers through increased information sources and ease of switching, less customer loyalty and harder brand image building (Porter, 2001). Although the technology helps to expedite the processes, companies still need time to get the best out of the modern facilities. Misunderstanding this fact caused many failures in e-commerce field during the short Dot-Com era (Perrin & Conway, 2005). Businesses had wrongly assumed that an automatic success is the result of web-based automation and failed to see the actual success factors of e-business (Quaddus & Achjari, 2005). Researches confirmed that customers are reluctant to return after a disappointing online purchase (Olson & Boyer, 2003). Moreover, while the market considers online companies as a source of speed and a new channel to reach to customers, many different traditional factors like brands, products, distribution, suppliers' networks, customer relationships, and physical sites are also critical. Many pure online companies are lacking these parameters (Ernst et al., 2001). In competing with firms that have physical assets which have entered the e-business arena, pure dot-com firms will encounter many difficulties as the click-and-mortar firms are able to create a synergy by combining their online and offline resources. Even for the mixed physical-virtual businesses, there is a lower chance expected to be sustained and created value for shareholders (Weill & Vitale, 2015).

Some failure factors for e-business activities would be failure to respond to customers' needs and requests (Forbes et al., 2005), mismanagement of extended sales channels (Osterwalder & Pigneur, 2002), "wait and see" attitude of firms in selecting partners and marketplaces, anxieties in data sharing security and reluctance among firms, non-feasible custom made products, lack of standardisation,

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immaturity of marketplace services, supplier, consulting service, pricing model, e-procurement software, and trust issues among partners (Angeles & Nath, 2007). Being under a great pressure from internal players, competitors and customers, and due to technical and even non-technical factors, many organisations have encountered difficulty to implement a good e-commerce system in the very limited time to respond to the ever changing demand in the market (Rodríguez-Ardura & Meseguer-Artola, 2010).

In the B2B market, issues included are unprepared market for B2B commerce, unbalanced power distribution between B2B partners, organisation-wide integration issues, conflicting process changes required for large organisations in order to build their single point of contact B2B interfaces, lack of trust and data sharing reluctance among partners and issues related to financial and transaction weakness of small firms in contrast with large firms (Angeles & Nath, 2007). Developers of B2B and supply chain management systems should consider issues such as the lack of trust between online users as compared to physical transaction, privacy and security concerns by the users and organisations, useful and specialised payment systems, and data and connection consistency (Mangina & Vlachos, 2005).

2.2.6   E-business Success Factors

Generally speaking, for all information systems, success depends on meeting desired goals successfully (Liu & Arnettb, 2000). In the context of e-business, success would be sought operationally and strategically. Therefore there is a need to distinguish cyberspace features which lead to success. They would be categorised as e-business's contribution in obtaining the organisation's goal, the conversion rate of company's e-business, the number of website visitors and the length of time visitors remain on a site (Quaddus & Achjari, 2005).

For successful implementation of information technology and e-business for supply chain management, several components need to be considered: 1) Strategic planning of information technology which needs a strong support from organisation's management team for a long term strategy building for implementation; 2) Implementation of IT which may require re-engineering some of

the organisational processes and functions and should be done by an expert IT team with the support of management; 3) Virtual enterprise which refers to activities that lead to partnerships based on core competencies. It involves e-business activities such as B2B and the need for IT trainings for those who need to carry out the activities; 4) Knowledge and IT management are critical to be considered and it involves activities that can secure safe and effective knowledge transfer, learning, and IT aided internal and external collaborations; 5) E-business enables the network of businesses to access wide range of markets and suppliers and increase the cost efficiency of the supply chain management while increasing its flexibility; and finally, 6) Organisational and technological infrastructure requirements for all of the mentioned activities need to be provided in an efficient way. Strong supply chain management system needs an efficient infrastructure support (Gunasekaran & Ngai, 2004).

Value creation is a key to understanding the success of e-business activities. (Torkzadeh & Dhillon, 2002). E-business creates higher value for organisations if used more frequently (Zhu & Kraemer, 2005) and higher usage rate needs people and organisations' adoption to the technology. There are three major contexts in which usage of the information technology is being studied: "Technology Context" in which IT infrastructure of the firm is being assessed; "Organisational Context" in which firm is being assessed from organisational features perspective; and "Environmental Context" in which the focus is on firm's industry and business environment (Tornatzky & Fleischer, 1990). A model called TOE framework has been used to find success factors for e-business utilisation by organisations. It shows that "technology competence, financial commitment, competitive pressure, and regulatory support" are the most significant determinants of e-business usage by the organisation (Zhu & Kraemer, 2005). Another research in tourism industry showed that "Adoption Intention", "Cost of investment", "Firm Scope", and "Technology Competence" are determining factors in the usage of web tools (Salwani et al., 2009). Perceived usefulness and accessibility together with comfort and attitude are other factors that influence the use of new technology and thus Internet based business for users. Considering customers' attitude towards Internet usage, which can be positive, indifferent, and negative, and accordingly taking appropriate actions

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would help firms in improving their electronic business (Olson & Boyer, 2003). Success factors can also be divided into technical and non-technical factors (Cullen & Taylor, 2009). Technological factors both internally such as firms competence in technological innovation, and externally such as technological readiness of the market forces, and even non-technical external and internal factors such as consumers' behavioural richness and pressure from other firms as well as company's global scope are among other factors which affect e-business adoption (Rodríguez-Ardura & Meseguer-Artola, 2010).

Beyond these classification, success factors of an e-business activity in literature include a long list of factors such as plenty, payment, variety, low price, services, delivery, security, stability, evaluation, expertise, speed, privacy, low cost, ease, customer, strategy (Sung, 2006) , balance catalogue selection strategy, purchasing behaviour analyses, suppliers and contractors consolidation, involvement of the preferred and strategic suppliers in planning for partnership, selection of e-procurement software and services, reduction of the number of suppliers, understanding the preferred supplier's technology plans and their ability to support the e-procurement initiatives, enforcement on-contract buying with preferred suppliers, re-engineering all affected business application effectively, centralised control of contracts, production of data, catalogues, price updates for indirect procurement, implementation and maintenance of computerised rules governing procurement, visibility (Angeles & Nath, 2007), creating customer pool, customer trust, feel of reliability, satisfaction, dependency (Liu & Arnettb, 2000), variety of choices available for customers, pleasance of e-purchase and secure online payment experiment (Torkzadeh & Dhillon, 2002).

Some scholars have tried to give structure and simplify this long list by depicting e-business success factors in a framework. For example, website success factors are categorised into four factors of "quality of information and service", ways users utilise website, the joy of using the website, and "system design quality" (Liu & Arnettb, 2000). In another study, the business service quality in e-commerce is divided into 4 types of customer expected service qualities which are quality of marketing services, quality of logistics services, quality of operations services, and

quality of collaboration services (Y. Yang et al., 2006), or a long list of factors which have been divided into five categories of system quality, information quality, management and usage, web assurance and empathy, and trust (Cullen & Taylor, 2009).

The framework in Figure 2.2 is another example that relates the dimensions of cyberspace with customer's response to the perceived cyberspace as basis to understand the success of e-commerce activity. The researcher has suggested a need to pay careful attention to the model and create a site superior to the competitors in all of the covered dimensions (Rosenbaum, 2005).

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┌──────────────────┐        ┌──────────────────┐        ┌──────────────────┐
│ Cyberspace       │        │ Purpose of site  │        │ Site approach    │
│ Dimensions       │        │ visit and Internet│        │                  │
│ . Navigation     │        │ skill level      │        │ . Affiliation    │
│ . Information    │        │ moderation       │        │ . Exploration    │
│ . Delivery       │        └────────┬─────────┘        │ . Stay longer    │
│ . Presentation   │   ┌────────────┐│┌──────────────┐  │ . Commitment     │
│ . Security/Privacy│──│ Perceived  │││  Customer    │──│ . Carry out plan │
│ . Reputation     │   │ Cyberspace │  │  Response    │  │                  │
│ . Community      │   └────────────┘  └──────────────┘  │ Site Avoidance   │
│ . Entertainment  │                                     │ (Opposite of     │
│ . Product        │                                     │ approach)        │
│ . Reliability    │                                     │                  │
│ . Trust          │                                     │                  │
└──────────────────┘                                     └──────────────────┘
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Figure 2.2 Cyberspace Dimensions (Rosenbaum, 2005)

Others have paid special attention to the stages of service which a customer may perceive from a website. An e-commerce activity should attract customers, makes them feel the site is trustworthy, dependable, reliable, and generates customer satisfaction in all of the following stages:

1. Pre-Sales: Attractiveness
2. Online- Sales: Dependable, Reliable, Trustworthy
3. After-Sales: Meeting Demand, Pleasing Customer (Liu & Arnettb, 2000).

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It is important to notice that knowing the list of all success factors is not enough as the effect of these factors differ from country to country (Sung, 2006). For example, competitive forces have stronger effects on e-business usage in industrialised countries whereas regulatory factors are more important in developing countries (Zhu & Kraemer, 2005). Thus, the list needs to be prioritised in regard to the origin country of the company.

2.3 Alliance and Partnership
2.3.1 Definitions and Basics of Alliances

Strategic alliance is not a new concept. Long before modern business practices, it has been something very common in royal families to form such alliances through marriage arrangements for political reasons (Dalton, 2009). Today's industrial environment is built up based on complex networks of interconnected companies and business entities. Firm interaction in a business network is to gain resources and control (Gadde, Huemer, & Håkansson, 2003). In business area, strategic business alliance is defined as "a unique organisational structure to enable cooperation between companies" (Ling, 2002) "involving exchange, sharing, or co-development of products, technologies, or services" (Gulati, 1998). Strategic alliances are partnerships for medium to long periods of time between two or more companies to achieve strategic goals which benefits them and enhances their competitive position and operational performance (Elmuti & Kathawala, 2001; Zhou, Hui, & Liang, 2011) even if this achievement is around a portion of their organisational goals or operational area (Brooke & Oliver, 2005). A key difference between ordinary and strategic alliances is commitment to key strategic objectives which is at the core of any strategic alliance (A. Zhang, 2005). It is also worth noticing the duration of the alliance. This duration is normally long (Chenga, Li, Love, & Irani, 2004) because a short term agreement will not be able to create a unique or difficult to imitate competitive advantage for the parties involved as it cannot differentiate the collaborating partners from other players in the market (Dyer & Singh, 2010).

Strategic alliance literature can be categorised into four main categories in terms of theoretical approaches that is a base for their view of partnership: 1) those which study partnership from "Transactional Cost Theory" perspective which focus on ways of minimising costs of business transactions with utilisation of partnership advantages, 2) those literature which look at strategic alliances through the lens of "Strategic Behaviour Approach" which believes in enhancement of firms' competitive position as a result of alliance. 3) the researchers which follow the "Resource Based Theory" and suggest that strategic alliances provide firms with a better access to resources they need to improve competencies, and finally 4) the "Organisational Theory" based researches in which partnership is presented as a means of learning and attainment of a new competency (Chand & Katou, 2012). It is essential to notice that in many aspects of alliances more than one view needs to be considered because some important aspects of business are not well covered by one theory. For example, in the study of structural preferences for alliance formation, to decide between equity or contract based alliances and the form of partners' interactions, while using the "Transactional Cost Theory" is essential to analyse the cost efficiency and return on investment potential of the alliance, it doesn't cover the importance of resource sharing as comprehensive as the "Resource Based Theory" does (Haozhe Chen & Chen, 2003).

2.3.2 Offerings of Alliances

Business environment in the last century has witnessed a shift of business world from material and natural resources based economy to knowledge based economy. This has intensified service sector's boost in its portion of national income on the one hand and the style, efficiency, and scale of manufacturing on the other hand. In fact, knowledge based economy has created a more intensified competition in a more complex business environment and this means an urge for making alliances to survive (Contractor & Lorange, 2002).

Maybe the greatest offering of an alliance is to help firms achieve what they could not achieve alone. Alliances are effective aids for implementing business strategies (Yasuda & Iijima, 2005). This happens in various ways and for a variety of

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reasons. Yet the common aspect in all of these forms and logics is the synergy that the alliance brings into the business which outcome gives all partners a competitive edge (Dalton, 2009). The high competitiveness is positively reflected in the stock price of firms in the time of alliance announcement (Brooke & Oliver, 2005; Kale et al., 2001; Ojah, 2007). This increase in market price in terms of percentage is more significant in smaller partners. Firms' value also increases higher when they announce partnership within their groups (such as alliance of firms under one holding group) and lower when partnering with domestic companies (Chiou & White, 2005). Positive market reaction to the alliance announcement is a sign of hope for better future performance which relates to the improvement of firms' competencies through partnership and can be due to the past favourable experiences of the customers about such alliances.

One way of looking at the expected outcomes of a strategic alliance is to divide it into two dimensions. The first dimension is to consider company related factors such as marketing factors which are speed to market and market structure, product related factors such as product development and technology access, resource access and development, knowledge and learning, and transactional cost and risk management. Secondly are the factors relevant to the environmental uncertainty which may help firms to use the strength gained by alliance to protect themselves against environmental changes, or at least decrease the environmental risk (Townsend, 2003).

Possession of a certain set a capabilities is a necessary component to successfully serve a targeted customer group (Osterwalder & Pigneur, 2002). The capabilities and resources required for competing can be provided in different manners. It can be acquired, developed internally, or gained by entering a partnership in a strategic alliance (Bierly & Gallagher, 2007). Trying to provide everything alone for all the customers will most likely turn to a failure (Porter, 2001). Even for innovative processes it would be wise to avoid a full dependency on internal parties (Harrigan, 1987; Pisano & Verganti, 2008). Firms now need concentration and innovative forces and they are even forced to be more flexible than before (Inkpen, 1996). As a solution, firms may consider distributing parts of value creation process

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among partners while focusing on their own best capabilities and potentials (Osterwalder & Pigneur, 2002). The distributed parts are those "weak business functions" (J. Zhang & Frazier, 2011) and "non-core" activities which would be better performed by professionals and the resulted released resources would be better used for the company's "core" activities (Y. Yang et al., 2006) and core competencies (Bierly & Gallagher, 2007). Partnership does not only allow concentration but it is also for better utilisation of firms' limited resources and creates a chance in sharing costs of product design, development and distribution as well as many other business activities which results in cost efficiency especially in terms of variable costs (Ojah, 2007). This particularly is more important in facing fast evolving environments in terms of market and technology (Yasuda, 2005). Strategic alliances help organisational growth and prosperity in turbulent business environments (Pansiri, 2008). Resource based theory tells us that since firms are not capable of accessing and possessing all of the required resources alone, interacting with other firms would enable them to overcome their shortcomings. Transactional cost theory, on the other hand, gives us good reasons why making alliances will improve our decision making efficiency as it may give firms a better access to required knowledge for making decisions and provides them with rewards and punishments for the result of the decision made (Marciukaityte, Roskelley, & Wang, 2009). In short, firms collaborate to gain competitive edge through achievement of higher quality, better innovative capabilities, or greater cost efficiency (Wong, Tjosvold, & Zhang, 2005).

Strategic focus on core activities, increasing need for access to technologies or markets in local and international competitions, government motives and regulations, improved information systems, greater investment necessities which are reflected as higher risks, and a great push to introduce new products in a faster speed (Harrigan, 1987; Vonortas & Safioleas, 1997), have led to an increasing acceleration in formation of alliance in recent years with an ascending alliance related portion of return on investment among top performing companies. (Ghandour, Swartz, Grenek, & Roberts, 2004; Holmberg & Cummings, 2009; Nielsen, 2007; Wilson & Hynes, 2009; Yasuda & Iijima, 2005). For example, in health care systems, strategic alliances between educational centres such as universities and health care centres

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such as hospitals have proven to resolve their human resource problems in terms of required registered nurses as well as academic requirements of the universities. In this industry, strategic alliances have provided financial, learning, and operational performance for the partners (Novotny, Donahue, & Bhalla, 2004). Pharmaceutical companies likewise make plenty of alliances. Forming strategic alliances helps these firms in faster and more efficient development in drugs (Ziegelbauer & Farquhar, 2004), as well as a better access to scale, market, complementary resources, and technology development (McCutchen & Swamidass, 2004). These advantages have resulted higher performance both in organisational level and in industry level in pharmaceutical industry (Rothaermel, 2001). In hospitality industry, different forms of alliances have been used as means to access resources, share and thus reduce business risks and extend the business into new markets, both in domestic regions and international scope (Chathoth & Olsen, 2003). In Canada, winery firms made alliances with food industry and tourism industry to turn Niagara Region into a hub for the industry. Use of Internet, festivals and joint marketing in their alliance made it feasible even for smaller firms to join the attempt to promote the whole Regions' product instead of one brand and benefit from the large customer base (Telfer, 2001).

In the last years of the past century, more than 20,000 alliances are reported (Anand & Khanna, 2000). The number of strategic alliances is now near two times larger than ten years ago and the rate is not showing any decline in the near future (Chand & Katou, 2012). Studies suggest that the number of strategic alliances is growing at a rate of 25% in the United States and the return in investment is significant for the most active alliance members (Chathoth & Olsen, 2003). The mounting number of alliances suggests that the industrial structure has become more dependent on alliances and joint venture than before in the history (Harrigan, 1988). Firms now own resources, perform activities, invest, and adapt to new technologies as a network instead of individual companies (Gadde et al., 2003). Partnership has changed the configuration of competition in a way that the concept of competitor is now more relevant to networks of firms rather than firms themselves. In many of the industries, alliances of partner companies are competing against each other in contrast with the earlier competition which was among firms (Banerji & Sambharya,

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1998). Despite the traditional tendency to create internal core competencies, the collaborative structure of firms and unique alliance configuration which result in co-advancement of skills, resources, and co-specialisation is now turned to be a new source of competitive advantage and unique competency (Dyer & Singh, 2010). For example, in a supply chain management, self-optimisation of activities and procedures have changed into network optimisation to help the firms in co-achievement of the best results as a system or network rather than individual companies (Romano, 2003). That is why the firm's network itself becomes an inimitable and complex competitive advantage (Gadde et al., 2003). Surprisingly, economic benefits of alliances are so strategic that in several cases, competitors collaborate in some areas despite competing in other areas. Each member of alliance is participating in partnership structure to maximise its profit. Hence, this collaboration will benefit its partners as well and thus partially contributes to the increment in the partner company's profit margin (A. Zhang, 2005). Alliances between Amazon.com and Borders Group, Yahoo and Microsoft, and Toys R Us and Amazon.com are some examples of such unexpected partnerships (J. Zhang & Frazier, 2011). For firms which are concerned about environmental issues, alliance formation with expert firms in the fields related to "Green Activities" such as used product collection for closed-loop supply chains are economically and operationally attractive (Kumar & Malegeant, 2006). Another very common example of these so called "co-opetitions" is the collaborations in airline industry. Companies of this industry are normally stiff competitors and yet they collaborate to better compete with other airline networks in alliance form (Dalton, 2009). This industry is among the highest alliance announcing industries and its top five alliances carry more than 64% of global air passengers (A. Zhang, 2005). In some cases such as travel and tourism related industries, partnerships have made the industry borders unclear and firms are now competing as parts in alliance which reach beyond a certain industry borders (Pansiri, 2008). In pharmaceutical industry, alliances are formed not only for complementarity and access to resources but also to enhance research and development, speeding the access to market, and inter-organisational specialisation and concentration. In this industry strategic alliances have lowered industry barriers

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to enter the market through complementary product or technology development which need lower capital investment and creates lower risk level. (C.-W. Lee, 2007).

In the current century, many companies perceived globalisation as a key to achieving financial and operational competencies and thus implemented globalisation strategies (Lo & Yeung, 2004). This rush into global markets has created a new competition in global scope. Under the pressure of global competition, it is not easy to expect survival without networking and partnership (Banerji & Sambharya, 1998). Managing alliances of a company is so important that many successful firms have created a separate unit to improve their partnership qualities and outcomes (Wittmann, Hunt, & Arnett, 2009).

From a change perspective, it can be observed that firms are no longer evolving in an isolated manner. Instead they choose a combination of evolution and co-evolution. They evolve together with their partners as a larger and stronger entity which changes and enhances over the time to give each and every partner in it a better chance of survival in a turbulent environment. Firms in the alliance become more dependent on the alliance and as they change together, they show resource interdependency and in short, they form a new coherent unit in the business environment (Wilson & Hynes, 2009). As depicted in the Table 2-3 alliance can buy time or skills for the organisation.

Table 2-3: The Role of Alliances (Sá, 2005)

Alliances buy	Time	First Move advantage		New segment (due to new needs, etc.)
		Occupy a new enlarged market		Globalisation, free trade, deregulation
		Increase the pace at which resources are deployed		Important when performing some strategic moves, e.g. a flanking attack
	Skills	Same segment (lowest due to an increase in size)		Share, scale and experience benefits
		Different segment	Same strategic move	The new segment is more attractive and/or synergic
			Different strategic move	Alliances satisfy the required implementation criteria

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In other words, organisations tend to replace their internal growth with growth through different types of partnerships (Duysters & Man, 2003).

Partners help firms to make the competition easier to handle, make profit margins more steady, accelerate changes in structure and technology (Harrigan, 1988), establish their position in the market or explore new opportunities for business activities by providing strong complementarity in a network structure (Bierly & Coombs, 2004). In a successful partnership, partners will have a higher production performance (Todeva & Knoke, 2005), and are expected to gain higher competitive advantage which can be achieved through sharing knowledge and information, assets, resources, benefits, risks, and collaboration in building capabilities, or appropriate governance structure (Dyer & Singh, 2010; Manthou et al., 2004; Todeva & Knoke, 2005; Zhao, 2006). A higher equity value for partnering firms is then not far from expectation considering the above mentioned benefits (Todeva & Knoke, 2005). The market witnesses a higher share value after the formation of an alliance is revealed to the market which may reflect higher flexibility, venture chances, and access to resources resulting from partnerships (Brooke & Oliver, 2005). Examples of motives to create strategic alliance are learning and access to critical technical, commercial, and social resources, (Dai & Kauffman, 2002a), supply network linkage and access to distribution channels (Supphellen, 2002; Todeva & Knoke, 2005; Zhao, 2006), minimising market and organisational risks, discovering new businesses, and gaining economies of scale (Todeva & Knoke, 2005; Zhou et al., 2011), internationalisation, enhanced manufacturing processes, and minimising different kinds of costs such as logistic related costs and production costs (Supphellen, 2002). Most of these motives would simply be categorised into four categories which are cash, scale, skills, and access (Bleeke & Ernst, 1994) which makes it easier to understand the logic behind each motive.

However, among all motives for alliance formation, learning is tricky to achieve. Learning capacity does not appear to be symmetrically distributed across the organisational units and among partners. It is very strong in alliances where value creation is the subject of partnership. For example, R&D joint venture creates a great learning outcome. However even for the same kind of alliance not all companies

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hold the same capability to use the opportunity. Even having a high level in intangible assets, knowledge, and skill does not necessarily result in better capacity to utilise alliance learning opportunities (Anand & Khanna, 2000). Even though it is true that organisations also tend to learn from their partners and learning is one of the most important roots of many alliances, yet partners are very reluctant to share critical information which would increase the risk of being exposed to the competitors (Inkpen, 1996; Todeva & Knoke, 2005). In a closer view, researchers may even suggest that learning may affect the initial mutual exchange of resources which had urged the need for alliance in the first place. When one partner learns from the other partner what it lacks in knowledge (like market knowledge) prior to the partnership, its motive for continuing the alliance may weaken or vanish and the partnership can come to an end (Jiang et al., 2008). Even some partners may enter the alliance with an intention to learn as fast as possible and leave the partnership when the learning rate is slow to find another partnership which can contribute to their knowledge faster (Yaprak, 2011). Yet open information flow helps transparency, and transparency cultivates trust which is critical for alliance integrity and endurance (Gulati, 1998). This paradoxical nature of alliance, especially in the knowledge economy era becomes even more critical as firms depend more and more on knowledge in their competition. As mentioned before, there are basically two main fears. The first is that today's partners become tomorrow's competitors after learning enough, and secondly, the cost of transferring knowledge surpluses the benefits of alliance formation as a result of deep blending of knowledge in all aspects of organisational soft side. However, the concerns are reduced due to three changes in the business environment: 1) regulatory changes towards better protection as well as more standardisation of knowledge assets, 2) companies' knowledge management approaches towards facilitating organisational knowledge enhancement, and 3) production and distribution evolutions towards speed, out souring, variety, and technology (Contractor & Lorange, 2002).

It is note-worthy that in many cases, alliances would not only benefit the firm but due to their cost efficiency and many other benefits, they also benefit the public by enhancing the public welfare and thus this concept needs to be noticed more seriously by law makers (J. Zhang & Frazier, 2011).

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2.3.3 Types of Alliances

Several types of alliances are identified. Some examples of classification of alliances are: equity and non-equity based collaboration, contractual and protocols agreements on the standards, characteristics of the products, exchange of board members, consortiums, private and brand agreements, dual marketing, industry standards group, vendor buyer agreement, subcontractor networks, commercial agreement, franchise, licensing, R&D consortia, cartels, joint venture, joint marketing and distribution efforts, co-learning activities, facility and space sharing, exchange of minority holdings, acquisition, and merger. (Dalton, 2009; Kauser & Shaw, 2004; Pansiri, 2008; Sá, 2005; Todeva & Knoke, 2005)

In one of the classifications, researchers have considered two dimensions of governance and participation for collaboration. Participation can be either open for all or closed and exclusive for some certain parties. Governance and decision making would also be either flat and equal for all parties or hierarchical and dependent on one dominant party. Based on these two dimensions, the researchers have suggested four types of collaborations: Innovative mall, Innovative community, Elite Circle, and Consortium. As illustrated in Figure 2.3, in open participation modes which are innovative mall and innovation community, the solution can be provided by anybody. In contrast in closed collaborations which include elite circles and consortiums, a defined group of partners and participates are involved in the activity. Considering the other dimension of the grid, innovation malls and elite circles are governed in hierarchical modes in which a certain party decides about the problem or subject of collaboration. On the other hand, innovation communities and consortiums are governed in a flat mode where the subject of collaboration and the solution to be used is jointly defined. Each of these types of collaborations has its own advantages and disadvantages which need to be considered before entering a partnership. While open types of collaboration provide wider range of solutions, a closed type has better potential in providing quality outcome. Hierarchical collaboration provide a better control over the direction of partnership but flat collaborations is better for sharing the capabilities (Pisano & Verganti, 2008).
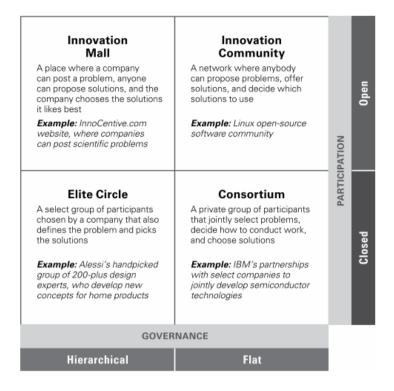
Figure 2.3: Four Ways of Collaboration (Pisano & Verganti, 2008)

Yet another way to look into alliance structure would be through the lens of social exchange theory. This perspective suggests two dimensions: 1) to see if the resources which are being shared through the alliance process are similar in nature ("symmetrical alliance") or different ("asymmetrical alliance"); 2) to examine if the firms are forming vertical or horizontal alliance.
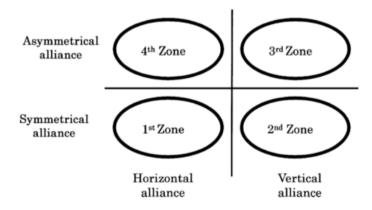
Figure 2.4: Alliance Matrix (Yasuda & Iijima, 2005)

Vertical alliances refer to the accessibility of resources or markets. The horizontal partnerships are formed to overcome competition and enforce strategic market positioning. Researches show that firms need to link these dimensions with their business strategies to find the best category of partnership to form (Yasuda & Iijima, 2005). Even though vertical alliances provide complementarities and horizontal alliances reduce overall competition, a more realistic view reveals that firms usually form a hybrid form of alliances in which elements of vertical and horizontal partnerships coexist (A. Zhang, 2005).

The long list of the types of alliances may raise the question of the type of the alliance which is suitable for a firm. There are many determinants for the appropriate alliance including speed of demand growth, demand uncertainty level, product differentiation level of the industry, standardisation level of product structure in the market, level of customer sophistication and bargaining power, stability level of competitive market, strategic importance of collaboration, production technology influencing factor (capital or labour), and so on. Firms need to carefully study these factors and then they will have a better sense of the suitable type of the collaboration (Harrigan, 1988).

2.3.4 Success of Alliances

Success of an alliance is hard to define due to the complexity of the matter. Many scholars define it as goal achievement, which itself needs a more specific definition and measurement. Sustainability of alliance's competitive advantage which is created through the partnership members would be one of the ways to explain success of the alliance. Life duration of an alliance may provide another measure which needs more caution because end of an alliance might be due to successful attainment of strategic goals. Performance of the alliance might be another measure which itself is difficult to understand (Townsend, 2003).

Performance: Success indicators of strategic alliances are not yet very well explored by the researchers (Pansiri, 2008). Success of an alliance is usually linked to its performance measurement. In understanding alliance performance, firms need to consider both alliance arrangement and its processes (Nielsen, 2007). Measuring

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the success of an alliance based on its performance is complicated and under-researched mainly because measuring the performance of an alliance itself is a big issue. Performance of a firm is a result of many factors which are other than its partnership and it will make it very difficult for scholars to isolate the alliance's effect on performance (Gulati, 1998). Considering skill-sharing measures to assess success of the alliance is also challenging due to great ambiguity in measuring skill level (Murray & Kotabe, 2005). Although some have related the performance to financial, survival, control, operational or learning indicators, yet the difficulty is to have an overall comprehensive and measurable indicator (Pansiri, 2008). Meanwhile literature suggests that the success of an alliance would be identified in two major success areas of strategic and operational goals, and financial goals (Nielsen, 2007; Todeva & Knoke, 2005). Whether or not an alliance can perform in either of the mentioned areas greatly depends on the appropriate alignment of alliance resources to the environmental factors. The form of alliance is another indicator of the effect of an alliance attributes on its performance. For example, the effect of relational investment on performance is not equal in Equity and Non-Equity alliance (Murray & Kotabe, 2005). Thus, the performance indicators need to be studied in the correct context before simply being assumed as success guarantors.

Alliance Management: Firms with a separate and structured alliance management team have shown a greater success compared to the ones without any kind of alliance management team (Kale et al., 2001). Alliance management is a complex concept which can be viewed from different angles. Skills required for alliance management can also be argued from different perspectives. Expected results of an alliance which are based on value creation may suggest different skills for alliance management compared to transactional cost perspective. Whatever the definition and perspective is, firms need this function and it acts as the basis for their "Social Capital and Knowledge". (Ireland, Hitt, & Vaidyanath, 2002). Four practices are recommended for the success of partnership: 1) Clarify the purpose of the collaboration; 2) Simplify the forms and minimise the collaboration overload; 3) Involve the right people; and 4) write down the collaboration details like rules, limits, mutual understandings, goals, patterns, policies, and norms in order to ensure that all parties are on the same page (Lukas & Andrews, 2011). This is what an organisation

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needs to do to handle limited number of partners. Nevertheless, there are bigger issues to handle when the number of alliances that the firm is involved in grows. One suggestion is to allocate a centre to manage issues related to the alliance. A "Strategic Centre" would be an organisational unit or a central firm of a particular alliance. This centre can perform in three dimensions to help the alliance: "creator of value for its partners", "leader, rule setter, and capability builder", and "simultaneously structuring and strategising". As a "value creator", the centre determines strategic outsourcing criteria, helps to develop skills in partner, helps the partner in developing technologies, and facilitates competency enhancement in the partner firms. As a "leader", the strategic centre shares business ideas and visions to harmonise and align partners, provides the required supports for the partners, creates a trust and collaboration environment and facilitates procedures for attracting and choosing new partners. Finally for "structuring and strategising", the strategic centre develops simultaneous procedures for marketing, information sharing, learning, and strategy setting to create structure and provide strategy at the same time. Proper operation of a "Strategic Centre" would to a great extent support a coherent collaboration between a "Web of Partners" (Lorenzoni & Baden-Fuller, 1995). As alliances get more and more common and as their number increases in the business world, managing sets of partnerships that a firm is engaged in becomes more critical. "Portfolio Management" is a key to address this issue and properly face it. Alliance management is necessary to be developed to manage larger number of alliance activities. These activities are in four categories: 1) Alliance Portfolio Strategy, 2) Alliance Portfolio Monitoring, 3) Alliance Portfolio Co-ordination and 4) Task related to Alliance Management System which is at the core of all other activities. "Portfolio Strategy" activities are to define alliance policy and strategy. Then these policies and strategies need to be monitored by "Portfolio Monitoring" activities. "Portfolio Co-ordination" is necessary to create synergy among alliances and avoid conflict. Finally, "Alliance Management System" which is at the core of alliance activities and provides alliance portfolio management with sufficient tools and processes to formalise and standardise required functions. (Hoffmann, 2005). The concept of alliance orientation describes the same concept but in a different manner. The firms which are engaged in alliances and partnerships, over time create a set of

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skills which allow them to screen the environment for potential partners, handle their partners in existing partnership, properly coordinate the alliance strategies, and successfully manage the alliance knowledge. This set of skills which together reflect a firm's alliance orientation is necessary for its success in managing its partnership. The stronger the set dimensions of alliance orientation, the higher the alliance network performance and the market performance. "Network Performance" is affected directly by alliance orientation of the firm and is defined as: " the strength of a firm's relationships with its key network partners and its ability to manage crises and conflicts with these partners satisfactorily" while "Market Performance" is affected indirectly by alliance orientation through network performance and is defined as:" the extent to which a firm achieves success in its existing businesses, products or markets, and in future positioning in its markets". It is important to notice that under high market and demand uncertainty, the role of alliance orientation becomes more critical for higher performance (Kandemir et al., 2006). Thus, in the e-business environment with high uncertainty, risk and turbulence, managers need to improve the development of their market orientation set of skills.

Adding to the above discussions, alliance formation is considered as a kind of change for many organisations and thus has the potential to bring about employee resistance. To avoid this problem, alliance management needs to consider a change in management to ensure employee and management satisfaction before alliance formation. In order to do so: 1) there should be a great effort to challenge the conflict between change and status quo; 2) goals and organisational structure need to be transparent; 3) passion and eagerness need to be provided; 4) and human resource development practices need to be carried out. These actions can ensure commitment to the alliance at management and employee level which will consequently result in alliance success (Chenga et al., 2004).

Although there is no doubt in the benefits that an alliance can harvest from creation of an alliance management team or unit, there are some challenges in initiating such entity. These challenges include the burden of investment in creating the unit for smaller companies, proper linkage between the unit's activities and other

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functional areas of each organisation, and considering optimum weightage for the unit's gravity in predicting alliance's success (Kale et al., 2001).

Selection Criteria: Strategic alliances are formed and performed in a sequence of interrelated stages. The steps include the initial decision to enter or form an alliance, followed by selection of partners and form an alliance with them. After partners are selected, the structure of the partnership forms and this is the beginning of ongoing progresses, changes, and adoptions (Gulati, 1998). Among these steps, many researchers believe that the most important step to consider for the success of a strategic alliances is the "partner selection" step (Chand & Katou, 2012; Swoboda et al., 2011). For an appropriate partner selection many researchers have suggested various criteria. A potential partner should possess "Four Cs", which are 1) Complementary skills, 2) Cooperative culture, 3) Compatible Goals, and 4) Commensurate level of risk (Brouthers et al., 1995). These factors together with 5) Trust and control (Pansiri, 2008), and 6) resourcefulness (Chand & Katou, 2012) identify the appropriateness of a firm to be considered as a potential future partner in the "Partner Selection" stage.

2.3.5   Failures of Alliances

Although many benefits and success factors are identified for alliances, yet many alliances fail (Dalton, 2009; Pansiri, 2008). In fact the failure rate is measured to be around one out of every two alliance (Brouthers et al., 1995; McCutchen et al., 2008; Todeva & Knoke, 2005). In some researches the rate is reported to be even higher (Banerji & Sambharya, 1998; Chand & Katou, 2012; Cravens et al., 2000; Spekman, Isabella, MacAvoy, & Forbes, 1996) and if we translate not meeting objectives as failure, then the rate would go up to 75% (Bitran et al., 2002). These failures are due to causes such as lack of fit, compatibility, synergy, or trust between partners, partnering time pressure, costly joining process, poor implementation, wrong formation reasoning, cultural differences between allied organisations, organisational struggles, unsatisfactory performance, insufficient partnership experience, too much of differences in prior partnership history, dependence on non-international partners, excessive complexity in the tasks required to achieve the

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alliance goal, lack of effective communication and goal difference (Bitran et al., 2002; Chand & Katou, 2012; Kauser & Shaw, 2004; McCutchen et al., 2008; Pansiri, 2008; Sá, 2005). However firms can significantly reduce the failure rate of their strategic alliances by careful partner selection (Pansiri, 2008).

2.4 Alliances for E-Business Activities

After the electronic revolution in global economy, e-business has become a critical part of many industries' business processes. Success in e-business thus becomes a critical competitive issue of this era. Partnership is one of the favourable strategies which many firms follow in their path towards e-success. Strategic alliances are more critical in high tech industries with regards to their greater uncertainty and risk involvement (Brooke & Oliver, 2005), and a faster technology development which raises a greater quest for "market reach" (Bruton & Samiee, 1998). Some firms such as Hewlett-Packard, adopt alliances in their e-business to catch up with firms ahead of them in technology advancement and some others such as IBM, use it to advance their total solution offering for customers even in areas which are not directly based on e-business (Ghandour et al., 2004). Alliances are more vital in firms which are involved in data processing technologies and telecommunication as a result of technology complexity, shorter product life, governmental push, and tougher competition (Harrigan, 1987). Between the years 1984 and 1994, telecommunication and computer industries hold the highest rate of alliance announcement almost all over the world (Vonortas & Safioleas, 1997). Network nature of electronic medium greatly helps forming alliances which used to gain broader market and distribution channel to enhance the value of offered services through complementary and value added services presented by partners (Chatterjee, 2004). This leads to formation of more than 13,000 e-commerce partnerships in 1999. Figure 2.5 illustrates the trend of e-alliances formation before 2000 compared to the traditional alliances formation in the same period of time (Ernst et al., 2001).

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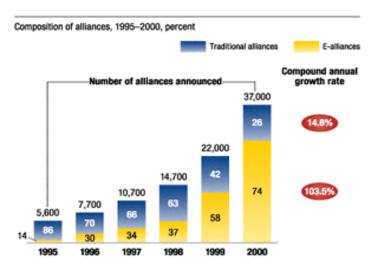
Figure 2.5: Composition of Alliances, 1995-2000, Percent (Ernst et al., 2001)

Figure 2.5 shows a relatively fast initial growth in announcement of alliances between e-commerce companies. However, Table 2-4 shows that alliances such as other aspects of e-business are influenced by bubble burst of e-business in 2000, 2001, and 2002.

Table 2-4: Distribution of Alliances by Year (Dai & Kauffman, 2002a)

Year	1998	1999	2000	2001	2002
Number of Alliances Events	4	22	215	73	5

This trend slowed down the alliance formation between e-commerce companies for several years. However, in the recent years as a result of global competition, the number of companies participated in alliances has again increased (Vapola, Paukku, & Gabrielsson, 2010). Globalisation forces many competing firms to join alliances to survive in the new technological and global business e-environment (Coupey, 2004). In the fast altering B2B environment, cooperative strategies are taking the place of the competitive strategies. B2B e-markets have access to products, customers, technological resources, social resources, and new business opportunities while reducing their risks by entering strategic alliances. (Dai & Kauffman, 2002a).

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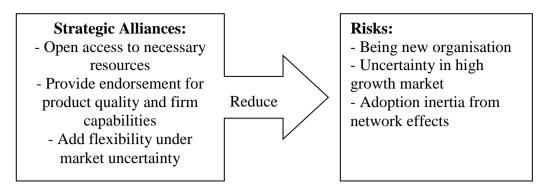
Figure 2.6: Alliances Reduce B2B E-Market Risk (Dai & Kauffman, 2002a)

"Strategic Planning for E-Commerce System (SPECS)" which involves three major analyses: E-Market Analysis, E-chain Analysis and E-Alliance Analysis which view e-market as an ecosystem with four stages of birth, expansion, authority and death. Two distinct chains would be recognised in E-Chain Analysis. Electronically enhanced traditional supply chain and "virtual value chain" where new intermediaries appear on the web space. E-alliances such as portals in some cases join the old value chain and create a new invisible value chain (Hackney, Burn, & Dhillonz, 2000).

Partnership benefits e-business in two ways: Strategic benefits include new market entrance and better understanding of buying patterns, and operational benefits such as improved market transparency, economies of scale and better inventory management (Manthou et al., 2004). Strategic alliance should be an integral part of the whole e-business formulation. While being clearly defined, it should has an interface with other organisation strategies. A proper alliance implementation strategy, valid control and evaluation method, and flexibility should also be considered as success necessities (Zhao, 2006).

2.4.1 Types of Alliances between E-Business Companies

Different studies have indicated various types of e-business partnership from different points of view. Each categorisation illustrates specific aspect of partnership and helps us to better understand strategic thinking behind formulation of an alliance. As a result of vast opportunities created by telecommunication technology and the effect of network which connects businesses all around the world, an initial motive

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for alliances in new technological environment would be global. One of the alliance types which is the result of such demand is Transnational Strategic Alliance (TSA) which connects firms across the world in a partnership. In this type of partnership while the alliance would be addressed as a new entity, the local entities of the partners are still in place and functional (Sussan & Oh, 1996). This is just one example of partnerships which is introduced under new e-business environment. This type and other types of alliances need to take a form of collaboration to function. In general, strategic alliance in high-tech industry can be categorised in four forms : 1) technology licensing in which partners pay in return for the right to using a company's possessed technology, 2) joint research and development in which firm collaborate on R&D activities, 3) outsourcing in which a part of the job is being assigned to other partners to be executed and 4) joint venture in which partners create a new legal entity to become the basis for their collaboration on product/service creation (Yasuda, 2005).

For Internet based businesses, the literature has introduced numerous other typologies for strategic alliances. Here we will go through some more examples of such partnership types. E-auction is a type of collaboration in which suppliers are invited to submit bids online. Distributed development system is another collaborative mechanism which aims to accelerate product development life cycle by allowing production elements work simultaneously via electronically connected collaborative system which connects all units and companies in the partnership together (Pudney & Malmgren, 2003). Another typology of online alliances would be related to the intention of partners in forming the alliance. Considering this approach, six types of alliances are recognised: "Strategic Online Alliance" with a strategic intention to benefit the business of partners, "Opportunistic Partnership" with intention to provide partners with partial benefits and gives them maximum flexibility in formation, minimum dependence and resource sharing, "Sizzle Partnership" with the main intention to link a company to a better known firm in order to improve its perceived brand strength, "Partnerships Created by Strategic Investments" in which a firm takes over a group of companies with the intention to create a directed partnership and finally "Internal Partnership" which involves internal collaboration of different business units within a company (Ling, 2002).

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Another type of alliance in e-business world is called @alliance. This alliance is referred to "particularly short-lived alliances that focus on completing narrowly defined tasks in a very short time frame." (Duysters & Man, 2003). Some other types, forms and motives of partnership for e-business include indirect sales channels, value added resellers, distributors, business alliances, (Manthou et al., 2004), alliances to deepen the product services content and community offerings, alliances that bring better channel access to fulfilment of capabilities, alliances to give access to market customer bases, partnerships for diversifying revenue sources and partnerships which provide better technology and marketing service access (Chatterjee, 2004). Considering the alliance accomplishments, in the area of B2B e-market alliances, four kinds of alliances are recognised: 1) "Marketing Alliances" with the capability of providing partners with distribution opportunities, 2)"Participation Alliances" with capability of securing vertical collaborations in value delivery chain, 3) "Functionality Alliances" which provides participants with a better online transaction functionality and finally 4) "Connection Alliances" which provide partners with better connection to their online clients (Dai & Kauffman, 2002b). Alliance can also be viewed in light of the typology of the partners. It can be categorised as alliances among dotcom industries, partnership between brick-and-mortal companies and dotcom industries, and finally partnership among brick-and-mortal companies (Zhao, 2006).

All the above mentioned literatures are trying to distinguish characteristics, strategies and aims of electronic alliances which are in some aspects different from conventional alliances. The next section will introduce more details pertaining to these differences.

2.4.2 Differences between Conventional and E-Business Alliances

The various types of Internet facilities are the best reason for growing importance of proper strategy selection and formulation (Porter, 2001). Internet's strategy facilitating nature has made it easier for some firms to enter the competition which has resulted in an intense competition throughout the industry. The very different nature of electronic environment asks for a more cautious approach towards

business formulation and strategy. Transforming from traditional purchasing system to e-business system changes the competitive view to collaborative relationship. Wider range of channels in selecting partners, better flow of data, greater possibility for system integrity (Zhao, 2006), better supply chain management, better future demand forecasting, and stronger linkage to customers' own planning systems have given e-business alliances a higher success rate than the traditional off-line partnerships (Pudney & Malmgren, 2003). Using internet has resulted in some valuable restructures in some of the industries due to better communication and transaction facilities (Porter, 2001). In conventional alliances, larger organisations preferred joint ventures which are proven to create lower organisational conflict and reduce resource dependency (Homin Chen & Chen, 2002). Merger and acquisitions also used to be very popular among companies. However, many firms no longer refer to these strategies as their preferred strategies when alliances provide more flexible opportunities in the turbulent business environment, especially in network economy and high tech industries. Some of main differences between the conventional alliances and the e-business alliances would be categorized in some main areas of concern; 1) many conventional alliances were formed as a part of companies' market expansion strategy or to create a higher operational scale. In formation of new alliances however, knowledge acquisition is the dominant motive. 2) Traditional alliances were made in a long process of trust building and integration. One would expect a long lifecycle for these alliances. In contrast, the new alliances are made in a rather faster procedure and are in average aimed for a shorter lifecycle. 3) Traditionally alliances where more in a dyadic fashion. They were formed between two companies with mutual benefits in a well-defined structure. I the new era of alliances however, may of the e-business alliances are made between groups of partners. The companies make sure to be a good fit to the network of companies rather than a specific individual partner. 4) Traditionally, companies were looking for established companies to ally with. In the new era of e-business and digital technology, entrepreneurial characteristic of a company is what managers want to see in partnership prospects. 5) As a result of shorter lifecycle for alliances, unlike conventional alliances, new line of alliances focus more on alignment of organisational goals rather than trust and control. 6) In order to avoid time

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consuming complex alliance formation (with several functionality) the new alliances are narrowly focused on smaller areas of collaboration which allows faster formation with less complexity which is easier to manage. (Duysters & Man, 2003).

2.5   Successful Partner Selection Criteria

Alliance success factors are one of the important matters of research (Ybarra & Turk, 2009). Proper partner selection is the first stage and one of the most important success factors of creating a successful strategic alliance (Banerji & Sambharya, 1998; Bruton & Samiee, 1998; Supphellen, 2002). Knowing the right criteria to select a partner among the candidates will result in a higher success rate of the partnerships (Hughes & Beasley, 2008). Thus, obtaining sufficient information about partners before alliance formation is critical. This information may come directly via personal contact, or indirectly by a third party. The information is even more important if the alliance formation is closely linked to the core of company's strategy or the differences between partners are significant (Supphellen, 2002). However it is evident that a proper set of criteria to select appropriate partners depends on factors such as governance structure of the alliance, scope of the partnership and initial motives of alliance formation. Furthermore, several criteria such as technology and marketing potential, production and competitive factors, success rate in prior partnership experiences, and human capital related factors of the potential partnership candidates are suggested to be monitored prior to alliance formation (Nielsen, 2003).

Success factors of partner selection which are mentioned in the reviewed literature are mainly in two categories: first, the factors which result in success, second, those which indicate a successful partner selection. In some cases it is hard to recognise which side a factor falls in. In some other cases, a factor is mentioned in both sides by different authors. There are many factors as success indicators such as commitment to the alliance, trust and communication among partners, and power and conflict resolution factors (Ramaseshan & Loo, 1998). The list of considerations for selecting proper partners is also quite long. It includes but is not limited to factors such as internal knowledge of collaboration, earlier history of partnership, lower

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country risk, high level of trust, low level of alliance management protectiveness, complementarity, low cultural distance, and high relational capital (Nielsen, 2007). Alliances are formed due to different dynamics and forces in different countries and thus, the factors affecting their success may vary in different countries and under different social and regulatory pressures and conditions (Palmer & Bejou, 1995). Cultural distance in particular is important in cases where the partner is from a country with high governance structure (Globerman & Nielsen, 2007). This research will attempt to gain a better understanding of these factors because a proper comprehension of the success factors is associated with future effectiveness in alliance formation (Kauser & Shaw, 2004).

Many researchers have tried to categorise the success factors to make a better use of them in conceptualisation of the study matter. Some researchers have focused in a certain industry to find and categorise the factors. For example, in the logistics industry, proper partners suggested to have two sets of aspects which are strategic and business criteria. In the first criteria, there are factors such as compatibility of values, cultures, objectives, company size, and financial conditions. The second criteria consists of factors such as technical, performance, quality and managerial aspects of partners' values (Büyüközkan, Feyzioğlu, & Nebol, 2008). The quality of partners is a major factor in partner selection of supply chains. In the selection phase, quality of the partners in cultural and operational dimensions needs to be inspected before formation of the alliance (Lo & Yeung, 2004).

Some other literature have tried to categorise the success indicators of alliance formation under three categories of reduced transactional cost, improved market power and increased learning outcomes (Gulati, 1998) or put preconditions of alliance formation in a framework of four settings which indicates a partnership will be successful if partners are presenting complementary skills, compatible goals, cooperative cultures and proportional alliance relevant risk (Brouthers et al., 1995). However, we will see some other motives and results suggested by other scholars are not exactly under these categories. For example, another model identifies 20 success factors of collaborative relationships as illustrated in Table 2-5 (Lukas & Andrews, 2011)

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Table 2-5: Success Factors of Collaborative Relationships (Lukas and Andrews, 2007)

Category	Factors
Environment	• Community collaboration history • Community perception of collaborative groups • Community's political and social climate
Membership characteristic	• Mutual respect, understanding, and trust • Cross section of members • Members interest in collaboration • Compromise ability
Process and Structure	• Share of members in process and outcome • Flexibility • Multiple participation layers • Roles and policy guideline development • Adaptability • Appropriate pace of development
Communication	• Open and frequent communication • Established informal links for communication
Purpose	• Concrete, attainable goals and objectives • Shared vision • Unique purpose
Resources	• Funds, staff, materials, and time sufficiency • Skilled leadership

Complementarity of resources, effective synergy creation among the complementary resources, and relational factors of alliance are in particular very bold indicators among the success factors of an alliance and it is highly recommended not to take any of these considerations out when considering alliance formation as each and every of these factors are independently important for the overall success (Wittmann et al., 2009).

Basically the factors which affect success are compatibility and complementarity factors (Mitsuhashi & Greve, 2009). Alliance formation motives and factors indicating or resulting from successful partner formation are reduced uncertainty (risk, trust and control), enhanced market knowledge/capabilities, better performance and cost leadership, and improved intangible assets.

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2.5.1 Uncertainty Reduction (Risk, Trust, Control)

Needs and Benefits: Strategic alliances if not carefully crafted can be of a dangerously risky nature (Brouthers et al., 1995). Success of an alliance depends on the commitment level of partners to meet the organisational goals (Pansiri, 2008). The new business environment has created extra uncertainty by offering virtual partnerships in which many partners may even not know each other very well. In such environment, it is essential to create trust between allies (Osterwalder & Pigneur, 2002). Mechanism, focus, and extent of organisational control, as well as trust and conflict resolution techniques are important determinants of successful alliance (Kauser & Shaw, 2004). A successful alliance formation is associated with reduced uncertainty, market risk and managerial risk (Bierly & Coombs, 2004; Bitran et al., 2002; Brooke & Oliver, 2005; Bruton & Samiee, 1998; Cravens et al., 2000; Das & Teng, 1998; Ghandour et al., 2004; Holmberg & Cummings, 2009) as well as reduced "Relational Risks" such as not having satisfactory cooperation between partners and "Operational Risks" such as factors that can jeopardise success of alliance (Cravens et al., 2000; Jiang et al., 2008). Higher level of trust will benefit organisations through better exchange of information, higher learning, higher performance, flexibility, (Bruton & Samiee, 1998; Das & Teng, 1998; Gulati, 1998; Jiang et al., 2008; Ybarra & Turk, 2009), decrease the danger of opportunistic behaviour (Das & Teng, 1998), strengthen defensive competitive position through better controlling competitors and customers, overcoming governmental intervention or legislative barriers (Bitran et al., 2002; Holmberg & Cummings, 2009), access to governmental lobbies and power networks, or even having a defensive position against corruption, illegal activities and violence (Young et al., 2011).

Mechanisms: Mechanisms to create this control may vary among alliances. Ownerships (majority and minority), hierarchical control, contractual control and any forms of formal controls such as social and even cultural controls are examples of control types aimed to increase trust and confidence among partners (Das & Teng, 1998). The type of suitable control may also vary from industry to industry. For example, if trust is taken as a mechanism for control, it may create opportunistic behaviour in some cases, such as in hospitality industry as a sufficient mode of

control for a long-term mature relationship (Chathoth & Olsen, 2003). More of these mechanisms will be studied later in this chapter when reviewing legal and governance control of alliances.

Partner Selection Considerations: Even though there are many trust and risk related benefits for an alliance, there are also some other factors to be considered before choosing a partner for alliance. Firstly, the more partners are involved in alliances in different or even similar networks, the more they would be trusted due to several reasons such as the gravity of their reputation required for other partnership (Todeva & Knoke, 2005). Having a history of partnership with the same company will ensure the partners of having sufficient knowledge about their structure and compatibility of their goals and objectives and therefore will ease the decision of partner selection (Gulati, 1998). Thus, finding a partner with a history of previous or existing partnership would indicate a positive signal for having less trust related issues. These companies are more likely to be capable of providing a successful alliance because they have already created a knowledge overlap which gives them a better understanding of cultural compatibility, knowledge structure and intangible assets of each other (Hughes & Beasley, 2008; Pansiri, 2008) and it is more likely to have future deeper relationships in form of joint venture or even merger and acquisition (Marciukaityte et al., 2009). Secondly, partners need to have equal level of dependency to alliance to maintain commitment and satisfaction from the alliance. (Kauser & Shaw, 2004; Ybarra & Turk, 2009). Relationship equity which is "perceived fairness in the relationship" also needs to be considered as a trust creating feature of a partnership (Ybarra & Turk, 2009). In terms of risk structure this can be interpreted as the risk level included in the alliance structure which needs to be proportional to the level of each partner's share in the alliance. This increases the trust among all partners in the alliance and other partners as a balance between risk and reward that is observed and thus no partner will abuse the imbalanced risk distribution (Brouthers et al., 1995). Another feature of partner which needs to be considered is the shared values that are carried by the firm. Shared values are defined as: "the extent that partners to an exchange have common beliefs regarding the importance of the motives for transacting as well as the goals and objectives of the

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exchange". The more value partners share, the higher the future trust level would be expected (Ybarra & Turk, 2009).

Trust as an Output: It should be noticed that trust is an important outcome of a successful alliance formation which indicates successful alliance operation. A high level of trust shows us that firms have been careful in choosing their partner and such alliance in return will increase the level of mutual trust among partners (Huang, 2006; Solesvik & Westhead, 2010).

2.5.2 Operational Cost and Performance

Meeting alliance objectives is among the strongest success indicators (Jiang et al., 2008) and in many, if not most alliances we can see operational and financial motives as leading goals for partnership formation. However, measuring alliance performance is very rare among managers of companies involved in partnerships. Especially when a company is involved in many alliances the measurement becomes very complex and that adds to the reluctance of managers to measure the effect of a specific alliance formation. Yet, some firms have adopted models and methods such as Balanced Scorecard to evaluate the efficiency of their alliances despite its difficulties which gives them a better control over outcomes and decisions relevant to any of their alliances (Cravens et al., 2000).

Alliances increase cost efficiency by reducing transactional costs (Gulati, 1998) and cost sharing among partners. It also creates economies of scale and scope by creating a volume in the accumulative activities performed by partners (Bitran et al., 2002; Holmberg & Cummings, 2009). Partnership enables partners with smaller assets to generate a greater financial outcome by pooling their assets. This cost efficiency may appear in the areas of technology utilisation, R&D, product development, market access and many other key activity areas of the partner firms (Holmberg & Cummings, 2009). Besides cost efficiency, higher revenue and profit opportunities, alliances produce operational and strategic efficiencies. Partnerships pool resources provided by all partners (Holmberg & Cummings, 2009) and synergise the utilisation of the inputs which results in a greater output (A. Zhang & Zhang, 2006). Alliances not only help operational practices to improve, they also

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enhance business processes and support international business practices (Wu et al., 2009). The information which a firm gains through the social capital earned by the network of partners can improve the operational utilisation of resources in the firm's possession (Gulati, 1998). Under certain circumstances, operational, financial, and market efficiencies might be so strong that even partnership with competitors in some business areas would be recommended (J. Zhang & Frazier, 2011).

2.5.3 Market Power

Accessibility and knowledge of local and international markets are among the most important alliance outcomes for many companies (Bierly & Gallagher, 2007; Ghandour et al., 2004). Today, market power is defined based on relationships rather than traditional focus on exchange. Firms are now more dependent on alliances for their marketing purposes than ever and a successful alliance is expected to create a favourable marketing outcome for the businesses involved in the partnership. The importance of alliance formation is even more stressed in light of considering rapid growth in the international market places and influence of global marketing on overall business performance (Townsend, 2003). With formation of alliance firms would have better access to markets and gain market acceptance and strategic competitive position in new international markets (Holmberg & Cummings, 2009; Kauser & Shaw, 2004). Increased market share, power and efficiency as well as sales growth can be utilised as determinants of alliance success. (Banerji & Sambharya, 1998; Bierly & Coombs, 2004; Gulati, 1998; Kauser & Shaw, 2004; Wu et al., 2009) Other outcomes of successful alliance are investment(Ghandour et al., 2004) opportunity (Brooke & Oliver, 2005; Wu et al., 2009), as well as brand power, reputation (Jiang et al., 2008), speed to market (Bruton & Samiee, 1998; Holmberg & Cummings, 2009), supplier or production access (Holmberg & Cummings, 2009), geographically complementary market access (Mitsuhashi & Greve, 2009), and utilisation of new technology and R&D (Bierly & Coombs, 2004).

2.5.4 Intangible Outcomes

Financial results are for sure the most desirable outcome for many firms when implementing different strategies. However, researches show that to have

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sustainable financial results, companies need to seek intangible assets as an important outcome of their strategies (Kaplan & Norton, 1996). Especially when operating over Internet, intangible assets seem to have even stronger effect on financial business results (Burt, 1995; Cinca, Callén, & Molinero, 2010).

Learning and knowledge creation as two of the most sought outcomes of the alliance (Inkpen, 1996). Some partnerships are forms as mechanism to share information and access to required expertise and technologies (Homin Chen & Chen, 2002). Access to information is a vital element of any business but what really matters is an access to accurately processed information which is normally beyond the financial and timing capacity of a single entity. The network which a firm is a member of, would perfectly acts as a processor for the load of information which may be useful for that organisation (Burt, 1995). Thus learning about relevant valuable information would be attained through a successful partnership. Learning occurs through exchange of technology or sharing skilled human resources (Banerji & Sambharya, 1998; Bitran et al., 2002; Brooke & Oliver, 2005; Bruton & Samiee, 1998; Gulati, 1998; Holmberg & Cummings, 2009; Jiang et al., 2008; Wu et al., 2009; Yasuda, 2005), organisational interactions and strategic relevance to the partnership by internalising the knowledge acquired in the partnership processes (Inkpen, 1996). Alliances enable partners to become technology leaders by the learning which is a result of interactions among partners and leverage their technological capabilities beyond what they could achieve alone (Hipkin & Naudé, 2006).

It is important to notice that in any alliance, a better conflict resolution mechanism and a high relational capital (social capital based on trust, respect, and friendship) brings in a better chance of corporate learning (Todeva & Knoke, 2005). The knowledge is in two forms of tacit and explicit. The former has a vague and implicit form which makes it difficult for organisations to acquire and communicate. The latter has a better systematic form which makes it easy to acquire and communicate. Depending on how organisations aim to create processes of learning, one or both of the knowledge forms could be transferred. For example, if the learning is more through technology sharing, then the systematic explicit knowledge is better

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learned; whereas when the learning happens through rotation of personnel, tacit knowledge is also well communicated and learned. Besides, the quality of knowledge management processes and implementation is a determinant of the quality of learning in the partnership. If all of the facilitating factors of knowledge management are well taken care of, then the parties involved in strategic alliance will better benefit from the learning outcomes (Inkpen, 1996). The best result is produced when tacit and implicit knowledge are combined in an alliance to provide sustainable advantage (Wittmann et al., 2009). Knowledge transfer which is a result of strategic alliance is strongly affected by dynamic aspects of alliance. The more clear and frequent inter-organisational communication is, the better technological knowledge transfer would be expected. In return, having more of explicit knowledge in communication will force organisations to form better organised procedures for knowledge creation and inter-organisational interactions. This effect would be even stronger when material rewards are offered. Other than clear material rewards, firms should carry out trainings, create suitable environment and organisational culture, or even develop organisational units for better inter-organisational communication among alliance members and meanwhile should try to minimise conflict and maximise the trust between partners (Lin, 2007). Learning and knowledge transfer in high technology based on alliances are so critical that firms may even compete on basis of their experts' innovativeness in knowledge contribution within the alliance. Firms with higher contribution will determine alliance direction and firms with passive strategies will be left behind. Learning, innovation and knowledge transfer capabilities have to be improved in a dynamic way in order to keep the alliance on the right track (Hipkin & Naudé, 2006).

However pure learning is not the only intangible outcome of a well formed alliance. Alliances in general enhance firm's intangible assets and organisation skills (Holmberg & Cummings, 2009). Expected results of an alliance in the domain of intangible assets may include better support of technical and research activities, advanced standards of security, services, ease of access, stronger reputation and trademark in the competitive international market and access to patents and licenses (Wu et al., 2009). Particularly, innovativeness (which is very important in high tech

and IT industries) is proven to be enhanced as a result of processes in alliances which enforce the prerequisites of innovation (Yaprak, 2011).

Culture is another factor which plays a vital role both in expected results of an alliance and pre-requirements of a successful alliance formation. Cultural similarity is a basic predictor of higher success probability in partner selection (Bierly & Gallagher, 2007). "Cultural fit" which is proven to be one of the strongest success indicators takes many features of a potential partner into consideration. Feature like "ethical and moral values", "openness", "style of management and leadership", and "risk and security orientation" are some of these cultural aspects which are needed to be carefully assessed before allying with a potential partner (Swoboda et al., 2011). While compatible culture is an important condition which firms need to meet before partnership, formation and successful operation of the alliance would result in creation of a stronger collaborative culture (Brouthers et al., 1995; Holmberg & Cummings, 2009; Spekman et al., 1996). This constructive cycle may explain why having a history in alliance participation is highly associated with a higher rate of success (Gulati, 1998; Mitsuhashi & Greve, 2009).

Another asset to be obtained through partnership is social capital. Social capital can be defined as: "a firm's relationships with other companies that have important resources". It is built through long-term relationships and can contribute to the success of partnership based on mutual trust (Ireland et al., 2002) . While social capital is mentioned in earlier paragraphs as an indicator of better chances for corporate learning, its area of influence goes beyond the learning concept. Social capital can aid alliances in the formation step (Mitsuhashi & Greve, 2009). Moreover, it is also important after alliance formation. Opportunistic behaviour would decrease considerably as a result of social capital of a firm because presenting such behaviour may damage the social capital which may in return damage other relations that the company is engaged in. Having a greater social capital, will increase the attractiveness of the firm as a potential partner for other firms and thus bring in higher opportunities for the organisations (Bierly & Gallagher, 2007).

2.5.5   Compatibility

Compatibility is a major indicator of alliance success. In assessing compatibility of the firms it is vital to notice that compatibility is not equal to similarity (Mitsuhashi & Greve, 2009). To assess a firm's compatibility, one can consider the degree of alignment in background, goals, organisational cultures, resources and values of the allying parties (Pansiri, 2008). There are several factors which signal compatibility of two companies. In their relation alliance partners need to have compatible goals (Brouthers et al., 1995). Goals may be assessed in terms of financial, sales, or market achievement (Kauser & Shaw, 2004) and the performance of the alliance needs to be examined frequently against the pre-set goals of the partnership (Brouthers et al., 1995). An indicator of real and deep compatibility of goals is the shared vision of companies and their managers. Not only firms should share their vision, but also alliance should bring a shared vision for partner firms' managers. This alignment will secure alliances to maintain their integrity even in harsh business times. (Spekman et al., 1996). For example, one research illustrated that mutual commitment to quality in organisational goal level will have better result in alliance performance if co-operational interdependencies are empowered in management and organisational levels. After all, managers are the key players in establishing lasting collaboration between organizations and if their role is strengthened, they will be able to be more effective in bringing the collaborative visions into practice (Wong et al., 2005). Another research suggests that management and employee satisfaction improve the alliance performance which in return increases staff and management commitment and thus the link between alliance performance, and management commitment and satisfaction needs to be considered seriously (Chenga et al., 2004). In another level, firms need to be able to align alliance goals, company goals, and its objectives. If one of the companies finds it impossible to do so, it is probably not a good candidate to join that specific alliance (Das & Teng, 1998; Hoffmann & Schlosser, 2001; Holmberg & Cummings, 2009; Zhao, 2006). In short, a successful alliance formation should provide partners with perception of satisfactory compatibility of goals at all levels when it comes to evaluation stage (Feng et al., 2010; Huang, 2006; Solesvik & Westhead, 2010; Zhao, 2006).

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Moreover, firms need to be examined in terms of compatibility at the execution level. They need to examine if cooperative culture exists between the partners and if their management styles and operational know-hows are compatible. Sometimes even the size of the partnering company needs to be assessed since similar size firms work better together (Brouthers et al., 1995). Other signals of compatibility may appear later in evaluation stages of alliance after a period of collaboration. The signals may include partners' satisfaction with their partnership in terms of co-ordination of activities, interaction between managers, compatibility of activities, participation in decision making, partner level of commitment, information sharing, management of activities and partner level of honesty (Chatterjee, 2004; Huang, 2006; Kauser & Shaw, 2004).

The fast changing environment suggests that organisations need some extra qualification to remain compatible. In other words another indicator of success in partner selection would be organisational flexibility and adjustment to environmental changes (Bierly & Coombs, 2004; Brooke & Oliver, 2005; Holmberg & Cummings, 2009). To ensure these flexibilities, organisations need to be capable of performing smooth and effective information communication in order to keep them aligned to the partner's goals and operational direction. Quality of information communication is one of the main tools for coordination of activities between managers and units of partners (Kauser & Shaw, 2004). Another main factor to be considered in this respect is the cultural compatibility between partners as well as cultural support for collaboration in each of the parties (Spekman et al., 1996). These cultural and communication factors together with earlier mentioned dynamics will help firms in an alliance to remain compatible.

2.5.6 Complementarities

Complementarity of the competencies and resources are important motives of alliance formation and predictors of the suitability of a candidate for partnership. (Chatterjee, 2004; Feng et al., 2010; Hoffmann & Schlosser, 2001; Mitsuhashi & Greve, 2009; Ojah, 2007; Vapola et al., 2010). Complementarities provided by the partners allow the firms to look for extension of their outputs with minimising the

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cost of their input and sometimes even eliminating the need for extra input (Ojah, 2007). Similar to compatibility, complementarity of partners also begins with goals and objectives. Complementarity of goal if replacing competitive goals would benefit firms in the alliance in terms of successfulness (Brouthers et al., 1995). Resource based view expresses the idea that the resources of the alliance partners need to be in a form of complementarity to help them better compete (Zhu, 2004). Quick access to complementary physical and non-physical resources is a strong motive to form alliances (Ghandour et al., 2004). Complementary resources may range from financial resources to non-financial resources such as managerial and technical ones or even means of distribution (Cravens et al., 2000; Holmberg & Cummings, 2009).

Functionally, firms need to learn how to co-specialise in combining complementary skills and resources (Brouthers et al., 1995; Cravens et al., 2000; Gulati, 1998; Holmberg & Cummings, 2009; Jiang et al., 2008; Yasuda, 2005; Zhu, 2004). By creating strong linkages between different functionalities of companies in the network of an alliance, firms can improve or extend their value chain and product lines (Bitran et al., 2002). The ultimate goal is to synergise alliance partners' complementary resources and capabilities to mount partner's competitiveness (Pansiri, 2008).

Besides resources and capabilities, complementary products and services would also trigger alliance formation as a solution to close the gap in firm's offerings (Ghandour et al., 2004; Holmberg & Cummings, 2009; A. Zhang & Zhang, 2006). This comprehensiveness of relevant products and services will enhance the cross-selling between related markets (Holmberg & Cummings, 2009) as well as an easier expansion into international markets (Bitran et al., 2002). A very common example of such alliances would be found in airline industry where many airliners collaborate to gain international presence and provide comprehensive solution for their customers. They combine their sales channels and roots to be able to serve more clients with better travel roots and options. In US and Europe for example, deregulations in the industry have motivated the airliners to partner in order to make their hubs international and gain access to a larger geographical scope of global market (Shibata, 2001).

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2.6   Issues and Challenges

In 2000 and 2001, the IT bubble burst initiated a great amount of criticisms against e-business activities. Improper shift to low price as core competency and "misguided" partner selection were two important strategic mistakes which led many e-activities to failure (Porter, 2001). Not only did many businesses go down with the trend, but also the mind-set of those outside the business area shifted away from the once favourite topic of e-business. This could be even seen in some business schools where they terminated the e-business courses after the initial wave broke down (Rob, 2003).

When it comes to e-business alliances, the concept of failure is sometimes misunderstood for termination. Termination might be an indication of successful achievement of final goal of the alliance. Thus the rates mentioned for alliance failure after exclusion of these cases might be less than what is simply reported in literature. Yet the rate is not small enough to ignore (Jiang et al., 2008). E-business companies have to pay more attention to maintaining flexibility of the alliance, being wary of exclusive deals, and creating an appropriate balance between performance incentives and execution (Ernst et al., 2001). Partners have different resources and views on the appropriate level of the responsibility. They might also have technological adaptability issues related to standards, equipment, and networks (Hackney et al., 2000). Dependency on creativity and innovation would increase dependency of e-business companies on tacit knowledge and this will increase their reluctance of sharing knowledge in the alliances (Dai & Kauffman, 2002a).

Failures of alliances are mainly due to improper delegation of alliance management duties, lack of useful alliance strategy, sub-optimal initial partnership, inadequate collaborative alliance recourses (Ling, 2002), being too ambitious, failing to commit the people, software relationship, liquidity and capital that is needed to give the venture complete autonomy, being burdened by equal–governance arrangements (Ernst et al., 2001), missing face to face contact, or treat of bypassing the distribution channels (Pudney & Malmgren, 2003). Beyond these issues,

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managers are in doubt to lose short-term benefits for the sake of long term competitive advantage which collaboration can create (Pudney & Malmgren, 2003).

As mentioned in other sections of this research, albeit numerous reasons mentioned for failure of alliances, majority of scholars agree that improper partner selection is amongst the strongest reasons for unsuccessfulness of partnerships (Holmberg & Cummings, 2009). It is especially noteworthy that this problem is at the formation stage of the alliance and can be prevented with a much lower cost than the consequent problems that would occur in the later stages.

2.7 Value Models

In reviewing value related literature, one may face two types of value. The first value is the value created by businesses for their customers which is through meeting their expectations, and the second type is the value created for the businesses by adding to their revenue and lessening their costs. As shown in the following pages, these two types are very much interlinked and are related through the means of financial benefits and exchanges. Thus, they can be considered the same and there will not be much of emphasis on their differences.

Adding up the complementary resources by having various partners is not enough to create competitive advantage in an alliance. Complementary resources need to be configured in the alliance in a way to create value for the partner firms (Wittmann et al., 2009). The synergy in value creation provided by the well-configured complementary resources of the alliance members creates enough extrea value to overcome the costs of alliance formation. Firms in a business network do not act independently. They align their activities with those of their partners in order to co-generate a higher value as a larger entity. This allows them to optimise their resource access and allocation. In other words, the network allows them to think beyond the company boundaries to form their processes (Gadde et al., 2003).

Although organisations must discover new ways of value creation as an integrated part of their strategic moves (Pisano & Verganti, 2008), in the early business models of organisational moves in the Internet era, online transaction had a

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minor and straight forward role. Many firms used Internet just as a means for cataloguing or simple enquiry collecting. This view of Internet is no longer true. Firms are forced to think of ways to create value through web (Olson & Boyer, 2003). Value itself is defined as "the amount buyers are willing to pay for what a firm provides them" and is measured in terms of revenue created for the firm (Porter, 1998). This money comes in return by meeting customers' needs and trying to satisfy them (Kothandaraman & Wilson, 2001). The way a business process creates value for a specific target market is at the core of a business model and its resulting strategy (Osterwalder & Pigneur, 2002).

The way firms creates value online is different from the conventional business models in many ways: The Internet has made the size of potential market much larger and broader in scope; Easier payment systems have made the transactions faster and safer; e-shops have made the inventory cost lower; The customer relationship is also enhanced in many ways. product development processes is now benefiting from customer collaboration through feedback systems and in short many traditional issues in business management do not exist or are radically diminished by online business solutions (Kothandaraman & Wilson, 2001).

The value creation over Internet can be described by the virtual value chain model which consists of five activities namely gathering, organising, selecting, synthesising, and distributing information (Rayport & Sviokla, 1995).
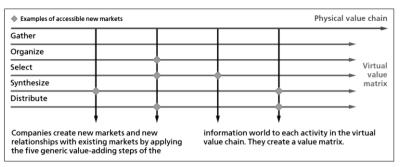
Figure 2.7: Virtual Value Chain (Rayport & Sviokla, 1995)

These stages, for example, in online news industry are translated as content creation and production, content packaging, distribution, and consumption. In each stage we see new players (such as weblog writers and business websites) who do not exist in traditional media structure (Águila-Obra et al., 2007). Many firms while adopting virtual value chain have implemented this system in three stages. The first stage is "visibility". In this stage firms utilise the information systems to make the required data accessible for those who needs it. The second stage is "Mirroring capabilities" in which firms utilise the information system to move the processed from traditional infrastructure to online infrastructure with a better performance. It sometimes even includes the adding value to the conventional activities through online activities. The last stage is to use information technology to establish a "New Customer Relationship" in which the firms can get closer to their customers and use the advantages of online systems to strengthen their relationships with the customers (Rayport & Sviokla, 1995). One might add to these stages of maturity in value creation yet another important stage of utilising Internet facilities to establish new business alliance.

Alliances are formed in order to produce superior value for involving firms and their customers (Brooke & Oliver, 2005) and value creation is the major characteristic of an e-business partnership (Manthou et al., 2004). In the context of e-business, alliance formation is one of the most important strategies performed in order to improve the resulted value of e-business activities. Partners create value for the alliance (Holmberg & Cummings, 2009) and the total created value is accumulation of the value created by parties involved in the e-business process (Amit & Zott, 2001). In the new era of information technology, e-business and

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globalisation, companies are facing a higher degree of markets, product sets and customer expectations' complexity which are beyond one company's capabilities to fulfil them. This will leave no choice but emergence of value creating networks which are: "firms that come together to create customer value" (Kothandaraman & Wilson, 2001). These networks strengthen customer value proposition through attracting new online customers, improving, recreating and renewing price-value relationship, providing more complete customer solution, offering new relevant products/services, enhancing offering scope, increasing customer loyalty and reducing customer turnover (Holmberg & Cummings, 2009). Yet it is important to notice that even after selecting a right set of partners, the firms still need to be aware of their exact role in the partnership and thus, having an appropriate structural model for the alliance is inevitable. The number of partners and the focus and strength of the relationship need to be optimised in a way that the resulted network remains effective and efficient. Too much of redundant or insignificant partners would bring nothing but a waste of time and energy. In contrast, a well-structured network creates a greater value for the partners (Burt, 1995) and thus, we need to know the structure in which the value is best created in order to be able to form an appropriate network structure for the alliances.

In many conventional alliances, value creation is well described by Porter's value chain. Especially in the manufacturing section, where value creation takes place through conversion of raw materials to end products, Porter's Value chain would best utilised to explore an appropriate alliance configuration. However this model is hardly an option for alliances to adopt in e-business environment (Laffey, 2009). Information technology has made it more innovative and efficient to create value online in ways which is not available to the traditional transactions (Amit & Zott, 2001; Osterwalder & Pigneur, 2002). Although some scholars have tried to adopt this model into e-business environment by assuming clicks and users as production materials, the clarity of the outcome model is less than satisfactory. (Laffey, 2009). Even other value creation models such as Resource Based View (RBV), Schumpeterian theory of innovative economics, theory of strategic networks and transaction cost theory would face difficulties in fully explaining the process of value creation over Internet (Amit & Zott, 2001). For an example, RBV can show

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the need for alliance as an answer to the ultimate need of firm to access required resources to keep up in the competition (Yasuda, 2005). Over the Internet, alliances create value through providing a comprehensive solution for a specific need of customers. Companies involved in this process try to coproduce the value by presenting their products and services that are relevant to the customers' needs. To understand this concept better, this research will review the academic background of value creation and the value adding types of partnership in the context of e-business.

Value configuration in organisations involves logic, process, and technologies. Processes and technologies are built upon logics of value configuration and thus it is good to take a look at these logics prior to finding appropriate technologies. Sweet (2001) suggested that strategic value configurations logics have four distinguished types, namely: value-adding, value-extraction, value-capturing, and value-creation. Value-adding logic emphasises on creating additional functions or features for the product or new products in a way that customers are more satisfied and willing to pay extra. This is in some ways taking opposite direction of value extraction logic which suggests finding ways to create the same amount of product with lower production cost. Even though these two value logics focus more on production aspect, value capturing logic looks into the information which can be viewed from the customers' aspect to achieve higher value. In a more advanced configuration, value creation logic suggests strategies of broad connectivity which allow customers to be incorporated in value creation process by sharing and accumulating information in a network of connections. The first two logics are often used in production technologies while the new technologies such as those that are used in Internet are more concentrated on the logics and include more of customer involvement (Sweet, 2001). This is important for the current research as it reveals a difference between the nature of conventional businesses and e-business models. In any search for appropriate value configuration for e-business processes, an important hint should be to look for value configurations which are capable of illustrating and modelling direct customer involvement in e-business process knowing the value creation logics, it's now the time to look into value generation technologies.

Value generating technologies are basically categorised into three types of long-linked, intensive and mediating technologies. Long-linked technologies create value by converting inputs to usable outputs. An example would be technologies which are used in the factories that turn raw material to products in several stages. Mediating technologies create value through connecting customers together. These technologies are well used in social networks and fan clubs. Intensive technologies create value through investigating customers' problems and creating the best solution for their problems. These technologies can be seen in the insurance companies, clinics and financial institutes where customers are directed towards specialists for tailored solutions after their enquiries are diagnosed. (Thompson, 1967). For each of these value generation technologies, there is a corresponding value configuration. Porter's value chain best describes value configuration of long-linked technology. For two other values of generating technologies two different value configurations are suggested: "Value Network" would best describe the value configuration of mediating technology and "Value Shop" is the value configuration for intensive technology (Stabell & Fjeldstad, 1998). In value network, mediators monitor and somehow force the desired balance and standards among the members of the network. They also facilitate the interaction of the parties in the partnership. On the other hand, the value shop focuses on providing professional solutions tailored to the customer need (Laffey & Gandy, 2009).

Value chain model is a value configuration model which explains the organisational process of producing valuable product from raw material in a chain of value adding activities with the support of some other activities, factories and production lines in many industries are well aware of the way this value configuration helps in comprehending the production process. Many firms and factories receive and prepare the required raw material by performing activities such as procurement and inventory management and then convert them into valuable products in their production line. The outcome of this stage will be stored and distributed in stages of outbound logistics, marketing and sales and finally there are complementary services given to customers in the service stage. These stages are themselves being supported by other activities such as human resource activities, firms' infrastructure preparationand technology development. The outcome of the

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process would be a profit margin for the business which is a result of value generation for customers in the process (Porter, 1998).
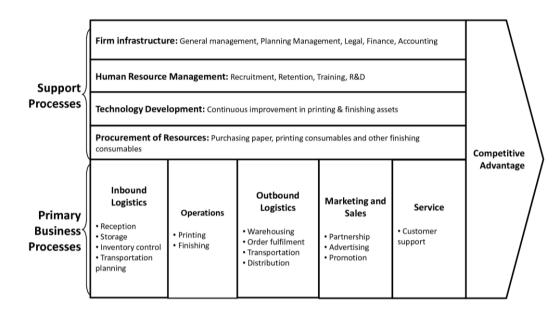
Figure 2.8: Value Chain (Porter, 1998)

Many researchers have tried to explain the e-business processes with the help of value chain configuration. One example is "Click Chain" configuration in which clicks are modelled as inputs of a production line. This input is provided by comparison websites or other sources. Then in the operation stage, a matching process takes place and links customers to the correct products after that, in the outbound stage, customers are directed to the providers. In the next stage, marketing and sales take place where sources of click bundle promote themselves and then customer support activities are being introduced. All of the above activities are very much similar to Porter's value chain (Laffey, 2009).
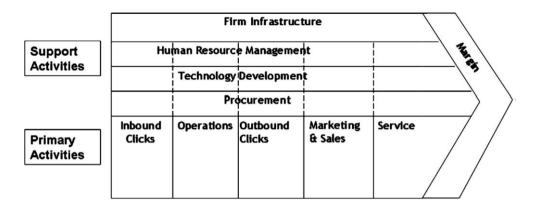
Figure 2.9: Click Chain (Laffey, 2009)

Even though Click Chain model explains a lot about the process of value creation in comparison to websites in particular, it is not a good candidate to depict value configuration over internet for several reasons. Firstly, by using the value chain as its basis, it is implying that the clicks are like raw material in the process. This has an implication that the customers are passive in this process. The model shows a process in which it is hard to imagine active participation among users in value creation. While value chain best describes value generation in manufacturing process, it looks quite artificial to fit click (and not even users) in this configuration. The other problem is related to the marketing and sales step. In value chain model, distribution step reflects a set of activities in which the product of the operation is being distributed. In click chain model however, marketing efforts are devoted to promote the click generator mechanisms rather than the products which are ready at outbound process. Moreover, in this value configuration, it is not so clear if the system can actively use feedback as a value added part of the process. In contrast, customer feedback over the internet is an important part of the progress.

Value chain is not practical to be used in all organisations (Hedman et al., 2008). Value creation over Internet begins with customers searching for a solution to their inquiries and then through search tools they are guided towards websites specialised to satisfy their needs. Besides that, in contrast with the conventional supply chain based integrations which are best interpreted by value chain configuration, many alliances in IT era tend to be in horizontal form (Francalanci, Willcocks, & Kern, 2001). These facts together disqualify value chain as an ideal

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model to explain the value configuration in e-business process and alliances which aim to create value through e-business.

Value network (Stabell & Fjeldstad, 1998) is the second value configuration which helps us understand value generation in mediating technologies. The network refers to the connections between customers which are provided by the company. The companies using value network configuration use a form of contract as a means of control to guarantee the quality of the connections created. The more value a connection provides the more these firms can expect users and the more users they service, the more value they can create for their customers as the opportunities of networking will increase as the choices of networking increase (Stabell & Fjeldstad, 1998).
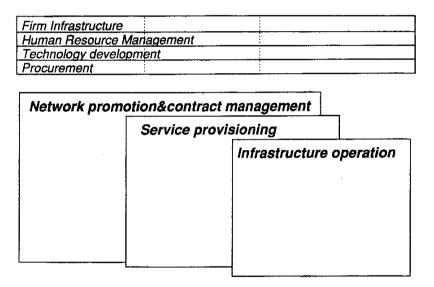
Figure 2.10: Value Network (Stabell & Fjeldstad, 1998)

As depicted in Figure 2.10, there are three main activities supported by other secondary activities in the network. Customers are initially attracted and join the network through "Network promotion & contract management" set of activities. Their activities and the connections they build and the termination of these connections are due to "Service provisioning" set of activities. The whole network needs a basic infrastructure to sustain and operate. This infrastructure is also provided by the company in the last set of primary activities. As in the value chain, the configuration includes a set of secondary activities such as Human Resource

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Management and Technology Development which aims to serve the primary activities (Laffey & Gandy, 2009; Stabell & Fjeldstad, 1998).

Unlike value chain, value network configuration focuses more on customers and thus can explain e-business activities better in which customers have active part in value creation process. Especially in online social networks, this model explains different aspects of value creation process. For an example, facebook.com provides an infrastructure in which members connect to each other and they are all bound to terms and conditions in an agreement that they have confirmed as a condition of becoming a member of the website. Facebook Company facilitates this connection and has the liberty to terminate membership or limit member activities in case a member violates the agreement. It is also clear that none of the above is possible without technology creation, administration, finance, and human resource activities which are being performed in the company. Even though, Facebook is not charging members for their membership, Alibaba.com uses the same configuration to connect businesses and then charges members for advanced membership types. Regardless of the method these firms use to make revenue, the value of their websites for their customers is due to their networking services.

Compared to the value chain, value network configuration can illustrate the active role of customers better in value creation process and therefore, it is not a suitable model for e-business companies which provide specific goods or services for customers. Moreover, unlike "Click Chain" model, and value shop which will be presented later, value network configuration explains the relationship between firms which provide clicks (online customers) with firms which receive these clicks and actually provide customers with services and goods. While value chain configuration is more focused on production process, value network as described before is solely depended on creating connection between customers and thus neither is capable of describing collaboration between firms to provide services for customer in a process which depends on active participation by the customers as one can see in most of the e-business alliances.

The technology used by e-business alliances would best fit intensive technology and therefore the best value configuration for these alliances considering its stress on providing solution for customers, would be Stabell's Value Shop configuration. Information technology has made the customer involvement much easier than before and true value, scope and scale can be achieved over Internet through a closer interaction between businesses with their network of clients (Sweet, 2001). Looking into examples of alliances between the firms that perform e-business activities (such as tour and travel activities) will reveal that most of the firms in the alliance interact closely with customers and this means an active involvement by customers in the value creation process. This is well described in the value shop configuration. In value shop configuration as is the case of many e-business alliances, customers are highly involved in all stages of value creation process (Laffey & Gandy, 2009). Some studies even suggest that for e-services, customers need to be at the centre of the value creation and the e-service providers are seen as supporting agents for customer interaction which result in creating value (Heinonen & Strandvik, 2009). Some even suggest that customers not only should be placed at the centre of e-service, but also need to be considered as partners in the creation of an e-service structure (Hedman et al., 2008).

There are two categories of value shop's activities: 1) primary activities and 2) support activities. Primary activities include five stages of problem finding, problem solving, choice, execution, control and evaluation. These activities are co-performed with a set of support activities such as: human resources management and technical support which may differ from organisation to organisation (Stabell & Fjeldstad, 1998). "Value Shop" diagram which is depicted in the Figure 2.11 shows primary and support activities:

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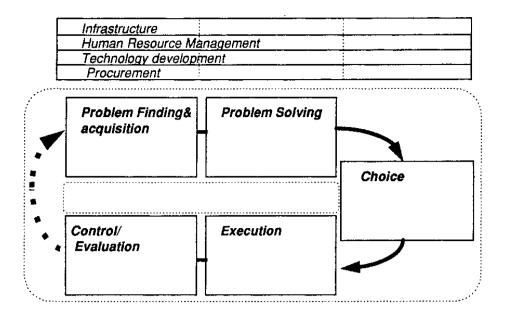
Figure 2.11: The Value Shop Diagram (Stabell & Fjeldstad, 1998)

If we look back at the process of e-business we will find a close link between the steps in the process of e-commerce and the steps in the process of value shop. In the following figure, we can see a sample of how literature describes an e-business process. The order life cycle which is a general model is used to describe the process which happens in an e-commerce activity (Zhu, 2004).

Figure 2.12: Order Life Cycle, (Zhu, 2004)

Looking closer will reveal a close similarity between the steps of the Order Life Cycle model and value shop. First two steps include activities which help customers to better define and conceptualise their problem. This is equivalent to the first step of value shop model. After viewing the firm's information and searching for desired product or service, comparison tools and viewing the search result in the second step will help customers to have their problems solved. This step can be well mapped on the second step of value shop model. Product selection and order placement are clearly the third step in value shop. Payment and order fulfilment

would easily be considered as execution part of value shop and customer service and support are not far from control and evaluation step in value shop.

Another example is a research which relates to the business process stages for e-business activities. The first stage of the model in this research is information gathering. Activities of this stage are similar to those described for problem finding and acquisition. The second step is negotiation. In this stage "Problem Solving" happens and "Choices" are presented. The third stage is contract fulfilment in which the solution is "Executed". Finally in the collaboration stage there is further "Executions" coupled with "Evaluation" of the process performance and information analysis for future transactions. (Y. Yang et al., 2006)

The examples above demonstrate perfect matches between e-business processes and the value shop's process of value creation. In short, it should not be far from reality to map e-business activities on value shop model rather than porter's value chain. Considering the nature of value creation in alliances for e-business, this research will adopt value shop configuration (Stabell & Fjeldstad, 1998) for the process of value generation and to find out the required components of a proper model for alliance in the e-business environment.

2.8   Components of Electronic Business Alliances

In this section, the components which can perform the required activities of e-business alliance are investigated. Each activity could be performed by one or more firms or components and each firm will on the other hand serve the alliance with performing one or more of the required activities. Structure of an alliance is one of the most significant success factors of an alliance (Swoboda et al., 2011). It is important to have a structural model for strategic e-business alliances. It is because as a part of advancement of companies in alliance formation, they will base their partnership on desired alliance structure and work their way through alliance formation stages to create the desired structure in future (Gulati, 1998). Creating a thorough comprehension of the partner selection in a prescriptive way will help managers to avoid failure (Bierly & Gallagher, 2007).

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In general, the types of companies which have been mentioned in the reviewed literature to fulfil the purpose of an e-business alliance would be listed as E-solution Providers' Chain, E-Traffic Stream Generator, and Supporting Companies. Each of these three components performs a part of Value Shop activities. Problem Finding and Acquisition are well performed by E-Traffic Stream generators. These components help customers to find and acquire information regarding their demand. Problem Solving and choice is also provided by the same group of partners. They provide customers with a list of relevant professional solution providers and may rate, rank, or even compare them to assist the customers further in their choice. E-solution providers are in charge of providing information for E-stream generators to solve the customer problems as well as executing the provided solution. Many components can act to fulfil requirements of the element of Control and evaluation of Value Shop. E-stream generators such as search engines and comparison websites may create user ranking systems. E-solution providers provide support for customers. Technical firms may join to provide analysis for feedback. Legal and governance firms also create more control and evaluation to the value creation process. Then technical, e-payment, and logistics support with further help from the legal and governance partners create the support component of the value shop mode.

The mentioned components which will also be described in the coming sections in detail are the ones this research could find in careful review of the literature in search for partners participating in an alliance for e-business activity. Other researches have also tried to aggregate the required elements of partnerships in an e-business activity. Although those models do not fully agree with the facts mentioned in this research, but their elements are closely related to the elements that this research has found as required partners. For example, introduction of e-commerce in travel industry resulted in many alliance formations with a variety of partners. A list of firms involved in these alliances would be categorised as follows: 1) traditional and online travel agencies as well as their complementary and supporting firms with relevant products to create travel solution such as hotels, car rental and airlines, 2) channel companies such as search engines and advertisement agencies to lead customers towards the solution provider firms, 3) firms which are not exactly in the line of travel solution yet may have a relevant target market (like

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sporting event organisers), 4) Firms with electronic payment services, 5) logistics supports like event planning firms and ground transportation, 6) technical and supporting IT firms, and even 7) governments (Holmberg & Cummings, 2009). This example clearly shows a fit coverage of many of components suggested by this research in travel agency online alliances.

Another even more structured example is Virtual e-Chain (Manthou et al., 2004) which suggests the chain of partners in an e-business activity. Table 2-6 presents a comparison between VeC model and components found in this research.

Table 2-6: Comparison between VeC Actors and Roles (Manthou et al., 2004) and Value Shop Based Components of E-Business Partnership Model

VeC Model Actors	Roles	E-business Partners (In this research)
Supply chain network partners	Supplier Intermediary Customer	E-Solution Provider
Strategic Partners	Manufacturer	E-Solution Provider
	3PL provider Distributer Warehousing enabler	Logistics Support
Market Mediators	Broker, finder agent, advertiser, auctioneer, translator, negotiator	E-Stream Generator
Non-Strategic partners	bid, billing and payment manager	E-Payment Support
	Commodity, indirect goods supplier	E-Solution provider
Network operation partner	Communication and network service provider (ISP)	Technical Support
Supply chain network master	Life Cycle Manager: Initiation, Composition, Fulfilment, Evaluation, Maintenance, and dissolution Manager	Legal and Governance Support

As depicted in the table, each role in VeC, is paired with one of the partners in the current research's suggested model.

Researcher would like to take this as an evidence for comprehensiveness of the e-business partners found in the literature review which will be presented in the following pages.

2.8.1 E-Solution Providers' Chain

In Stabell's "Value Shop", execution, control, and evaluation can be performed by a chain of firms which create the core of the alliance's e-solution. Over the Internet, there is a customer side call for firms to provide a comprehensive solution (Ghandour et al., 2004). Alliances help partners to combine their resources to formulate a better competitive strategy and provide the most value added product or service (Chatterjee, 2004; Dai & Kauffman, 2002a; Porter, 2001). Complementarities are the "major drivers" of strategic alliances (Duysters & Man, 2003) and based on provision of a wide range of complementary products and services in order to increase the bargaining power of each partner, stabilising the prices, improving the quality of services, bringing more market opportunities, reducing competition, expanding customer base, and gaining better access to social capital (Zhao, 2006). Companies can even search beyond their industries to find partners which would help them to create a comprehensive solution for the partnership (Holmberg & Cummings, 2009). Creating such an alliance based on complementary products creates a competitive advantage for the alliance partners and raise the barriers for the potential competitors and make the competition tougher for the existing rivals (A. Zhang & Zhang, 2006). Many examples of such alliances in many industries have been mentioned in earlier sections. Partnerships in car manufacturing, pharmaceutical, travel and tour are some examples.

However, while these firms are focal actors of a partnership, it is important to note that their performance is affected by the activities of other non-central firms in the alliance. It is the interaction of all formal and non-formal partners in a business network that makes a web of goal achievements for the alliance and benefits the focal and non-central firms (Gebrekidan & Awuah, 2002). For e-business activities, there are many of these non-central yet important firms which will be listed in the following titles.

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2.8.2 E-traffic Generators

Many of the firms which operate over electronic business platforms seek success through finding ways by creating traffic for their electronic business place (Cinca et al., 2010). For example, Tour and travel industry have seen a new core competency which is different from traditional ones. Many travel agencies would find it hard to resist partnerships which offer them higher visitors for their websites (Kothandaraman & Wilson, 2001). Stabell's "Value Shop" model (Stabell & Fjeldstad, 1998) may give a key to better understand this trend. First three activities which are required to fulfil the value creation of a "Value Shop" configuration are: problem finding, problem solving, and choice. These activities over Internet are being performed by the second component: "E-traffic Stream Generators". Customers start their quest for the solutions of their problem over Internet through online tools for information search (Y. Yang et al., 2006). These tools evaluate the problem, find the solution alternatives and lead the customers to the e-solution provider chain component. The specialised service of assisting customers in their searching process and making a correct decision, adds value to the whole alliance because it can save the time of the customers which can be well spent on the next stages of purchase process (Dai & Kauffman, 2002a). In fact lower cost of search for information is one of the major advantages of Internet-based businesses for customers in some of the industries (Águila-Obra et al., 2007). For example, portals serve as gateways to e-marketplaces. They gather mass of customers and lead them towards the specialist e-solution providers. These companies drive their major revenue from advertising and traffic generation and thus are experts in this field. Market makers are not only channel the traffic but also facilitate online transaction. (Delfmann et al., 2002) Traditionally this role is carried by marketing channels and intermediaries. Over Internet they have either been eliminated or started collaboration with electronic portals (Aldin & Stahre, 2003). For many alliances, online traffic is mainly generated either in a paid or free search collaboration, direct traffic or in a form of affiliate (Laffey, 2009). If an online solution provider is well branded, then it may catch a good direct traffic. Yet cyber-mediaries like gateways, directories, comparison websites, search engines, malls, website evaluators, affiliate program provider, auditors, forums, fan clubs, user groups, financial intermediaries,

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spot market makers and barter networks bring the value by providing demand choice, and quality assurance for the customers (Hackney et al., 2000; Laffey & Gandy, 2009).

Attracting visitors towards e-solution chain of an alliance will increase the value of the whole partnership (Ilfeld & Winer, 2002). Website traffic announcement is an important factor in firm's evaluation (Benbunan-Fich & Fich, 2004). Thus those companies who think of stock market entrance, ally with mega portals for the sake of higher IPO and public traded companies sought after the support for their growth by the means of these alliances (Ernst et al., 2001).

Other than generating visitor stream for the alliance business, firms of this nature can act as feedback generators as well. It is recommended that comparison websites can create loyalty by adding user evaluation and feedback to their sites. Feedbacks such as user rating and user review can considerably add to the performance of the e-business by giving the chances for customer loyalty through word of the mouth (Gauri, Bhatnagar, & Rao, 2008). Alibaba.com and Google.com are examples of e-traffic generators with feedback and evaluation facilities.

2.8.3   Support

Infrastructural factors provide a supportive environment which helps a better relationships and growth of partnerships. These infrastructural factors provide a better connectivity and harmony in the systems required for cooperation (Manthou et al., 2004). As a backbone, the alliance structure support elements would connect to almost all other components and all firms would use the provided support. Many of common tasks and requirements of allied firms would be outsourced to firms in this category. Required support components of electronic alliance would be categorised into 4 major categories;

2.8.3.1 Legal and Governance Support

In any partnership, one of the things which threaten the existence of the alliance is the opportunistic behaviours of partners. Opportunistic behaviour destroys

trust between partners and makes them unwilling to continue their partnership (Jiang et al., 2008; Spekman et al., 1996). Especially in high tech industries, high risk and interdependency magnifies the importance of taking care of such issues (Ybarra & Turk, 2009). Trust is one of the crucial requirements of successful partnership (Todeva & Knoke, 2005; J. Yang, Wang, Wong, & Lai, 2008). Trust is defined as "positive expectations about another's motives with respect to oneself in situations entailing risk" (Boon & Holmes, 1991). It benefits strategic alliance in many ways including enhancing alliance stability and performance (J. Yang et al., 2008), decreasing transactional cost, encouraging preferable behaviour, diminishing amount of contractual burden, solving conflict cases (Spekman et al., 1996), helping the operational flow of business, and reducing the need for controlling formal contract (Dalton, 2009). Trust is well understood as a necessity in any partnership, yet its measuring level and the logic behind its creation in firms is not really clear. Besides, trust needs to be considered at two levels: people and organisations. Although trust needs to be made at organisational level in large, yet the key individuals in organisations who make decision indicate that trust needs to be gained at individual level as well (Bierly & Gallagher, 2007).

Control is one of the common ways of strengthening inter-organisational trust. Control can be defined as "process by which one partner influences, to varying degrees, the behaviour and output of the other partner, through use of power, authority, and a wide range of bureaucratic, cultural and informal mechanism" (Geringer & Hebert, 1989). Monitoring, guiding, assessing, and rewarding would be considered as activities expected from a control mechanism to perform in an alliance (Jiang et al., 2008). A better control should also consider clear design of partners' roles, privileges, and duties (Hoffmann & Schlosser, 2001; Zhao, 2006). Governance is the control mechanism of an alliance. Alliance Governance can be defined as: "the mode of control the partners establish through either some form of ownership or formal contract" (Bierly & Coombs, 2004). Legal and governance support are considered the control system which are able to bring in trust, resolve a dispute between members of an alliance, or alliance and customers, as well as monitoring alliance members' activities and ensure that all parties are aligning their activities with the interest of alliance, as well as trade laws (Ernst et al., 2001). Having a

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governance mechanism will protect each party's interest in sharing resources, responsibilities and profits (Todeva & Knoke, 2005). In fact, having a proper control system together with a good level of trust among partners decreases the uncertainty level of collaboration and increases the level of predictability of cooperation behaviour (Spekman et al., 1996).

Depending on the alliance nature, one of three types of governance support is possible: A dominant company in the partnership (Ernst et al., 2001; Pisano & Verganti, 2008), an independent entity (Ernst et al., 2001), or a committee of members from alliance (Manthou et al., 2004; Pisano & Verganti, 2008). Three common alliance structures through which the mentioned governance supports are provided are joint-venture, equity, or non-equity alliances (Bierly & Coombs, 2004; Harrigan, 1988). Choice of the governance type depends on the risk and cost of opportunistic behaviour of the partners. In cases of higher risks for example, ownership of equity becomes a stronger governance determinant. The risk and cost themselves are influenced by relational capital, host country governance infrastructure and characteristics of inter-firm transactions such as their complexity and risk (Globerman & Nielsen, 2007). It is important to note that the three governance types can exist in any of the three alliance governance structures. For example, the dominant company in the alliance may ask for share interest in the alliance partnership to be able to provide better control support for the alliance or partners may form a contract (no-equity alliance) to collaborate under supervision of a committee of partner representatives. Moreover, the decision of governance type depends on many factors such as the amount of complementarity of the resources shared in the alliance by the parties, the history of partnership among alliance partners, the amount of relative competition among partners and the significance of diversification strategy of the firm partnering in the alliance (Pateli & Lioukas, 2011).

Even though having a strong control mechanism is considered as an inevitable component of a successful alliance and increases the satisfaction of partners' of the alliance performance, the designed control system should not act as a barrier to organisational flexibility or be perceived as a threat for partners'

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independence (Pansiri, 2008). In high tech industry alliance in particular, too much of governance and lack of flexibility may act as a barrier to the innovativeness of partners' experts and responsiveness to the customers' ever-changing demands (Hipkin & Naudé, 2006). One way is to find ways to increase simpler non-contractual trust as a key for saving the financial and non-financial cost of control, decreasing the organisational bond and adding to all partners' organisational flexibility (Dalton, 2009). Another way is to allocate the task of balancing control and flexibility to the "Strategic Centre" for alliance which can be the central firm of the alliance or an organisational independent unit (Lorenzoni & Baden-Fuller, 1995). In fact too much of control mechanism itself can create an environment of mistrust by implying that partners need to check on each other to trust. This can be replaced by trust-based governance which will also reduce the cost of control and communication. High level of trust between partners acts as a governance system and thus reduces the amount of formal communication level required for control purposes. However creating such a trust level needs a careful partner selection in terms of shared values (Ybarra & Turk, 2009). Having all above said, alliance partners have an option of including a legal firm to take care of control and trust. Such company can benefit in different ways including resolve partner resolution, overviewing each partner's behaviour in order to avoid opportunistic activities or creating a reliable contractual and legal infrastructure for partners to collaborate in a controlled and trustful environment. It makes a better sense when one takes into account a great deal of legal activities required for alliance negotiation, partnership formation, for collaboration of partners without legal issues, for altering initial agreements and for possible termination of an alliance. In all of these steps alliance managers need professional legal consultancies (Campbell & Reuer, 2001) which would be well provided by a third party legal firm.

It is also worth noticing that the pressures to form a partnership and the way it needs to perform may be posed by government's regulations and policies. (Palmer & Bejou, 1995). For example, the conditions under which an alliance can be formed and the regulations under which an existing alliance can perform are strictly influenced by governmental policies and regulation (Shibata, 2001). Moreover many of the governments have developed acts and regulations to facilitate, protect, secure,

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or control e-business activities, and those individuals and firms in its relation (Biglari, 2008) which in turn will affect alliances with e-business objectives. As a matter of fact, one of the main motives of some alliance formations is dealing with these act, rules, and regulations and to avoid so called "artificial trade barriers" posed by governments (Harvey & Luscht, 1995). In case of international strategic alliances, the governments may be concerned with the foreign partners' adaptability with host country's cultural aspects. (D.-J. Lee, 1998). In light of this insight, a legal firm in a partnership may also take care of the relation between partners and the government and provide them with general legal supports as described earlier in this chapter.

2.8.3.2 Technical and IT Support

Technology competences can improve the use of e-business more than any other factor (Zhu & Kraemer, 2005). Moreover, information technology facilitates the collaboration between companies and the return on investment for IT facilities in terms of its collaborative benefits surpluses its costs (Grover, 2002). Technology is one of the desired complementary assets that many firms seek through forming alliances. (Ghandour et al., 2004) Information technology in the new era of e-business is even more vital than before. Companies are now having a set of information technology tools as their information technology portfolio. Information technology portfolio is defined as: "total investment in computing and communications technology" and includes "hardware, software, telecommunications, electronically stored data, devices to collect and represent that data, and the people who provide IT services". The information technology is necessary to link businesses to their customers and partners. However, the IT infrastructure required for e-business varies depending on their business model and each firm's need to make sure that there is a correct fit between the former and the latter (Weill & Vitale, 2015).

Appropriate implementation of IT infrastructure is important because of the complementarity which exists between IT infrastructures and e-business activities. Examining the success degree of IT infrastructures and e-business activities of several firms shows a direct relation and positive interaction between the two factors (Zhu, 2004). Moreover, some of the most important causes of e-tail service failure

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are related to the IT problems. Reasons such as website defects, data problems, and miscalculations in online pricing are all indicators of a need for professional IT support (Forbes et al., 2005).

Partnership is a way to access required technological services for the businesses in an alliance (Bierly & Coombs, 2004). Several IT services are necessary for the firms to run their business smoothly such as customer database, organisational intranet (Weill & Vitale, 2015) website design and hosting (MacGibbon & Schumacher, 2007). Several other services are vital for e-business partnership. Examples of the supporting technical elements of e-business partnership include tools for integrating, analysing, and communicating information and knowledge across the partnership and supporting organisational infrastructure (Manthou et al., 2004). Example of information integration and analysis are tracing customer paths to find out value generating patterns of customer movement over the websites, their preferences and online traffic trends (Laffey, 2009).

Though operational effectiveness is getting easier to achieve by the help of Internet for all the companies, technologies which are used to achieve effectiveness are getting standardised, more and more similar, and done by third parties in many cases. As the role of achieving competitive advantage through operational effectiveness is getting weaker in e-environment (Dai & Kauffman, 2002a; Porter, 2001), outsourcing it to third party would be more reasonable. Small businesses would successfully enter e-business activities by outsourcing the IT development and support aspect of their e-business implementation (Yrle & Hartman, 2004) and there are supporting evidences for an increasing trend of outsourcing IT services in e-business activities (Weill & Vitale, 2015). In-house IT developments are usually more expensive than expected in the planning phase. While outsourcing IT services is usually easier and cheaper for the companies, it will also add to the performance of e-business as a result of broad scope of IT companies' experiences in handling issues of IT systems and thus their capabilities in providing even more functionality for e-business companies (MacGibbon & Schumacher, 2007).

It is important to notice that one of the possible technical services that can be expected from external technical partners is the analysis of outputs of partnership allies. This evaluation of the output data can be used as a mean of evaluating alliance performance and partners' collaborative capabilities (Manthou et al., 2004). Having a higher level of trust among organisations also need "timely, accurate and proprietary" information flow (Ybarra & Turk, 2009). This evaluative step can easily be considered as the last step in the value creation loop of Value Shop model which requires evaluation of the service given to the customer and quality of the created value.

2.8.3.3 Logistics Support

Logistics would be defined as "Process of planning, implementing, and controlling the efficient flow and storage of goods, services, and related information as they travel from point of origin to point of consumption" (Stock, Greis, & Kasarda, 2000). It needs specialisation in fields of warehousing and inventory management, analysis and flow of information, and control of distribution (Dai & Kauffman, 2002a; Y. Yang et al., 2006). Logistics is in many ways related to many of the main activities of the firm and in general creates the required flexibility for the organisational strategic moves in the quick changing e-environment. For example, the quality of logistics services is one of the determinants of successful implementation of marketing strategy. Firms may take any of the following four sets of configurations to relate marketing and logistics support. Marketing and logistics which are carried by the same partners in each step of chain, logistics separately handled from marketing activities and bypasses intermediaries, a combination of two earlier methods in a multi-channel mode, and separation of marketing and logistics channel and elimination of intermediaries (Aldin & Stahre, 2003). What is important to notice is the integrated part of Supply Chain Management and the network created by businesses in a SCM in which the partnership gives competitive advantage to the partners in a way that holding the strong relationship becomes of a higher priority compared to the initial financial benefits resulted from cutting off relational bounds (Romano, 2003).

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Information technology and especially Internet evolution has influenced the logistics industry to a great extent. E-logistic, for example, is a new concept created under the revolutionary enhancement of tools for communication and coordination due to IT and Internet offerings. (Büyüközkan et al., 2008). For e-business activities, using specialised logistics services is vital to achieve the expected service quality and customer satisfaction and thus further business transactions with the customers (Y. Yang et al., 2006). Therefore "Logistics Service Providers" are important parties in an e-business activity because of their know-how capabilities in logistics and consulting services which are required in the fast altering e-business environment. Several services are expected from a Logistics Service Provider. Initially there are some activities which are related to transporting the goods, material and products. Next would be the activities which are related to storing goods and material as well as handling their warehousing. The third set of activities is relevant to inventory management such as location engineering and flow forecasting. Lastly, there are activities relevant to order processing and packaging (Delfmann et al., 2002). In fact many of the failures in e-business retail is associated with reasons such as packaging errors, delivery speed and accuracy, and stock availability which can easily show a need for expertise in logistic field required for successful e-business activity (Forbes et al., 2005). Challenges of e-era and in some instances even the need for customising logistics services for electronic business processes, further stress on the urge of partnering with external Logistics Service Providers (Delfmann et al., 2002).

2.8.3.4 E-Payment Support

E-business uses many of the payment methods such as credit cards, debit cards, magnetic strip cards, smart cards, electronic checks, electronic cash, or even cash on delivery. Gaining the trust of both customers and businesses is vital for any e-business activity. Allying with well trusted payment solution providers as well positioned banks and commerce institutes would make it easier to gain this trust. Security of electronic money transactions should also be of a great concern (Greenstein & Vasarhelyi, 2001). Implementation of e-payment should be done professionally. This is why the matter should be done through a specialised organisation and the importance of the third party who provides the support for e-

payment comes to the picture. E-bay is one example which utilises the professional services of PayPal and credit card providers for its e-payment requirements (Laffey & Gandy, 2009). Many other examples of such collaboration like Ariba Inc. and Bank of America are captured by the literature. Online financial support is growing in collaboration with e-commerce players and many of the payment requirements are being handled by these professional service providers (Dai & Kauffman, 2002a).

2.8.4 Firms with Shared Target Market

Firms in general create value for a certain target market and thus it makes sense to focus on target market values for partner selection (Osterwalder & Pigneur, 2002). Social capital, through a network of relations, acts as a source of connectivity to the market and business network and complements social and technical capitals to provide profit and value (Burt, 1995). Many alliances are solely based on traffic providing benefits. This traffic should be relevant to a firm's product or service. Any successful alliance will create a stream of a specific target market and this creates a pool of customers that may relevant to the target market of other firms as well. These firms then may be interested in joining the alliance in order to benefit from this mass of relevant customers. Besides having a network of e-business, firms would also empower customers to create value through sharing and interacting among themselves (Zhu, 2004).

However, firms with relevant target market would also benefit the alliance in several ways. It is not necessary to find producers of the products of the same category to partner with. If the products of a company create a good match-up condition, the firm can be considered as a partner. The products or brands need to be able to fit into a bundle rather than being of the same category. Factors such as usage situation, user identity, or purchase criteria, can create pre-conditions of alliance formation (Ahn, Kim, & Forney, 2009). This result implies that to form alliance, partners need not to be necessarily of the same product-usage category. Their product may create additional value for the customers of the alliance. These firms may bring related and value added products (though being out of e-solution chain), additional customer stream, or any other type of contribution. Adding to the

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product mix of the alliance and enhancing the customer richness and reach of the alliance are themselves among the motives of strategic electronic alliance (Holmberg & Cummings, 2009). Forming alliance by itself is proven to add vital social strengths to the alliance parties such as "organisational prestige, reputation, status, and brand recognition" (Todeva & Knoke, 2005). Thus, partnership with a respected firm in alliance served market would bring in the mentioned social capital irrespective of the product which adds to the basket. Moreover, literature suggests that customer trust and satisfaction together result in customer loyalty (Osterwalder & Pigneur, 2002) and if these firms are trusted by the customers then considering them as partners would be worthy if their membership in alliance adds to customer trust.

2.9 Summary of the Chapter

This chapter provided an overview of the literature related to the subject of this research. It has provided an understanding of the electronic business concepts and environment as well as basics of alliances and partnerships in their conventional environment. The literature review has then focused on researches which have studied the alliances and partnerships in the environment of electronic business.

After providing an understanding about the basics and concepts, the literature review has focused on successful partner selection criteria and their relevance in the electronic business environment.

The researcher then has reviewed value models, their components, and variations, presented in the literature. This section has resulted in suggestion of a value model and its necessary components to create an alliance between companies to perform electronic business.

In the next chapter, the research methodology to evaluate the proposed value model, components, and success indicators is presented.

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CHAPTER 3
METHODOLOGY

3.1 Introduction

This chapter discusses the research methodology of this study which is used to achieve the objectives which were mentioned in the previous chapters. The goal of the study can be put briefly as development of a model to show the relative importance of different components of a strategic alliance in the attainment of successful partnership for value creation in e-business activities. This needs us to find and examine alliance components, success indicators, and appropriate valuation model for electronic business. Furthermore, this chapter also includes discussion on data collection methods and its justifications, methods of statistical analysis, and hypothesis development.

The structure of this chapter is as follows: research framework, research design, data collection methods and justifications, operationalisation of variables, pre-tests, and data analysis methods.

3.2 Research Framework

As mentioned in chapter 2, based on the available literature, many factors were identified as factors that reflect features which should be considered to be examined before forming a partnership with a company in a strategic alliance. Many of these features are easily bundled into two groups of compatibility and complementary indicators of partners.

However, these features do not create a guideline for selection in decision making in terms of components which are required for e-business alliance. The type of companies that a firm should look for to perform a successful electronic business based alliance is not clear in some of literature mentioned in the previous chapter. Meanwhile, there are many other literatures that indicate one or some required components to build an e-business alliance yet none of them are comprehensive

enough to form a holistic model which includes the types of firms required as components of an e-business strategic alliance.

Another concern is about measuring the success of an alliance in the field of e-business. There is little written about measuring the success of an alliance in the field of electronic business. Even less is written about success of such alliances in developing countries, especially Malaysia. Moreover many of the researches which have been conducted with the objective of measuring success of an alliance do not cover all aspects of successful alliances and only focus on limited indicators such as length of alliance or financial performance.

The main objective of this study is to create a model that integrates the components of strategic e-business alliance. This research has utilised the guidelines provided by transactional cost theory, theory of strategic alliances, resource based theory, and outcomes of various value configurations and value creation studies to find the components and determinants of success for the partnership.

The framework includes two sets of variables: independent variables and dependent variables. In the literature review section of this study, there are four main components for e-business alliances: e-traffic generators, solution (complementary products) provider companies, firms in the shared target market, and support companies. The support service providers are also found to have four dimensions. These companies include firms which can provide Legal and Governance Support, Technical and IT support, Logistics Support, and E-payment Support. These constructs will together form independent variables.

As for dependent variables, the success of an e-business alliance is found to have four dimensions: risk and uncertainty reduction, market potential (knowledge and capabilities), operational cost efficiency and performance, and intangible indicators (like knowledge and cultural capabilities). In the following sections, each variable will be discussed in detail.

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3.2.1 Independent Variables

As mentioned in chapter two of this research, many researches have been conducted to address the different types of partners which are required to form a successful alliance. Many of them have found components which are important in general. Some of them have investigated the concept within the scope of e-business. Based on the in-depth study of literature, the following items are identified as independent variable:

a) **E-traffic Generator** refers to companies with the capability to collect online enquiries and guide them towards the expert members in the partnership relevant to their problems. These components are suggested and supported by articles written by experts such as Águila-Obra et al. (2007); Benbunan-Fich and Fich (2004); Cinca et al. (2010); Dai and Kauffman (2002a); Delfmann et al. (2002); Ernst et al. (2001); Gauri et al. (2008); Hackney et al. (2000); Ilfeld and Winer (2002); Kothandaraman and Wilson (2001); Laffey (2009); Y. Yang et al. (2006).

b) **E-Solution providers' Chain**, which includes firms that provide solutions available online for customers. These firms provide products which are complementary to each other and introduce solutions to the problems the customers have. These components are suggested and supported by experts such as Chatterjee (2004); Dai and Kauffman (2002a); Duysters and Man (2003); Gebrekidan and Awuah (2002); Ghandour et al. (2004); Holmberg and Cummings (2009); A. Zhang and Zhang (2006); Zhao (2006).

c) **Firms with Common Target Market** consists of firms with target market similar to the alliance partners yet their products have no or little direct contribution to the solution that the alliance is aimed to provide for customers. Although these firms are not directly connected to the solution provided by the partnership but they have other contributions to the alliance's strength. These contributions could be in the form of strengthening the brand positioning, customer trust, or similar offerings. These components are suggested and supported by articles written by experts such as Ahn et al. (2009); Burt (1995);

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Holmberg and Cummings (2009); Osterwalder and Pigneur (2002); Todeva and Knoke (2005); Zhu (2004).

d) **Support Firms are** firms that provide different types of supports required for proper function of the alliance members individually and the alliance itself as a bigger entity. Support services required for an alliance to perform Internet based activities have at least four dimensions: 1) IT and technical support, 2) Legal and governance support, 3) logistics support, and 3) e-payment support. These four dimensions have been suggested and supported by various expert scholars such as Bierly and Gallagher (2007); Büyüközkan et al. (2008); Dalton (2009); Forbes et al. (2005); Globerman and Nielsen (2007); Jiang et al. (2008); Laffey (2009); MacGibbon and Schumacher (2007); Manthou et al. (2004); Pateli and Lioukas (2011); Weill and Vitale (2015); J. Yang et al. (2008); Y. Yang et al. (2006); Ybarra and Turk (2009).

All of these components are examined against the value configuration model which is suggested in chapter two, Figure 2.11 as a proper value configuration for alliance of e-business firms. Figure 3.1 depicts a combination of all suggested components of the proposed model in an alliance to perform e-business activities except for the component of "Firms with shared target market". The model is adopted from Stabell and Fjeldstad's Value Shop (1998) in the context of e-business alliances. This model is selected to be adopted based on the reasons mentioned before in the literature review section.

Logistics Support
E-Payment Solution
Technical and IT Support
Legal and Governance
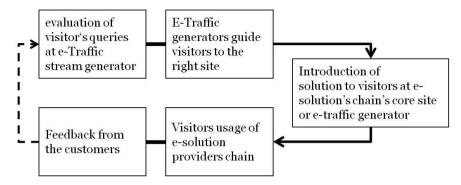
Figure 3.1: E-Value Shop Diagram Adopted from Value Shop (Stabell & Fjeldstad, 1998)

Exhibited components are based on the literature and fully fit the Value Shop model. However, researcher suggests yet another component based on observation and reasoning which is tested in this research. This extra element is the fourth element in the mentioned list and it interacts with other elements as shown in Figure 3.2.

Logistics Support
E-Payment Solution
Technical and IT Support
Legal and Governance
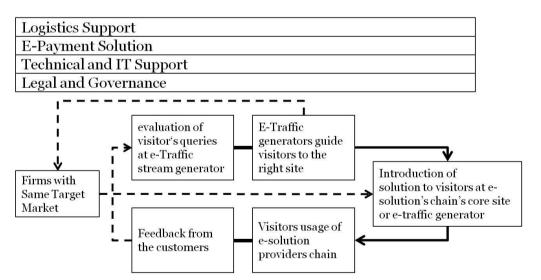
Figure 3.2: The E-Value Shop Diagram 2

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Based on the suggested components, a structural model is being put together as shown in Figure 3.3 which illustrates the function of the alliance better in a compact form.
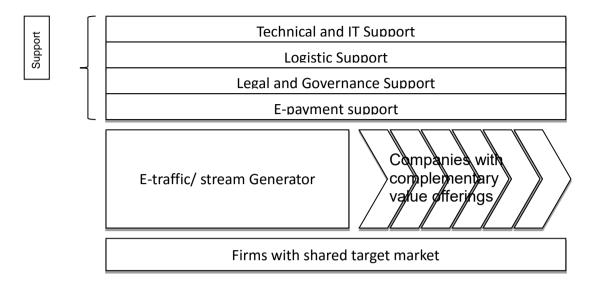
Figure 3.3: Components of Alliance of E-Business Companies

Thirty five items have been utilised to measure the perceived importance of these components in a questionnaire using a Likert scale of 5 degrees with 1= not important up to 5 = extensively important.

In the following sections dependent variables are introduced and then a theoretical framework is presented to show the relationships between dependent and independent variables.

3.2.2 Dependent Variables

While a large number of scholars have conducted researches regarding the factors which influence the success of strategic alliance, measurement of the success itself remains a place of dispute (Pansiri, 2008). Some scholars have considered "partnership ending" as a failure indicator and have tried to contribute to the success of alliance by studying causes of failure (Bitran et al., 2002; Chand & Katou, 2012; Sá, 2005), which actually may be due to its successful achievement of predefined goals rather than failure indicator (Townsend, 2003). Many other scholars have tried

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to define success as achievement of the desired performance (Nielsen, 2007) which itself brings up the question of ways for isolating the organisational situation to measure the added performance due to alliance formation (Gulati, 1998). Another problem is that the performance has two sides: Financial and Operational (Todeva & Knoke, 2005). Yet goals of alliance formation would reach beyond performance measurements as many companies look into partnerships as means of achieving intangible outcomes such as learning (Murray & Kotabe, 2005).

In order to capture the alliance success, this study has used present literature to find different dimensions of success of a strategic alliance. Then for each dimension, several items have been extracted from previous researches as measures of the perceived significance of these dimensions in the research questionnaire. The recognised dimensions are as below:

a) **Uncertainty Reduction:** this dimension includes factors which help to reduce risk of the business for partners. Both operational and relational risks are involved. Trust and control are expected to be perceived higher as a result of success in alliance formation. This dimension is suggested and supported in literatures from scholars like: Huang (2006); Hughes and Beasley (2008); Marciukaityte et al. (2009); Solesvik and Westhead (2010); Ybarra and Turk (2009).

b) **Operational Cost and Performance:** This dimension of success refers to measures such as cost efficiency. It includes both operational and financial items. Nevertheless, it is not easy to separate them due to their high inter-relatedness. Both operational synergy and reduction of transactional cost can be the results of an alliance which are expected to be observed in a successful strategic alliance. This dimension is suggested and supported in literatures from scholars such as Bitran et al. (2002); Cravens et al. (2000); Holmberg and Cummings (2009); Jiang et al. (2008); Wu et al. (2009); A. Zhang and Zhang (2006); J. Zhang and Frazier (2011).

c) **Market Power:** One of the indicators of successful alliance is the achievement of a higher market power. This higher market power is

achieved as a result of multiple effects of partnership such as broader access to the international and local markets, a better brand positioning due to the alliance strength, enhanced market knowledge and an increased speed to the market. This dimension is suggested and supported in literatures from scholars such as Brooke and Oliver (2005); Ghandour et al. (2004); Holmberg and Cummings (2009); Mitsuhashi and Greve (2009); Wu et al. (2009).

d) **Intangible Outcomes:** The last indicator of a success is the achievement of intangible outcomes of a partnership. The most important intangible outcome is learning. The learning would be at skill level, cultural level or technology level. However, other outcomes can also be considered as intangible outcomes of an alliance. Social capital, organisational stability, and innovativeness are some examples which can fit into this category. This dimension is suggested and supported in literatures from scholars such as Burt (1995); Cinca et al. (2010); Hipkin and Naudé (2006); Inkpen (1996); Lin (2007); Mitsuhashi and Greve (2009); Swoboda et al. (2011); Wittmann et al. (2009); Yaprak (2011).

3.2.3 Theoretical Model

As explained in chapters one and two of this research, there is a need for a comprehensive model to include all of the required components for alliance formation in the field of e-business. This study attempts to aggregate recognised components and dimensions and evaluate the impact of different types of companies on the success of an alliance in the context of electronic business partnership. The model presented in Figure 3.4 represents independent and dependent variables which are the components of an alliance and also the dimensions of alliance success respectively. Their dimensions and relationships will be used as a basis for developing hypothesis and theory testing in this research.
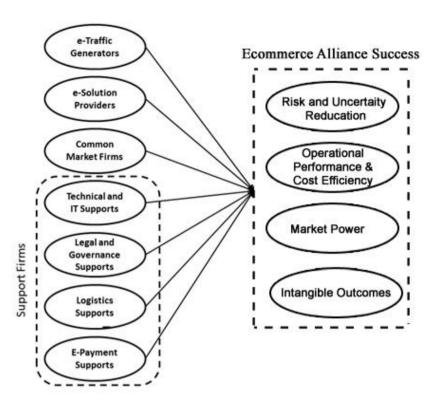
Figure 3.4: Research Framework

The following section describes the research design in which operationalisation of constructs, sample design, analysis method, research process, and hypothesis development are described in detail.

3.3 Research Design

Research design provides procedural sequence of actions with which collected data can be put in a scientific analysis in order to solve the research problem in a more economically feasible way (Gable, 1994; Sekaran, 2015; Wrightsman et al., 1976). Since each problem would require different steps to be solved, each research may need to be designed based on the requirements of the questions of that specific research (McBurney & White, 2012). In general, research design clarifies: 1) details of study such as investigation type, population, and sampling design, 2) measurement and data collection methods, and 3) data analysis and hypothesis testing methods (Emory & Cooper, 2013; Sekaran, 2015).

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One of the most popular methods of data collection for scientific researches is survey method which provides an opportunity to study correlations between the factors. This method retains the perception of the participants via questionnaire tool and then putting together the collected data into technical analysis in order to come up with final conclusion (McBurney & White, 2012). When factors that are needed to be measured and the way they should be measured are clear for the researcher, using survey research design with the use of questionnaire is recommended (Sekaran, 2015).

Qualitative study with case study and interview methods are recommended for under-researched fields (Eisenhardt, 1989; Laffey, 2009; Walsham, 1995) but in the field of strategic alliances and electronic business, quantitative study with survey method is recommended and utilised by many recent scholars like: Ahn et al. (2009); Chand and Katou (2012); Cinca et al. (2010); Cullen and Taylor (2009); Heinonen and Strandvik (2009); Kros et al. (2011); Pateli and Lioukas (2011); Rodríguez-Ardura and Meseguer-Artola (2010); Salwani et al. (2009); Swoboda et al. (2011); Wittmann et al. (2009); Ybarra and Turk (2009). This indicates that this field of research is mature enough to depend on quantitative studies, survey method, and questionnaire tool. Accordingly, this research has used quantitative analysis in which data collection method was survey via questionnaire.

3.3.1.1 Overview

Since the model was developed based on the previous literature, with constructs in place, and the study was trying to test relations and significance of these variables, the nature of this study is considered as "hypothesis testing" type of study where researcher was trying to understand the nature, relation, or differences between groups of variables in a certain condition (Sekaran, 2015).

In terms of time horizon, studies are divided into two types. The first type is called cross-sectional, the type of study in which data collection is conducted once for a certain duration of time. Second type is called longitudinal studies in which researcher conducts the study and collects the data for several times in a certain duration of time with the intention to observe changes during that duration due to

factors which may influence the matter of study differently at different times or may take time to create effect on the subject affected (Sekaran, 2015). Cause and effect studies for example, may best benefit this type of timeframe. This study was conducted in cross sectional manner for several reasons. One of the reasons was due to the difficulty and cost of the study which is higher in longitudinal studies (Sekaran, 2015) and the time constraint of this study. Moreover, the nature of the study is not a changing nature during the time for the purpose of this research. This makes the longitudinal studies irrelevant for this research as the research objective is not concerned about the changes in the factors of study during the time. The suitability of cross-sectional study of this research is evident by looking into the researches which have utilised the same method and are similar in nature to the present study. A number of these researches include: Águila-Obra et al. (2007); Chand and Katou (2012); Marciukaityte et al. (2009); Pateli and Lioukas (2011); Solesvik and Westhead (2010); Swoboda et al. (2011).

3.3.1.2 Questionnaire Design

In quantitative research methods, when data is collected in a survey, the common tool to collect data is a questionnaire (Sekaran, 2015). A good questionnaire needs to have a set of aspects such as : easy to comprehend, relevant to the matter of research interest, accurate and reliable, unbiased, and well structured (Zikmund, Babin, Carr, & Griffin, 2012). A well designed questionnaire will provide researcher with a set of information which does not put him in trouble during analysis and interpretation stages (Bell & Waters, 2014).

3.3.1.2.1 Information Required

The first step in designing a questionnaire is to identify the questions that are needed to be asked for the purpose of the research objective (Babin & Zikmund, 2015; Bell & Waters, 2014). Based on the model which is developed to be tested as a solution for the research problem and resulting hypothesis, in the design of questionnaire, the information which were to be collected were organised in three sections: 1) Information regarding personal position in the respective organisation

and the organisational features regarding the matter related to the research interest, 2) level of perceived importance of different identified components in an alliance for e-business activities, and 3) success measurement for e-business alliance.

3.3.1.2.2 Type of Questionnaire and Method of Administration

This study needed a careful statistical analysis to uncover the importance and correlation strength of the factors. This means that the researcher needed to develop a structured questionnaire (Bell & Waters, 2014). Closed end questions are more structured and more suitable for data analysis (Sekaran, 2015), thus this research has utilises closed end questions.

Answering the research questions would be administered in two ways. One is an interview in which the respondents will be administered during the data collection by the researcher (or trained representatives), and the other type is self-administered which the respondents are given the questions and they provide the appropriate answers without the administration of the researcher. This method is faster and needs less resources and budget. It also carries less intervention during expression of respondent's perception regarding the matter of interest in the questions and thus will be less biased (Kothari & Garg, 2013). Since the questions of this study should be comprehensible enough for the respondents, and the researcher depends on the previous literature to find the constructs, self-administered questionnaire was found to be suitable for the study.

3.3.1.2.3 Form of Response

Among different types of closed end questions which are nominal, ordinal, interval, and ratio scale, the ratio scale is the most accurate in terms of capturing the real quantity of the variable. However, in social sciences, and specifically in business and management studies where researchers have to measure perception of respondents regarding a concept, the most accurate scale which is applicable is the interval scale (such as Likert scale). It is more powerful than the first two types and provides better data for analysis and interpretation. In this scaling method, respondents' perception will be mapped on a five-point scale and thus will provide

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the researcher with a sense of significant for each measure (Dhawan, 2010; Sekaran, 2015). Likert scale reduces the subjective interpretation and judgments and thus increases the reliability of the answers (Oppenheim, 2000).

Based on the mentioned reasons, interval Likert scale is found more relevant for the purpose of this research and thus was used as basis for the questionnaire development. In this research the researcher aims to know the perception of the managers to measure the items of the questionnaire with high reliability. Measuring their perception via Likert scale as explained earlier in this section, provides a reliable answer which can be easily analysed via quantitative methods. However in the first section of questionnaire, personal and organisational data were captured via nominal and ratio scale question types. Questions such as the number of partners in the e-business activities of company are considered as ratio scale while questions such as their organisational position would be nominal scale.

Evidence of the appropriateness of the Likert-type scale for this concept of research would be found in some other related researches conducted for studies of a similar nature which have justified, recommended, and used the method for their own studies. Some of the scholars have utilised the same scale include Lo and Yeung (2004); Pansiri (2008); Ramaseshan and Loo (1998); Sung (2006); Swoboda et al. (2011); J. Yang et al. (2008); Ybarra and Turk (2009). The next section explains the features considered in developing the questionnaire.

3.3.1.2.4 Best Practices Adoption in Developing Questionnaire

Questions and questionnaire structure should be designed in a way that bias is minimised and thus it is suggested to notice some of the recommended features of a well-designed questionnaire. The following list shows a number of the aspects of the literature adopted in this study which are recommended by scholars (Babin & Zikmund, 2015; Bell & Waters, 2014; Brace, 2013; Dhawan, 2010; McBurney & White, 2012; Zikmund et al., 2012).

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- Study's matter of interest and the purpose of the research are clearly explained in simple words.
- Instructions to answer the questions are provided in easy and fluent wordings.
- Each and every question is clear in wording and necessary definitions are attached.
- Pre-code response categories' considerations are noticed in developing answers.
- Questions are designed in a way to be answered easily and as short as possible to avoid fatigue of respondents.
- Questions are designed to be well understood by most of the targeted respondents.
- Questions are grouped in sections according to their relevance and matter of interest to help the flow of answer and better understanding.
- Questions are sequenced logically in a way that helps respondent's understanding and shows the relevance of the questions.
- Open ended questions are avoided as much as possible.
- Questions do not require respondents to recall any past event or data.
- Loaded (emotionally charged) and leading questions are avoided.
- Double barrelled questions are avoided. Each question is concerned about one single matter of interest.
- Personal and classification data are avoided as much as possible unless necessary. This should make the respondents comfortable to answer questions without extra considerations.

3.3.1.3 Questionnaire Development

There are many studies conducted regarding the concept of strategic alliances, electronic business, and alliances for conducting electronic business. These studies have been reviewed in Chapter two. However, little is done to identify the component of an alliance for electronic business and none of the studies is found to be comprehensive enough to provide a questionnaire containing all of the constructs for the present study. Thus, a questionnaire is developed for this study to provide the researcher with the questions to measure the construct of the research's theoretical

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model. The items to measure the constructs are all based on the available theories in the fields of electronic business and strategic alliances and are developed based on the previous studies in these fields.

3.3.1.3.1 Construct Operationalisation

After the constructs are identified, they need to be measured in a process called operationalisation. Operationalisation or "Operational Definition" is "the process of identifying scales that correspond to the variance in concept to be involved in a research process" (Babin & Zikmund, 2015) where scale is: "A device providing a range of values that correspond to different values in concept measured" (Babin & Zikmund, 2015). Thus, based on the available literature and theory, for each of the concepts, including success of an e-business alliance and significance of components or dimensions of components of alliance, items were developed to measure each construct.

The following tables (3.1 and 3.2) show the source of items developed for the constructs of this study. Table 3.1 shows the source and the number of items for the independent variables and their sub-constructs and Table 3.2 illustrates the source and number of items developed for the dependent variable and its sub-constructs. This research has adopted the items which the scholars who have conducted the mentioned researches have confirmed, used or suggested as elements for the items.

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Table 3-1: Operational Definition of Independent Variables

Construct	Sub-construct	Source(s)	Items
e-Traffic Generator	N/A	Águila-Obra et al. (2007); Benbunan-Fich and Fich (2004); Cinca et al. (2010); Dai and Kauffman (2002a); Delfmann et al. (2002); Ernst et al. (2001); Gauri et al. (2008); Hackney et al. (2000); Ilfeld and Winer (2002); Kothandaraman and Wilson (2001); Laffey (2009); Y. Yang et al. (2006)	5
e-Solution Providers	N/A	Chatterjee (2004); Dai and Kauffman (2002a); Duysters and Man (2003); Gebrekidan and Awuah (2002); Ghandour et al. (2004); Holmberg and Cummings (2009); A. Zhang and Zhang (2006); Zhao (2006)	5
Common Market Firms	N/A	Ahn et al. (2009); Burt (1995); Holmberg and Cummings (2009); Osterwalder and Pigneur (2002); Todeva and Knoke (2005); Zhu (2004)	5
Support firms	Logistics	Aldin and Stahre (2003); Büyüközkan et al. (2008); Dai and Kauffman (2002a); Delfmann et al. (2002); Forbes et al. (2005); Romano (2003); Stock et al. (2000); Y. Yang et al. (2006)	5
	Legal and Governance	Bitran et al. (2002); Ernst et al. (2001); Holmberg and Cummings (2009); Todeva and Knoke (2005); Young et al. (2011)	5
	Technical and IT	Bierly and Coombs (2004); Forbes et al. (2005); Ghandour et al. (2004); Manthou et al. (2004); Weill and Vitale (2015)	5
	e-payment	Greenstein and Vasarhelyi (2001); Laffey and Gandy (2009); Manthou et al. (2004)	5

Table 3.2: Operational Definition of Dependent Variables

Construct	Dimension	Source(s)	Items
E-business Alliance Success	Uncertainty Reduction	Huang (2006); Hughes and Beasley (2008); Marciukaityte et al. (2009); Solesvik and Westhead (2010); Ybarra and Turk (2009)	6
	Operational Cost and Performance	Bitran et al. (2002); Cravens et al. (2000); Holmberg and Cummings (2009); Jiang et al. (2008); Wu et al. (2009); A. Zhang and Zhang (2006); J. Zhang and Frazier (2011)	7
	Market Power	Brooke and Oliver (2005); Ghandour et al. (2004); Holmberg and Cummings (2009); Mitsuhashi and Greve (2009); Wu et al. (2009)	6
	Intangible Outcomes	Burt (1995); Cinca et al. (2010); Hipkin and Naudé (2006); Inkpen (1996); Lin (2007); Mitsuhashi and Greve (2009); Swoboda et al. (2011); Wittmann et al. (2009); Yaprak (2011)	5

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3.3.1.3.2 Instrument Refinement and Verification (Pre-Test/Pilot Study)

In designing a questionnaire, one of the techniques to ensure quality of the research is called pilot test. Pilot test is: "a small-scale research project that collects data from respondents similar to those to be used in full study" (Babin & Zikmund, 2015). This test which is sometimes also called "Pretest" is very useful to evaluate the usefulness of the research procedure. Without a pilot test, an original research instrument cannot be confirmed in terms of validity and reliability (Balian, 2011).

Other than fine-tuning the research tools and procedures, pilot test has another value for the research. As the research procedure is somehow repeated by the pilot study, it gives additional credit to the study by indicating that the research has provided results more than once and thus carries extensively high value in terms of scientific reliability (McBurney & White, 2012).

Based on the above mentioned guidelines, there was a need for a pilot test to be conducted for this research. The objectives of this pilot test are as listed:

- Collecting feedbacks from respondents to improve the instrument.
- Assessing feasibility of using the instrument in collecting data.
- To make sure the scale is relevant to the items of the constructs.
- Assessing clarity of the questions for respondents.
- Assessing time required for answering all of the questions.
- Finding bugs in questionnaire in general.
- Avoid redundancies should any identified by respondents.
- Assessing reliability and validity of the instrument.

The test was conducted in two rounds. In the first round, a pretest was conducted with a small number of expert and executives as participants and after fine-tuning the questionnaire based on their advice, the questionnaire was given to a larger (yet smaller than the final research) number of participants for validity, reliability and other tests of the instrument. The following is a more detailed description of the test.

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In the first round of the pre-test, a group of ten strategic management experts, DBA students, e-business executives, and company owners were invited to review and answer the questions. Ten people were asked to participate because the recommended number of participants in such pre-test is 6 to 10 participants (Spector, 2001; Zikmund et al., 2012). The main objectives of the test were to assess if the scale mode and the questions were suitable for the study, instructions were clear and adequate and the items reflected the associated variables.

The result of the study was positively supporting the overall instrument design except for some minor changes in wording of parts of the questionnaire, the rest of the instrument was revealed to be clear and well understood by the respondents. Respondents were reported to be comfortable with the Likert scale used in the questionnaire. The items were relevant to the construct and reflected the variety of research interests which were measured. No redundancy was found in the items and most of the respondents were able to complete the questionnaire in approximately 20 minutes.

Some of the changes made to the questionnaire based on the recommendation are as follows:

- Some definitions were added to the introduction section of the questionnaire.
- The font size of the questions was changed to make it more comfortable to read.
- Some of the questions were rephrased to make them clearer.
- Table format with the name of construct at the side (instead of at the top) of the items were used.
- The order of some questions in the section "A" (personal and organisational details) are changed to keep the questioning flow more smoothly.

After these changes, the second round of the pilot study was conducted. In this round the questionnaire was given to a larger group of respondents to complete and although their comments were considered in order to finalise the questionnaire, validity and reliability of the questionnaire were also assessed via relevant methods which will be described in later sections. The required number of the samples for this

stage of the study was between 20 and 50 respondents (Rossi, Wright, & Anderson, 1985). Thus, a total of 50 managers of firms relevant to the matter of study who were representative of the total population were selected for the pilot test. The result of their comment was reflected in changes made in wording of a small number of questions. The data collected from this round of test was used to validate and test the reliability of the measures and the instrument in general which is discussed in later sections.

3.3.1.4 Survey Implementation

After the instrument design was finished, it was time to determine the method of survey implementation. There are many methods for survey implementation and each of these methods has its own advantages and disadvantages. First, the media should be determined through which the survey will be conducted. This media could be mail, telephone, or face-to-face and in paper or electronic modes (Brace, 2013).

There are other methods which consist of a mixture of the other methods such as "Computer Assisted Telephone Interview" (CATI) and "Computer Assisted Personal Interview" (CAPI) which have a combination of advantages of two different methods in one method and at the same time overcome many disadvantages of the other method (Sekaran, 2015). Another example of mixed method is methods which attempt for data collection in several sequences. For example, making initial telephone contact and follow with face-to-face or email surveys. This also eliminates some of the disadvantages of methods used within the mixed method (Zikmund et al., 2012). Table 3.3 shows a summary of advantages and disadvantages of the main data collection methods.

In this research, clarity of the questions was tested in two steps. The pilot test and the feedback from pre-test showed no indication of a need for supervision. Moreover, a supervised data collection method has the risk of loading the answers with bias due to presence of researcher. It also takes more time and requires more resources to conduct such survey due to comparatively large number of samples required for this study. Thus, the research was conducted initially with the use of electronic software. A copy of the questionnaire was generated in the

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surveymonkey.com and another copy was generated in Microsoft Word format. Link to the online survey available on surveymonkey.com together with an MS Word copy of the blank survey was emailed to the respondents. A welcome screen, a short introduction of the research and its objectives were included in the email as recommended by research experts (Zikmund et al., 2012). The respondents were given the option of answering the questions online or completing it with the use of MS Word file and emailing it back to the researcher. As suggested by scholars, after one week of pending for response, another follow-up email was posted to non-respondents (Sekaran, 2015). However, the outcome was less than satisfactory in terms of the response rate. The response rate for this round of data collection was less than 3%. Only 31 responses where collected from 1264 managers who were asked to respond. A low response rate could however be predicted due to several reasons such as receiving too many email requests during the day, lack of physical incentives and motivations, and security concerns (Zikmund et al., 2012).

As a result of lower than expected responses collected in the first round, another round of data collection was conducted and the collected data from the first round was fully eliminated from the final data set. In the second round, respondents were contacted in person and were given a copy of the questionnaire. Then, another appointment was made to collect the completed questionnaire. By using this method, unlike the first round, the response rate was surprisingly high. Except for 3 respondents, all of the other respondents were fully cooperative. The 3 non-respondents could not be contacted during collection appointment and follow-up contacts. The contacted people were selected in a sampling process which will be discussed in the next section.

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Table 3-2: Comparison of the Four Approaches for Conducting a Survey

	Internet-based	Mail	Face-to-face	Telephone
Required characteristic of suitable respondents	Can be contacted by e-mail	Can be contacted by mail	None	Can be phoned
Confidence that the right person has responded	High	Low	High	High
Size of sample that can be dealt with	Large	Large	Subject to number of interviewers	Subject to number of interviewers
Likely response rate	Variable	Variable	High	High
Speed of data collection	2-6 weeks or even instantaneous	4-8 weeks	Subject to sample size, number of interviewers, etc.	Subject to sample size, number of interviewers, etc.
Main financial resource implications	www page design, if used	Outward and return postage, photocopying, etc.	Interviewers, travel, photocopying, etc.	Interviewers, telephone calls, etc.
Geographic flexibility	Worldwide	High	Limited	High
Anonymous of respondents	Can be anonymous or known	High	Low	High-moderate
Ease of follow-up	Depend on what type of Internet-based survey	Easy	Difficult	Easy

Adapted from (Saunders, Lewis, & Thornhill, 2015; Zikmund et al., 2012)

3.3.1.4.1 Sampling Design

Generally, there are two sampling designs: probability and non-probability. In the probability sampling method, there is a known chance for each sample to be selected and the result will have the potential to be generalised, whereas in non-probability method, factors other than generalisation (such as time constrains) become critical (Sekaran, 2015). Probability sampling produces the most desirable survey which enables the researcher to apply various statistical methods without bias or doubt about validity of the results (McBurney & White, 2012). For the purpose of this research, generalisation of the results is of high importance and other constraints

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are not of the same significance. Thus the method used for sampling in this study was a probability sampling method. Probability sampling itself may be in the forms of restricted and unrestricted. Even though the chance of selection of each population element is "known and equal", the sampling method is called unrestricted. The sampling method used in this study was also unrestricted probability sampling (simple random sampling) as this method provides the least bias with highest generalisability (Sekaran, 2015).

Besides the sampling method, it is also necessary for a sampling design to identify the unit of analysis, population and sampling frame. Unit of analysis focuses on the "level of investigation" in which the researcher will try to find the answer for the research problem (Sekaran, 2015; Zikmund et al., 2012). In this research, perception of business managers and managers of different companies regarding the effect of alliance and partnership on their respective businesses and business activities was being investigated and thus unit of analysis for the present research is "Businesses". Unlike unit of analysis, population focuses on the totality of the units which will be examined. Population is defined as: "the entire group of people, events, or things of interest that the researcher wishes to investigate" (Sekaran, 2015). In this research, the researcher was interested in examining the perception of the managers of firms who are involved in alliances for conducting any kind of electronic business activities. The reason these managers were selected to be studied is that only at management level individuals may obtain comprehensive information good enough to evaluate performance. They are the only people with access to top level details and know the results of company activities and were therefore considered good sources of information for research (Menon, Bharadwaj, Adidam, & Edison, 1999).

As in many cases, it was practically impossible to collect data from the entire population (Sekaran, 2015). In addition to the population, researcher needs to identify the "Population Frame" which refers to "a listing of all the elements (single members) in the population from which the sample is drawn". For this research, due to accessibility and required resources, the research was restricted to Malaysia. Besides, researcher believes that conducting the study in a developing country will

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add to the understanding of possible differences or similarities between developing countries business environment and developed countries' business environment where most of the researches have been conducted. However, in Malaysia, managers from MSC status companies were chosen to be studied as it appears that businesses in the field of electronic business need to have the MSC status due to privileges rewarded as well as governmental regulations governing Malaysian IT and business environment including financial and non-financial motive, cyber law concerns, and many more factors (mscmalaysia.my, 2012d).

MSC Malaysia (Multimedia Super Corridor) is "Malaysia's national ICT initiative designs to attract world-class technology companies while grooming the local ICT industry". This project which was initiated on 12 February 1996 by Malaysian Prime minister of the time is aimed to coordinate Malaysian economy towards a knowledge based economy and is completely supported by Malaysian Government. (mscmalaysia.my, 2012c). In Malaysia, there are several locations which the environment is designed to attract ICT investments and the resources are accumulated to support these investments. These are called cyber cities and cyber centres. At the time that this research was conducted, there were seven major areas in Klang Valley, Kedah, Penang, Melaka, Perak, Johor, and Pahang (mscmalaysia.my, 2012a).

There were approximately 2300 firms in Malaysia with MSC status at the time of conducting this research (mscmalaysia.my, 2012b). A list of all of the firms was initially collected and the information was extracted from Malaysian MSC's website. Some of the companies did not have sufficient contact information. Some others did not have major activities in Malaysia. For the rest of the firms in the MSC Status list, through their websites or other contacts provided in the list, firms were assessed in terms of having electronic business activities or being in collaboration with firms of such activities. After eliminating irrelevant firms on the list in the mentioned process, the final list of this research included 1264 firms. Based on the shortlisted companies a list of their managers, contacts, addresses, and emails were also combined to form the Population Frame for the study. Finally using Microsoft Excel's "Rand" function, a random list of samples was generated to be used in

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survey implementation phase. Following the method discussed in section 3.3.1.4, a total of 365 questionnaires were collected. Considering that some of the questionnaires were mal-completed or were uncompleted, a final collection of 324 samples were compiled in order to be used in the analysis phase.

3.3.1.4.2 Sample Size

As it is discussed in later sections, the statistical method chosen for this study is Structural Equation Model (SEM). Sample size should not be small as SEM relies on tests which are sensitive to sample size. Different scholars have suggested various safe range of sample size for SEM. One recommended sample size is at least 100 – 200 (Hoyle, 2011). It is basically needed to have ten to twenty times as many cases as variables (Scheiner & Gurevitch, 2001), or five cases per parameter estimate (including error terms as well as path coefficients) if one has met all data assumptions (Bentler & Chou, 1987). Moreover, if the population size is considered the way the population frame is determined earlier, the sample size for this research should be around 300 cases to satisfy 95% confidence interval. (Krejcie & Morgan, 1970). Thus the sample size for this research which is 324 samples is considered satisfactory for the requirements of the data analysis.

3.3.1.5 Reliability

It is essential to test the measurement instrument in terms of reliability. By definition, "a measuring instrument is reliable if it provides consistent results" (Dhawan, 2010). In fact reliability ensures the researcher to acquire the same set of results by repeating the test with the same measurement instrument. This indicates stability, bias-less-ness, and "goodness" of the measure (Sekaran, 2015).

Cronbach's Coefficient Alpha is one of widely used assessments for reliability of the measures (Ahn et al., 2009; Kauser & Shaw, 2004; Liu & Arnettb, 2000; Lo & Yeung, 2004; Pansiri, 2008). A Cronbach's Coefficient Alpha if greater than 0.6 is considered fine in terms of reliability of measure (Price, 1997). Though some other scholars may consider different values of acceptable Alpha value, 0.7 is

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considered a sufficient minimum value for the measure to be reliable (Hair, Black, Babin, & Anderson, 2010).

Table 3-3: Alpha Coefficient for Independent and Dependent Constructs

Variable	Coefficient Alpha
e-Traffic Generator	0.92
e-Solution Providers	0.88
Common Market Firms	0.84
Logistics	0.85
Legal and Governance	0.82
Technical and IT	0.93
e-payment	0.83
Uncertainty Reduction	0.75
Operational Cost and Performance	0.87
Market Power	0.82
Intangible Outcomes	0.78

The analysis for this research showed that none of the items had value lower than 0.7 and therefore no item needed to be eliminated due to reliability issue. Table 3-3 illustrates details for Cronbach's coefficient α test of variable investigated in the current study, according the data collected during the Pilot test.

According to Hair et al. (2010) another way to test the reliability is to use Composite Reliabilities (C.R.) The condition is that Composite Reliability for each and every construct needs to be greater than 0.7. However this threshold level is sometimes considered as low as 0.5. (Sridharan, Deng, Kirk, & Corbitt, 2010).This measure is approached in Chapter 4 and the results indicated if all of the items should be kept or modified or eliminated.

3.3.1.6 Validity

Validity is the most fundamental indicator to assess the measures in terms of their relevance to the construct that they are supposed to measure. Validity is defined as: "The ability of scale or measuring instrument to measure what it is intended to measure" (Zikmund et al., 2012) which indicates "The accuracy of a measure or the extent to which a score truthfully represents a concept" (Babin & Zikmund, 2015). Validity has many aspects among which three aspects are fundamental: 1) Face

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(content) validity, 2) Criterion validity, and 3) Construct validity (Babin & Zikmund, 2015; McBurney & White, 2012; Sekaran, 2015; Zikmund et al., 2012).

Face (content) Validity refers to a "professional agreement that a scale logically appears to accurately measure what it is intended to measure" (Zikmund et al., 2012). Criterion Validity refers to "the ability of some measures to correlate with other measures of same construct" (Zikmund et al., 2012). Finally Construct Validity refers to "the ability of a measure to confirm a network of hypotheses generated from a theory based on the concept" (Zikmund et al., 2012).

Content validity was proven to be high in this study according to two factors. First, the items were developed both for dependent and independent variables based on extensive literature review, presented in Chapter 2 and in the beginning of this chapter. Second, the relevance and expert agreement on the true measurement of the constructs which were intended to measure was achieved via the means of pilot test which was explained earlier in this chapter. Thus the measures were considered to possess Face validity. Factor analysis was conducted as a means to test other aspects of the validity and provide a satisfactory level of Construct and Criterion Validity which will is illustrated later in this chapter as well as Chapter 4.

3.3.2 Data Analysis and Hypothesis Testing Procedure
3.3.2.1 Overview

After the data collection phase, researcher needs to analyse data for hypothesis testing purpose. This step has been facilitated by the use of a number of user friendly computer software. This step begins with data preparation and ends with hypothesis testing results. Data preparation ensures that the data is good enough for analysis and has pre-requirements of the method used for analysis method of the study (Sekaran, 2015). In this study, data preparation such as elimination of missing data, categorisation of data, data coding, and data entry were performed with the use of SPSS. Data analysis was performed by using SPSS and AMOS software.

As the current research is looking into the relations between dependent and independent variables and trying to predict e-business strategic alliance success by

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looking into components, regression would seem to be the right method as its task is "predicting the value of one variable from another based on their correlation" (McBurney & White, 2012). However, regular regression techniques were less likely to provide us with accurate enough result. In this research Structured Equation Model (SEM) was used instead as a technique to analyse the collected data from questionnaires. Unlike many other multivariate techniques, this technique enables us to test the entire model with considering multiple relations simultaneously (Hair et al., 2010). SEM tests a broad range of covariance structures (Bryk & Raudenbush, 2002) and with the use of SEM, which avoids inter-relations between questions for different constructs (multicollinearity) we can directly consider mediator constructs (Hair et al., 2010; Sharma, 1995).

As per explained by Hair et al. (2010) one can identify six major steps in SEM modelling. These steps are depicted in Figure 3.5 and include:

- "Stage1: Defining Individual Constructs
- Stage2: Developing the overall measurement
- Stage3: Designing a study to produce the empirical results
- Stage4: Assessing the measurement model validity
- Stage5: Specifying the structural model
- Stage6: Assessing structural model validity"

These stages are followed in this study in different sections and subsections as explained in this chapter and provided in chapters three and four. Constructs are introduced in sections 3.2.1 and 3.2.2 of this study. These constructs where then assessed section 4.5.1.1 as per explained later. In section 4.5.1.2 , 4.5.1.3, and 4.5.1.4 the measurement model was introduced, studied, and assessed from fit, reliability, and validity view of point as per expected in stages two, three, and four of SEM modelling. In Section 4.5.2 the Structural Equation Model is specified and in section 4.5.3 it is put into the test of goodness of fit and the regression estimates are calculated. Based on the results of these sections, the conclusions were drawn and a table of results were presented at the end of the chapter four.

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Structural Equations Modeling Overview

Stage 1 — Defining the Individual Constructs
What items are to be used as measured variables?

Stage 2 — Develop and Specify the Measurement Model
Make measured variables with constructs
Draw a path diagram for the measurement model

Stage 3 — Designing a Study to Produce Empirical Results
Assess the adequacy of the sample size
Select the estimation method and missing data approach

Stage 4 — Assessing Measurement Model Validty
Assess line GOF and construct validity of mesuement model

Refine measures and design a new study ← No — Measurem nt Model Va id? — Yes → Proceed to test structural model with stages 5 and 6

Stage 5 — Specify Structural Model
Convert measurement model to structural model

Stage 6 — Assess Structural Model Validity
Assess the GOF and significance, direction, and size of structural parameter estimates

Refine model and test with new data ← No — Structural Model Valid? — Yes → Draw substantive conclusions and recommendations

Figure 3.5: Stages of Structural Equations Modelling (Hair et al., 2010)

3.3.2.2 Descriptive Analysis

The researcher needed to have an overall comprehension of the collected data. Thus descriptive analysis was used to process the collected data. Descriptive analysis provides statistical interpretations in form of numerical or graphical

presentations which creates simple and understandable sense of the collected data. Descriptive statistics such as mean, standard deviation, and range provide researchers with less load of numbers and replace large tables of data with smaller and meaningful numbers which describes the collected data in a more friendly manner (Wilkinson, 2002).

The present research has used SPSS software to calculate these statistics. The study has performed descriptive statistics in two folds. First, it has provided insight about the respondents and their respective organisations. This part was extracted from the data collected from first section of the questionnaire. It showed the distribution of respondents regarding the questions of this section in terms of number and percentage. In the second stage, dependent and independent variables were examined. Mean, standard deviation, variance, Skewness, and Kurtosis are some of the statistics which were examined to gain a better insight about the collected data. These statistics revealed overall opinion of the participants regarding the matters of the question, the consistency of different participants' idea regarding the same matter, and the shape of the distribution of the collected data.

3.3.2.3 Normality Test

Normality is the "degree to which the distribution of the sample data corresponds to a normal distribution" (Hair et al., 2010). Testing normality of data is mandatory before performing any multivariate data analysis. For the Test of Normality, this research looked into the concepts of skew and kurtosis of the variables. However, instead of simply using Skewness and Kurtosis measures, the study used two more precise measures. Skew Index (SI) and Kurtosis Index (KI) measures are the "best known standardised measures of these characteristics that permit comparison of different distributions to the normal curve" (Kline, 2011). SI and KI can be calculated with the following formula:

$$SI = S^3 / (S^2)^{3/2} \quad \text{and} \quad KI = (S^4 / (S^2)^2) - 3$$

In these formulas, S^2, S^3, and S^4 are respectively second, third and forth "moments about the mean" and can be calculated as:

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$$S^2 = \sum (X-M)^2/N \qquad\qquad S^3 = \sum (X-M)^3/N \qquad\qquad S^4 = \sum (X-M)^4/N$$

M is the mean and N is the number of records. It is assumed that the probability of the samples occurrence is equal. According to Kline (2011), for the test of normality, absolute value of SI should be smaller than 3 and absolute value of KI needs to be lower than 8.

3.3.2.4 Exploratory Factor Analysis (EFA)

"Exploratory Factor Analysis (EFA) explores the data and provides the researcher with information about how many factors are needed to best represent the data. With EFA, all measured variables are related to every factor by a factor loading estimate" (Hair et al., 2010). By exploratory factor analysis, this study has uncovered factors which can refine the measurement instrument by testing the items and their consistency with the theory expectations.

To perform EFA, this research has used Principal Component Extraction and Varimax Rotation methods. By performing the tests based on these methods, Kaiser-Meyer-Olkin measure of sample adequacy (KMO) should be greater than 0.8 and in the Bartlett's test of Sphericity, p-value should be lower than 0.05 to be significant. Cumulative percentage of "Extraction Sums of Squared Loadings" for "Total Variance Explained" should be greater than 0.50. When the mentioned conditions are met, it can be concluded that the proportion of total variance in all the variables which is accounted for by identified factors is adequate.

3.3.2.5 Test of Validity of Measures

According to Hair et al. (2010) Construct Reliability (CR) which measures reliability and internal consistency of the measured variables representing a latent construct must be established before construct validity can be assessed. For this purpose, CR was examined to be greater than 0.7. After this assessment Convergent Validity and Discriminant Validity were tested.

Convergent Validity is defined as: "extent to which indicators of a specific construct converge or share a high proportion of variance in common" (Hair et al.,

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2010). In this test, we need another measure called: Average Variance Extracted (AVE). AVE is defined as: "A summary measure of convergence among a set of items representing a latent construct. It is the average percentage of variation explained (variance extracted) among the items of a construct" (Hair et al., 2010). For the purpose of this test, AVE should be greater than 0.5 and it should be smaller than CR.

Discriminate Validity is defined as: "Extent to which a construct is truly distinct from other constructs both in terms of how much it correlates with other constructs and how distinctly measured variables represent only this single construct" (Hair et al., 2010). For this test, Maximum Shared Squared Variance (MSV) and Average Shared Squared Variance (ASV) were assessed to make sure that they are both smaller than the AVE measurement.

3.3.2.6 Confirmatory Factor Analysis (CFA)

According to Hair et al. (2010), Confirmatory Factor Analysis (CFA) is a test of "Measurement Theory" which "specifies how measured variables logically and systematically represent constructs involved in a theoretical model. In other words, measurement theory specifies a series of relationships that suggests how measured variables represent a latent construct that is not measured directly".

In this research, first for each construct, factor loadings were examined to test the validity of items. All factor loadings had to be higher than 0.5. This procedure was applied to both dependent and independent variables. If the result does not fit with the condition mentioned for the factor loadings, the respective items need to be eliminated or modified. After the test was performed for each and every construct, the measurement was developed in AMOS software and again the factor loadings were examined as mentioned before.

3.3.2.7 Structural Equation Modelling

Structural Equation Modelling "is a technique that allows separate relationships for each of a set of dependent variables. In its simplest sense, structural

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equation modelling provides the appropriate and most efficient estimation technique for a series of separate multiple regression equations estimated simultaneously." (Hair et al., 2010). SEM provides two models for analysis: 1) the structural model which is the path model, and determines the relationship between independent and dependent variables and 2) the measurement model which allows more than one variable (indicator) to identify a single independent or dependent variable (Hair et al., 2010). This method is considered strong analysis method for extending the theory development (Gefen, Straub, & Boudreau, 2000) and simultaneously assessing the multiple and interrelated dependence relationships. Therefore SEM was selected for this study as the core of inferential analysis.

3.3.2.8 Goodness of Model Fit

Goodness-of-Fit is defined as: "measure indicating how well a specified model reproduces the covariance matrix among the indicator variables" (Hair et al., 2010). The model which is developed based on hypothesis can be evaluated statistically in an examination of the variables to determine the extent to which it is consistent with the data. To do this assessment, goodness-of-fit is measured. "If goodness-of-fit is adequate, the model argues for the plausibility of postulated relations among variables; if it is inadequate, the tenability of such relations is rejected" (Byrne, 2009). In general there is no easy-to-accept and well agreed standard for data-model fit or misfit (Schermelleh-Engel, Moosbrugger, & Müller, 2003). Different scholars have identified different acceptable thresholds for each criterion. The following table is one example.

Table 3-4: Goodness-of-Fit Criteria and Acceptable Ranges (Schermelleh-Engel et al., 2003)

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Fit Measure	Good Fit	Acceptable Fit
χ^2	$0 \leq \chi^2 \leq 2df$	$2df < \chi^2 \leq 3df$
p value	$.05 < p \leq 1.00$	$.01 \leq p \leq .05$
χ^2/df	$0 \leq \chi^2/df \leq 2$	$2 < \chi^2/df \leq 3$
$RMSEA$	$0 \leq RMSEA \leq .05$	$.05 < RMSEA \leq .08$
p value for test of close fit ($RMSEA < .05$)	$.10 < p \leq 1.00$	$.05 \leq p \leq .10$
Confidence interval (CI)	close to $RMSEA$, left boundary of CI = .00	close to $RMSEA$
$SRMR$	$0 \leq SRMR \leq .05$	$.05 < SRMR \leq .10$
NFI	$.95 \leq NFI \leq 1.00$[a]	$.90 \leq NFI < .95$
$NNFI$	$.97 \leq NNFI \leq 1.00$[b]	$.95 \leq NNFI < .97$[c]
CFI	$.97 \leq CFI \leq 1.00$	$.95 \leq CFI < .97$[c]
GFI	$.95 \leq GFI \leq 1.00$	$.90 \leq GFI < .95$
$AGFI$	$.90 \leq AGFI \leq 1.00$, close to GFI	$.85 \leq AGFI < .90$, close to GFI
AIC	smaller than AIC for comparison model	
$CAIC$	smaller than $CAIC$ for comparison model	
$ECVI$	smaller than $ECVI$ for comparison model	

Table Foot-Note
"$AGFI$ = Adjusted Goodness-of-Fit-Index, AIC = Akaike Information Criterion, $CAIC$ = Consistent AIC, CFI = Comparative Fit Index, $ECVI$ = Expected Cross Validation Index, GFI = Goodness-of-Fit Index, NFI = Normed Fit Index, $NNFI$ = Non-normed Fit Index, $RMSEA$ = Root Mean Square Error of Approximation, $SRMR$ = Standardised Root Mean Square Residual.
[a]*NFI* may not reach 1.0 even if the specified model is correct, especially in smaller samples
[b]As *NNFI* is not normed, values can sometimes be outside the 0-1 range.
[c]*NNFI* and *CFI* values of .97 seem to be more realistic than the often reported cut-off criterion of .95 for a good model fit. "
Adopted from Schermelleh-Engel et al. (2003)

After building structural model by AMOS software, mentioned criteria should meet the conditions. However it is sufficient if at least five criteria meet the conditions (Hair et al., 2010).

3.3.2.9 Model Evaluation

After ensuring the goodness-of-fit for the structural model, it is time to evaluate the model's expected outcomes. R^2 is one of the criteria that should be examined. However in SEM and via AMOS instead of R^2, "Squared Multiple Correlations" is assessed. Squared Multiple Correlations is defined as "values representing the extent to which a measured variable's variance is explained by a latent factor". For this research this value explains the extent of the variance of the

success for electronic business alliances depends on and would be explained by the existence of the components suggested by the theory.

After assessing Squared Multiple Correlations, regression relations need to be assessed. AMOS provides a list of relations together with their estimated weightage and p-value. To test the significance of a relation, p-value needs to be lower than 0.05. This can easily be done via the tables provided by the software. If the p-value meets the criteria, then the relation can be considered strong and the estimated value in the same table will represent regression weight for that relation. These models have helped the study to evaluate the hypothesis of the research. To study the sub-hypothesis of the research, a path model has attached independent variables to the dimensions of the success. This has given the researcher the ability to evaluate the relations which are proposed by a set of sub-hypotheses. To make this evaluations again the researcher has looked at the p-value of the relation which needed to be smaller than 0.05 to support the proposed sub-hypothesis. Finally the amended model was represented by considering the recommendations obtained in the mentioned steps.

3.3.3 Statement of Hypothesis

Based on the literature and the theories relevant to the presented research framework, following hypotheses were extracted and tested by the means of the statistical methods described before and demonstrated in details in chapter 4. In these hypotheses, association of each of the components suggested by literature with the success of electronic business alliance were proposed. These components include e-traffic generators, e-solution providers, firms with common target market, IT and technical support firms, e-banking support organisations, logistics supporting firms, and legal and governance support firms.

Alternative hypothesis are formulated as below:

- H1: There is a significant positive association between partnering with e-traffic generators and success of alliance for e-business activities.

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- o H1.a: There is a significant positive association between partnering with e-traffic generators and risk reduction.
  - o H1.b: There is a significant positive association between partnering with e-traffic generators and market power.
  - o H1.c: There is a significant positive association between partnering with e-traffic generators and operational performance and cost efficiency.
  - o H1.d: There is a significant positive association between partnering with e-traffic generators and intangible outcomes.
- H2: There is a significant positive association between partnering with a chain of e-solution providers and success of alliance for e-business activities.
  - o H2.a: There is a significant positive association between partnering with a chain of e-solution providers and risk reduction.
  - o H2.b: There is a significant positive association between partnering with a chain of e-solution providers and market power.
  - o H2.c: There is a significant positive association between partnering with a chain of e-solution providers and operational performance and cost efficiency.
  - o H2.d: There is a significant positive association between partnering with a chain of e-solution providers and intangible outcomes.
- H3: There is a significant positive association between partnering with firms with common target market and success of alliance for e-business activities.
  - o H3.a: There is a significant positive association between partnering with firms with common target market and risk reduction.
  - o H3.b: There is a significant positive association between partnering with firms with common target market and market power.
  - o H3.c: There is a significant positive association between partnering with firms with common target market and operational performance and cost efficiency.
  - o H3.d: There is a significant positive association between partnering with firms with common target market and intangible outcomes.
- H4: There is a significant positive association between partnering with IT and technical support firms and success of alliance for e-business activities.

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- H4.a: There is a significant positive association between partnering with IT and technical support firms and risk reduction.
  - H4.b: There is a significant positive association between partnering with IT and technical support firms and market power.
  - H4.c: There is a significant positive association between partnering with IT and technical support firms and operational performance and cost efficiency.
  - H4.d: There is a significant positive association between partnering with IT and technical support firms and intangible outcomes.
- H5: There is a significant positive association between partnering with legal and governance support firms and success of alliance for e-business activities.
  - H5.a: There is a significant positive association between partnering with legal and governance support firms and risk reduction.
  - H5.b: There is a significant positive association between partnering with legal and governance support firms and market power.
  - H5.c: There is a significant positive association between partnering with legal and governance support firms and operational performance and cost efficiency.
  - H5.d: There is a significant positive association between partnering with legal and governance support firms and intangible outcomes.
- H6: There is a significant positive association between partnering with logistics support firms and success of alliance for e-business activities.
  - H6.a: There is a significant positive association between partnering with logistics support firms and risk reduction.
  - H6.b: There is a significant positive association between partnering with logistics support firms and market power.
  - H6.c: There is a significant positive association between partnering with logistics support firms and operational performance and cost efficiency.
  - H6.d: There is a significant positive association between partnering with logistics support firms and intangible outcomes.
- H7: There is a significant positive association between partnering with e-banking support firms and success of alliance for e-business activities.

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- o H7.a: There is a significant positive association between partnering with e-banking support firms and risk reduction.
- o H7.b: There is a significant positive association between partnering with e-banking support firms and market power.
- o H7.c: There is a significant positive association between partnering with e-banking support firms and operational performance and cost efficiency.
- o H7.d: There is a significant positive association between partnering with e-banking support firms and intangible outcomes.

3.4 Summary of the Chapter

This chapter has presented the research methodology which has been used in this research. The chapter begins with introducing the research framework, dependent and independent variables, and theoretical model.

The chapter then proceeds with presenting the research design. This section begins with the design of questionnaire and its important considerations including required information, types of questionnaire, method of administration, and form of response. The chapter also presents a list of best practice considerations to be adopted while designing the questionnaire. The section then focuses on questionnaire development including construct operationalisation and instrument refinement and verification. Then survey implementation, sampling design, and sample size are discussed. Then tests of reliability and validity are presented.

After presenting the research framework and research design this chapter has presented the data analysis and hypothesis testing procedure. This includes the description of tools and methods for descriptive analysis, test of normality, exploratory factor analysis, structural equation modelling, evaluation of goodness of model fit, and model evaluation.

Finally alternative hypothesis are formulated based on the proposed model. Seven main hypotheses and four sub-hypothesis for each main hypothesis were presented which were tested in chapter four of this study.

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CHAPTER 4
RESULTS AND DISCUSSIONS

4.1 Introduction

The purpose of this research is to find the components of successful alliance to perform electronic business. The study will also try to find out the appropriate dimensions to measure the success of such alliances. This is done through a comprehensive data analysis which will be presented in this chapter.

In this chapter, initially the statistical analysis and results of the study is presented. The chapter begins with an overview of the collected data and profile of companies being studied. The statistical review of the answers given to the questionnaire will then be discussed. Various implications of the average perception of the managers about components and success of an e-business alliance will be discussed. Distribution of collected data will also be examined to make sure that it meets requirements of a normal distribution.

Next will be the confirmatory factor analysis. In this section measurement tool will be tested to find out the correct configuration of the items which can correctly explain and measure the constructs of the theoretical model which has been developed in earlier chapters. After development of measurement model and fitting it, the structural model will also be fitted and developed. This will help us to come to the final preparation for data analysis.

In the final part of this chapter Structural Equation Model will be used to find the equation of the developed model. That is in the form a regression model which is used to test hypothesis. First main hypotheses of the research is assessed and relationship between all of the components and success is assessed and then a deeper analysis creates a more comprehensive insight into the relationship between each of the alliance components and various dimensions of success. This is an important insight as it will provide us with a deeper comprehension of practical ways of

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influencing each and every aspect of alliance success and thus will help decision makers to provide their respective organisations with better alliance map and partnership choices with regards to appropriate partner selection in order to achieve their specific organisational goals.

4.2 Descriptive Analysis

In this research a questionnaire was designed to collect data from the respondents of this study. The process of data collection was described in chapter 3. The final number of questionnaires with usable data sets is 324. SPSS is used for the initial analysis for the data collected. In this section, an exploratory data analysis will be presented. Table 4.1 illustrates the overall result of analysis for the first section of the questionnaire.

4.2.1 Descriptive Analysis of Personal / Company Data

As shown in Table 4-1, 85.2 percent of participants have at least one form of e-business in their business activities. It is important to notice for 14.8 percent of the participants, none of their business activities are in e-business format. This fact however, does not disqualify them for the study, as they are selected for the study because they have partnership with e-business firms and supporting the e-business activities for their activities. One very common example is small IT companies which have special customers and developed software. These firms take care of software technical support for one or more alliances which are active in the e - business field yet these firms themselves do not conduct e-business activities. For example, they do not sell their software online. They have special marketing strategies and find their customers through their business networks.

A smaller number of firms with a part of their business in the e - business format are firms with e-business as their main business format. Only 46 percent of the firms studied in this survey are pure e-business companies or firms which have e-business activities as their main activities. This result is also expected as many firms are from the traditional physical business environment which has adopted only a part

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of their services or business to electronic business. An example would be firms with traditional sales outlets which also have started online shops.

Table 4-1: Descriptive Information

Parameter	Number	Percentage
Part of the company's activities are in electronic format		
Yes	276	85.2
No	48	14.8
Company's main business is in electronic format?		
Yes	149	46
No	175	54
Position:		
Senior Executive	54	16.7
Top Manager	156	48.1
General Manager	20	6.2
Managing Director	94	29
Business Partners to perform e-Business activities		
0	12	3.7
1	54	16.7
2-5	131	40.4
5-20	83	25.6
20-100	32	9.9
more than 100	12	3.7
Number of websites owned by the company:		
0	0	0
1	113	34.9
2-5	130	40.1
5-20	65	20.1
20-100	16	4.9
more than 100	0	0
Number of e-business websites owned by your company		
0	48	14.8
1	103	31.8
2-5	124	38.3
5-20	44	13.6
20-100	5	1.5
more than 100	0	0.0

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Almost half of the respondents of the study have top management position while close to a third of them are managing directors, 16.7 percent are senior managers and 6.2 percent are the general managers. This indicates a high quality of answers because the respondents have quality knowledge about the business performance and effect of partnership in their business as well as their firms' tendencies and necessities in selecting their partners.

All of the firms in this study have at least one website. Around 34.9 percent of the firms have only one website, 40.1 percent have between 2 and 5 website, 20.1 percent have 5 to 20 websites and around 4.9 percent of the companies have more than 20 websites. However none of the companies have more than 100 websites. The reason that many of these companies have more than one website is due to the variety of their products or services. For example, a software company may have separate websites for each of the categories of the products. Some companies also have one official website for their company in addition to other websites for their services or products.

It is clear that not all of the websites are involved in e-business activities. 14.8 percent of the companies are reported to have simple websites with no e-business activities. Many of these websites have a few introductory web pages and a simple contact page with address, number, and sometimes email address in it. 32 percent of the firms have only one e-business website, around 38 percent of the firms have 2 to 5 e-business websites. 13.6 percent of companies have 5 to 20 e-business website and only 1.5 percent of companies have more than 20 websites for e-business purposes.

Table 4.1 also illustrates that 3.7 percent of the firms have no partners for their e-business activities. These firms are not disqualified from the study since they have a part of their activities in electronic format and at the same time they have partners in their other activities. For example in their offline sales they have formed partnership with distribution companies which have no contribution in their online direct sales. Thus, the managers of these firms have a sound understanding of both concepts of e-business and partnership and provided researcher with quality answers.

Among the respondents, 16.7 percent are reported to have only one partner for e-business activities. 40.4 percent of the respondents have 2 to 5 partners for their e-business activities. This section forms the largest section of the samples. 25.6 percent of the firms are reported to have between 5 and 20 partners, 9.9 percent have 20 to 100 partners and 3.7 percent have more than 100 partners. Examples of the last category are e-payment and logistic firms or firms with products or services which fit into a good variety of businesses.

Table 4-2 presents a statistical review of industries in which respondents are working at. Although naturally many of them are from IT related but yet more than half of the participants are from other industries as illustrated by this table. Within IT related industries there are companies of mobile, telecommunication, graphic design, web design, software, and IT hardware which together made up around 43 percent of the samples. Electrical and Electronics related firms made up another 10 percent. Education, Banking and Financial Services, Consultancies, Industrial Services, and Trades each has above 5 percent of participants and the rest of the industry have less than 5 percent of the representatives involved in this study.

Table 4-2: Summary of Industries Covered in the Survey (N=324)

Parameter	Number	Percentage
IT related	139	42.9
Education	24	7.4
Banking / Financial Services	23	7.1
Food and Agriculture	16	4.9
Logistics and Transportation	11	3.4
Medical related	13	4.0
Electrical and Electronics	32	9.9
Trades	19	5.9
Consultancy / Industrial Services	21	6.5
Petrochemical	4	1.2
Media	16	4.9
Car / Auto related industries	5	1.5
Toys	1	0.3

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4.2.2 Descriptive Analysis of Variables

Table 4.3 reflects descriptive statistics of the independent variables. Technical and IT support firms possess a mean of 3.77 which is the highest among the components. E-traffic generators and e-banking services also have values close to 3.76. It shows that the participants have perceived these components as the most important components of a successful alliance for e-business activities. Legal and governance component has the lowest mean value which implies that the participants have perceived a lower importance for this component for e-business partnerships. This shows a general tendency of the firms to keep themselves independent and would show a hesitation to be controlled by a third party. As mentioned in the literature review, independence of firms is one of the aspects that alliance is seeking and instead of a third party, governance is sometimes taken care of by a committee of representatives or the dominant firm of the partnership.

Looking into the standard deviation column reveals that the largest value belongs to e-solution providers' chain. This means the perception of Malaysian MSC managers about the necessity of partnership with other providers of complementary products for their product is the least consistent. While some producers put more value on "one stop centre in house" philosophy, some others believe in the value of partnership for providing specialised solutions for customers. In the pilot test phase, one of the providers mentioned that: "if our firm trusts too much on the complementarity of other firms' products for its product, when other partners get strong enough, there is always the risk of looking out for our replacement. That is even more serious if there is a provider from China to replace our product in the network." This statement shows why many believe in focus and concentration in the area of solution development, yet some others are not so comfortable with the idea of becoming a ring in a chain of solution providers. However as it is explained later in this chapter, the correlation between this factor and success of the partnership is strong enough and this explains that although the importance of this factor is not as well agreed as other factors, its influence on the success of the partnership is well supported.

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Table 4-3: Descriptive Statistics of Independent Variable

Variables	N	Mean	Std. Dev.	Variance	Skewness	Kurtosis
e-traffic generators	324	3.7642	.79407	.631	-1.002	.768
e-solution providers	324	2.8679	1.19745	1.434	.233	-1.384
Common market firms	324	3.5204	.78260	.612	-.866	.668
Technical and IT	324	3.7747	.95909	.920	-1.078	.268
Legal and governance	324	1.9062	.75103	.564	1.256	2.375
Logistics	324	3.5309	.77956	.608	-.534	.269
e-banking	324	3.7599	.87793	.771	-1.117	.796

Table 4-4 reflects descriptive statistics of dependent variables. In this table, all of the means are above median. However, certainty and market power are the most perceived important aspects of a successful alliance with a value of respectively 3.78 and 3.71 while intangible outputs are the least important measure of a successful alliance for e-business activities with a mean of 3.48.

Table 4-4: Descriptive Statistics of Dependant Variable

	N	Mean	Std. Dev.	Variance	Skewness	Kurtosis
Certainty	324	3.7124	.85067	.724	-1.352	1.094
Market Power	324	3.7862	.87078	.758	-1.682	1.961
Operation	324	3.6831	.62339	.389	-1.274	2.789
Intangible	324	3.4809	.79379	.630	-1.053	1.206

In this table, the largest standard deviation belongs to market power. This implies that participants of the study had least consistency in valuing the effect of a successful partnership with described components on the market power of their firm. This means while some would believe in the value of partners for enhancing their market power, some others are not so confident in gaining market power with the practice of selecting the right category of partners. This might be due to the current market power of the firms. It seems natural that larger firms with greater existing market power would score this parameter significantly lower than those of lower

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existing market power. This becomes even more obvious if the central company is the market leader or multinational corporations, or looking for partners in areas which are less related to the market size.

4.3 Test of Normal Distribution

For test of Normality, this study uses Skew Index (SI) and Kurtosis Index (KI) measures (Kline, 2011). If sample size is less than 30, then the numerical tests would be less useful and if the sample size is larger than 1000, then the tests would be too sensitive. In both cases, graphical analysis of normal distribution have to be utilised (Hair et al., 2010). As the sample size for this study is larger than 30 and smaller than 1000 for the test of normality, numerical analysis will be sufficient.

For the data collected in this research, N=324 and Mean is presented in Tables 4.3 and 4.4 for each of the dependent and independent variables. The calculation results for SI and KI are presented in Table 4.5.

Table 4-5: Calculation of SI and KI for Normal Distribution Test (N=324)

Variable	Mean	SI	KI
IV			
e-traffic generators	3.764198	-0.9972	0.737569
e-solution providers	2.867901	0.231766	-1.38083
common market firms	3.52037	-0.86186	0.639429
Technical and IT	3.774691	-1.07276	0.245753
legal and governance	1.906173	1.249959	2.32001
Logistics	3.530864	-0.53134	0.246854
e-banking	3.759877	-1.1123	0.76502
DV			
Certainty	3.712438	-1.34608	1.061745
Market Power	3.786759	-1.67374	1.910337
Operation	3.683056	-1.26763	2.721646
Intangible	3.480864	-1.04816	1.169451

As illustrated in this table, the absolute value for all of the SI measures are less than 3 and the absolute value for all of the KI measures are less than 8 and thus according to Kline (2011) none of the variables are in extreme distribution and the distribution for all of them would be considered as close to normal distribution.

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4.4   Exploratory Factor Analysis

This section looks into factors which can refine the measurement instrument by testing the items and their consistency with the theory expectations via exploratory factor analysis. The Principal Component Extraction as well as Varimax Rotation method are used for the purpose of exploratory factor analysis. As mentioned in the previous chapter, the Kaiser-Meyer-Olkin measure of sample adequacy (KMO) should be greater than 0.8 and in the Bartlett's test of Sphericity, p-value should be lower than 0.05 to be significant. As shown in Table 4-6 KMO is 0.879 and thus the partial correlations of variables are appropriate for the analysis to progress. P-value of Bartlett's test of Sphericity is 0.000 which is significantly small and shows that correlation matrix is not an identity matrix and thus is appropriate.

Table 4-6: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.879
Bartlett's Test of Sphericity	Approx. Chi-Square	14050.040
	df	1711
	Sig.	.000

Cumulative percentage of "Extraction Sums of Squared Loadings" for "Total Variance Explained" is 73.607 which satisfy the condition of being greater than 0.50. Thus the proportion of total variance in all the variables which is accounted for by identified factors is adequate.

Table 4-7 shows Rotated Component Matrix. Due to the results of this table, items are measuring correct factors except for two items of risk and uncertainty factor. These items need to be eliminated and this is in-line with the results that are obtained from fitting measurement model which will be presented in the next section.

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Table 4-7: Rotated Component Matrix (a)

	Component											
	1	2	3	4	5	6	7	8	9	10	11	12
Com4	.925											
Com3	.923											
Com2	.897											
Com1	.891											
Com5	.860											
Marketing4		.794										
Marketing1		.779										
Marketing2		.755										
Marketing3		.750										
Marketing7		.724										
Marketing5		.722										
Marketing6		.690										
PerfCost2			.807									
PerfCost3			.746									
PerfCost1			.729									
PerfCost5			.686									
PerfCost6			.683									
PerfCost4			.622									
Trafic5				.833								
Trafic4				.784								
Trafic2				.754								
Trafic3				.740								
Trafic1				.702								
Legal2					.871							
Legal3					.866							
Legal5					.853							
Legal4					.834							
Legal1					.798							
Logistic5						.849						
Logistic4						.817						
Logistic3						.807						
Logistic2						.719						
Logistic1						.671						
STM2							.757					
STM5							.756					
STM3							.688					
STM1							.662					
STM4							.661					
EBank5								.888				
EBank4								.883				
EBank1								.855				
EBank3								.523				
EBank2								.489				
IT2									.837			
IT5									.808			

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IT4									.793		
IT3									.604		
IT1									.529		
RU4										.677	
RU1										.612	
RU3										.610	
RU2										.605	
Intang1											.635
Intang2											.616
Intang4											.551
Intang3											.544
Intang5											.481
RU6											.820
RU5											.789

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalisation.
a Rotation converged in 7 iterations.

4.5 Validity and Reliability of Measures

4.5.1.1 Confirmatory Factor Analysis of Constructs

In this section, first we discuss and analyse factor loadings for each of the constructs. With this test, items will be evaluated in terms of validity. All factor loadings should be higher than 0.5. For each Construct with the help of AMOS software, a model is built to test the Factor Loadings independently. The result is illustrated in the **Table 4-8**. As shown in this table, Factor Loadings range from 0.54 to 0.94 and thus the condition is met for all of the items.

Table 4-8: Factor Loadings for Independent Constructs

Construct	Factor Loading
e-Solution Providers	
Item 1	0.87
Item 2	0.90
Item 3	0.91
Item 4	0.94
Item 5	0.85
e-traffic generators	
Item 1	0.66
Item 2	0.81
Item 3	0.82
Item 4	0.88
Item 5	0.84
Common Market Firms	
Item 1	0.78

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	Factor Loading
Item 2	0.86
Item 3	0.80
Item 4	0.60
Item 5	0.69
Technical and IT Support	
Item 1	0.54
Item 2	0.83
Item 3	0.58
Item 4	0.76
Item 5	0.80
Legal and Governance	
Item 1	0.77
Item 2	0.90
Item 3	0.88
Item 4	0.75
Item 5	0.82
e-Banking Support	
Item 1	0.86
Item 2	0.57
Item 3	0.57
Item 4	0.94
Item 5	0.87
Logistic Providers	
Item 1	0.71
Item 2	0.72
Item 3	0.80
Item 4	0.86
Item 5	0.85

Since none of the factor loadings is lower than 0.5 in consideration of constructs independently, no modification is required for the items of independent variables.

Same procedure is applied to dependent variables. **Table 4-9** presents the results of this test.

Table 4-9: Factor Loadings for Dependent Constructs

Construct	Factor Loading
Risk Reduction	
Item 1	0.80
Item 2	0.72
Item 3	0.63
Item 4	0.72
Item 5	0.64
Item 6	0.57

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Construct	Factor Loading
Operational Cost and Performance	
Item 1	0.67
Item 2	0.83
Item 3	0.77
Item 4	0.61
Item 5	0.82
Item 6	0.81
Market Power	
Item 1	0.78
Item 2	0.75
Item 3	0.71
Item 4	0.82
Item 5	0.64
Item 6	0.60
Item 7	0.62
Intangible Outcomes	
Item 1	0.92
Item 2	0.85
Item 3	0.65
Item 4	0.58
Item 5	0.67

The result of this table shows that if considering dependent variables separately, then there is no need for any item to be eliminated as loadings for all the factors are greater than 0.5.

A measurement model based on the existing items is created and the amendments are considered until the measurement model shows consistency with the conditions of model fit.

4.5.1.2 Measurement Model Fit

A measurement model is created based on the constructs and the items available after the previous tests. The following tables show the measurement model factor loadings as well as fitting criteria values.

Table 4-10: Measurement Model Factor Loadings

Construct	Factor Loading
e-Solution Providers	
Item 1	.87
Item 2	.90
Item 3	.90

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Item 4	.94
Item 5	.85
e-traffic generators	
Item 1	.67
Item 2	.82
Item 3	.82
Item 4	.88
Item 5	.83
Common Market Firms	
Item 1	.79
Item 2	. 85
Item 3	.81
Item 4	.61
Item 5	.69
Technical and IT Support	
Item 1	.57
Item 2	.81
Item 3	.60
Item 4	.79
Item 5	.76
Legal and Governance	
Item 1	.77
Item 2	.90
Item 3	.88
Item 4	.74
Item 5	.82
Logistic Providers	
Item 1	.74
Item 2	.74
Item 3	.79
Item 4	.85
Item 5	.83
e-Banking Services	
Item 1	.86
Item 2	.60
Item 3	.59
Item 4	.93
Item 5	.87
Risk Reduction	
Item 1	.82
Item 2	.71
Item 3	.62
Item 4	.71
Item 5	.64
Item 6	.55
Operational Cost and Performance	
Item 1	.65
Item 2	.81

Item 3	.76
Item 4	.61
Item 5	.84
Item 6	.82
Market Power	
Item 1	.78
Item 2	.76
Item 3	.71
Item 4	.82
Item 5	.63
Item 6	.59
Item 7	.60
Intangible Outcomes	
Item 1	.85
Item 2	.78
Item 3	.73
Item 4	.66
Item 5	.74

This table shows a reduction in many of the factor loadings in comparison with the previous section in which constructs have been separately investigated. However, still none of the constructs has items with factor loadings below 0.5. Thus, there is no need to eliminate any factor or modify the model.

Now model fit will be investigated. Before modifying the model, parameters of model fit are as illustrated in the following table. In the standard column, the reference to compare with the value is shown.

Table 4-11: Fitness of Model Criteria

Criteria	Value	Reference Value
CMIN/ DF	2.37	< 2
GFI	0.72	> 0.9
CFI	0.84	> 0.9
TLI - rho2	0.82	> 0.9
IFI - Delta2	0.84	> 0.9
NFI - Delta1	0.75	> 0.9
RMR	0.07	< 0.08
RMSEA	0.07	< 0.08

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Based on the above table, only two of the criteria are met but for a model to be considered fit, we need to have at least five criteria meet the standard values. In order to make this happen, the measurement model needs to be amended.
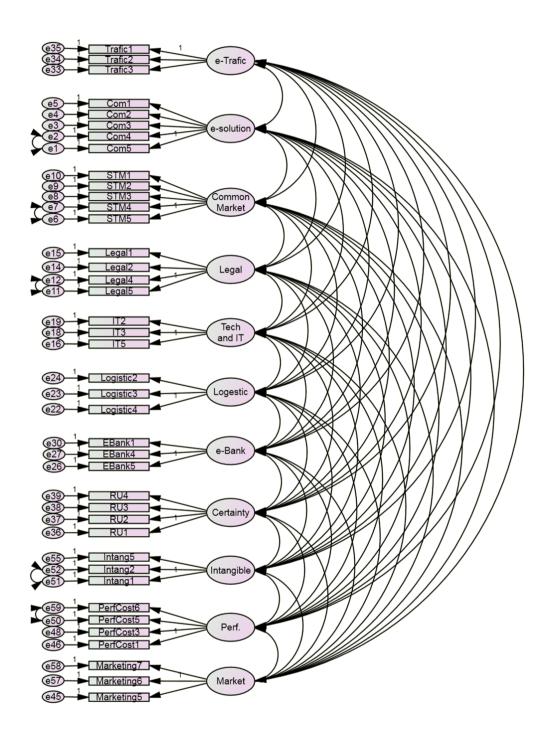
Figure 4.1: Amended Measurement Model

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In this model some of the items are eliminated and some covariances between items of the same construct are created. After making all of the necessary changes, loading factors as well as fitting criteria are checked again. The following tables will illustrate these measures.

The following table demonstrates new factor loadings after amendments made to measurement model.

Table 4-12: Amended Measurement Model

Construct	Factor Loading
e-Solution Providers	
Item 1	.89
Item 2	.91
Item 3	.92
Item 4	.91
Item 5	.79
e-traffic generators	
Item 1	.70
Item 2	.82
Item 3	.83
Common Market Firms	
Item 1	.79
Item 2	.85
Item 3	.82
Item 4	.57
Item 5	.66
Technical and IT Support	
Item 2	.84
Item 3	.58
Item 5	.80
Legal and Governance	
Item 1	.78
Item 2	.93
Item 4	.69
Item 5	.77
Logistic Providers	
Item 2	.72
Item 3	.83
Item 4	.82
e-Banking Services	
Item 1	.86
Item 4	.95
Item 5	.86
Risk Reduction	

Item 1	.85
Item 2	.72
Item 3	.63
Item 4	.72
Operational Cost and Performance	
Item 1	.60
Item 3	.76
Item 5	.82
Item 6	.79
Market Power	
Item 5	.69
Item 6	.69
Item 7	.66
Intangible Outcomes	
Item 1	.78
Item 2	.69
Item 5	.75

None of the factor loadings are lower than 0.5 and thus this criteria is met. Also many items are eliminated and just the remaining items are shown in this table. Based on this measurement model, the following table investigates the conditions of model fit.

Table 4-13: Measurement Model Fit Criteria (Warokka & Febrilia, 2015)

Criteria	Value	Reference Value
CMIN/ DF	1.33	< 2
GFI	0.88	> 0.9
CFI	0.97	> 0.9
TLI - rho2	0.97	> 0.9
IFI - Delta2	0.97	> 0.9
NFI - Delta1	0.89	> 0.9
RMR	0.04	< 0.08
RMSEA	0.03	< 0.08

According to **Table 4-13**, CMIN/DF is 1.33 which is less than 2, CFI, TLI, and IFI are all 0.97 which exceeds 0.9, RMR is 0.04 and RMSEA is 0.03 and both of them are smaller than 0.08 and thus 6 of the criteria meet the fit condition for the measurement model. Since the number of criteria required for model fit is 5, this model can be considered fit. Moreover, GFI is 0.88 and NFI is 0.89 which can be considered very close to 0.9 and shows further support for measurement model fit.

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4.5.1.3 Reliability Test

In this section reliability will be examined. To test the reliability the Composite Reliabilities (C.R.) is used. The condition is that CR for each and every construct needs to be greater than 0.7. According to **Table 4-14**, CR values range from 0.721 to 0.948. Since all of the CR values are greater than 0.7, the condition for reliability of measure for this study is met.

Table 4-14: Convergent and Discriminant Validity Factors

	CR	AVE	MSV	ASV
e-Traffic Generators	0.828	0.617	0.423	0.196
e-Solution Providers	0.948	0.784	0.116	0.044
Common Market Firms	0.860	0.556	0.348	0.232
Legal and Governance	0.873	0.636	0.137	0.047
Technical and IT Support	0.789	0.561	0.260	0.109
Logistics Support	0.834	0.627	0.325	0.131
e-Banking Providers	0.920	0.794	0.260	0.107
Certainty and Risk	0.822	0.539	0.490	0.228
Operational Performance	0.833	0.559	0.504	0.223
Market Power	0.721	0.511	0.023	0.006
Intangible Results	0.785	0.549	0.438	0.294

4.5.1.4 Convergent and Discriminant Validity Test

Two conditions should be true for Convergent Validity. 1) For each construct, CR should be greater than Average Variance Extractions (AVE), and 2) each AVE should also be greater than 0.5 (Chamsuk, Phimonsathien, & Fongsuwan, 2015). According to Table 4-14, AVEs range from 0.511 to 0.794 and thus the first condition is true. Also the table shows that for all of the constructs, CR is greater than AVE. Therefore Convergent Validity conditions are met for this study.

To test Discriminant Validity, both of Maximum Shared Squared Variance (MSV) and Average Shared Squared Variance (ASV) need to be smaller than AVE. As demonstrated by **Table 4-14**, these conditions are also met and thus Discriminant Validity can also be assumed.

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4.5.2 Structural Equation Modelling
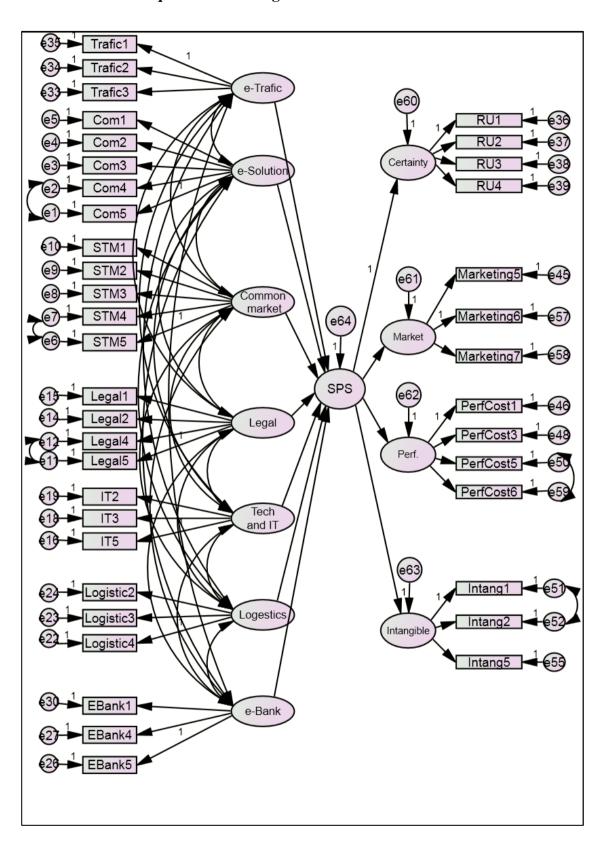
Figure 4.2: Structural Equation Model

4.5.3 Model's Test of Goodness of Fit

To test the goodness of fit, at least 5 of the model fit parameters should meet the standard reference criteria. **Table 4-15** illustrates the values for these criteria.

Table 4-15: Test of Fitness for Structural Model

Criteria	Value	Reference Value
CMIN/ DF	1.33	< 2
GFI	0.88	> 0.9
CFI	0.97	> 0.9
TLI - rho2	0.97	> 0.9
IFI - Delta2	0.97	> 0.9
NFI - Delta1	0.89	> 0.9
RMR	0.05	< 0.08
RMSEA	0.03	< 0.08

Table 4-15 shows that 6 of the fitting criteria including minimum discrepancy (CMIN/DF), Comparative Fit Index (CFI) , Tucker-Lewis Index (TLI), Incremental Fit Index (IFI), Root Mean Square Residual (RMR), and Root Mean Square Error of Approximation (RMSEA) meet the conditions for model fitness. Also Goodness of Fit Index (GFI) and Normal Fit Index (NFI) are very close to meet the conditions. Since more than 5 criteria meet the conditions of model fitness, we can consider this model fit.

In terms of R^2, SEM examines "Squared Multiple Correlations". In this research, this measure for success of electronic business alliance is equal to 0.89 which shows that in this model, variance of success is 89% determined by proposed components which are its predictors for this model.

4.5.4 Testing Hypotheses

Based on the structural equation model, regression weighs should be investigated in order to test the main hypotheses. **Table 4-16** shows the regression weights for the default model. Except for Legal Supports, all of the regression weights are significant with the critical ratio test considering the criteria of $p < 0.05$.

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The result thus shows that the necessity of legal and governance support firms as partners are not well supported as a critical component of e-business alliance.

Table 4-16: Regression Weights: (Group Number 1 - Default Model)

			Estimate	S.E.	C.R.	P
success	<---	e-Bank	.19	.04	4.82	***
success	<---	Logestics	.18	.05	3.32	***
success	<---	Tech_and IT	.13	.04	3.05	.00
success	<---	Legal and Governance	.02	.05	.46	.64
success	<---	Common_ market	.46	.08	5.92	***
success	<---	e-Solution	.08	.03	2.46	.01
success	<---	e-Trafic	.37	.08	4.81	***

Table 4-17 shows that for legal and governance, standardised regression weight is only 0.02 which again shows insignificance of the construct in the partnership. However other standardised regression weights are between 0.10 and 0.40.

Table 4-17: Standardised Regression Weights: (Group Number 1 - Default Model)

			Estimate
Success	<---	e-Bank	.22
Success	<---	Logestics	.17
Success	<---	Tech_and IT	.15
Success	<---	Legal and Governance	.02
Success	<---	Common_ market	.40
Success	<---	e-Solution	.10
Success	<---	e-Trafic	.31

In the following pages, implication of these results for hypotheses of this study is investigated. The following statements are based on the results shown in Table 4-16 and Table 4-17.

Hypothesis 1: There is a significant positive association between partnership with e-traffic generators and success of alliance for e-business activities.

The results presented in Table 4-16 and Table 4-17 show that this hypothesis is supported (β =0.31, p <.05). Therefore, there is a significant positive association between partnership with e-traffic generators and success of alliance for e-business

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activities. This result implies that e-traffic generators can significantly increase the chance of success for e-business alliances.

Hypothesis 2: There is a significant positive association between partnership with e-solution providers' chain and success of alliance for e-business activities.

The results presented in Table 4-16 and Table 4-17 show that this hypothesis is supported (β =0.10, p <.05). Therefore there is a significant positive association between partnership with e-solution providers' chain and success of alliance for e-business activities. This result implies that having firms which provide an e-solution for customers in a partnership can significantly increase the chance of success for e-business alliances.

Hypothesis 3: There is a significant positive association between partnership with firms with common market and success of alliance for e-business activities.

The results presented in Table 4-16 and Table 4-17 show that this hypothesis is supported (β =0.40, p <.05). Therefore there is a significant positive association between partnership with firms with common market and the success of an alliance for e-business activities. This result implies that partnership with firms with common market can increase the chance of success for e-business alliances.

Hypothesis 4: There is a significant positive association between partnership with technical and IT support firms and success of alliance for e-business activities.

The results presented in Table 4-16 and Table 4-17 show that this hypothesis is supported (β =0.15, p <.05). Therefore there is a significant positive association between partnership with technical and IT support firms and the success of an alliance for e-business activities. This result implies that technical and IT support firms can significantly increase the chance of success for e-business alliances.

Hypothesis 5: There is a significant positive association between partnership with legal and governance support firms and success of alliance for e-business activities.

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The results presented in Table 4-16 and Table 4-17 show that this hypothesis is not supported (β =0.02, p >.05). Therefore there is no significant association between partnership with legal and governance support firms and the success of an alliance for e-business activities. This result implies that legal and governance support firms do not increase the chance of success for e-business alliances.

Hypothesis 6: There is a significant positive association between partnership with logistics support firms and success of alliance for e-business activities.

The results presented in Table 4-16 and Table 4-17 show that this hypothesis is supported (β =0.17, p <.05). Therefore, there is a significant positive association between partnership with logistics support firms and the success of an alliance for e-business activities. This result implies that partnership with logistics support firms can significantly increase the chance of success for e-business alliances.

Hypothesis 7: There is a significant positive association between partnership with e-banking support organisations and success of alliance for e-business activities.

The results presented in Table 4-16 and Table 4-17 show that this hypothesis is supported (β =0.22, p <.05). Therefore there is a significant positive association between partnership with e-banking support organisations and success of alliance for e-business activities. This result implies that partnership with e-banking support organisations can significantly increase the chance of success for e-business alliances.

Based on the presented discussions, 6 out of 7 main hypotheses are supported by this research. To test the sub hypotheses, a deeper study is carried out to examine the relation between independent variables and dimensions of the dependent variable. Based on this analysis, the results shown in Table 4-18 are extracted. There are seven independent variables and four dependent variable measures which together form 28 sub-hypotheses. The results of Table 4-18 is used to examine these sub-hypotheses.

Table 4-18: Regression Weights (Group Number 1 – Default Model)

			Estim ate	Standardise Estimate	S.E.	C.R.	P
Certainty	<---	e-Trafic	.31	.20	.11	2.84	.00
Certainty	<---	e-solution	.10	.10	.05	2.11	.04
Certainty	<---	Common_ Market	.44	.29	.11	4.03	***
Certainty	<---	tech_and IT	.20	.19	.06	3.18	.00
Certainty	<---	Legal	.10	.07	.07	1.35	.18
Certainty	<---	Logestic	.14	.10	.08	1.69	.09
Certainty	<---	e-Bank	.27	.25	.06	4.70	***
Perf.	<---	e-Trafic	.23	.32	.06	4.05	***
Perf.	<---	e-solution	.00	.00	.02	-.07	.94
Perf.	<---	Common_ Market	.21	.30	.06	3.85	***
Perf.	<---	tech_and IT	.01	.02	.03	.39	.70
Perf.	<---	Legal	.03	.05	.04	.94	.35
Perf.	<---	Logestic	.18	.28	.04	4.17	***
Perf.	<---	e-Bank	.04	.09	.03	1.56	.12
Marketing	<---	e-Trafic	.07	.07	.12	.64	.52
Marketing	<---	e-solution	.05	.08	.05	1.07	.28
Marketing	<---	Common_ Market	-.11	-.10	.11	-.95	.34
Marketing	<---	tech_and IT	.02	.03	.07	.32	.75
Marketing	←-	Legal	.03	.03	.08	.38	.70
Marketing	<---	Logestic	.00	.00	.09	.05	.96
Marketing	<---	e-Bank	.10	.13	.06	1.66	.10
Intangible	<---	e-Trafic	.31	.27	.08	3.77	***
Intangible	<---	e-solution	.09	.12	.03	2.44	.01
Intangible	<---	Common_ Market	.45	.40	.08	5.35	***
Intangible	<---	tech_and IT	.12	.15	.05	2.53	.01
Intangible	←-	Legal	-.03	-.03	.05	-.61	.54
Intangible	<---	Logestic	.08	.09	.06	1.39	.16
Intangible	<---	e-Bank	.15	.19	.04	3.54	***

H5.a, H5.b, H5.c, H5d: As expected from the analysis of main hypotheses, none of the sub-hypotheses formed to test the relation of legal and governance component and success measures are supported. The p values for this component range from 0.18 to 0.7 and all of them are larger than 0.05 and thus would not support the hypotheses.

Meanwhile, the remaining 24 hypotheses, half of them are well supported by the research whereas, the other half are not strong enough to be supported.

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H1.a: E-traffic generator component shows a significant relation with certainty and risk reduction dimension of success with a p-value close to 0 and standard β of 0.20, suggesting that having e-traffic generators in an alliance will decrease the business risk and market uncertainty for partners.

H1.b: E-traffic generator component shows insignificant relation with market power dimension of success with a p-value of 0.52 and standard β of 0.07 suggesting that having e-traffic generators in an alliance will not significantly increase the market power of partners in the alliance.

H1.c: E-traffic generator component shows a significant relation with operational performance and cost efficiency dimension of success with a p-value of 0 and standard β of 0.32, suggesting that having e-traffic generators in an alliance will increase operational performance and cost efficiency for partners.

H1.d: E-traffic generator component shows a significant relation with intangible dimension of success with a p-value of 0 and standard β of 0.27, suggesting that having e-traffic generators in an alliance will improve intangible outcomes of business for partners.

H2.a: E-solution providers' chain component shows a significant relation with certainty dimension of success with a p-value of 0.04 and standard β of 0.10, suggesting that having e-solution providers chain in an alliance will reduce business risk and uncertainty for partners.

H2.b: E-solution providers' chain component shows an insignificant relation with market power dimension of success with a p-value of 0.28 and standard β of 0.08, suggesting that having e-solution providers chain in an alliance will not significantly improve the market power of partners.

H2.c: E-solution providers' chain component shows an insignificant relation with operational performance and cost efficiency dimension of success with a p-value of 0.94 and standard β of 0, suggesting that having e-solution providers chain

in an alliance will not significantly improve the operational performance and cost efficiency of partners.

H2.d: E-solution providers' chain component shows a significant relation with intangible dimension of success with a p-value of 0.01 and standard β of 0.12, suggesting that having e-solution providers chain in an alliance will improve the intangible outcomes of business for partners.

H3.a: "Firms with common target market" component shows a significant relation with certainty and risk reduction dimension of success with a p-value of 0.00 and standard β of 0.29, suggesting that having a firm with common target market in an alliance will reduce the uncertainty and risk of business for partners.

H3.b: "Firms with common target market" component shows an insignificant relation with market power dimension of success with a p-value of 0.34 and standard β of -0.10, suggesting that having a firm with common target market in an alliance will not significantly improve the market power for partners.

H3.c: "Firms with common target market" component shows a significant relation with operational performance and cost significant dimension of success with a p-value of 0.00 and standard β of 0.34, suggesting that having a firm with common target market in an alliance will improve the operational performance and cost efficiency for partners.

H3.d: "Firms with common target market" component shows a significant relation with intangible dimension of success with a p-value of 0.00 and standard β of 0.40, suggesting that having a firm with common target market in an alliance will improve the intangible outcomes for partners.

H4.a: IT and technical component shows a significant relation with certainty dimension of success with a p-value of 0.00 and standard β of 0.29, suggesting that having an IT and technical support firm in an alliance will decrease the uncertainty and risk for the partners.

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H4.b: IT and technical component shows an insignificant relation with market power dimension of success with a p-value of 0.75 and standard β of 0.03, suggesting that having an IT and technical support firm in an alliance will not significantly improve the market power of the partners.

H4.c: IT and technical component shows an insignificant relation with operational performance and cost efficiency dimension of success with a p-value of 0.70 and standard β of 0.02, suggesting that having an IT and technical support firm in an alliance will not significantly improve operational performance and cost efficiency for the partners.

H4.d: IT and technical component shows a significant relation with intangible dimension of success with a p-value of 0.01 and standard β of 0.15, suggesting that having an IT and technical support firm in an alliance will improve intangible outcomes for the partners.

H6.a: Logistics support component shows an insignificant relation with certainty dimension of success with a p-value of 0.09 and standard β of 0.10, suggesting that having a logistics support firm in an alliance will not significantly improve certainty for the partners.

H6.b: Logistics support component shows an insignificant relation with market power dimension of success with a p-value of 0.96 and standard β of 0.00, suggesting that having a logistics support firm in an alliance will not significantly improve market power for the partners.

H6.c: Logistics support component shows a significant relation with operational performance and cost efficiency dimension of success with a p-value of 0.00 and standard β of 0.28, suggesting that having a logistics support firm in an alliance will improve operational performance and cost efficiency for the partners.

H6.d: Logistics support component shows an insignificant relation with intangible dimension of success with a p-value of 0.16 and standard β of 0.09,

suggesting that having a logistics support firm in an alliance will not significantly improve intangible outcomes for the partners.

H7.a: E-banking support component shows a significant relation with certainty dimension of success with a p-value of 0.00 and standard β of 0.25, suggesting that having an E-banking support in an alliance will improve certainty of business and reduce risk for the partners.

H7.b: E-banking support component shows an insignificant relation with market power dimension of success with a p-value of 0.10 and standard β of 0.13, suggesting that having an E-banking support in an alliance will not significantly improve market power of the partners.

H7.c: E-banking support component shows an insignificant relation with operational performance and cost efficiency dimension of success with a p-value of 0.12 and standard β of 0.09, suggesting that having an E-banking support in an alliance will not significantly improve operational performance and cost efficiency of business for the partners.

H7.d: E-banking support component shows a significant relation with intangible dimension of success with a p-value of 0.00 and standard β of 0.19, suggesting that having an E-banking support in an alliance will improve intangible of business and reduce risk for the partners.

Figure 4.3 depicts the model used to extract these results as per described in Table 4-18 and the mentioned sub-hypothesis analysis.
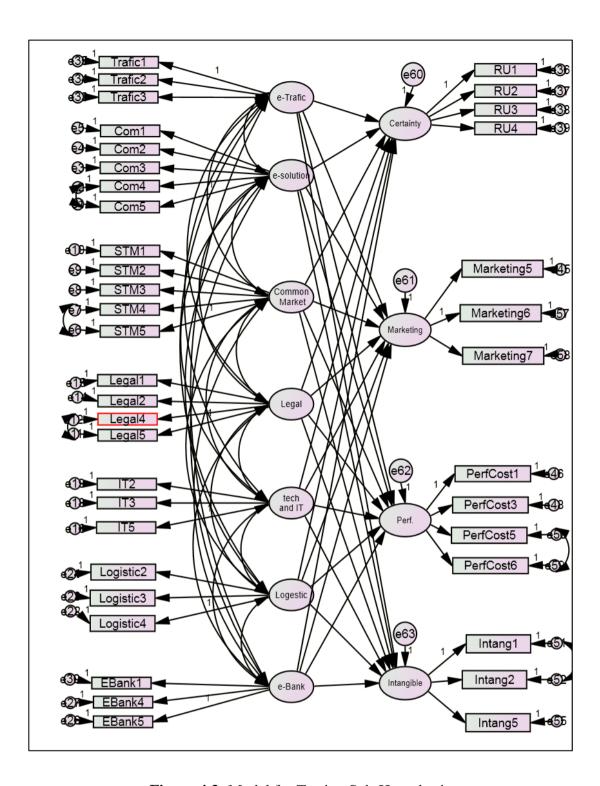
Figure 4.3: Model for Testing Sub-Hypothesis

4.5.5   Summary of Data Analysis

The results show in general that out of 7 components, 6 are showing significant positive relation with success of partnership. Partnership with a firm to handle legal and governance support seems not to have a significant relation with success and e-traffic generators, e-solution providers, firms with common market, IT and technical support firms, logistics supports, and e-banking supports are showing significant positive relation with success of partnership. This is in line with further analysis which shows no significant relation between legal and governance component and dimensions of success when examined separately.

A deeper evaluation also provides us with more precise information. None of the partnership components shows a significant relation with market power of the alliance. This is also in line with non-significant relation between success and market power due to high p-value which suggests that participants of this study do not consider market power as one of the indicators of a successful e-business alliance. This means that success of an e-business alliance should be measured by three dimensions namely intangible outcomes (like learning and cultural outcomes), performance and cost efficiency, and risk reduction. Mentioned analysis leaves out 6 components and 3 success dimensions and thus, suggests 18 sub-hypothesis to be examined.

Certainty and reduction of risk are not significantly influenced by existence of logistics support firms in the alliance. However, 5 other components namely e-traffic generators, e-solution providers, firms with common target market, technical and IT support firms, and e-banking support organisations, can significantly improve business certainty in and e-business alliance.

Likewise, intangible outcomes of an alliance are not significantly influenced by existence of logistics support firms. Yet, 5 other components namely e-traffic generators, e-solution providers, firms with common target market, technical and IT support firms and e-banking support organisations, can significantly improve intangible outcomes in and e-business alliance.

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Unlike 2 other dimensions, operational performance and cost efficiency measure of e-business alliance success are influenced significantly by only a half of the components namely firms with common market, e-traffic generators, and logistics support. This means that e-banking support firms, e-solution provider partners, and technical and IT support firms cannot significantly improve this success dimension if included in a partnership.

In addition to the above results, the research reveals that for e-business alliances, almost 0.89 percent of variance for success is explained by the independent variables of the study model.

The following table provides a summary of results for testing all hypothesis and sub-hypothesis.

Table 4-19: Results of hypothesis and sub-hypothesis testing

Hypothesis	β	P-Value	Result
H1	0.31	p <.05	Supported
H1.a	0.20	p <.05	Supported
H1.b	0.07	p >.05	Not Supported
H1.c	0.32	P <0.5	Supported
H1.d	0.27	P <0.5	Supported
H2	0.10	p <.05	Supported
H2.a	0.10	p <.05	Supported
H2.b	0.08	p <.05	Supported
H2.c	0	p >.05	Not Supported
H2.d	0.12	p <.05	Supported
H3	0.40	p <.05	Supported
H3.a	0.29	p <.05	Supported
H3.b	-0.10	p >.05	Not Supported
H3.c	0.34	p <.05	Supported
H3.d	0.40	p <.05	Supported

H4	0.15	p <.05	Supported
H4.a	0.29	p <.05	Supported
H4.b	0.03	p >.05	Not Supported
H4.c	0.02	p >.05	Not Supported
H4.d	0.15	p <.05	Supported
H5	0.02	p >.05	Not Supported
H5.a	0.07	p >.05	Not Supported
H5.b	0.03	p >.05	Not Supported
H5.c	0.05	p >.05	Not Supported
H5.d	-0.03	p >.05	Not Supported
H6	0.17	p <.05	Supported
H6.a	0.10	p >.05	Not Supported
H6.b	0.00	p >.05	Not Supported
H6.c	0.28	p <.05	Supported
H6.d	0.09	p >.05	Not Supported
H7	0.22	p <.05	Supported
H7.a	0.25	p <.05	Supported
H7.b	0.13	p >.05	Not Supported
H7.c	0.09	p >.05	Not Supported
H7.d	0.19	p <.05	Supported

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CHAPTER 5
DISCUSSIONS AND CONCLUSIONS

5.1   Introduction

This chapter discusses the findings of the entire research. It investigates the extent which the research objectives are met. It also discusses the research and managerial implications of this study. Finally limitations of the research and recommendations and opportunities for further researches will be discussed.

5.2   Summary of Hypotheses and Findings

After identification of the initial model, the measurement model is inspected for validity and reliability of the measurement instruments and this stage resulted in some modifications to better fit the measurement model. After that, the Structural Equation Model is also built and refined to meet the condition of model fit. This model provides the researcher with an opportunity to test the relationships between components and dimensions of a successful electronic business alliance . The main and sub hypothesis are tested using SEM and AMOS. Initially 7 components are found as the building blocks of an alliance for e-business activities namely e-traffic generators, e-solution providers, firms with common target market, IT and technical support firms, legal and governance support firms, logistics support firms and e-banking and payment support organisations. Other than legal and governance support firms, the rest of the mentioned components have significantly important information on an electronic business alliance. As for dimensions of success in electronic alliance, 4 dimensions are identified: 1) risk reduction and business certainty, 2) market power, 3) intangible outcomes, and 4) operational performance and cost efficiency. Other than market power, the other 3 dimensions are found to be appropriate measures of the success of electronic business. Further analysis reveals that the relations which have either "legal and governance" component or "market power" are not significant. This leaves 6 independent variables and 3 dimensions which together form 18 sub-hypothesis. 13 of these sub-hypothesis are supported

while the other 5 are not supported. The following section discusses these results in more details.

5.3 Discussion of Research Findings

The results of this research produce conclusions which are consistent with many of the hypothesis and sub-hypotheses. This research finds that the success of a strategic alliance in the field of electronic business has a significant association with the presence of many components in the alliance. In this section, we discuss these relations one by one based on the results of the previous chapter as well as Chapter 3 to gain a proper insight of each part.

5.3.1 E-traffic Generators

This research supports the importance of e-traffic generators for the success of an e-business strategic alliance. These firms can create online visitors for other companies. An e-traffic generator can be a search engine, industrial portal, or even an ISP. The findings of this research are in line with Cinca et al. (2010); Delfmann et al. (2002); Y. Yang et al. (2006) findings. In short, e-traffic generators act as a gateway for e-business strategic alliance as they guide online customers towards the website in which an alliance is proposing its value. Without this component, the alliance will have difficulties in finding the right customers.

The dimensions of success for e-business strategic alliance reveals that e-traffic generators significantly improve the possibility of success in terms of certainty and reduction of risks, operational performance and cost reduction, and intangible outcomes.

In many e-business activities, the service is professional and technology is sophisticated. However, customers are not aware of the product or service. This is a great risk which can be diminished via an alliance with e-traffic generators. E-traffic generators have wide access to general or specialised customers. They usually have access to customer preference and visitors submit their enquiries and search for a solution via these websites. Partnership with e-traffic generators will guarantee

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access to customers and thus a better return on investment which will diminish uncertainty of the business.

Operational performance and cost efficiency in an online business can be obtained by specialisation and better utilisation of resources at hand. On the other hand, a large part of the e-business process includes access, collection, and the process of customer enquiries. Partnership with e-traffic generators websites will allow firms to outsource this part of the e-business process and focus on their main business activities. Resulted focus will lead to an improvement in their operational performance and cost efficiency.

Intangible outcomes of an alliance are in different forms including learning, culture, accumulated work skill, social capital, brand power, and so on. Partnership with an e-traffic generator will contribute to this dimension of success in several ways. First of all, with its access to pool of customers, it will automatically improve the brand awareness of the alliance partners, and thus the brand power of firms in the alliance is expected to improve. Moreover, partners will have the opportunity to learn how to collect, handle and process the customer enquiries and furthermore learning outcome is also expected to be a part of having this component in the alliance.

5.3.2 E-solution Providers

This research supports the importance of e-solution providers to the success of an e-business strategic alliance. Together these firms provide a combination of products and services which can resolve the customers' problems and provide them with a comprehensive solution. The findings of this research are in line with the findings and recommendations of scholars such as Chatterjee (2004); Dai and Kauffman (2002a); Gebrekidan and Awuah (2002); Ghandour et al. (2004); Holmberg and Cummings (2009); Zhao (2006) . Thus, having firms with products which are relevant to the solution of the alliance subject is at the core of alliance formation. Specialised firms together build a comprehensive solution while each firm focuses on its product and service. This provides customers with solutions which sometimes involve services from different industries with the highest possible quality.

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The dimensions of success for e-business strategic alliance reveals that e-solution providers significantly improve the possibility for success in terms of certainty and reduction of risks and intangible outcomes while the results show no significant relation between having e-solution providers' chain of firms in the alliance and operational performance and cost reduction dimension of success for e-business strategic alliance.

Any business includes a certain risk and provides value to the customers with a profit higher than the normal rate of return for the business risk. The risk in production is due to the uncertainties and can be translated as the cost of business. However, partnership with other firms to provide a solution for the customers can be seen as sharing the risk and thus reducing the cost of business for each partner. Synergy, pooling resources, using the social connections of network and many other techniques provide each partner with the opportunity to diminish its risk of business.

Unlike supply chain based alliances, alliances for e-business activities are more often in horizontal form (Francalanci et al., 2001). Thus, partnership with firms in this format would not directly affect the internal processes of value creation for partners and therefore these alliances will not strongly influence the operational performance of the firm. Therefore if any, the effect of the e-business strategic alliance on the operational performance and cost efficiency of the firms will be indirect and through other factors. That would be the reason why this research does not find a significant relationship between having a chain of e-solution provider as partners and operational performance and cost reduction in other alliance firms.

Collaboration to provide a solution for customers results in a strong and customer centric network of firms which link their success to each other. This network provides a social capital for the firms involved. Moreover, collaboration between these firms needs a specific harmony since they co-present their products and services and thus their products and services need to be in a complete coherence. This coherence will be provided by alignment of different activities in marketing, design, production, and distribution procedures which will force the firms to improve the collaborative culture of the whole organisation. The result will be a higher level

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of cooperative culture in all of the companies involved. Furthermore, all of the activities which lead to the mentioned harmony will naturally provide the partners with learning experience due to the close co-operation in management and front line levels.

5.3.3 Firms with Common Market

This research supports the importance of partnership among firms with common market in order to achieve success in an e-business strategic alliance. These are firms that provide services and products for targeted customers of the alliance even though their products or services are not necessarily related to the solution that the strategic alliance is formed to provide for customers. Findings of this research are in line with the findings and recommendations of scholars such as Osterwalder and Pigneur (2002); Todeva and Knoke (2005). In short, the firms may be selected as partners due to their strength in the target market as a support for the other alliance partners. This support can be in term of providing learning opportunities about the targeted customers, adding to the trust among customers in the alliance, adding to the brand power of alliance in the targeted market and so on.

The dimensions of success for e-business strategic alliance reveals that firms with common target market significantly improve the possibility of success in terms of certainty and reduction of risks, operational performance and cost reduction, and intangible outcomes.

One of the most important risks that a firm may encounter in its business is investing in services or production of goods without a profitable return on investment. This risk can be reduced by partnership with firms which target the same segment of market as the e-business strategic alliance. These firms provide the alliance with the targeted customers. The volume of this firm's customers and their trust in its brand would act as a good leverage for the alliance to gain a quality access to the relevant customers and thus achieve higher financial results with lower risk by having a greater certainty.

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Firms with common target market have access to information about the customers which are in the target market of alliance. This information is crucial when it reflects the preferences of the customer and helps the alliance members to align and adjust their operation especially in product or service design phase of production. By tailoring the production to customers' preferences, partners can avoid unnecessary cost and focus on the real needs of the market and thus improve cost efficiency of their operations.

As mentioned before, partnership with firms with a common market can add to the knowledge of partners about the market, customers, their behaviour and preferences. These are all samples of intangible outcomes which can be enhanced by having this kind of partners in an alliance for e-business activities. Besides, they may be able to enhance the brand power and reputation of the alliance and add to the customers' trust in the alliance and the members of the partnership.

5.3.4 Technical and IT Support

This research supports the importance of technical and IT support firms for success of an e-business strategic alliance. These are firms which provide other members with technical support in terms of infrastructure, information, other necessary technologies and R&D activities. Findings of this research are in line with the findings and recommendations of scholars such as Bierly and Coombs (2004); Ghandour et al. (2004); Grover (2002); MacGibbon and Schumacher (2007). Therefore, in an e-business alliance, having a partner who is an IT and technical support provider helps other members to enjoy a professional platform for their activities. Moreover, having a common source of IT and technical support will help them to collaborate better as their information flow will be better aligned. It is also important to notice that technical is not limited to information technology. Outsourcing services in general and technical support in particular, also provides partners with a better focus on their specialised area of business.

Looking into the dimensions of success for e-business strategic alliance reveals that technical and IT support firms significantly improve the possibility of success in terms of certainty and reduction of risks as well as intangible outcomes.

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However, this research does not support the significance of the relationship between partnership with IT and technical support firms and the success of the alliance in terms of operational performance and cost reduction.

E-business is built on IT infrastructure and as such the failure of IT systems is a risk of losing the whole business altogether. There are several risks associated with IT support. Losing customer data, having slow website, having high downtime of servers, slow processing and even not having a user friendly website are some examples of these risks. In order to overcome many of these risks there is a need for a focused support and professional technical services together with a vast knowledge in the field. Hence, having a professional IT support provider company in the alliance will diminish a great deal of these risks and therefore leads to the success of the alliance.

For many electronic business firms, information technology works as a display and distribution channel. Although IT bridges the production line with the market, it is not a major factor for the operational processes in general. This can explain the insignificant relation between partnership with technical and IT support firms and operational and cost efficiency dimension of the strategic alliance success.

A major intangible outcome of most of the alliances is knowledge and thus the quality of knowledge in management and IT systems is a key indicator of this aspect of success for e-business strategic alliances. For online businesses, information technology is the basis for collecting and analysis of customer data which gives partners a higher hand in the competition. For example, understanding and predicting customer behaviour provide many firms such as google.com and amazon.com with a better opportunity to suggest relevant products or services. Therefore, having a reliable and professional IT system will provide firms and alliance with a great success in terms of learning process.

5.3.5 Legal and Governance Support

This research cannot support the importance of legal and governance supporting partners for success of an e-business strategic alliance. These firms

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provide partners with services such as contract alignment, conflict resolution services, and legal consultancies. This research cannot find any support that having these kinds of firms as partners for e-business strategic alliances can affect its success. One possible reason for this could be due to the different nature of firms in one e-business alliance. Unlike conventional alliances, in e-business alliances, the firms are diverse in terms of industry. This makes their legal issues different in nature. On the other hand in the industrial environment, many legal firms are specialised in giving services to a certain industry and therefore makes them unsuitable candidate for giving consultancies to other partners. Furthermore, legal issues are very sensitive and firms prefer to have freedom in selecting their own legal advisors rather than being bound to the alliance formalities. Moreover, there could be possible conflict between partners and would be diminished by control provided by contracts and a committee of representative which usually can perform conflict resolution services. Thus, having a new company in the partnership to provide these services would look unnecessary for many managers.

5.3.6 Logistics Support

This research supports the importance of logistics support partners to the success of an e-business strategic alliance. Findings of this research are in line with the findings and recommendations made by researchers such as: Aldin and Stahre (2003); Dai and Kauffman (2002a); Delfmann et al. (2002); Y. Yang et al. (2006). In other words, logistics services provide firms with professional services and ensure them safe and cost efficient delivery of product and as well as material from supplier to their point of production or service. Smooth supply chain management, together with trust of customers which enables firms to access new markets, are some of the benefits that an alliance can achieve by partnership with a logistics service provider.

The dimensions of success for e-business strategic alliance reveal that logistic service providers significantly improve the possibility of success in terms of operational performance and cost efficiency. However this research cannot find significant relation between partnership with logistics companies and success of e-

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business strategic alliances in terms of certainty and reduction of risks or intangible outcomes.

A great part of the operation is related to logistics in both inbound and outbound ends. Moreover, many logistics firms can also provide customer knowledge which can provide insight for design of products and services as well as packaging design and process. These are some of the facts explaining why partnering with a logistics support firm will positively affect operational success of the alliance.

Despite many of the related studies, this research does not support a positive effect for partnership with logistics support providers and risk reduction. It can be the result due to the uncertainty in quality of goods delivered by another partner. However this result may need further research to be justified or amended.

Logistics works along supply chain and is vertically directed. Thus the knowledge it carries does not directly aligned to horizontally directed e-business strategic alliance. This can be a reason for insignificance of partnership with such firms in successful achievement of intangible expected outcomes of strategic alliance for e-business purposes.

5.3.7   E-Payment Support

This research supports the importance of e-payment support firms for success of an e-business strategic alliance. These are firms which provide alliance customers and partners with easy, safe and efficient payment and money transaction services. Findings of this research are in line with the findings of the researchers such as Dai and Kauffman (2002a); Greenstein and Vasarhelyi (2001); Laffey (2009). E-payment providers ensure the customers the security of their data and enable standard and easy payment process. These factors make alliance more reliable and trustworthy for its clients and thus positively influence the success of the partnership.

The dimensions of success for e-business strategic alliance reveals that e-payment support firms significantly improve the possibility of success in terms of certainty and reduction of risks, as well as intangible outcomes. However, this

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research cannot support the relation between having an e-payment support firms in the alliance and operational performance and cost reduction aspect of strategic alliance success for e-business activities.

Without e-payment support there is a high risk of encountering financial transaction problem. Security risk, misplacement of user data and risk of incomplete transaction are some of these possible issues. Having a financial institute for handling e-payment will ensure both customers and partners that these risks will be eliminated or at least minimised. Since dealing with money creates financial responsibility, having a professional firm to handle this concern can minimise the problems.

E-payment support appears in the last section of the transaction and it is not directly linked to the internal operations of the firm or if connected its role is not as bold as logistics, technology and other aspects of the operation. Thus an insignificant relation between partnership with an e-payment provider and operational success of e-business strategic alliance is not far from expectation.

Clients' trust, brand power and customer knowledge are some of the intangible expected outcomes of an e-business strategic alliance. Partnership with a well-known e-payment provider institute can add to the clients' trust. Many of these institutes carry powerful brand names and having them as a partner in the alliance can transfer a part of their brand power to the alliance and hence to partners of the alliance. Although many financial institutes are bound to the confidentiality concern, yet having them as a part of the alliance means that a great deal of customer knowledge exists within the partnership and other partners will at least indirectly benefit from this knowledge.

5.4 Meeting Research Objectives:
5.4.1 Objective One

The first objective of this study is to find a value configuration model to describe value creation process in strategic alliances of e-business activities.

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This objective is met by developing a model based on "Value Shop" which is a value configuration suggested by Stabell and Fjeldstad (1998). All of the activities mentioned in value shop configuration are covered by the value creating activities of components suggested in this study. And the value creation activity of the components mentioned in this study can be explained by the value creation process mentioned in the value shop model. However, one of the components – common market firms – is not directly a part of value shop configuration and is added to the model while adapting it for e-business environment. Significance of this new component is then supported by the results of this research in Chapter 4.

5.4.2   Objective Two

The second objective of this study is to develop a model to assist companies in finding right type of companies as their partners in e-business activities.

This objective is also met by developing a model which is adopted based on the value shop configuration that consists of six components. These components together in a process explained by value shop create value for customers and alliance members. Components of this model which represent different types of potential partner firms are mapped on the value shop activities .Thus this model shows the part of any specific company can take on the partnership and the gaps which exist in the alliance to be filled with new partners. These components and the model are described in detail earlier in this chapter.

5.4.3   Objective Three

The third objective of this study is to determine factors which can be considered as success dimensions of alliance for e-business activities.

This objective is also met through a study of success factors and indicators in the e-business environment. Various indicators are categorised into four types among which three are supported to be true dimensions of success for e-business strategic alliance. These indicators together can be used as representatives of success and its

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measurement. Details about these three dimensions and their part in overall success are discussed in the previous sections of this research report.

5.5 Revised Model:

Based on the findings in Chapter 4, the initial model can be reconfigured as follows. Among the dimensions of the e-business alliance success, market power seems not to be a strong dimension. As shown in the results when testing the sub-hypotheses in Chapter 4, inclusion of none of the components of the alliance in the model used by this research are proven to have a strong association with this dimension of success and this shows the insignificance of this dimension as a measure for success of an alliance in the context of e-business as a mean to assess the appropriateness and importance of creating partnership with a certain type of company. This may be due to the fact that many of the market related factors are in nature more relevant to other success dimensions. For example, to enter international markets when taking as a success factor can be covered by risk reduction dimension as the risk of such entrance is the real concern of company managers. Another example is market power. It is greatly associated with customer satisfaction which is very much linked to the operational success dimension. Yet as another example, brand value which is another very important indicator of the market power is perceived as an item of intangible outcomes of a successful alliance formation. Thus, it seems that the market power cannot be seen as an independent dimension of success and based on the results of this study, is not perceived as a good factor for assessing the importance of alliance components for its success. Instead it may be perceived as a hidden dimension which is already presented by the other three dimension of success.

In the independent variables' side, the "Legal and Governance Support" element does not show a significant relation with success of a strategic alliance for e-business activities and thus it is eliminated in the revised model. The final model indicates that to create a successful e-business alliance, there is a need for six components namely e-traffic generator, e-solution provides, firms with common market, technical and IT support firms, logistics firms, and e-payment supporting

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institutes. The last three types would be considered as support firms. The model also suggests that in order to measure success, we need to measure three dimensions which are risk and uncertainty reduction, operational and cost efficiency and intangible expected outcomes of the alliance.
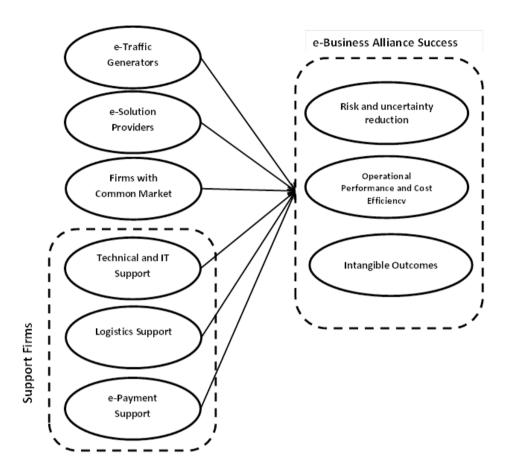

Figure 5.1: Revised Model

Based on the corrections made in the model and results of the research in Chapter 4, a new value configuration would be presented. In the model presented below, partners are mapped on components of value creation.
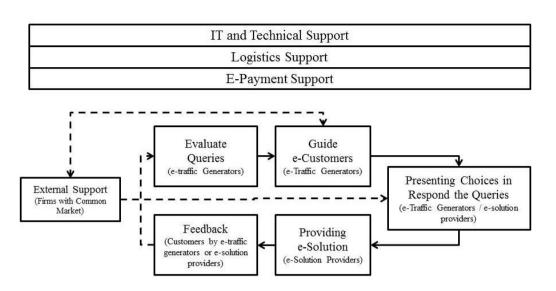
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Figure 5.2: Revised Value Configuration Model for E-Business Strategic Alliance

The value configuration model presented here should be useful in illustration of the process of value creation in strategic alliances as well as the role of each company type in this process. Finally, based on the process presented above, a structural configuration of components will look like **Figure 5.3**. In this figure while e-solution providers extract profit margin from the whole process, customers are guided toward them by e-traffic generators and somehow with firms with common market. Meanwhile, support firms including technical and IT support, logistics and e-payment support can provide services for all of the firms in the process of value creation. This model while being in simplistic form can be well utilised with the model presented earlier for a full comprehension of the process of value creation in e-business strategic alliance.
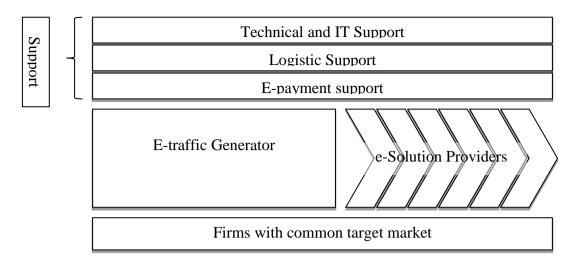
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Support	Technical and IT Support
	Logistic Support
	E-payment support

| E-traffic Generator | e-Solution Providers |

| Firms with common target market |

Figure 5.3: Structural Configuration of E-Business Strategic Alliance

5.6   Theoretical Implications

In the body of current literature, there is a comprehensive set of articles in search for characteristics of an appropriate partner for firms. Most of these articles are exploring conventional business. Literature concerning strategic alliances in electronic business area however is not as rich as conventional physical business area. Moreover, while many of the scholars have studied the characteristics of good partner, less attention has been paid to the structure of strategic alliances in the field of electronic business. Current study has contributed to the body of literature by trying to close these two major gaps. Firstly, the study extends the current available researches of strategic alliances in the field of electronic business. Secondly, it investigates components required for value creation in an e-business strategic alliance and thus further explores the appropriate structure of alliance in e-business area.

As this research has been conducted in the area of alliance and partnership, we may consider it as a development in Strategic Networks Theory. Any research to be considered in this area needs to contribute in answering the questions which Strategic Networking Area is bound to respond. These questions are "(1) why and how are strategic networks of firms formed? (2) What is the set of inter-firm relationships that allows firms to compete in the market place? (3) How is value created in networks?", and finally "(4) how do firms' differential position and

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relationship in networks affect their performance?" (Amit & Zott, 2001) Considering these questions, the present research can be considered as a development under the Strategic Network Theory.

Regarding the first question, this research has explored the need for strategic alliance formation in light of value creation process suggested by Value Shop configuration. Adopting this model and making relevant amendment to fit it in the area of e-business has addressed the "why" part of the first question. As the outcome of the research is a structural model with firm types as its components, it can also help in alliance formation and thus address the "how" part of the first question. Firms need to look into the types of the firms suggested by this model to find appropriate partners to help them build a comprehensive structure for delivering value to customers. Moreover, the study has explored the relationship between partnership with different firm types and success dimensions of an alliance. The study has described the theoretical backbone of allied firms' inter-relations based on Stabell's Value Shop model in order to address the second question. The third question is also answered by referring to the Value Shop model as it will describe in detail how the value is being created in this model. The study has gone deeper in the concept and mapped e-business components on the value shop and added one more component relevant to the context to the value configuration. Thus, the final model describes components and the process of value creation in a strategic network of firms in the context of electronic business. Firms' performance and its relation with partnership with each and every suggested component of the model is also investigated in an analysis for testing the sub-hypotheses of the research.

Another contribution of this research is regarding combination of the existing theories in finding a comprehensive measure for alliance success in the field of electronic business. While previous researches (mentioned in Chapter 2) are concerned about finding dimensions of success within boundaries of a certain theory, this research has combined the theories and suggested a set of measures which together would represent the success of an e-business strategic alliance.

5.7   Managerial Implications

This research provides a model which can work as a guideline for managers. As described in Chapter 2, the major problem of firms in alliance formation is to find a suitable partner. In this regard, they need to answer two major questions. First question is regarding their expectations from the partnership. The second question should be the role of the partners including their own companies in achieving these goals. They need to know how a partnership can help them to achieve their organisational goals and which partners can help them achieving these goals. The model developed in this research can help them have a better position in resolving these problems.

Regarding the expected outcomes of an alliance, the model categorises possible outcomes of an assumed alliance in three major categories of risk and uncertainty reduction, operational performance and cost efficiency and intangible outcomes. Managers need to figure out their actual needs and consider if the partnership can help them to satisfy these needs.

Managers can also use this model to obtain an eagle eye perspective of the partnership they are about to build or join. The proposed model describes what types of firms are required to have a successful e-business strategic alliance. The research provides them with an insight about how these types of firms can join a process of value creation and work together as a single entity. Having these insights, managers can identify their own role in the partnership and this will give them a better negotiation power and a better tool in decision making in the process of alliance formation. The model also will describe the roles to be filled by other partners and thus will help to go for the right partners and avoid unnecessary costs of building a wrong connection with firms with no contribution in achieving organisational goals.

Moreover, combining value creation system and expected outcomes and dimensions of success, managers can use the results described by sub-hypotheses of this study and prioritise partnership candidates based on the priority of their needs. After identifying the need of their company, they can use the results of this research as a basis to find the most relevant type of company to look for to fulfil to that

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specific need of the organisation. As mentioned earlier, some types of firms will not help in achieving specific goals. This means that partnership with these types of firms will be the last priority based on the expected alliance outcomes. Pairing of their organisational needs and partner types based on this model's outcomes, gives the managers a prioritised list of company types to look for. For example, if a company needs to improve in operational performance dimension, the results in chapter 4 and especially the regression estimates' presented in Table 4-18 suggests that partnership with logistics support and e-traffic generators are highly important while partnership with companies with complementary products would not be an asset in improving the success of this dimension.

5.8   Limitations of the Research

This research is conducted with considerations of time, resource, and geographical limitations of the researcher.

Data collection for the study is limited. Although Malaysia is a good example of developing countries, the results may not fully reflect general characteristics of business environment in all of the developing countries. Malaysian multi-racial aspects of cultural behaviour, as well as special governmental policies which may differ in other countries, suggests that this research can be conducted in other developing countries in order to be generalised. Furthermore, generalising the results of this research to developed and undeveloped countries may need even more considerations as the economic structure and forces of these countries are different from developing countries such as Malaysia and these differences may result in different e-business structure and behaviour.

Data for this research is limited to the questionnaire based on primary data which reflects perception of the respondents. Although various considerations are posed to ensure reliability and validity of the data collected, yet general perception is not as precise as data collected from financial and non-financial sources of the firms. Especially in the field of e-business, many firms are small and are not public yet. A secondary data set collected from firms would better provide a realistic insight for the study particularly if the data could be collected in a time series before and after

alliance formation. If the research could isolate other environmental effects, the research can produce a more precise model. However, due to time limit of the research in contrast with the time required to conduct such time-series research, unavailability of the financial data for many un-public companies, difficulties in isolating the effect of partnership from other economic factors resulting in company success, and un-clarity and difficulties in finding formation of new alliances in Malaysia made it impossible for the researcher to have this kind of comprehensive research method.

5.9   Recommendations for Future Research

Based on the limitations of the study and also the derived results from the data analysis, following recommendations can be considered for further studies.

A similar research in a wider geographical area, with data collected from different groups of countries, including developed, developing, and under-developed countries, may provide a more generalizable model for theoretical consideration. At least the model of this research can be re-examined for further confirmation in countries with different or similar characteristics to those of Malaysia.

Another recommendation would be conducting the research with secondary data in events before and after alliance formation to avoid possible bias of perception in measurement. Such research needs to find ways to isolate the effects of external and internal factors on business outcomes which are not directly due to partnership. Change in technology, management team, macro-economic effects and market preferences, are some of the effects which change during the time and can easily be mistaken by the alliance formation results.

Some of the results of this study, especially effect of partnership with logistic providers on risk reduction, may not be fully aligned with the findings of the researches in developed countries. Further researches may require focus on such results and further investigate the roots of such differences.

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5.10 Conclusions

This research attempts to create a better structural model for e-business strategic alliances. A comprehensive review of literature in the fields of e-business and strategic alliances as well as a review of value models helped in formation of an initial conceptual model for e-business strategic alliances. The model is put to test for confirmation of components and most of the components are supported and proven to have positive effect in the success of strategic alliance for e-business activities. These components are e-traffic generators, e-solution providers, common market firms, and three of the supporting components which are: logistics supports, IT and technical support and e-payment support.

One of the problems which this research had to overcome in its way to provide a useful model is the measurement of success for strategic alliances. Although many other scholars have published articles in measurement of success for strategic alliances, yet two gaps had to be covered in this study. First problem was regarding the theoretical basis of measurements. Each of the current literature is utilising success measures developed based on one of the theories relevant to the strategic alliances while the concept of strategic alliance has roots in several theories. This study identifies a set of measures with regards to these theories together in a single model to capture different aspects of success. Another problem is regarding the context of most of the current studies. The area of strategic alliances in the context of e-business is less covered in literature. Especially the success dimensions in this area have to be re-examined as the process of business in virtual environment is not exactly the same as conventional business environment. Four dimensions are extracted from the literature review and three of them are supported by data analysis. These dimensions include risk and uncertainty reduction, operational performance and cost efficiency, and improved intangible outcomes.

The presented model has many theoretical and practical implications. The results can be used as a basis for further development of literature in the study of the structure of electronic business strategic alliances. The value creation process and configuration of components in creation of value is discussed in this research which

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can help further developments in the area. For practical uses, the model provides a guideline for managers to identify best partners for their activities in their e-business activities. It helps them to find their own role in the process of value creation and identify gaps to be covered by partners for better serving the customers and gaining competitive edge. It also provides them with guides for measuring the success of the formed alliance for evaluation purposes.

Finally the results of this study need to be considered by looking into the limitations of the research for further studies.

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APPENDIX 1

QUESTIONNAIRE

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MULTIMEDIA ● UNIVERSITY
TM

Questionnaire

| **Study of Selecting Appropriate Partner Types**
to Form Successful Strategic E-Business Alliances |

While being one of the favourite strategies among e-business companies, strategic alliances fail very frequently. Success of the strategic alliances in e-business environment have been subject of many studies and through these studies, inappropriate partner selection have proven to be one of the most important reasons for failure of alliances. Thus a well-developed partner selection model will greatly decrease the risk of alliance failure.

E-Business is basically any business that is drawing a majority of its income from selling their products or service in an online format.

Strategic Alliance is a tailored business relationship bases on mutual openness, shared risks, and share rewards that yield a competitive advantage resulting in business performance greater than would be achieve by the firms individually.

E-Business Alliance is a strategic alliance between two or more companies aimed to perform e-business activities.

The purpose of this research is to study the required types of partners necessary for a successful strategic alliance to perform an e-business activity.

This questionnaire consists of four sections on individual demographic characteristics and various questions related to your ideas about alliances and e-business activities in general and in your organisation.

I hereby assure you that the responses collected from this survey will be kept confidential. If you need any clarifications or, if you have any recommendation, please feel free to contact me at the listed address and telephone number.

Thanks you very much for your participation and co-operation.
Amirpouyan B. Harandi
Email: Harandi@gmail.com   H/P: 0172699072

A. BUSINESS DETAILS

Please tick the box relevant to your answer for each question or fill in the blank.

1. Is any part of your company's activities in electronic format (e-Business)?   Yes ☐

   No ☐

2. Does your company have partner(s) performing e-Business?   Yes ☐

   No ☐

3. Is your company's main business in electronic format (e-Business)?   Yes ☐

   No ☐

4. Your Position:

   Senior Executive ☐ Manager ☐ General Manager ☐ Managing Director ☐

   Other ----------------

5. Industry of business: _____

6. Your Department: _____

7. Number of Business Partners to perform e-Business activities:

   0 ☐   1 ☐   2-5 ☐   5-20 ☐   20-100 ☐   more than 100 ☐

8. Number of websites owned by your company:

   0 ☐   1 ☐   2-5 ☐   5-20 ☐   20-100 ☐   more than 100 ☐

9. Number of e-commerce websites owned by your company:

   0 ☐   1 ☐   2-5 ☐   5-20 ☐   20-100 ☐   more than 100 ☐

B. COMPANY TYPES IN E-BUSINESS ALLIANCE

This section will ask about the importance of selecting a category of companies as a partner in an e-business alliance to form a successful partnership. Please tick the relevant answer according to your experience and knowledge. Please note that by alliance we mean **Strategic Alliance Formed to Perform E-Business Activity.**

Grades: 1= Strongly Disagree   2= Disagree   3= Neutral   4= Agree   5= Strongly Agree

E-traffic Generators	1. There is a need to select an alliance partner with ability to guide customers towards your website (like search engines, web-directories and portals) to increase traffic and attract new customers.	①②③④⑤
	2. There is a need to select an alliance partner which controls gateways through which customers access online services (like ISPs, telecommunication and mobile service provider, web-server providers and so on).	①②③④⑤
	3. There is a need to select an alliance partner with ability to give alliance an international customer access.	①②③④⑤
	4. There is a need to select an alliance partner with considerable customer basis (Like general portals and social networks).	①②③④⑤
	5. There is a need to select an alliance partner from media industry (like TV channels and magazines) to improved brand recognition and alliance visibility.	①②③④⑤
plementar	6. There is a need to select an alliance partner with complementary product to yours.	①②③④⑤

	7. There is a need to select an alliance partner with complementary service.	①②③④⑤
	8. There is a need to select an alliance partner with complementary physical resources (like access to material).	①②③④⑤
	9. There is a need to select an alliance partner with complementary intangible technical resources (like access to experts, and technology)	①②③④⑤
	10. There is a need to select an alliance partner with complementary intangible non-technical resources (like access to legal and political networks)	①②③④⑤
Shared target market	11. There is a need to select an alliance partner with a target market like yours even if it doesn't have a relevant product or service, to improve your access to the shared potential customer bases.	①②③④⑤
	12. There is a need to select an alliance partner with a target market like yours even if it doesn't have a relevant product or service, if it can add to the trust of your customers on the alliance.	①②③④⑤
	13. There is a need to select an alliance partner with a target market like yours even if it doesn't have a relevant product or service, to add to the variety of the alliance's offerings for that shared target market.	①②③④⑤
	14. There is a need to select an alliance partner with a target market like yours even if it doesn't have a relevant product or service, to gain a better access to the shared target market's information.	①②③④⑤
	15. There is a need to select an alliance partner with a target market like yours even if it doesn't have a relevant product or service, if it can add to the reputation of your alliance.	①②③④⑤
Legal & Governance	16. There is a need to select a governing party (a partner, an external firm, or a committee of partners' representatives) in the alliance to take care of conflict resolution among partners of the alliance.	①②③④⑤
	17. There is a need to select a governing party (a partner, an external firm, or a committee of partners' representatives) to create an environment of trust and confidence among the alliance partners.	①②③④⑤
	18. There is a need to select a governing party (a partner, an external firm, or a committee of partners' representatives) in the alliance to take care of controlling, monitoring and managing relationship of companies in the alliance.	①②③④⑤
	19. There is a need to select a company as a partner in the alliance to overcome legal/regulatory barriers.	①②③④⑤
	20. There is a need to select a company as a partner in the alliance with ability to manage governmental interventions and relationships.	①②③④⑤
IT and Technical	21. There is a need to select an IT company as an alliance partner to create new software, data structure, and other IT foundations.	①②③④⑤
	22. There is a need to select a company as a partner in the alliance for taking care of IT maintenance and support.	①②③④⑤
	23. There is a need to select a company as a partner in the alliance to provide secure and up-to-date communication and network service.	①②③④⑤
	24. There is a need to select an alliance partner which can provide non-IT technical support.	①②③④⑤
	25. There is a need to select a company as a partner in the alliance for taking care of research and development support.	①②③④⑤
Logistics	26. There is a need to select a logistics company as an alliance partner for taking care of adding to the confidence of your customer regarding delivery of their products.	①②③④⑤

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	27. There is a need to select a logistics service provider as a partner in the alliance because of their know-how capabilities in logistics, logistics project management and consulting services.	①②③④⑤
	28. There is a need to select a logistics service provider as a partner in the alliance to provide partners with warehousing services.	①②③④⑤
	29. There is a need to select a logistics service provider as a partner in the alliance to provide partners with distribution services.	①②③④⑤
	30. There is a need to select a logistics service provider as a partner in the alliance to provide partners with services to aggregate, manage and deliver relevant data and information across the chain. (Info. services).	①②③④⑤
e-banking	31. There is a need to select an e-payment provider (like online banking, etc.) as a partner in the alliance to provide a variety of payment options for the alliance customers.	①②③④⑤
	32. There is a need to select an e-payment provider as a partner in the alliance to provide customers with quick payment opportunities.	①②③④⑤
	33. There is a need to select an e-payment provider as a partner in the alliance to provide customers with easy payment opportunities.	①②③④⑤
	34. There is a need to select an e-payment provider as a partner in the alliance for increasing the trust of the customers on the alliance.	①②③④⑤
	35. There is a need to select an e-payment provider as a partner in the alliance to provide customers with secure payment opportunities.	①②③④⑤

C. SUCCESSUL E-BUSINESS STRATEGIC ALLIANCE PARTNER SELECTION OUTCOMES

This section will ask about different outcomes of a successful partner selection in formation of an alliance. Please note that by alliance we mean **Strategic Alliance Formed to Perform E-Business Activity.**

Please indicate the importance of the following items in determining success of an alliance for e-commerce activities composed of the appropriate types of partners.

Grades: 1= Strongly Disagree   2= Disagree   3= Neutral   4= Agree   5= Strongly Agree

Reduced Uncertainty (Risks, Trust, Control)	1. Reduced uncertainty and "Market Risk".	①②③④⑤
	2. Reduced "Relational Risk" (not having satisfactory cooperation between partners).	①②③④⑤
	3. Reduced "Operational Risk" (factors that jeopardise success of alliance).	①②③④⑤
	4. Increased trust for better exchange of information and flexibility.	①②③④⑤
	5. Decreased danger of opportunistic behaviour from partners.	①②③④⑤
	6. Strengthened defensive competitive position (through better controlling competitors or customers or overcoming governmental intervention or legislative barriers.)	①②③④⑤
Market knowledge/ capability	7. Increased marketing efficiency.	①②③④⑤
	8. Reduced customer turnover.	①②③④⑤
	9. Improved local and international market investment opportunities.	①②③④⑤
	10. Facilitation of international expansion.	①②③④⑤
	11. Improved branding (like strategic positioning, brand reputation, and brand recognition/visibility)	①②③④⑤
	12. Increased speed to market (through leisure customer segments, better international customer and supplier access, or utilisation of new technology and R&D).	①②③④⑤

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	13. Strengthen customer value proposition (through improving, recreating, and renewing price-value relationship, providing relevant and more complete customer solution, products, or services, and enhancing offering scope).	①②③④⑤
Performance / Cost	14. Reduction of transaction cost.	①②③④⑤
	15. Increase in cost efficiency in assets, operations and strategies, through improved performance, cost sharing and pooling resources.	①②③④⑤
	16. Increased net income (through better purchasing, distribution, and supply chain management)	①②③④⑤
	17. Leverage of assets to use same or smaller asset base to generate higher revenues and profits.	①②③④⑤
	18. Attainment of economies of scale (Cost efficiency due to expansion for additional product unit).	①②③④⑤
	19. Attainment of economies of scope (Cost efficiency due to expansion for additional production type).	①②③④⑤
Intangible Assets	20. Successful partner selection is associated with learning knowledge and skills (through exchange of technology, skilled human resources, and R&D support).	①②③④⑤
	21. Enhancement of firm's intangible assets (like Standards, Reputation, trademarks, patents, licenses, and knowledge of processes and practices)	①②③④⑤
	22. Enhanced organisation culture.	①②③④⑤
	23. Improved organisational flexibility and adjustment to environmental changes.	①②③④⑤
	24. Better knowledge of local business practices and environment.	①②③④⑤

Complementarities	25. Complementary product/ services proposition.	①②③④⑤
	26. Co-specialisation and combining complementary skills (managerial, technical, etc.).	①②③④⑤
	27. Co-specialisation and combining complementary resources (financial, physical, technical, etc.).	①②③④⑤
	28. Enhanced product mix, product diversification, and total relevant solutions	①②③④⑤
	29. Linking partners' different functions for an improved and extended value chain	①②③④⑤
Compatibility	30. Compatible goal of partner firms.	①②③④⑤
	31. Shared vision between partners and among managers.	①②③④⑤
	32. Alignment of alliance and partner firms' objectives / goals.	①②③④⑤
	33. Presence of cooperative culture between the firms.	①②③④⑤
	34. Involvement of sharing proportionate level of risk.	①②③④⑤

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