

Evaluation of business networks in the AusIndustry Business Network Program

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Abstract

Researchers have found that inter-firm collaboration, that is, co-operative business networks, can provide a competitive advantage that would not be possible independently for small sized firms. Work has been done by some governments, for example, Danish, Norwegian, New Zealand, American and Japanese, in the area of policy and practice of business networks because they have realised the importance of business networking and have encouraged collaboration of small firms by assisting in the facilitation of networks. The Australian government established a Business Network Program which ran for four years and several studies were completed on various aspects of the program during that period. However, there had been no particular research that examined the success or other outcomes of these networks, thus providing the basis for the research question addressed in this research:

How and why did the business networks developed in the AusIndustry Business Networks Program, succeed or not succeed?

Further, questions relating to how and why these outcomes may have occurred or how they may have been measured in the Australian government facilitated program were also unanswered. A review of the extant literature in this area established the theoretical foundations upon which this research is based and made possible the development of a model comprising three constructs or research issues that would address the research question:

RI 1: How and why is network success evaluated?

RI 2: How and why do the internal and external environments affect the outcomes of the network?

RI 3: How does facilitation affect the network?

In order to address these research issues and the research question, a protocol was developed and case study interviews with the lead business of sixteen networks participating in the AusIndustry Business Network Program were carried out. The resultant data was compared for each of the research issues through a qualitative

methodology from which conclusions and answers to the research question and issues were derived.

The results of this research showed that network members evaluated their own outcomes often using multiple measures, both qualitative and quantitative, with the most common criteria being whether the network continued or discontinued. Moreover, it was concluded in this research that successful networks usually had a single goal or purpose for joining a network which they ultimately achieved. In contrast the unsuccessful networks generally joined the network with multiple goals and which were not all achieved, thus contributing to their lack of success. This result was not evident in the literature reviewed in chapter 2.

Additionally, the findings showed that high levels of trust, commitment and reciprocity were essential elements in the success of business networks. More importantly this study found that whilst all successful networks had these elements, some of the non successful ones also reported high levels of trust, commitment and reciprocity. Thus it appeared in this study that whilst these elements are important for network success, they do not alone ensure that success, further, it was noted that for any network that reported a lack of any one of these elements, non success was more likely. In relation to this finding was the discovery that in these networks formal contracts between the network members increased the levels of commitment and reciprocity and thus increased the chances of success. When external environmental factors were examined in relation to their impact on network success, it was found that whilst all had some impact on their business generally, competition was noted as having the highest impact and government or legal issues the lowest impact.

Finally, this research found that facilitation did not necessarily contribute to a network's success but that possible a lack of appropriate facilitation style did contribute to the non-success of networks. However, it was clear that the small networks needed less facilitator guidance overall and that the larger networks definitely needed facilitation and guidance. Moreover, it was found that the *type* of facilitation at the various stages of the network process were more important to the likelihood of success, rather than the mere presence of a facilitator.

Thus, the main contribution of this theory building research is to extend the general level of knowledge about business networks and provide new insights into network theory and the value of networks using an original application of existing knowledge. This knowledge can contribute to network education and training in business schools and can contribute to the development of future government policy and practice pertaining to network programs.

CERTIFICATION OF DISSERTATION

I certify that the ideas, experimental work, results, analyses, software and conclusions reported in this dissertation are entirely my own effort, except where otherwise acknowledged. I also certify that the work is original and has not been previously submitted for any other award, except where otherwise acknowledged.

.....
Signature of Candidate

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Date

ENDORSEMENT

Signature of Supervisor

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Doctor Jane Summers

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Date

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Gratitude also goes to Professor Chad Perry for introducing me to the subject of this research and for 'teaching me how to write'.

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I wish to acknowledge the Faculty of Business at the University of Southern Queensland for providing excellent facilities and my colleagues there for their assistance and advice, namely Dr Hoda Masters, Rae Jones, Les Brown and Michael Gardiner. I am particularly grateful to Anne Woodroffe, IT Training Officer, Department of Information Technology Services, for patiently and enthusiastically contributing awesome document formatting expertise.

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1 Introduction

1.1 Background to the research

Current research theory indicates that for small sized firms, inter-firm collaboration, also known as business networking, has become one of the most rapidly emerging mechanisms for achieving results for competitive advantage that would not be possible independently (Rosenfield 1996).

The literature in the *parent discipline*, network theories, categorises the foundations of network theories based on the actors, process, structure, and types of links formed (Araujo & Easton in Iacobucci 1996), and has been mainly concerned with defining business networks (Healy, Hastings, Brown & Gardiner 1999; Iacobucci 1996; Buttery 1992; Håkansson 1987; Emerson 1972). Some authors in this area have also examined outcomes based on comparisons of traditional competition of transactions (Porter 1980) with less traditional approaches such as co-operation (Perry & Pyatt 1995; Ford 1990). Researchers have found that co-operative business networks can provide a competitive advantage for small sized firms (Gadde & Håkansson 1993; Axelsson & Easton 1992; Ford 1990). In order to explore this phenomenon further, it is necessary to examine the extant literature relating to business networks (immediate discipline) (Becatinni 1987).

In addition, as this study will focus on small to medium sized networks, the insights from the work of Swedish researchers, like Håkansson, with Snehota (1995), and with Gadde (1992), who found that trust, commitment, and reciprocity were key success factors for small to medium sized networks will also be considered.

Complementing these findings is the work done by some governments, in the area of policy and practice of business networks. For example, the Danish (Buttery & Buttery 1994), the Norwegian (SND 1995), and the New Zealand governments (Brookes & Lindsay 1998) have realised the importance of business networking and have encouraged collaboration of small firms by assisting in the facilitation of networks. Some of this work, particularly, that of the Norwegian Industrial and Regional Development fund (SND), has also been used by the Australian government to develop a business network manual for the AusIndustry Business Network Program, which is the focus of this study. Table 1.1 summarises the research conducted to date, the authors of that research and the how and why questions that will be addressed in this research relate to what has already been done.

Table 1.1 Research of AusIndustry Business Network Program

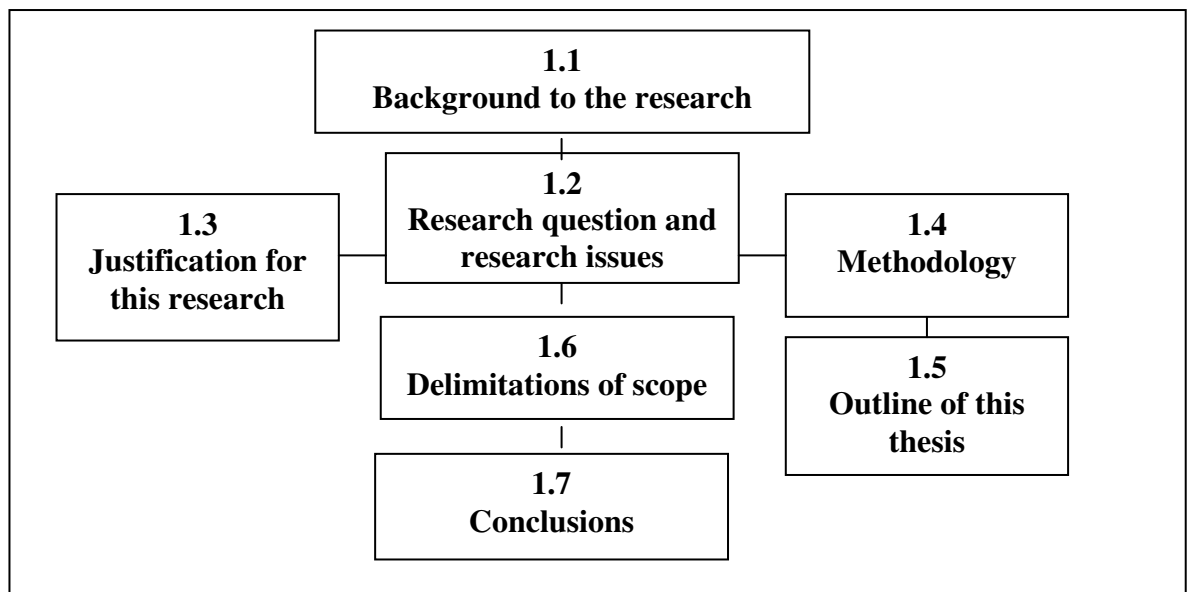
Variable/Researcher	Buttery (1995)	Holmes (1995)	Fulop (1997)	Arnall (1996)	Clegg & Porras (1997)	This Research
Nature of relationship	✓					✓
Network governance		✓				✓
Facilitators' roles		✓				✓
Organisational structure			✓			
Management competencies				✓		✓
Stages of growth				✓		✓

Key element – trust		✓			✓	✓
Network types					✓	✓
Outcomes						✓

Source: developed for this research

This chapter identifies the research question and related issues, provides justification for the research, describes the methodology to be used, and outlines the thesis and the delimitations of scope. Figure 1.1 provides an outline for this chapter.

Figure 1.1 Chapter 1 outline with section numbers



Source: developed for this research

1.2 Research question and research issues

The AusIndustry Business Network Program was established in 1994 and ran for four years with completion in December 1998. Several studies were completed on various aspects of the program during that period (table 1.1), but there has been no particular research that examined the success or other outcomes of these networks. Further, questions relating to how and why these outcomes may have occurred or how they have been measured also remain unanswered.

Therefore, the research question and research issues addressed in this research are:

RQ: How and why did the business networks in the AusIndustry Business Networks Program succeed or not succeed?

RI 1: How and why was network success evaluated?

RI 2: How and why did the internal and external environments affect the outcomes of these networks?

RI 3: How did facilitation affect the outcomes of these networks?

As these research issues are reasonably general in nature, each is explored through a series of sub questions developed for the interview protocol, which guides the research being undertaken.

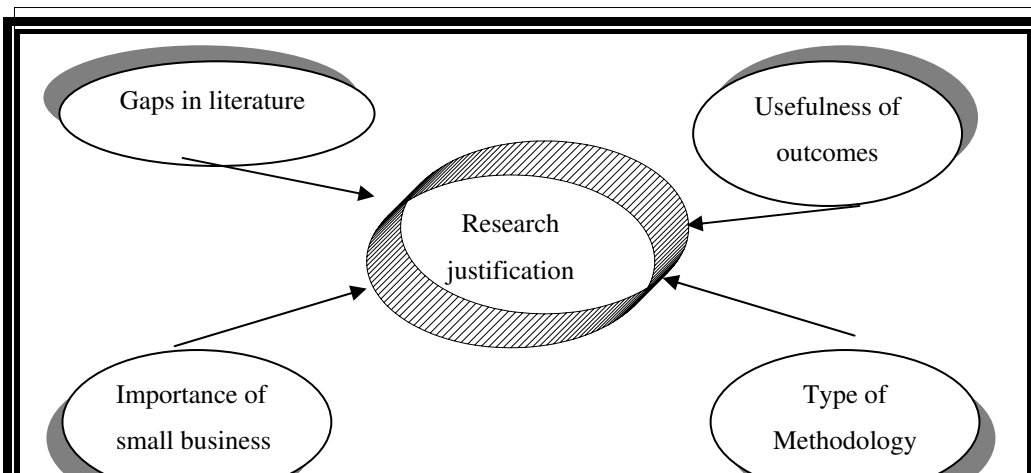
1.3 Justification for this research

There are four theoretical and practical bases on which this study is justified. Figure 1.2 illustrates these and each is discussed in turn.

1.3.1 Gaps in the literature

The literature identified key success factors of business networks (Buttery & Buttery 1994) however, there is a gap in the literature about how government facilitation affects networks. In particular, the literature is scant about Australian government facilitated networks and the performance measures used by Australian networks to determine their outcomes. Additionally, whilst the general literature does suggest how external environments may affect businesses, it does not provide an application of that theory to business networks.

Figure 1.2 Justification for this research



Source: developed for this research

1.3.2 Possible benefits of outcomes for policy and practice

The characteristics and linkages between networks and network facilitators may provide a basis for future policy making by highlighting practical concerns (Rosenfield 1996). Further answers to these research issues will also make a contribution to the general level of knowledge of the value of networks (Bowen, R. 1999, pers. comm., 25 March) and how to avoid mistakes in forming them. More particularly, there has not yet been an evaluation report, as a whole, of the first government assisted, facilitated network program in Australia. These outcomes should be of use to many different Australian Government Departments, in particular Commonwealth Department AusIndustry and Queensland Department of Business, Industry, and Regional Development (Buttery 1992), who have an interest in the role of networking in business development.

1.3.3 Importance of small business

Small business has accounted for 82% of all business activity in Australia since the early 1990s (Meredith 1993) and accounts for around half the employment in the Australian economy (Annual Review of Small Business 1997). If government assisted network programs are shown to be successful, individual businesses may consider using these networks to improve their performance both domestically and internationally. Many Australian businesses are small, with insufficient resources to independently grow, so they need to share resources (Bowen, R. 1999, pers. comm., 25 March). The Australian economy would also benefit by increasing the number of manufactures and exporters, which in-turn would decrease imports and thus improve the balance of payments and general economy. Hence, research into the outcomes and factors influencing success of an Australian business network program will assist in providing useful information that can contribute to building Australian small business competitive advantage.

1.3.4 Type of methodology

This study will be the first case study research into the success of the AusIndustry Business Network Program from an in-depth case study point of view. This case

study approach gives more *explanation* to how and why questions rather than mere frequencies or incidence because these questions deal with operational links which need to be traced over time and because some of these questions are ambivalent and need clarification (Yin 1994).

1.4 Methodology

To address the research issues developed from the gaps identified in the literature review, a research paradigm utilising case study methodology has been adopted. A research paradigm based on critical realism best suits this study because the research involves action-related analysis of real, complex situations (Perry 1999). The complex situations being researched, like people, relationships, time, place, and events, all affected the variables under study. Further this research is essentially addressing ‘how’ and ‘why’ questions and is therefore explanatory in nature. A critical realist paradigm was therefore most appropriate (Yin 1994). Chapter 3 further describes and justifies the application of case study methodology used in this research.

1.5 Outline of this thesis

This thesis consists of five chapters. Chapter 1 delineates the broad directions of this research and introduces the research question and research issues. This chapter justifies the importance of this research and presents an introduction to the methodology used. Finally, chapter 1 makes clear the delimitations of this study.

Chapter 2 reviews and synthesises the relevant literature on network theory and government assisted networks. From this review, gaps in the literature are identified and a conceptual model is developed as a background for this research. From this, chapter 3 describes the case study methodology used in this research, addresses the use of a realist paradigm, and discusses the data collection and analysis methods.

Chapter 4 presents the patterns of results of the data analysis addressing both the research question and each of the three research issues. Finally, chapter 5 examines the patterns of results of the data analysis before drawing conclusions by comparing the data from this research to the established literature from chapter 2. In this final

chapter the research question is answered, implications of this research are discussed and suggestions are made for further research in this topic area.

1.6 Delimitations of scope

This study focuses on sixteen cases, recognising constraints of time and resources. The goal of this research is to develop a qualitative initial understanding of underlying reasons for successes or other outcomes, but does not attempt to determine specific causal relationships. Moreover, measures of success are subjective and therefore the findings of the sample are not able to be *generalised* to the population.

Judicious planning of the research, careful and unbiased collection and analysis of data and adequate scrutiny of reporting reduces standard sources of error (Davis & Cosenza 1988). Therefore, the reader may have confidence in the accuracy, validity, and reliability of the research project and the information it produces.

1.7 Conclusions

This chapter provided an overview of the thesis, outlining the five chapter structure and specifying delimitations of scope. It is noted that this research is exploratory in nature and that the findings will therefore not necessarily be generalisable to the population. However, in spite of this, the research addresses a question from which no current literature provides an answer. The research is justified on that basis and also on the basis of the benefits to government facilitated business networks for future policymaking, the importance of small business to the Australian economy, and the methodology used. In addition, this research will contribute to general business education of the value of networks.

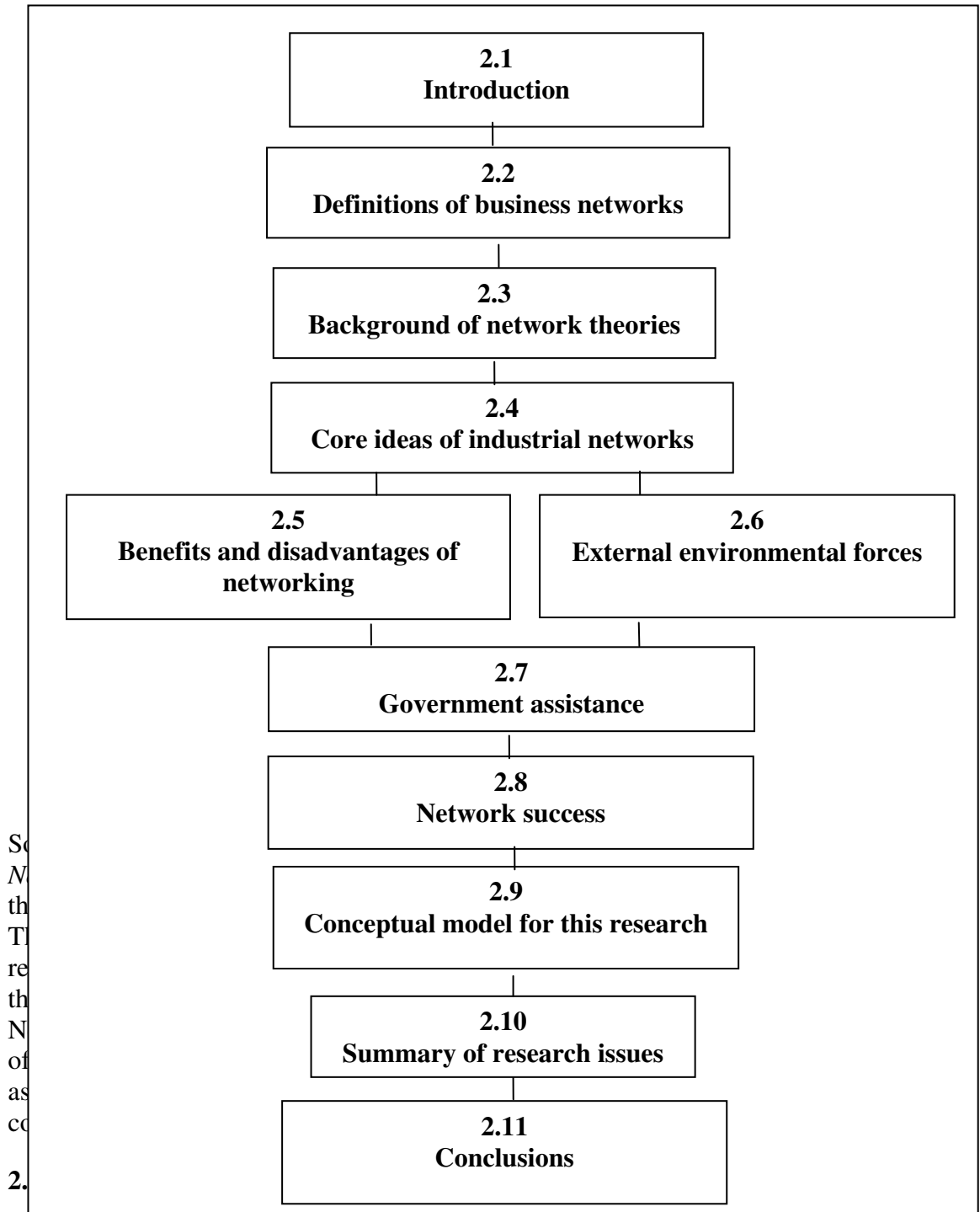
The next chapter will provide a review of the relevant literature that will inform about the research design and question. Chapter 2 will commence with a review of business networks and will conclude with a proposed conceptual model which will direct the research activity to answer the research question.

2 Literature Review

2.1 Introduction

Chapter 1 set the scene for this research by introducing the importance of the research question: *How and why did the networks in the AusIndustry Business*

Figure 2.1 Chapter 2 outline with section numbers



The literature relating to business networks is generally in agreement about the broad definition of networks (Buttery & Buttery 1995; Australian Manufacturing Council

1990). The term ‘network’ is broad for it may apply to many situations otherwise known as relationships, strategic alliances, strategic partnering, collaborative arrangements, cooperatives, alliances, joint ventures, and consortia (Perry & Pyatt 1995; Buttery & Buttery 1994). There is some debate about the minimum size of a business network and whether a dyadic relationship qualifies as a network. Some authors say network theory evolved when researchers started looking beyond simple dyadic relationships of two businesses toward more complex structures involving *three or more* actors (Healy, Hastings, Brown & Gardiner 1999; Anderson, Håkansson & Johanson 1994). In essence, *business networks* will be defined in this research as:

‘Three or more enterprises or organisations that work together for mutual benefit in a long term relationship, by jointly undertaking tasks or sharing knowledge or resources, whilst maintaining their separate entities.’ (Buttery 1992 p2).

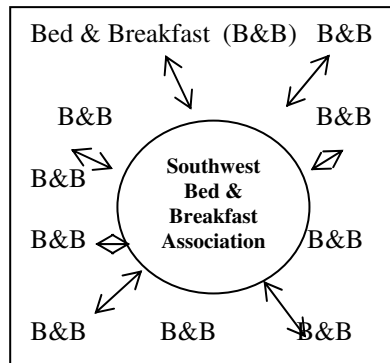
The AusIndustry Business Network Program followed this definition and as they are the context of this research, dyadic relationships or other types of networks will not be considered. Accordingly, the AusIndustry Business Network Program (1995; BIE 1995, p.229) defines a network for their program as consisting of ‘...at least three businesses...’.

2.2.1 Types of business networks

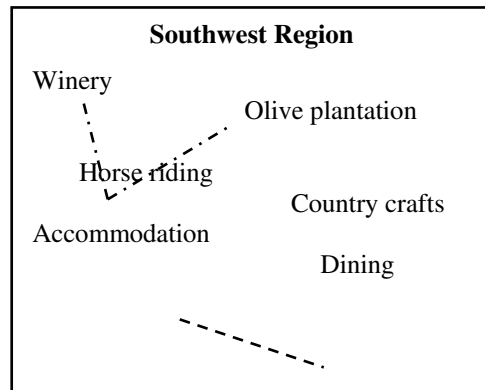
Within this overall definition of networks there are three types of networks in the AusIndustry Business Network Program [BNP], depending on the nature of the contribution to the network. The first type is the *pooled* network, when the companies or actors in a network share similarities in their product or service, clientele, mode of operation, or territory (Buttery & Buttery 1995; Hofseth 1993). An example of a pooled network is many small independent bed and breakfast (B & B) operators combining similar products in order to jointly provide services for convention organisers. Figure 2.2 illustrates the separate B&B establishments being connected to a B&B network (Southwest Bed & Breakfast).

Figure 2.2 Pooled network of similar services

Figure 2.3 Complementary network of complementary products



Source: developed for this research

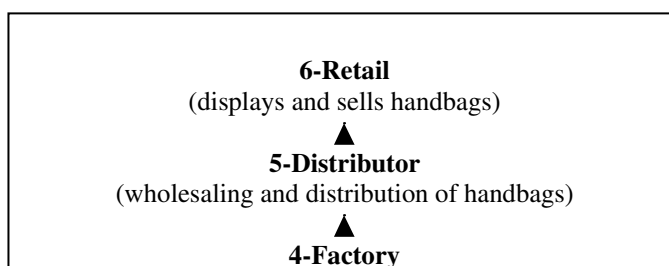


Source: developed for this research

Another type of network is a *complementary* network where different products go well together and when they are combined they can form a new whole. An example of complementary network might be that a winery, an olive plantation, a horse riding centre, country crafts, a dining operation, and accommodation in a particular region all cooperate. This cooperation then allows the region to be promoted as a whole and all independent enterprises are enhanced by the combined products and services. Figure 2.3 illustrates that some of these individual business products or services go particularly well together, as indicated by the connecting lines. For example, a horse-riding centre may create a network by organising with a winery and olive plantation to take their customers riding there, or an accommodation facility may network with a separate restaurant business so that their customers may dine there as part of the accommodation service offering. All of these individual services are connected encased in the region.

The third type of network is the *sequential* network which is usually found in a supply chain because there is value adding in each step towards a finished product (Buttery & Buttery 1995). An example of the actors in a sequential network (figure 2.4), may be: 1) a cattle property supplies raw materials, like live cattle, to; 2) an abattoir which then supplies fresh animal skins to; 3) a tannery where they are treated and transformed to leather and then sent to; 4) a factory where the leather is cut and sewn in into handbags. The handbags are then sent to 5), a wholesaler who distributes them to 6), retail stores for sale to the end user.

Figure 2.4 A sequential network of value adding



Source: developed for this research

2.2.2 Hard networks and soft networks

In addition to classifying networks based on the relationships of the enterprises, networks can also be classified based on the level of commitment and legality of the relationship. These types of networks are termed either *hard or soft* networks and the characteristics associated with each of these types of networks are listed in table 2.1. Distinguishing these two types of networks is important because the AusIndustry Business Network Program, which is the focus of this research, targeted ‘*hard*’ networks to be included in the program (AusIndustry 1995).

Table 2.1 Characteristics of hard and soft networks

Network characteristics	
Hard networks	Soft Networks
Contract commitment	Casual association
Membership exclusive by criteria of strategic input	Membership open based on loose criteria of eligibility
Contractual agreements	No contracts
Usually small	Usually large
Focus on firms	Focus on sectoral level
Formal with clear expectations of contributions	Informal, casual, not necessary to contribute except perhaps an annual fee
Required frequent attendance	Often occasional attendance
Co-operating in purchasing, product development, production, marketing,	Usually limited to providing information or organising functions

distribution, service, or finance	
Profit centres	Often cost centres

Source: developed for this research from AusIndustry 1995; Buttery & Buttery 1995; Perry & Pyatt, 1995; Milgrom & Roberts 1992

Often pooled, complementary or sequential networks are termed as *soft* network arrangements where business is conducted per each transaction and enterprises are not committed to each other or to the network (Buttery & Buttery 1995). In these soft or informal networks there are only loose linkages and resources are not committed. However when there is ongoing commitment by the enterprises, generally accompanied by a formal contract, then the arrangement is considered to be a *hard* network (Buttery & Buttery 1995). Indeed, the hardness or softness of all these types of networks may be distinguished by the contractual arrangements in place.

Some hard networks are legally formed for a specified period (Perry & Pyatt 1995). Formal/legal ties may not be stressed when the emphasis in the network is based more upon trust. Thus the degree of trust will influence the degree of formal/legal ties (Milgrom & Roberts 1992). The AusIndustry Business Network Program developed hard networks that represented a financial or asset commitment solidified by contract (Buttery & Buttery 1995).

2.3 Background of network theories

There are ten different network theories presented in the literature that could be used to explain ‘business networks’ (Araujo & Easton 1996), however, only six of them are related to marketing. These six are summarised in table 2.2 along with their main areas of focus. The sixth of these theories, *industrial networks, is the one considered most appropriate for this research* because it focuses on network structures and processes using primarily case study methodology, which is the theme and methodology that this thesis shall follow.

The first alternative, the *social* network approach, is generally acknowledged to be the precursor of and the most prolifically used in application to social science topics, which is from where marketing has come (Araujo & Easton 1996). The development of social networks stems from the study of anthropology (Wellman 1988) and focuses on relationships. Social relationships are an important element in the

networks, but social network approach is not specific enough for this research because the focus is more on social relationships and not so focussed on business relationships.

The second alternative, *inter-organisation* theory has traditionally been concerned with government agencies and non-profit organisations (Araujo & Easton 1996; Alter & Hage 1993), and so is inappropriate for this research which is focused on independent profit oriented businesses. The third alternative, *actor-network* theory also looks to explain relationships, however it lacks an economic viewpoint and does not consider any of the contributions that could be made from other theories (Araujo & Easton 1996; Law 1994; Callon 1992).

Table 2.2 Marketing networks

	1 Social networks	2 Inter-organisation theory	3 Actor-network theory	4 Network organisations	5 Entrepreneurship studies	6 Industrial networks
Major emphasis	Social relationships	Power, resource flows, efficiency	Sociotechnical structures	Resources and power	Individuals in new organisations	Market structures
Actors	Mainly individuals, some organisations	Govt. agencies, non-profit organisations	Individuals	Individuals and groups	Individuals	Organisations
Structure/process	Structure	Structure	Process	Structure	Structure and process	Structure and process
Types of links	Friendship, information, resources	Resources, power, and service delivery	Heterogeneous associations	Communication, information, resources, authority	Communication, influence, power, resources	Resources and information
Usage in marketing	Power in relationships with customers and suppliers	Best practice for interorganisa-tional relations	Explains relationships	Explains organisations and international business	How new organisations are built and sustained	Marketing and purchasing
Limitations	Primacy of structure over process	Blurred boundaries with profit organisations	Lack of cross referencing and economic viewpoint	Complex environments rife with conflict	Total individualistic emphasis	

Source: Adapted from Araujo and Easton (1996)

In the fourth theory, *network organisations* theory, there is often a strong core, with one firm acting as the strategic hub in the network and other firms outsourcing some of their functions (Storper & Harrison 1991). This core provides benefits of flexibility through the configuration of the relationships with suppliers as value-added partnerships (Johnston & Lawrence 1988). However, this core was not necessarily present in enterprises forming the focus of this research. The fifth alternative network theory, *entrepreneurship* theory, examined the influence and resources in new enterprises, but, according to Araujo and Easton (1996), it is severely restricted to individuals rather than to organisations and is therefore not applicable in this research.

Thus, the most appropriate application of these network theories for this research is number six, *industrial networks*. This theory shares some of the viewpoints of the other network theories reviewed here but the major emphasis is on market structures where the actors are organisations, as in this research. Industrial network research, and this research, focuses on network structures and processes using primarily case study methodology, where the network links are based on resources and information (Ford 1997; Araujo & Easton 1996; Håkansson & Snehota 1995). Finally, industrial network theory cross-references to social exchange theory and transaction cost economics, which are important elements in the history of business networks because they explain how and why business networks evolved. These theoretical concepts will be discussed in turn.

2.4 Core ideas of industrial networks

Exchange relations, between individuals and organizations, improve the competitive capabilities of all parties by pooling and exchanging knowledge, and resources (Iacobucci 1996; Buttery 1992; Australian Manufacturing Council [AMC] 1991). The core ideas of industrial network cooperation are based on economic, technical, and social bonds. Consider networks with a competition framework in contrast to networks with a cooperation framework whereby instead of businesses traditionally *competing*, based on transactions, *co-operative* business networks can provide a competitive advantage to each of the businesses in the network in some circumstances (Perry & Pyatt 1995; Gadde & Håkansson 1993; Axelsson & Easton 1992; Ford 1990; Porter 1980). The motivation of reducing transaction costs occurs

when a firm does not have the internal resources and capabilities for growth and development in terms of size or improvement in quality (Penrose 1968). This then leads a firm to outsource, which in turn creates a network situation based on technical or economic bonds.

In contrast to competition, people who co-operate believe that their goals are positively linked so that one success in goal attainment helps others reach their goals (Tjosvold & Weicker 1993). These core ideas of industrial network cooperation are important to this research because the basis of the AusIndustry Business Network Program was to improve the capabilities for growth and development of firms that did not have the internal resources and capabilities on their own. Each of these issues will now be addressed in more detail.

2.4.1 Transaction cost theory

One of the early foundations of network theory is transaction cost economics, for it provides the *boundaries* of networks. Transaction costs, such as the costs of search and information, bargaining, and decision and policy making, are of concern to a firm and these costs differ depending on the way the transaction is carried out (Milgrom & Roberts 1992; Williamson 1975; Coase 1937). These concerns lead to the end positions on a continuum of hierarchies and spot markets.

Figure 2.5 Hierarchies-markets continuum

HIERARCHIES	NETWORKS	SPOT MARKETS
Visible hand ☛	<i>Handshake</i>	Invisible hand ☚

Source: adapted from Milgrom & Roberts 1992

Figure 2.5 illustrates that spot market relations are at one end of this continuum, where the firm relies on market manoeuvring and *the invisible hand* of the markets' price mechanisms (SND 1995; Larsson 1993; Larson 1992; Powell 1990; Williamson 1975; Coase 1937; Smith 1776). These human and environmental elements combined give rise to costs, making these market transactions inefficient which, in turn gives rise to hierarchies. Hierarchies are at the other end of the

continuum, where all transaction costs are internalised within the firm (*the visible hand*) because transactions have become more uncertain, frequent, and specific (Larsson 1993). It is in hierarchies that actors can become opportunistic and can increase their own advantage but where firms will continue to operate in this manner if the cost to monitor opportunism is greater than the cost of opportunism itself.

In turn, networks are a hybrid between the extreme ends of the continuum, a framework denoted as the *handshake*, because it combines aspects of market transactions like price incentives, and the characteristics of hierarchies such as administrative monitoring (Larsson 1993; Larson 1992; Williamson 1991). Cost minimisation is the motivation for this organisational form.

2.4.2 Opportunism

It is opportunism in free markets that causes firms to internalise transaction costs through the hierarchies because the market approach to transaction costs ignores the role of trust between people in firms that do business with one another (Elg & Johansson 1993; Williamson 1975). Opportunism may be defined as; ‘allowing of due or undue weight to circumstances of the moment in determining policy; preference of what *can* be done to what *should* be done, compromise, practical politics, adaptation to circumstances and putting of expediency before principle or place before power, political time-serving’ (Oxford 1964, p849).

Opportunism, in contrast to a cooperative approach, may be illustrated by Von Neumann’s (1928) *game theory* otherwise known as the *prisoners’ dilemma*. In the prisoners’ dilemma, one foregoes cooperation in favour of the largest reward (Pruitt 1967). In essence, the dilemma is that, although all players are collectively better off if they cooperate, one player may be vulnerable and therefore act in their individual self interest depending on the number of strategies to choose from, the rewards associated with those strategies, and the actions and reactions of the other players (Cable and Shane 1997; Milgrom & Roberts 1992). In other words, a player can either cooperate for mutual gain or defect for individual gain.

To illustrate this mathematically, consider that there are two players, firm A and firm B, each with assets that would be worthless outside of a cooperative venture

(Milgrom & Roberts 1992). The cost to invest in a cooperative venture is \$2000 and the gross return from the total investment is \$8000, which yields a net profit of \$4000. Suppose that the benefits are divided according to the actions of the players where the actions are *grab* (opportunism) or *don't grab* (cooperation) and grabbing shall incur a fee of \$3000. If neither firm grabs then the firms divide the \$4000 total net profit, each receiving \$2000 net profit. If one firm grabs and the other doesn't, the grabber's payoff is all the net profits less the \$3000 fee for grabbing. This equals \$3000, which is \$1000 better than if neither grab. However, if both grab they each receive the net profit of \$2000 and absorb the fee of \$3000 for grabbing, which yields a negative \$1000. This can be seen in figure 2.6.

Figure 2.6 The grabbing game creates a Prisoners' Dilemma

note: A \$4000 investment will return \$8000 gross with a net profit of \$4000 (\$8000 gross – [\$2000 each invested by 2 investors] = \$4000 net profit).

		Firm A			
		Cooperation don't grab		Opportunism grab	
Firm B	Cooperation don't grab	$\$4000 \text{ return}$ $- \$2000 \text{ invested.}$ $/2 \text{ firms}$ $= \$2000 \text{ profit each}$		\$2000 loss	$\$8000 \text{ return}$ $- \$2000 \text{ invested}$ $- \$3000 \text{ grabbing fee}$ $= \$3000 \text{ profit}$
	Opportunism grab	$\$8000 \text{ return}$ $- \$2000 \text{ invested}$ $- \$3000 \text{ grabbing fee}$ $= \$3000 \text{ profit}$	\$2000 loss	$\$8000 \text{ return}$ $- \$4000 \text{ invested.}$ $/2 \text{ firms}$ $= \$2000 \text{ profit each}$ $- \$3000 \text{ each grabbing fee}$ $= \$1000 \text{ loss each}$	

Source: adapted from Milgrom & Roberts 1992

Thus when both players cooperate they are both rewarded at equal levels, a *win-win* situation. If one player does not cooperate this results a *win-loss* situation and if neither player cooperates a *loss-loss* situation results. The essence of the prisoners' dilemma is that what each player receives depends on what the other player does and thus illustrates that the critical components of this dilemma concern trust, commitment, and reciprocity. These three elements of social bonds are discussed in the following section because they are also critical components in the context of business networks.

2.4.3 Social and structural bonds

Structural bonds occur when two parties make economic, technical, or knowledge based investments that cannot be retrieved when the relationship breaks down, whereas social bonds occur through multi-level person to person contact during which trust may develop (Buttle & Ahmad 1999). Structural bonds are linked and can be strengthened by the social bonds that occur in ongoing relationships and networks. Moreover, social bonds need to be in place as a foundation before technical bonding can develop and are therefore important to research of networks (Mattson 1985).

Trust, reciprocity, and commitment have a strong role in the formation of social and structural bonds between the actors in the business networks and indeed are the key success factors of many networks (Buttery & Buttery 1994; Håkansson & Snehota 1995; Håkansson & Gadde 1992; Axelsson & Easton 1992; Turnbull & Wilson 1989). Formal-legal ties are often not stressed when the emphasis is placed upon trust. Thus the degree of trust will influence the degree of formal/legal ties (Milgrom & Roberts 1992).

Trust. Trust is defined as a ‘firm belief that a person or thing may be relied on’ (Oxford 1964 p1397). Trust is crucial to realising many transactions and network transactions also need commitment and reciprocity (Milgrom & Roberts 1992). Trust is needed not only for collaboration but also when dealing with conflict (Håkansson & Gadde 1992). Emphasis is placed upon trust as an informal tie but the degree of trust will influence the degree of formal/legal ties (Milgrom & Roberts 1992). One study, pertaining to business networks in the AusIndustry Business Network Program, revealed that ‘...networks may need higher levels of trust to actually reach the legal commitment stage’ (Smith & Holmes 1997). Contracts are a form of formal/legal tie that serve to set expectations, establish decision processes to deal with inevitable unforeseen circumstances and encourage commitment.

Commitment. Formal cooperation is minor in comparison to cooperation and commitment in everyday informal activities with continuing business relationships. Commitment is defined as a ‘pledge or dedication to a course of action’ (Oxford

1964 p243). Information and knowledge about other actors' activities, resources, and relationships with non-actors are effected through higher communication levels and in most cases lead to increased trust built over time (Axelsson 1992). Social embeddedness in the network can provide rich information that a network actor may not otherwise have, thus providing a foundation for commitment (Hertz 1992). Economic embeddedness of large expenditures or investments can serve to assure commitment as well as contracts (Milgrom & Roberts 1992).

Another way to help achieve commitment is the role of reputation. Not fulfilling obligations can result in a reputation for untrustworthiness and a bad reputation may reduce future possibilities for profitable transactions, especially in a network situation where similar transaction are expected to occur with frequency on a long time horizon (Milgrom & Roberts 1992).

Commitment may also be achieved by developing relationships, which may be preferable for a firm to playing the market. This strategy allows benefits to be obtained in cost reduction or increased revenues. Developing a relationship is a major adaptation by a company and as such, the adaptation marks a commitment by the company to the relationship (Ford 1997).

Reciprocity. Reciprocity relates to the satisfaction of the key elements of an exchange process. It is defined as a 'mutual action, principal or practice of give and take' (Oxford 1964 p1033). The everyday informal activities assume a circular causal relation between the network level and the production level (Johanson & Mattsson 1992). That is, the actors learn about each other and trust develops as they adapt their resource use to increase productivity, which leads to increased resource interdependence between them thus linking them closer to each other in a mutual orientation. Consequently, a reciprocal orientation is a key element of trust in a business network and the reciprocal orientation is related to the perceptions of one party about another party's abilities, expertise, and knowledge as well as the other party's motives and intentions (Wilson & Jantrania 1997).

Therefore, concern with one's reputation, commitment costs of investment, and contractual arrangement may be effective checks on post-opportunism. The

AusIndustry Business Networks were all formalised by contractual arrangements, where the governance of these contracts was assisted by the Australian Commonwealth Government.

2.5 Benefits and disadvantages of networking

There are many benefits to be gained by networking, in addition to transaction cost minimisation. Conversely, networking also brings with it some associated costs or impediments. The rationale and value of cooperation in a network will vary among markets and the situation of the enterprise (The Norwegian Industrial and Regional Development Fund [SND] 1995). Therefore, the advantages, or in other words the benefits, of cooperation are important as a basis for why businesses form networks and should be weighed against the disadvantages. The benefits and disadvantages of networking will now be discussed in turn.

2.5.1 Benefits of networking

For small sized firms, business networking has become one of the most rapidly emerging mechanisms for achieving results for competitive advantage that would not be possible independently (Rosenfield 1996). Some benefits are risk reduction, economies of scale and/or rationalisation, technology exchange, blocking competition, overcoming government mandated trade or investment barriers, facilitating international expansion of inexperienced firms, and vertical advantages of linking the complementary contributions in a 'value chain' (Contractor & Lorange 1988). These benefits can be categorised under four headings: 1) management and strategy, relating to the whole firm and/or to new directions; 2) operations; 3) finance; and 4) revenue, and are summarised in table 2.3 including the main authors who research in these areas.

Benefits depend on the area of cooperation and the firms' goals. For example table 2.3 suggests that the widest range of benefits is in operations. These operational benefits relate to technology and expertise (rows 9 to 11). Many benefits may also be provided in the area of logistics (row 18), which are generally concerned with supply rather than distribution. But there are also strategic benefits, in particular for research and development of new products (rows 7 and 8).

Table 2.3 Benefits of networking

Row	Benefits of networking	BIE (1995)	BNP (1995)	SND (1995)	Buttery (1992)	Total
	Management/strategy					
1	Market knowledge	✓		✓	✓	3
2	Improved management		✓	✓	✓	3
3	Learning			✓		1
4	Business recognition		✓			1
5	Staying in business		✓			1
6	Focus and specialisation		✓		✓	2
	Operations					
7	Product development	✓	✓	✓	✓	4*
8	Access to new innovation		✓			1
9	Access to technology	✓	✓	✓	✓	4*
10	Access to production facilities		✓		✓	2
11	Expertise	✓	✓	✓	✓	4*
12	Improved capabilities		✓		✓	2
13	Improved productivity	✓	✓	✓		3
14	Economies of scale		✓	✓	✓	3
15	Improved quality	✓		✓		2
16	Improved delivery/distribution			✓		1
17	Access to scarce supplies			✓		1
18	Reliable supply	✓	✓	✓	✓	4*
19	Negotiating and purchasing power	✓	✓			2
20	Reduce costs		✓	✓	✓	3
21	R & D		✓	✓	✓	3
22	Training		✓		✓	2
	Finance					
23	Access to financial resources	✓			✓	2
24	Risk reduction		✓	✓	✓	3
	Revenue					
25	Profits/sales	✓				1
26	New customers	✓	✓		✓	3
27	Overseas opportunities	✓				1
28	Reduce costs of advertising	✓		✓		2
29	More advertising exposure		✓	✓		2
30	Access to markets		✓	✓	✓	3
31	Customer satisfaction		✓			1
	Totals	13	22	18	17	

Source: Developed for this research

* most commonly mentioned benefit

Benefits from business cooperation are available to all types of firms but the degree of benefit and range of benefits varies. The greater chance of benefits and successful outcomes is usually associated with the firms who cooperate the most. That is firms who are committed and devote considerable time and resources to cooperative activities (BIE 1995).

Table 2.4 Disadvantages of networking

Row	Disadvantages of networking	BIE (1995)	BNP (1995)	SND (1995)	Buttery (1992)	Total
	Management/strategy					
1	Risk of loss of a fundamental idea or secret	✓	✓			2

2	Increased dependence on partners' reputation		✓			1
3	Over dependence on network members			✓		1
4	Incompatible relationships, or personalities	✓	✓	✓	✓	4*
	Trust and commitment:					
5	Lack of understanding			✓		1
6	Decisions taking too long				✓	1
7	Ad-hoc decision making				✓	1
8	Lack of trust	✓		✓	✓	3
9	Resistance from a network partner				✓	1
10	Unbalanced partnership, no mutuality	✓	✓	✓	✓	4*
11	Slack accountability by a partner			✓		1
12	Weak communication				✓	1
13	Hidden agendas				✓	1
14	More time	✓	✓	✓	✓	4*
15	More paperwork		✓	✓		2
16	Adapting to change		✓	✓	✓	3
17	Reduced management control	✓	✓			2
18	Reduction of independence			✓	✓	2
19	Cost of restructuring			✓	✓	2
20	Concern and costs with financial and legal details	✓	✓		✓	3
21	Instability of arrangement				✓	1
	Operations					
22	Sharing of own expertise		✓	✓	✓	3
	Finance					
23	Financial binds		✓	✓		2
	Revenue					
24	Less latitude in the market		✓	✓		2
	Totals	7	12	14	15	

Source: developed for this research

* most commonly mentioned disadvantage

2.5.2 Disadvantages of networking

Commonly cited disadvantages of networking are synthesised into four categories and are listed by author in table 2.4. In contrast to table 2.3 which shows operations and revenue as having the most commonly cited benefits of networking, table 2.4 shows a wide range of activities in the area of management and strategy that can present problems to the business network (rows 1 to 21). Most of these management and strategic problems concern the social areas of trust and commitment (rows 5 to 13) with the most commonly cited problems being incompatible relationships (row 4), an unbalanced partnership (row 10), and more time needing to be spent to develop the cooperative arrangements (row 14). These disadvantages are important considerations because they could contribute to how and why a network could succeed or not succeed, which is the subject of this research.

2.6 External environmental forces

This literature review has thus far presented the foundations of network theories and has highlighted the internal forces that can affect business networks both positively and negatively, that is how they can contribute to the success or non success of networks. Literature that examines the effect of the external environment will be

discussed in this section because the external environment can also affect the success or non success of networks.

Business networks are not in control of external environmental forces but these forces do impact business outcomes and therefore business networks must monitor and analyse them and develop strategies with which to respond to them (Kotler 1999; Aaker 1992). Businesses should be able to either respond offensively to take advantage of external opportunities or respond defensively to minimise the impact of potential threats (David 1999). Changes in these forces impact the ways firms are able to conduct business (political, legal or governmental forces), the costs of doing business (economical forces), the ways products are delivered and consumed (social and cultural forces), the ways products are manufactured (technological forces) and the ways businesses compete (competitive forces). Therefore business networks must adapt to these changes in order to compete successfully (David 1999; Kotler 1999; Aaker 1992).

This section will address, in turn, five external environmental forces that can impact the outcome of business networks: 1) political, legal or government forces; 2) economic forces; 3) social or cultural forces; 4) technological forces; and 5) competitive forces.

2.6.1 Political, legal and government forces

Businesses are strongly affected by developments in the political environment. This environment consists of the laws, government agencies and pressure groups that influence and limit various organisational activities and business operations (Kotler 1999; Aaker 1992). Moreover, political upheavals and changes in government policy occur daily and can have an enormous effect on those enterprises engaged in international business (Jeannot & Hennessy 1995). Federal, state, local and foreign governments are also major regulators, deregulators, subsidisers and customers. For example, governments can implement policies to control import and export laws, patents, taxation rates and so on. Government assistance to business networks will be addressed further in section 2.7.

2.6.2 Economic forces

Economic forces consist of factors that affect dollar values, inflation and interest rates, which in turn affect spending patterns and consumer purchasing power (Kotler 1999; David 1999). In particular, sales of goods are central to the various living standards of nations, to their currency values and to the availability of products (Jeannet & Hennessey 1995). Economies are in a constant state of transition and severe shifts in them, such as a collapse or recession, can immediately put a firm, relying upon a single product or a single market, straight out of business. Therefore, business networks must consistently monitor economic influences that relate to their products and have in place alternative strategies with which to respond to these economic forces.

2.6.3 Social and cultural forces

The social and cultural environment is made up of institutions and other forces that affect society's basic values, perceptions, preferences and behaviours (Kotler 1999). Social forces include for example, population shifts, age, gender, education levels, work ethics, lifestyles, people's views of others, solutions to problems and culture. Culture includes for example, language, religion, history, tradition, foods people eat, how people dress and so on.

People in a given society have many core beliefs and values that have a high degree of persistence but people also hold many secondary beliefs and values that are more open to change. Social, cultural and demographic trends have a major impact upon virtually all products, services, markets and customers by shaping the way people live, work, produce and consume (David 1999). Values, beliefs and demographic trends affect consumers' buying patterns and may be an uncontrollable force in the marketplace that a business must adapt to by developing strategies to minimise threats. On the other hand some businesses may take a strategic management perspective by taking aggressive action to affect the publics and forces in their marketing environment thus taking advantage of an opportunity (Kotler 1999). Moreover, when firms take advantage of an opportunity in an international marketplace, exporting for example, strategic direction may be significantly impacted by a new set of cultural forces (Jeannet & Hennessey 1995).

2.6.4 Technological forces

The fast pace of the technological environment is a dramatic force shaping the destinies of industries and markets as every new technology replaces an older technology (Kotler 1999). Many technologies have life cycles requiring management to forecast trends and predict when an original technology is in a decline phase, ready to be replaced by another (Aaker 1992). The telecommunication revolution has substantially changed the nature of how and where international business is transacted (Jeannet & Hennessey 1995). The effect of most recent advances in telecommunication and data transmission capabilities is to extend the reach of many business networks.

Technology can present opportunities for designing and developing new products but in contrast can be of a threatening nature presenting high costs of research and development and the competition required to keep up with revolutionary changes (Aaker 1992).

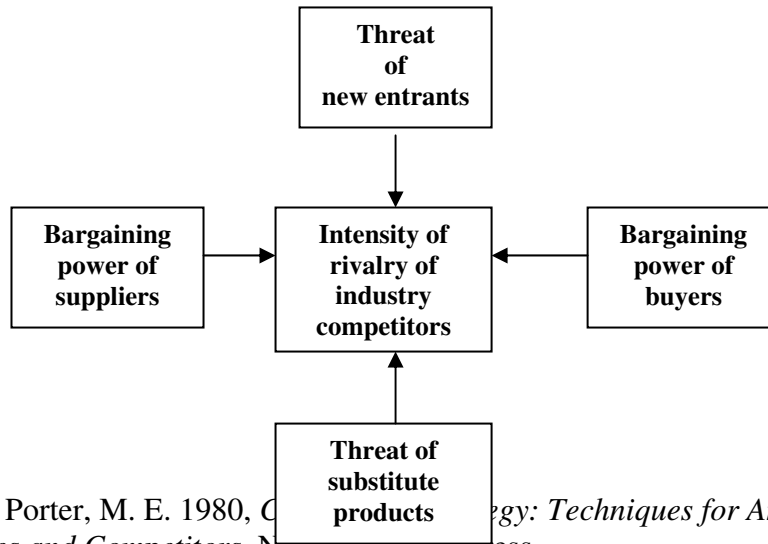
2.6.5 Competitive forces

To be successful, a business must do a better job of satisfying customers than its competitors (Kotler 1999). Thus, business strategies must not only be geared to the needs of consumers, but also to the forces of competitors. Identifying competitors and knowing their strengths and weaknesses is essential to any business (David 1999; Kotler 1999; Aaker 1992; Jeannet & Hennessey 1995). In particular, businesses can identify competitors from an industry point of view. Michael Porter (1980) suggests that the structure of the industry itself is not static and its suppliers and buyers have a major influence on industries' profit potential. He also proposes that five major forces drive industry competition as illustrated in figure 2.7.

The *intensity of rival competitors in an industry* increases when competitors are large in size or number, when commitment is high, when there exists high fixed costs and when exit barriers are high (Aaker 1992; Porter 1980). When there is higher intensity of rivalry, there is more impact on competing firms. The *potential for new entrants* competing in the industry can be determined by barriers to entry, for example, specialised know-how, large capital requirements, economies of scale, distribution channels, access to raw materials, locations and customer loyalty (David

1999; Aaker 1992; Porter 1980). When there are lower barriers to entry, there is greater potential for new entrants to enter industry competition.

Figure 2.7 Michael Porter's five forces of competition



Source: Porter, M. E. 1980, *Competition Strategy: Techniques for Analyzing Industries and Competitors*, New York: Free Press

Competition can include *substitute products*. Competitive pressures increase as the relative performance of substitute products increases or the relative price of substitute products decreases (David 1999; Porter 1980). *Bargaining power of suppliers* is higher when there are fewer suppliers and fewer raw materials available. Power is enhanced when the cost of switching suppliers is high (Aaker 1992; Porter 1980). Finally, the *bargaining power of buyers* is higher when there are many suppliers of products, when they are large and buy in volume, and when switching costs are low. The bargaining power of buyers can therefore impact on profitability (Porter 1980). Thus all of these five forces can impact significantly on business networks.

Thus, based on core elements of industrial networks like social and structural bonds, combined with internal factors like time and other resources, combined with the external environmental forces discussed here, emerges a research issue:

How and why did the internal and external environments affect the outcomes of these networks?

2.7 Government assistance

Government influence on business was discussed in section 2.6.1. The specific area of government assistance to businesses will be explained further here as it is an

important concept when we examine the AusIndustry Business Network Program because they realised the importance of business networking and encouraged it by directly assisting in the facilitation of networks. But before this program can be investigated previous programs need to be outlined.

2.7.1 Previous government programs

In contrast to direct facilitation programs in some countries, other countries have previously assessed or studied networks in more indirect ways. For example, the region in Italy of Emilia-Romagna is referred to as the birthplace of modern day networking and the 60 to 100 networks operating in the region are considered to be the most advanced networks in the world (Holmes 1995). The Italian government began to focus and learn about designing networks in 1971 and they were brought to the attention of other governments after a study was reported in 1987 (Becatinni 1987).

This study showed that the networks in the Emilia-Romagna Region [ERR] were somewhat different from the networks being examined in this thesis. The Italian networks formed naturally because they were closely clustered geographically in an area with a strong artisan tradition. They collaborated so that individually they could supply large organisations that would have otherwise been outside their capabilities and resources. Consequently, they were not hard networks but were highly based on trust (Holmes 1995). Later, their government assisted them and many others with technical and marketing information (Buttery 1992). The assistance and encouragement was provided via a service centre rather than through a personalised facilitator. The result was that the ERR went from one of the poorest of Italy's 21 regions in 1970 to the second wealthiest region by 1985.

Other countries have experienced business networking and have set up bodies to indirectly assist and encourage networking in various capacities. Examples of these include many programs set up by the European Commission to help to link firms for R&D, help foreign firms identify mutual interest partner candidates, and to provide some funding for these ends (Buttery 1992). The United States provides advice and a database of worldwide contacts for potential alliances (SBRG 1990). The Canadian government provides a similar service to potential networks but more so

with staff in the field working with companies, regional offices, and counsellors abroad. Industry associations organise cooperation in Germany also, along with university centres (Holmes 1995).

Some governments have given more direct assistance like providing funding or facilitation services. For example, the Finnish government commenced a Partnerlink program in 1990 to provide financial aid to business services such as consultants, technology, industry associations, and development companies (Holmes 1995). In Japan, where networking is widespread and successful, government plays a small role providing facilitators and some funding while industry associations stimulate R&D and diffuse technology.

As already noted, the Danish government recognised networking benefits and encouraged business networks to collaborate. Their program started in 1989 and since then many other governments have used their model for facilitating business networks (Holmes 1995). After only one year of establishing the program in Denmark 3000 companies had legal agreements in place as a result of the program. The Danish program proved successful and ended after only a few years as there was no further need for it because almost all small and medium enterprises came to know the basics and benefits of networking and would choose this as a natural option.

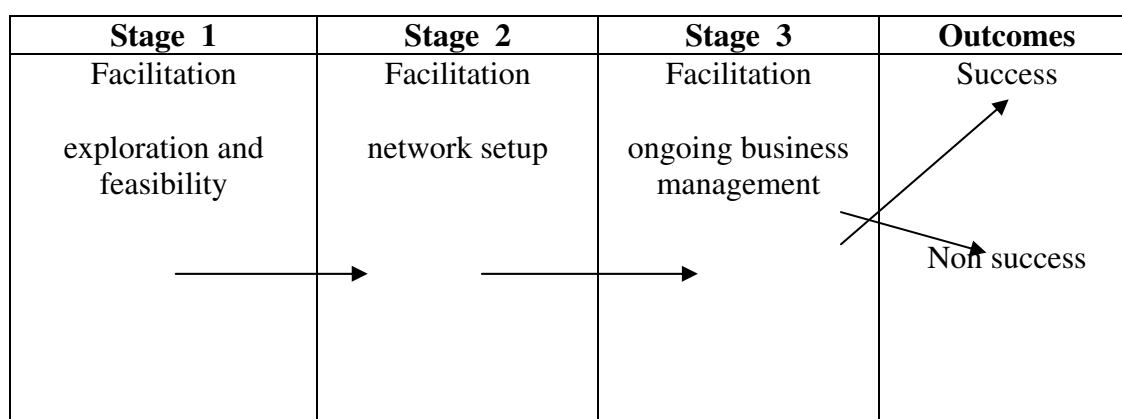
Adopting a model similar to the Danish model the Norwegian Industrial and Regional Development Fund started in 1991 in conjunction with the Norwegian Institute of Technology (Holmes 1995). The Norwegians became involved when it became evident that many companies tried cooperation non successfully because of lack of preparation (SND 1995). Hence they studied the Italian and Danish experience and developed a model to facilitate more coordinated cooperation efforts. Basically their program allows for trained funded brokers to start the links and assess feasibility. They then facilitate communication, cooperation, and the process to formalise a network strategy and business plan. The broker is then phased out but a portion of operations expenses are funded for a period up to two years. The aim is to establish enduring and binding collaboration that will increase the firms' competitiveness.

In turn, the AusIndustry Business Network program closely based its model on the best features of a number of these international programs. AusIndustry entered into an agreement with Norway, New Zealand and Canada to exchange information on Business Networks and in particular drew on Norwegian expertise to put their Network Broker Development Program in place (BNP 1995). The BNP ran for four years from 1995 through 1999.

2.7.2 Characteristics of the AusIndustry Business Network Program

The AusIndustry Business Network Program is comparable to the Danish model structured around a three stage development process (figure 2.8). In this development process, exploration and feasibility of the business network is the first stage of the process. If the network is considered to be feasible, then stage two begins the setting up of the network where arrangements are made concerning reciprocity and commitments of the businesses. In both stage one and stage two a facilitator plays a strong role in the formation of the network. Finally, in stage three the facilitator phases out whilst the businesses themselves attend to the ongoing management of the network business. The role of the facilitator will now be discussed in more detail.

Figure 2.8 Framework of network process



Source: adapted from SND 1995

2.7.3 Role of the facilitator

Governments may provide forms of assistance to get cooperative arrangements up and running, in two main ways: – information-only assistance or direct assistance (BIE 1995). In the former, information is provided to firms about various aspects of business cooperation but the firms are essentially left to make their own

arrangements. The latter involves taking a closer and more active role in bringing firms together by providing a facilitator, actively introducing firms, training in the formation of links and financial assistance. This latter was done by the AusIndustry Business Network Program who recruited management consultants, termed brokers, and trained them specifically for the purposes of facilitating business cooperation for the program.

These facilitators' roles were to develop a relationship with the partner organizations that could be described as consultant and client (BNP 1995). The facilitators were trained in Kanter's (1994, cited in BNP 1995) group development model following five phases: courtship; engagement; housekeeping; compatibility; until the discovery of an internal change as a result of its accommodation to the on-going collaboration, and Tuckman's (1965, cited in BNP 1995) theory of group development: forming; storming; norming; and performing (BNP 1995). The facilitators assumed a leadership role to be a catalyst for positive change and effective development of a team. Initially that required them to create and sustain an effective network with attention given to the need to develop a climate of trust between all cooperating firms. Ultimately the facilitator would step to the background, with participants 'owning' the network.

The role of the facilitator in business networks is therefore well documented in theory, however in the specific case of the AusIndustry Business Networks, no research exists that examined the effectiveness or otherwise of the facilitation method. Thus emerges another research issue:

How did facilitation affect the success of the networks?

2.8 Network success

Network success or non success is the research problem for this thesis and success and non success factors of networks can generally be determined by conducting a quasi cost/benefit analysis considering the benefits and disadvantages of networks discussed in section 2.5. Therefore it is important to summarise these here to show how they could contribute to the outcomes of the networks. It is also important to indicate what measures the networks in this particular program used to evaluate their outcomes, that is, success or non success. Therefore, factors for success or non success and measures of success pertaining to the AusIndustry Business Network Program will be discussed in turn.

2.8.1 Factors for success or non success

If negative elements of networking are many, for example, if lack of trust is strong or there is perceived to be a substantial loss of control, the network will be terminated and this would then be considered to be non success of the network (BIE 1995). Conversely if positive elements are substantial, for example, improved management or technology, then it is likely that the network would be considered to be a success. Table 2.5 lists factors for success and for non success

Table 2.5 Factors for success and non success of networks

Success factors	Non success factors
Good management: <ul style="list-style-type: none"> • Allocation of accountability and responsibility • Information retrieval • Regular monitoring of progress • Recognition of limits of alliance 	Poor management: <ul style="list-style-type: none"> • Inadequate strategies, either not detailed enough or not agreed upon • Deviation of core business • Managerial miss judgments in designing size and structure of network • Implementation and interpretation of operating rules
Internal focus within the network: <ul style="list-style-type: none"> • Frankness • Bonding • Motivation • Domain overlap/something in common 	<ul style="list-style-type: none"> • Opportunism
<ul style="list-style-type: none"> • Target market focus 	
<ul style="list-style-type: none"> • Required finance 	
<ul style="list-style-type: none"> • Partner selection-must be established on the basis of network requirements • Formulation and terms of agreements-just prior to formal arrangements 	

Source: developed for this research from BIE 1995; Buttery & Buttery 1995; SND 1995

2.8.2 Measurement of success

Traditional measures of success for businesses are generally based on a financial orientation for example, revenue generated, percentage of growth, bottom line profits, cash flow return on investments, productivity, number of sales, and market share (Kane 1986; Coditz & Gibbins 1981). These quantitative performance measures can be benchmarked and then used to compare to other similar industries. However, many firms now believe that emphasis on financial measures is inconsistent with relative performance and that the inclusion of non-financial measures can provide a more balanced scorecard (Ittner & Larcker 1998; Lingle & Schiemann 1996; Newing 1995).

Therefore, qualitative measures that firms can use to measure success include: business goals or objectives; improvements in distribution; recognition or reputation; quality; product design; and customer service (Glaister & Buckley 1998). Moreover, non-financial and intangible performance measures can include a weighted factor of subjectivity that relates to strategic or external changes, for example, organisational, economic and political conditions (AMA 1997). (These external changes were discussed in section 2.6.)

An entrepreneur may resort to sense-making or post-hoc rationalisations of why a venture is non successful (Zackarakis, Meyer & DeCastro 1999) and this rationalisation for self assessment is important for this research because the cases in this study, that is, the networks in the AusIndustry Business Network Program, will be asked to evaluate their own success. Attribution theory, attributing cause to self *versus* external factors, explains how people often make judgments about stimuli (Martinko 1995). Managers tend to attribute others' successes to external causes and others' failures to internal causes. On the other hand, managers tend to attribute their own strong performance to their own efforts and their own weak performance to external causes, because admitting personal fault would imply that they were lacking in some essential skills or attributes (Zackarakis, Meyer & DeCastro 1999; Wagner & Gooding 1997; Staw, McKechnie & Puffer 1983).

Finally, in order to define non success for small businesses, Watson & Everett (1996) claim that business discontinuance (due to a firm filing for bankruptcy, on one extreme, or on the other extreme, a simple 'inability to make a go of it') is an indication of firm failure. Business discontinuance however, excludes situations of retiring for age or health reasons, or selling for profit or reasons to move on.

Finally, another research issue is:

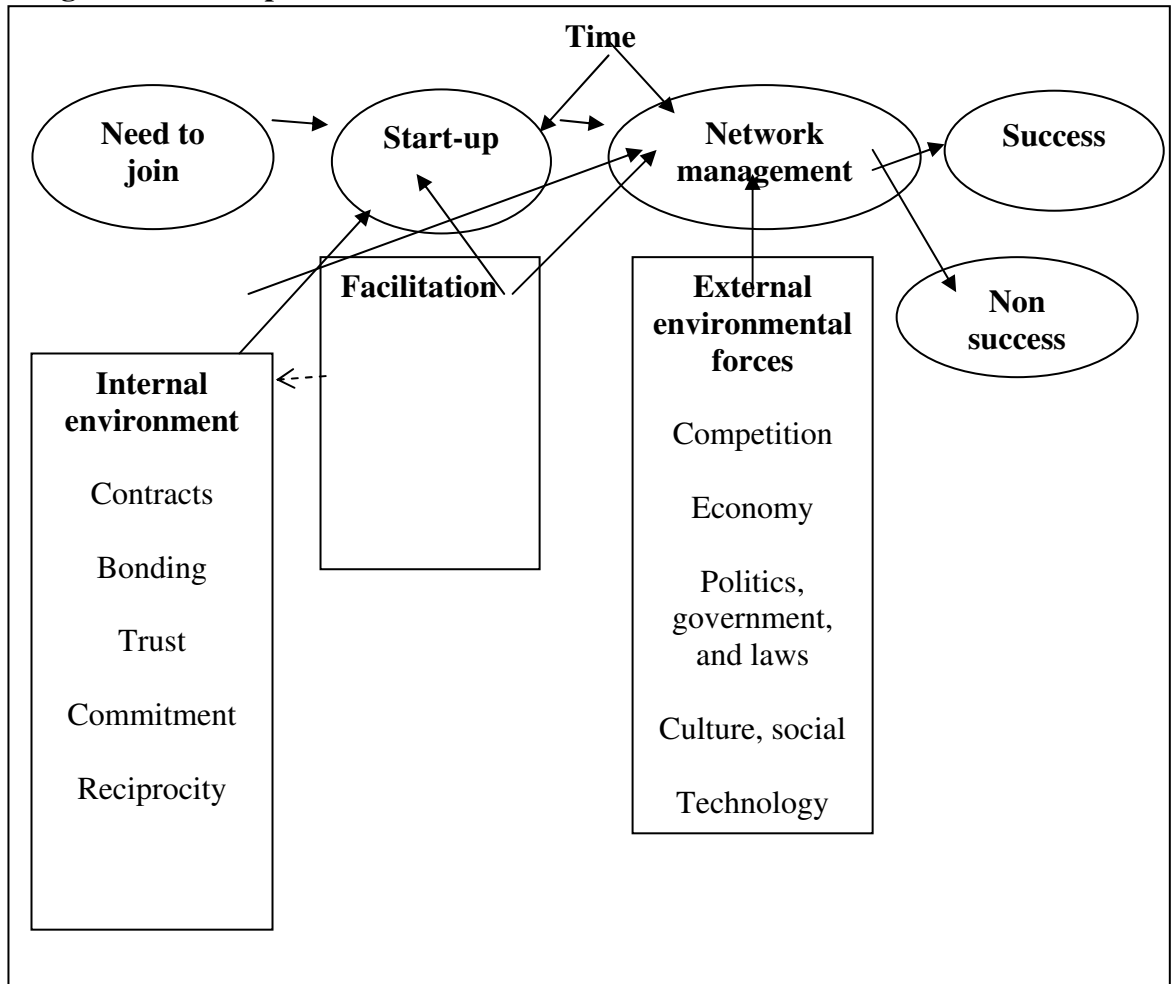
How and why was network success evaluated?

2.9 Conceptual model for this research

The conceptual model for this research (figure 2.9) illustrates how the internal and external forces affect the environment of the network, which in turn affects the network processes and outcomes.

This conceptual model illustrates that there is a set process involved in a business network (shown as ovals in figure 2.9) (SND 1995). This process begins with motivation or a *need to join* which then leads to the *start-up* phase of a formal network. *Time* is required for activities needed to start the network and time is required to *manage the network* and network business successfully. Ultimately the outcome of the network will be either success or non success.

Figure 2.9 Conceptual model for this research



shown in the internal environment is yet to be determined. However a relationship of sorts is suggested in the literature (section 2.7.3) where the facilitator was trained in group development and was required to create and sustain an effective network with attention given to the need to develop a climate of trust between all cooperating firms (BNP 1995).

In the ongoing management phase the network must manage the external environmental forces of: competition; the general economic climate; the political; legal and government rules and regulations; the cultural and social environment, particularly when working with other countries; and technological changes. It is strongly suggested in the literature that these forces will impact the success or otherwise of a business, however their impact on business networks is less clear and thus they will be examined in this study.

2.10 Summary of research issues

The natural order of the literature review highlighted the research issue of how the internal and external forces affected the networks. Following this, facilitation was considered as to how it impacted business networks. Finally the approach to evaluating outcomes was discussed. Whilst this natural order of literature was a convenient way to tease out the research issues relevant to this study, from a data analysis and practitioner perspective, it makes more sense to begin by examining the evaluation approach used by these networks. Thus, the order of the research issues has been rearranged so that they will be presented and analysed in the following chapters in this order:

RI 1: How and why was network success evaluated?

RI 2: How and why did the internal and external environments affect the success of the networks?

RI 3: How did facilitation affect the success of the networks?

2.11 Conclusions

This chapter began by defining and categorising business networks and providing an overview of network theories. From the core ideas of industrial network theory emerged some positive and negative elements of networking that combined with external forces contributed to outcomes of networks. The conceptual model in figure 2.9 integrated the factors critical to the processes of a network with an additional factor of facilitation. Facilitation emerged from the literature pertaining to government involvement in business network programs as an important factor in network success. The conceptual model illustrates how the forces and processes lead to an outcome of success or non success and the literature explained how success or non success was measured. Thus, from the literature emerged the research issues and these research issues drive the data collection described in chapter 3 and the subsequent analysis of this data in chapter 4. The literature in this chapter (2) will then be compared to chapter 4's data analysis in chapter 5.

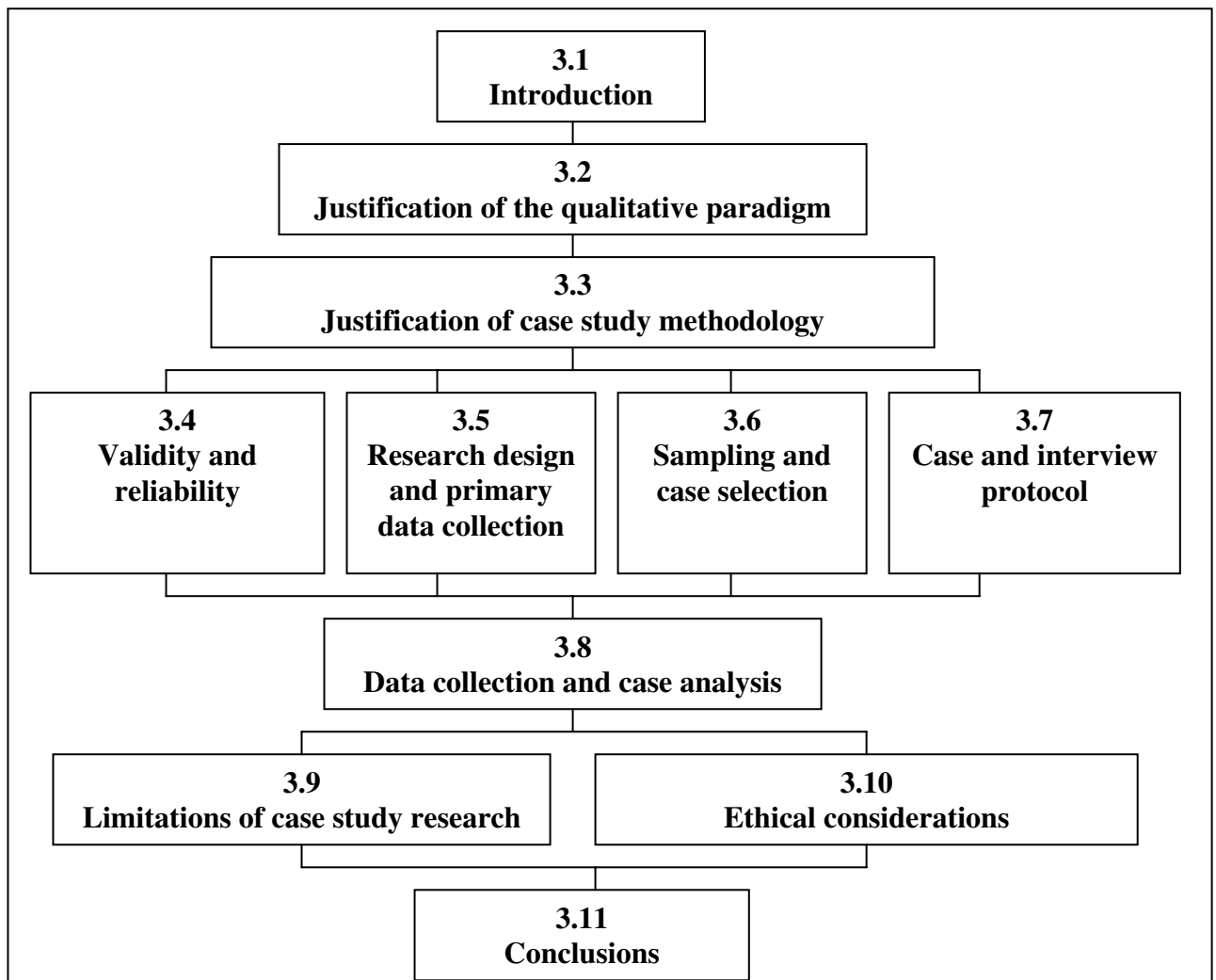
The next chapter will justify the research paradigm and the case study methodology, describe the data collection, analysis and reporting methods, and it will discuss the limitations of the research and ethical considerations.

3 Methodology

3.1 Introduction

Chapter 2 reviewed the literature on business networks. To address the research issues developed from the gaps identified in the literature review, a qualitative paradigm utilising case study methodology was adopted. In chapter 3 this approach will be described and justified. The reliability and validity of this research will be addressed. Then the procedures used for this case study methodology and all the elements of the research design, including the sampling method, case selection, the case protocol and interview protocol will be discussed. Next the case analysis and reporting issues will be explained. Limitations of case study will be addressed and the importance of ethical considerations will be discussed prior to concluding this chapter. Figure 3.1 outlines the structure that this chapter will follow.

Figure 3.1 Chapter 3 outline with section numbers



Source: developed for this research

3.2 Justification of the qualitative paradigm

Chapter 1 (section 1.4) justified the use of the qualitative approach for this research. In choosing the research paradigm that would be best suited to this research, four paradigms were reviewed: 1) positivism; 2) realism; 3) critical theory; and 4) constructivism. A paradigm is a belief system, a view of the world framework that guides the research (Guba & Lincoln 1994). These four paradigms are compared (table 3.1) at three interrelated levels: a) ontology, relating to the nature of the data; b) epistemology, relating to the nature of the researcher; and c) methodology, the type of procedure used to carry out the research (Guba & Lincoln 1994).

At the ontological level, a paradigm philosophically views what is reality in the world and what elements of it can be researched (Guba & Lincoln 1994). Secondly, the epistemological level provides guidelines for the relationship between reality and the researcher. Thirdly, the methodological level outlines techniques appropriate to conduct the research. Each of the four paradigms will be discussed at these three levels in turn, commencing with positivism.

Table 3.1 Paradigm comparison

Paradigm \ Level	(1) Positivism	(2) Realism	(3) Critical theory	(4) Constructivism
(a) Ontology (nature of the data)	Reality is real and apprehendable; scientific knowledge	Reality is real but only probabilistically apprehendable; imperfect due to human mental	Reality is shaped by social forces; research should emancipate the perceptions of participants	Reality is constructed by people; there is no truth
(b) Epistemology (nature of the researcher)	Findings are true; scientific; one-way mirror view	Objectivity sought; absolute truth not attainable	Subjectivity; mediated findings;	Researcher is passionate participant; creative findings
(c) Methodology (procedure)	Quantitative; surveys and experiments; verification of hypothesis	Qualitative; case studies and interviews	Transformative, action research	Unstructured research; participant observation; interviews

Source: adapted from Guba and Lincoln (1994); Perry, Riege & Brown (1998)

Positivism. The positivist belief (table 3.1, column 1) is that the world can be objectively described and measured in a one-way view of reality (Guba & Lincoln 1994). The ontology perspective assumes no worldly experience and is context free. The epistemology view of positivism assumes that findings are absolute and the methodology in this paradigm uses a deductive approach to verify an hypothesis based on existing theory. This approach is best suited for controlled conditions that produce quantitative results.

Realism. The realist paradigm, in contrast to the positivist paradigm, contends that, on an ontological level, reality is only probabilistically apprehensible (table 3.1, column 2) because of the human mental limitations and world complexity (Guba & Lincoln 1994). That is, epistemologically, reality is influenced by a researcher's perception and can be triangulated with other perceptions (Perry, Riege & Brown 1998).

Thus, a qualitative paradigm based on realism best suits this study, methodologically, because the research involves action-related analysis of real, complex situations (Perry 1999). The complex situations being researched, like people, relationships, time, place, and events, all affect the variables under investigation. Further, because this study is investigating 'how' and 'why' questions and is explanatory in nature this approach would intuitively be most appropriate (table 3.2) for qualitative case study research (Yin 1994).

Table 3.2 Advantages and disadvantages of realism and positivism paradigms for business research

Level	Paradigm	Advantages for business research	Disadvantages for business research
Ontology	Positivism		Naïve realism, assumes no worldly experience, time & context free, reductionist, deterministic
	Realism	Reality imperfectly apprehensible	
Epistemology	Positivism	Findings true	Findings <i>probably</i> true
	Realism	Modified objectivity, modifies dualism	Absolute objectivity, dualistic
Methodology	Positivism		Carefully controlled conditions, quantitative
	Realism	Natural settings, qualitative	

Source: adapted from Guba & Lincoln 1994

Critical theory. The critical theory paradigm (table 3.1, column 3) is similar to the realism paradigm whereby the truth is subjective to social conditions. However it differs in that the researcher is assumed to be a transformative intellectual and this will influence the findings through interaction with the object being researched (Guba & Lincoln 1994). Thus, the critical realism paradigm will not be suitable for this research.

Constructivism. The constructivist paradigm (table 3.1, column 4) is also similar to the realism paradigm and critical theory paradigm contending that truth is subjective based on human perceptions of reality (Guba & Lincoln 1994). In contrast to these other paradigms however, constructivism takes this one step further believing that these human perceptions are what is real and therefore there is no truth (Perry, Riege and Brown 1998). Thus the constructivism paradigm is not suitable for this research.

3.3 Justification of case study methodology

Given that this research follows a realism paradigm appropriate for case study methodology, this section justifies why case study methodology is appropriate for this research in contrast to other methods of collecting data such as experiments, surveys or archival analysis. In case analysis, primary data is collected utilising in-depth interview techniques. Case analysis, and this method of collection, best suits this study because the research was being conducted about a complex social phenomenon of which little is known (Perry 1999). The in-depth interviews address the research issues and specifically address the research question (Yin 1994). The in-depth interview is an unstructured personal interview that allows the interviewer

to uncover underlying motivations, beliefs, attitudes and feelings on a topic, which is not possible with other methods.

The approach this research takes is an inductive, theory-building method based on a relatively underdeveloped theoretical base. This theoretical base is also open to interpretation of the complexity and dynamism of the context of the organisational setting, which is appropriate for this research as it is based on theory development (Parkhe 1993). Thus, theory-testing methods are not appropriate because they are based primarily on the scientific process of deduction usually relying on large sample sizes. In spite of this there is some deduction of theory developed from the literature in this research (Parkhe 1993). Case study methodology is most appropriate for theory building research approaches and also accommodates the role of some prior theory (Perry 1998; Yin 1994).

Therefore in this research, the case study approach will be utilised to focus on particular situations, that is, situations that produce outcomes of success or non success of the networks, as stated in the research question. Moreover, the case study approach provides a richness and depth of contextual meaning that would not be possible if using a more deductive approach. In addition, this approach also facilitates illumination in relation to the research question and allows the possibility of new perceptions and understanding from immersion into the data and relationships (Merriam 1998).

3.4 Validity and reliability

In order to deal with standard tests of social science methods, several tactics can be applied *throughout* the case study methodology to help in ensuring validity and reliability (Yin 1994). There are four tests to judge validity and reliability in empirical research:

- 1) *Construct validity* is concerned with a measurement instrument and its ability to correctly measure concepts being studied (Yin 1994). To insure construct validity, data was collected using multiple sources of evidence, which provided multiple measures of the same phenomenon. Construct validity was enhanced with interview protocols based on sources of evidence obtained from a literature review.
- 2) *Internal validity* relates causal relationships between variables which could create bias in research results if one variable influences another (Malhotra 1996). To

ensure internal validity, all rival explanations and possibilities were considered in the inferences of the data analysis (Yin 1994). This particular validity issue is generally not significant with exploratory studies (Yin 1994)

- 3) *External validity* refers to the generalisability of the research results to the population (Malhotra 1996; Yin 1994). To ensure external validity, replication was included in the research design using multiple cases and results were compared to the extant literature (Yin 1994).
- 4) *Reliability* is concerned with how consistently a technique measures the concepts that it is supposed to measure to the extent that the study would attain similar findings if repeated (Emory & Cooper 1991). To insure reliability, a case study protocol (appendix 1) was developed for the collection of data in this research

3.5 Research design and primary data collection

Case study methodology was justified in section 3.4. This section will specify the details of the procedures necessary for obtaining the information through case studies in order to solve the research problem (Malhotra 1996). A research design is the framework for conducting the research and a rich theoretical framework can be developed through the procedure of replication (Malhotra 1996; Yin 1994). Multiple cases were used in order to produce literal replication, to aid in the prediction of similar results. Theoretical replication was used when contrasting results were produced, but with predictable reasons, by stating the conditions when literal replication may not be found (Yin 1994).

The purpose of this research was to obtain a good grasp of the situation, that is, the facts, people and concerns in a complex behaviouristic environment, and to discover ideas which would assist in clarifying the research issues (Zikmund 1997; Neuman, 1997; Cooper & Emory 1995). Moreover, this research was developed with a sense of direction for future research of a more descriptive or causal nature.

For this research using multiple case studies, data were collected in sixteen separate *in-depth interviews with the focal business*, in continuing networks and non-continuing networks from the AusIndustry Business Network Program. The number of cases selected is a judgemental choice reflecting on greater certainty of the literal and theoretical replication (Yin 1994). Within these networks, both large (more than three businesses) and small (three businesses) were also investigated. Using the variables of the large and small sizes of the network allows for more cross-comparisons of cases (Yin 1994). This primary data collection design is illustrated in table 3.3.

Table 3.3 Primary data collection design

16 In-depth Interviews	Continuing networks (successful)	Non-continuing networks (non successful)	Total cases
Networks with three businesses (=3)	4 cases	4 cases	8
Networks with more than three businesses (>3)	4 cases	4 cases	8
Total cases	8	8	16

Source: developed for this research based on Yin (1994)

3.6 Sampling and case selection

The use of multiple case studies was justified in section 3.5. The sample consists of sixteen cases investigated in sixteen in-depth interviews. There are no rules for *sample size* in qualitative research (Patton 1990), but guidelines suggest four to twenty interviews in order to cover minimum requirements of data but to avoid confusion of too much data (Perry 1996; Eisenhardt 1989; Miles & Huberman 1984). Thus, the sample size for this study falls well within those guidelines, particularly with a view to availability of respondents. The *population*, the aggregate of all the elements sharing the common set of characteristics, and the *sample frame*, a subgroup of the elements of the population selected for participation in this research are the same, that is, both are ‘all the business networks that completed the AusIndustry Business Network Program’ (Malhotra 1996).

The multiple cases in the design illustrated in Table 3.3 were purposively selected (Patton 1990), and may be regarded as multiple experiments (Yin 1994). They provided first hand pertinent information to achieve both the *literal and theoretical replication* necessary to convince the reader of a general phenomenon thus providing compelling support for the issue (Yin 1994). This replication logic also overrides logic for determining sample size, as discussed above (Yin 1994).

3.7 Case and interview protocol

Case protocol is used to ensure reliability of the research (section 3.4) and is essential when using multiple-case design (Yin 1994). The case protocol includes an overview covering the background information (chapter 1) and relevant readings about identification of the issues being researched (chapter 2). The protocol includes the procedures for gathering field information (chapter 3) and provides a guide for reporting the findings (chapters 4 and 5) (Perry 1998; Yin 1994).

The *interview protocol* is the framework of questions used in the interview process to provide replication of information and some control of the contextual environment (appendix 1) (Yin 1994). The personal interviews in this research were conducted on a one-on-one basis with the researcher and the respondent, utilising a semi-structured format to create an air of informality and to avoid confusion (Zikmund 1997; Malhotra 1996). The interviewer contacted the respondents to confirm the time and place of the appointment and to establish a rapport in a pre-interview conversation.

At that time, the researcher sought permission to record the interview, explain the purpose of the interview and assure the respondent of the confidentiality of the information.

The interview questions were developed on completion of the literature review and refined following two *pilot interviews*. The pilot interviews were conducted with two AusIndustry Business Network facilitators. This ‘tested’ the interview technique and provided insight into areas that needed clarification or refinement prior to the case study interviews (Yin 1994).

The interview began with a reminder of the confidentiality of the information and assurance that this was an independent academic study. This assurance helped to reduce the subtle outcomes that are influenced by the respondents’ perceptions of a formal inquiry, like ‘telling the interviewer what the interviewer wants to hear’ (Cooper & Emory 1995; Yin 1994). Next, a general opening question with almost no content was put in place to encourage the respondent to relax and talk freely. The general opening question was followed by more in-depth probe questions relating to the research issues. The interview was semi structured but followed a list of open questions as a guide for staying on the track of what needed to be collected (Yin 1994). Table 3.4 shows the association of the interview questions to the relevant issues.

Table 3.4 Purpose of the interview questions

A Interview question	B Interview question content	C Purpose of question
Preliminary questions	Description, demographics	Case design and case details
1	Story of connection with AusIndustry Business Network Program	To warm up respondent and case background
1.1	Why join the network	RI 2 part A
2	Level of time spent on network	RI 2 part A
3	How many in network/how met	RI 2 part A, case design and case details
4	Description of network	Case details
5	Social aspects	RI 2 part A
6	Role of facilitator	RI 3
6.1	Network possible without assistance?	RI 2 part A and RI 3
7	External environment	RI 2 part B
8	Outcomes	RI 1, RI 2 and RI3
9	How evaluate outcomes	RI 1
10	Cause of outcomes	RI 1, RI 2 and RI 3
11	How to improve network	RI 2 and RI 3
12	Contracts	RI 2 part A

Source: developed for this research

In a reverse cross comparison (column C in table 3.4 becomes column A in table 3.5), the issues are outlined with the corresponding questions in table 3.5, which

could also assist in the reporting process discussed in the first paragraph of this section (4.8).

Table 3.5 Research issues and related question numbers

Research issues	Question numbers
1	8, 9, 10
2 part A	1.1, 2, 3, 5, 6.1, 8, 10, 11, 12
2 part B	7, 8, 10, 11
3	6, 6.1, 8, 10, 11

Source: developed for this research

3.8 Data collection and case analysis

Upon completion of the pilot case study, data were collected in a qualitative form from the questions that were answered by the interviewee during the in-depth interview (Yin 1994). The interviews were recorded and transcripts were made immediately after each interview particularly noting quotations of significance that may possibly support findings later (Yin 1994). Each case was treated as an individual study of convergent evidence regarding the facts and conclusions (Yin 1994) and all individual studies thus contributed to replication.

The respondents were prompted into speaking most of the time in order to expand his or her own thoughts and attitudes, and to tell the story of their experiences regarding the ‘how and why’ in the research question (Zikmund 1997; Malhotra 1996; Dick 1990). The interview protocol also included some non-evaluative listening techniques with the exception of the scaled questions that would summarise the overall attitudes of an interviewee toward the issue addressed in each of the questions (Zikmund 1997).

Although the interviews started as induction, the analysis of the data was later related to some prior theories raised in the literature review. Combined with replication, this inclusion of prior theories provides *triangulation*, that is, development of converging lines of inquiry of several different sources of information, which in turn provides convincing and accurate evidence that contributes to construct validity (Yin 1994).

The *unit of analysis* of this research was the focal business in the network, that is, the business that the network was built upon. The *content analysis* began with several styles of coding in order to organise the data for retrieval (Neuman 1994; Miles & Huberman 1994). During a first pass through the data, themes and categories were assigned labels. A second pass through the data focussed on the coded themes to reveal interactions, relationships, and new ideas or areas for coding. The third pass concentrated on comparisons, contrasts, and generalisations. This was purely a manual process.

The generalisations of the data were then compared with the existing body of knowledge and theories. The generalisations were displayed in a matrix to facilitate matching patterns (Miles & Huberman 1994). The researcher took every effort for complete, thorough, and high quality analysis by considering *all* the relevant

evidence, including all major rival interpretations, addressing the most significant aspects of the case studies and knowing the subject matter (Yin 1994).

After the data was analysed, the findings were presented in this formal report. The report includes full text descriptions of the cases and table displays of the patterns and generalisations. Conclusions and implications are drawn and recommendations are made for further research.

3.9 Limitations of case study research

The case study research methodology outlined in this chapter follows a rigorous methodological approach. This was particularly addressed in section 3.4 regarding the validity and reliability of this case study research. However, there are some common criticisms of the case study approach to research. This section will discuss the common criticisms and the researcher's approach to overcome them.

Firstly, case study research has been criticised for tending to develop overly complex theories (Eisenhardt 1989). This research approach has overcome this criticism by developing the prior theories and research issues in the review of literature conducted in chapter 2.

Secondly, Parkhe (1993) contends that a sound base for establishing theory cannot be built upon one single method, which includes any type of research methodology that is standing alone. This research, however, does not suggest a complete theory. Rather, this research contributes to part of a total theory, thus overcoming this criticism.

Thirdly, the criticism of external validity was discussed earlier where it was explained that replication counteracts this criticism (Yin 1994). Moreover, external validity was safeguarded by comparing the data to the extant literature (chapter 5).

Finally, the criticism of the difficulty of conducting case study research was overcome by the use of case study protocol to reduce operational problems (Yin 1994). Researcher bias was overcome by this case study protocol where the research issues were clearly defined and the questionnaire was administered in an objective manner (Malhotra 1994). Therefore, if relevant safeguards are in place, case study research can provide a sound methodology for maintaining empirical reality in furthering theory.

3.10 Ethical considerations

Ethical considerations should pervade all aspect of the research process, from beginning to end (Malhotra 1994). Ethics address the right and wrong of any action, and are particularly important in qualitative case study research because of the amount and variety of contact that researchers have with respondents. It is important to protect the respondents from unethical practices by informing them of the purposes of the research and maintaining their confidentiality of all information. The following precautions were taken:

- participants were pre-contacted to authorise the interviews and at this time they were informed of the purpose of the interview. The respondents were

informed again of the purpose of the research at the start of the interview and an introduction of the interviewer was provided;

- ethical considerations were assured to the respondents at the start of the interview;
- confidentiality between the researcher and the respondent was assured by confirming that all respondents were to be coded for analysis and reporting purposes thus assuring that they remain anonymous;
- permission was requested to record the interview;
- analysis and reporting was performed in an objective manner to avoid bias or misleading findings; and
- the interview began only after receiving the respondents' informed consent to proceed.

Thus, the researcher may be trusted to have acted honourably, respecting all confidentiality and reporting honestly and without bias. The position adopted for this research was to research responsibly, anticipate ethical dilemmas and treat them during the planning rather than as an after thought (Emory & Cooper 1991).

3.11 Conclusions

This chapter began by justifying the use of the realism paradigm for this research and demonstrated that the use of case study methodology was suitable. Next the methods used to ensure validity and reliability of this research were presented and justified. The research design was then outlined, providing justification and support for the design selected in this study. As part of this discussion the sampling approach, case selection techniques and interview and case protocols were described.

Once the data for this study had been collected it needed to be appropriately analysed and interrogated in relation to both the research question and the research issues that provide the framework for this study. Therefore, as part of this chapter, the techniques for analysis and reporting of the data were explained and supported with appropriate theoretical justification. Finally, the limitations of case study research were addressed and consideration of ethical issues was assured.

The next chapter will present the findings of the data collected for each of the three research issues.

4 Data analysis

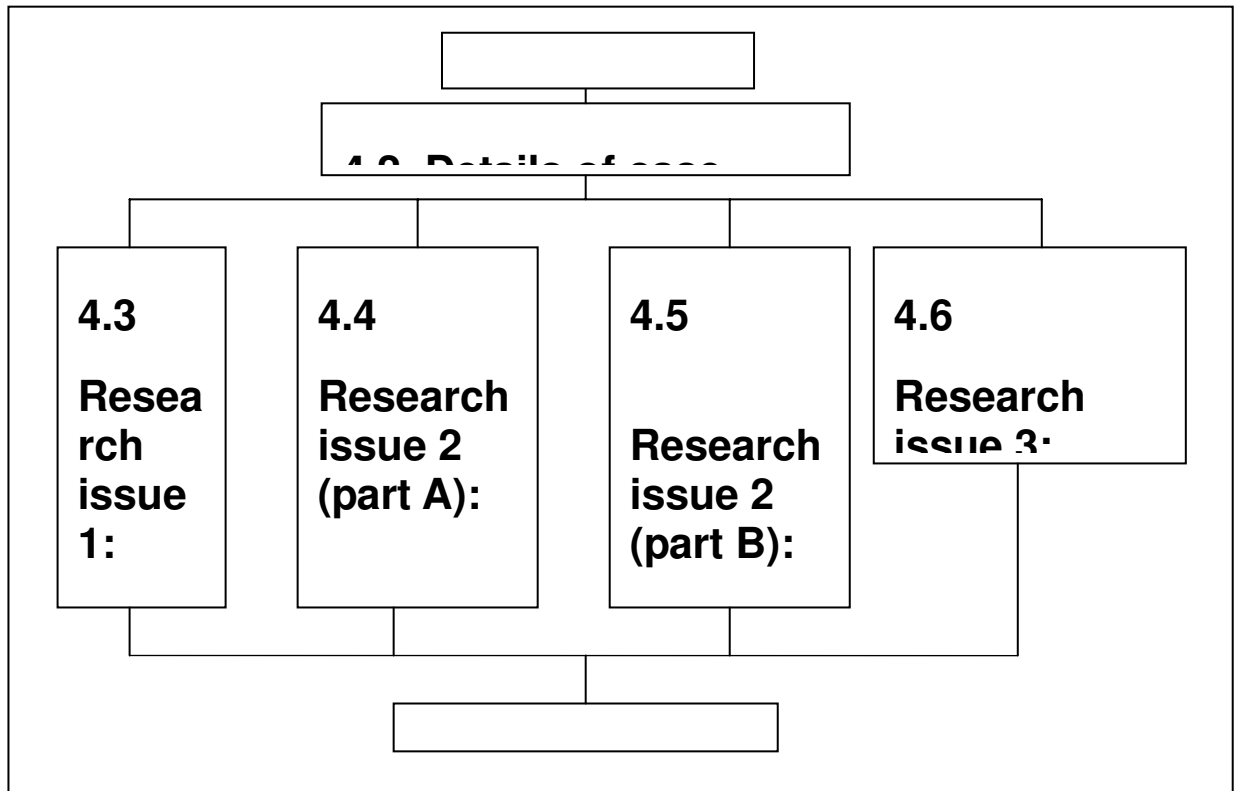
4.1 Introduction

Chapter 3 identified and justified the research methodology used to collect the case study data. In turn, this chapter presents that data gathered from the case interviews and compares and identifies the resultant patterns in it. The data was collected using

the interview protocol as discussed in chapter 3 and presented in appendix A. Interview tapes and transcriptions of these interviews are available from the researcher in line with the usual requirements for a case study database (Yin 1989).

There are seven main sections of this chapter, as outlined in sequence in figure 4.1. The chapter begins with a brief description of each case participant, followed with cross-case analyses of data to search for patterns. The findings are related to each of the three research issues, as set out in section 2.10. This chapter does not relate the patterns and findings back to the literature as this will be covered in chapter 5.

Figure 4.1: Chapter 4 outline with section numbers





4.2 Details of case participants

For ethical reasons and anonymity, the sixteen cases are referred to as case A, B, C, through P. It was noted in the methodology section 3.5 that this study was to include eight continuing networks (cases A-H) and eight discontinued networks (cases I-J), of which eight were large and eight were small. At that time it was posited that a continuing network would qualify as a successful network purely on the basis that it was continuing business ‘as a network’, and that a discontinued network would automatically qualify as non successful purely because it was no longer doing business ‘as a network’. However, after asking respondents to evaluate their own success or non success, one discontinued network (case J) believed that they were still successful because they still did business with each other, although not as a formal network. Therefore the revised matrix may be seen in figure 4.2 where case J was moved from the lower right-hand box to the lower middle box.

Moreover, it was determined by the researcher that, in order to be more diplomatic, non successful was considered a kinder term than failure (for use in this study) in the same respect that, for example, a person should not be considered a failure simply because the person was not ‘successful’. Additionally, no such word as unsuccess so non success was used instead which automatically replaces unsuccessful with non successful.

Figure 4.2 Characteristics of the case studies in this research

Network size	Successful networks	Non successful networks
Small networks three businesses (=3)	A, D, E, F	I, M, N, P
Large networks more than three businesses (>3)	B, C, G, H, 	 K, L, O

Source: developed for this research

Figure 4.2 also shows that, of the sixteen cases, half contained three businesses (=3) and were subsequently classified as *small networks* and half contained more than three businesses (>3) and were subsequently classified as *large networks*. As suggested in the literature, a network should contain three or more members and three was the minimum required number of members to join the AusIndustry Business Network Program (BNP).

The case details are summarised in table 4.1 and a brief description of each case then follows the table. These descriptions are provided in order to set the scene for the data analysis and precede the cross-case analyses in later sections, as prescribed by Patton (1990).

Table 4.1 Case details

Case code	Network continued or discontinued	Type of industry	Type of network	Number of members	How met	Why joined the network
A	Continued	Manufacturing	Complementary	3	Previous dealings	Had military background and believed in teamwork. Needed capacity because of market potential.
B	Continued	Manufacturing	Combination: complementary/ pooled/ sequential	7	Previous soft network	Wanted funding to pursue a business strategy.
C	Continued	Manufacturing	Pooled	12	Same business regionally, part of industry association	Wanted to be stronger collectively in the international marketplace.
D	Continued	Manufacturing	Complementary/ Pooled	3	All knew each other because came from small remote region	As a strategy to support each other.
E	Continued	Manufacturing	Sequential	3	Recommended by another party	To increase skill base and expand expertise
F	Continued	Services	Complementary	3	Previous dealings	Because they were approached by Austrade in an industry seminar for exporters and they wanted to enter an overseas market.
G	Continued	Manufacturing	Pooled	9	Previous dealings, same products	Was already an existing network that wanted to move to new levels of business and to get assistance to export.

Case code	Network continued or discontinued	Type of industry	Type of network	Number of members	How met	Why joined the network
H	Continued	Services	Complementary	6	Through local government	Because there was no service like this available.
I	Discontinued	Manufacturing	Pooled	3	Through industry association	Needed resources to export and expand capacity.
J	Discontinued	Manufacturing	Pooled	9	Associated by region and industry	Believes in being a team player.
K	Discontinued	Manufacturing	Pooled	4	All knew each other because in the same business	Expand capacity.
L	Discontinued	Manufacturing	Complementary	4	Industry association	All had a common purpose.
M	Discontinued	Services	Complementary	3	Previous dealings	Had previous experience with networks and needed team based management and experienced people for foreign markets.
N	Discontinued	Services	Complementary	3	Previous soft network	To formalise a soft network and jointly employ marketing manager.
O	Discontinued	Services	Complementary	22	A few knew each other but most were sought for their specialities	Needed marketing funding to enter an overseas market.
P	Discontinued	Services	Pooled	3	Same industry	Wanted to do something more.

Source: developed for this research

Case A was a complementary network of three firms. The lead business was a manufacturer for two other network members who independently designed products, sent them to manufacture, and then picked up the products and marketed them. That is, the second and third companies designed and marketed products that they outsourced to the lead business for manufacture.

The group had previous dealings with each other. However, it was important for the lead business, the manufacturer, to be guaranteed a continued relationship with the other firms before investing in expensive equipment. The managing director of this manufacturer learned about the AusIndustry Business Network Program in the newspaper, and having had a military background and firmly believing in team operations decided to join the program in order to firm agreements with designers for continued orders and to gain investors.

Case B was, in combination, a complementary network and a pooled network consisting of seven businesses. These firms had previously worked together in a soft network. The lead firm manufactured products that were filled with components

provided by any one of the other six firms as their capacity allowed. The lead firm heard of the AusIndustry Business Network Program and believed that this approach would facilitate funding needed to pursue a strategy that would allow it to compete on larger projects.

Case C was a pooled network of twelve businesses, which all produced the same ingredient that then went into a finished product. As well as being in the same business, they were all in the same region and were part of larger associations. They joined the AusIndustry Business Network Program, 'To be stronger collectively in the international marketplace.'

Case D was a complementary/pooled network of three businesses who came from the same remote region and thus 'all knew each other'. They decided to form a network 'as a strategy to support each other'.

Case E was a sequential network of three businesses that were recommended and introduced by another party. They each wanted to increase their skill base and expand their expertise in order to end up with a product that was marketable.

Case F was a complementary network of three businesses that had previous dealings with each other and two of the firms were interested in entering a particular overseas market. These two firms attended an industry association seminar for exporters that was represented by Austrade. Here they learned of the AusIndustry Business Network Program, which, they heard could assist with funds for overseas marketing of their product. The lead firm built the products that the second firm designed. They then approached a third firm who could provide another component of their product because a minimum of three firms was required to join the program.

Case G was a pooled network of nine members that had already been in existence for about ten years. They joined the AusIndustry Business Network Program at the level-three stage. That is, they bypassed the exploration and feasibility of networking stages and went directly to the business planning stage because of their ten year history. They were looking to get assistance to move to new levels of business - mainly to export. The lead network sold products sourced from some of the other network members. The lead network also designed products that were then custom manufactured by some of the other network members. All of the members were all sellers of the same type of products and wanted to cooperate in order to compete, with large capacity, on a global scale. They relied upon each other to be profitable.

Case H was a complementary network of six businesses. Each provided a separate and different service that, when combined, formed one service product. The local government brought them together and asked them to provide this service that was not yet available in the area.

Case I was a pooled network of three members who all manufactured the same product. They met through an industry association. They joined the network program in order to gain resources to enable them to export their product. They also wanted to pool their efforts to increase their capacity to supply large orders from Japan.

Case J was a pooled network of nine business from the same region who all produced the same ingredient that went into a final product. The lead firm joined the network program because ‘Well, I’m a great believer in being a team player.’

Case K was a pooled network of four businesses which all knew each other because they were in the same type of business. ‘Basically we were looking at some sort of synergy between what we did and whether or not we could take on contracts that required large volume.’

Case L was a complementary network of four members who had been in the same industry association. They joined the network because they ‘all had a common purpose’.

Case M was a complementary network of three members who had previous dealings with each other. The lead business was a consultant who designed systems, the second firm had core technology and the third firm had experience and connections in an overseas market. Also, this lead firm had previous experience with business networks and kept abreast of government assistance programs. Moreover, it was important for this consultant to have the core technology and the overseas contacts that the other two businesses had in order to enter the market. Therefore, this lead business approached the other two firms to enter the AusIndustry Business Network Program.

Case N was a complementary network of three businesses that had previous dealings with each other. The lead business provided a service of custom design and the other two businesses value-added separate components, by custom manufacturing and installing them, to complete the product. The lead business, that is the designer, learnt of the AusIndustry Business Network Program through AusIndustry sources. The strategy was to formalise the soft network so that customers would flow through all ends of the product and so that the three firms could jointly employ a marketing manager.

Case O was a complementary network of twenty-two members who all provided a different component of a complete service. The lead firm was a consultant who managed and invested in the network and had been approached by two other members who wanted to enter a particular overseas market. The two needed to seek other specialists in the industry to provide the full service and to contribute funds for start-up. They also needed assistance with managing the network and marketing the service. The consultant had been involved previously with another network in the AusIndustry Business Network Program.

Case P was a pooled network of three businesses where ‘everyone knew everyone else because it’s not a big industry’. They wanted to join a network to ‘do something’.

In summary, the network types were mainly complementary networks or pooled networks. Some networks were a combination of those types plus one network was a sequential type. Half (8) of the networks were small networks consisting of 3 members (3 businesses). Of the other half, the large networks, the largest network

had 22 members whilst the others had 12, 9, 7, 6 or even 4 members. Almost all of the networks had been in a soft network situation prior to joining the AusIndustry Business Network Program. The networks learnt of the AusIndustry Business Network Program in assorted ways and approached AusIndustry to apply for the offered assistance.

Now that the case participants have been described, the cases will be cross analysed for each of three research issues in turn. Research issue two will be divided into two sections, internal environmental forces and external environmental forces.

4.3 Research issue 1: How and why was network success evaluated?

The first research issue concerns the success of the networks. That is, how the network outcome is evaluated by the network participants themselves, what bases they used for this evaluation and why. Measures of success were discussed in the literature in section 2.8 and this research issue was addressed in questions 8, 9, and 10 of the interview protocol.

4.3.1 Network outcomes

Network success was addressed in question eight of the interview protocol where the respondents were asked to evaluate their own perceptions of the outcomes of their network associations as one of: very good, good or ‘so-so’ (successful), or poor or very poor (non successful). Note that ‘so-so’ indicates a weaker success, as those networks perceived that they clearly did not fail. Table 4.2 illustrates that all of the continued networks believed they were successful. Two of the businesses, who rated their success as only so-so, are considered to be successful because they were *still continuing as a network*. However, another two of the businesses with a higher success rating additionally said, the network proved ‘fantastic’ (C), and ‘...above my expectations’ (A).

In contrast, all of the discontinued networks rated themselves as non successful, except for one. On closer examination this one respondent felt that, in spite of the discontinuation of their network, they had still been successful in that they achieved their purpose of growth. In this case, ‘The network forced everyone to come together to verbalise and work on a business plan and strategy’ (J). In addition, even though this network discontinued, the lead network continued to benefit after the program had ended by pursuing informal networks with other businesses.

Table 4.2 Networks’ evaluations of their own success

Rating	Successful			Non successful	
	Very good	Good	So-so	Poor	Very poor
A	✓				
B		✓			
C	✓				
D		✓			
E	✓				
F			✓		
G	✓				

H			✓		
I					✓
J	✓				
K					✓
L				✓	
M					✓
N					✓
O					✓
P					✓
Totals		9		7	
>3		5		3	
=3		4		4	
Successful		9		0	
Non successful		0		7	

Source: developed for this research

Bold cases denote large networks (8) with more than three members (>3)

Non-bold cases denote small networks (8) with three members (=3)

Successful cases (9) are A through H plus J

Non successful cases (7) are I plus K through P

On investigation of these results by network size, it can be noted that the large networks tended to rate themselves as being successful more frequently (63%) than the small networks (38%). However, the small networks were equally divided between successful and non successful cases. The issue of network size may therefore have been an issue in these networks, with one particular network suggesting that, ‘It would have been better to have more players. Three was too small.’ (A).

In brief, continued networks rated themselves as being successful and discontinued networks rated themselves as being non successful. An exception was one successful network, which was discontinued but indicated that their success was linked more to their achieving a goal of growth rather than to their continuing network associations. Discussion of *how* these cases based their evaluations and *why*, will follow next.

4.3.2 Measures for evaluating network success and non success

After asking the respondents to evaluate the outcomes of their networks they were asked in question nine of the interview protocol, ‘On what do you base your evaluation of the network’s outcome and why?’ Table 4.3, column F illustrates that successful cases tended to use *more than one measure* to evaluate their outcomes whereas the non successful cases tended more to use *only one measure* of evaluation. Network size did not seem to influence this result, with both large and small cases using equal numbers of evaluative measures.

Of the four measures reported by respondents for evaluating the success and non success of business networks, the main measure used (by 56% of cases) was whether a network continued or not, which is a *qualitative measure*. This measure, [the network is] ‘...still going’ (or not going as indicated by ✓- table 4.3, column B) was used equally by the successful and non successful cases and almost equally for the large (63%) and small networks (50%).

Table 4.3 Measures used for evaluation of success

A Measure / Case	B Network continued 'still going'	C Growth/ economic success	D Some long term goals achieved	E General feeling	F Number of measures cited
A	✓	✓			2
B	✓				1
C	✓	✓	✓		3
D			✓		1
E	✓				1
F				✓	1
G	✓	✓			2
H		✓			1
I				✓-	1
J		✓			1
K	✓-				1
L			✓-		1
M	✓-	✓-			2
N		✓-	✓-		2
O	✓-				1
P	✓-				1
Totals	9	7	4	2	
>3	5	4	2	0	
=3	4	3	2	2	
Successful	5	5	2	1	
Non successful	4	2	2	1	

Source: developed for this research

Bold cases denote large networks (8) with more than three members (>3)

Non-bold cases denote small networks (8) with three members (=3)

Successful cases (9) are A through H plus J

Non successful cases (7) are I plus K through P

✓- indicates negative connotation

The second most frequently used measure for evaluation (by 44% of cases) was a *quantitative measure* of growth or economic success such as was indicated by sales figures (table 4.3, column C), a measure more commonly used as a bench mark in business for measuring success. This result also did not display a great disparity between large networks (50%) and small networks (38%). In contrast however, a larger disparity was noted when this evaluation method was examined in relation to the perceived outcome of the network. Specifically, over half (56%) of the successful cases indicated that they used quantitative measures such as growth and economic success but less than one third (29%) of the non successful cases used these types of measures. Interestingly it would appear that, for those non-continuing (and thus non successful) networks, the fact that the network was no longer together was enough of a measure for evaluation, 'It was a business consequence' (P). They

may not have felt that additional economic or quantitative evidence of non success was needed.

The third most frequently used measure of evaluation (by 25% of cases), another *qualitative measure*, was achievement of *long-term goals* such as brand awareness, a formal merger, or new product development (table 4.3, column D). 'I gauge a network is successful when it achieves its projected outcomes' (M). This measure of meeting goals was used equally in the successful and non successful networks (2 cases each) and equally in both the large and small networks (2 cases each).

Finally, two networks stated that a *general feeling* of success or non success amongst participants was the main basis for evaluation (table 4.3 column E), '...because all partners agreed' (A). This once again is a qualitative measure and would be closely related to trust and reciprocity mentioned as important elements in network success in chapter 2.

4.3.3 Summary of research issue 1

In brief, the networks were asked to explain which measures they used to determine their own success or non success. Non success was clearly determined if the network was no longer operating and this qualitative measure of evaluation, [the network is] *still going*, alone was enough for some networks to consider themselves successful. However, many networks used additional quantitative measures such as economic success, a measure more commonly used as a benchmark in business for measuring success. Other bases used by these networks to evaluate success or non success were: achievement of *long-term goals*, such as brand awareness, new product development, joint venture; and just a *general feeling* amongst the participants.

These measures were used almost equally amongst the successful and non successful networks and amongst the large and small networks with the exception that successful networks cited growth and economic success as an evaluative measure more often than non successful networks.

4.4 Research issue 2: (part A) How and why did the internal environment affect the business networks?

The second research issue concerns the internal and external environmental factors that may have affected the outcomes of the networks and addresses the research question of how and why did the networks succeed or not succeed: *How and why did the internal and external environment affect the outcomes of the networks in the AusIndustry Business Network Program?* There were five main internal factors identified from several areas of the literature that were considered important to the success of networks and that were examined in this study. These were: 1) the internal need to join a business network; 2) time and involvement devoted to the network; 3) social factors of trust, commitment, and reciprocity; 4) facilitation; and 5) contracts. However, facilitation (4) will be discussed separately in research issue 3 (section 4.6).

The external environment will be discussed following the internal environment and will also include five factors as developed from the literature in section 2.6. These factors are: 1) political, legal or governmental forces; 2) economical forces; 3) social

or cultural forces; 4) technological forces; and 5) competitive forces. Each of the internal factors will now be addressed in turn.

4.4.1 Internal need to join a business network

The first internal factor related to the ‘*need to join a business network*’ and this was investigated with respondents in question 1.1 of the interview protocol. The responses from the sixteen cases are summarised in table 4.4. There were several reasons given as to why the businesses joined a network and some businesses had *more than one reason* (table 4.4, column E) for joining the business network.

The most commonly cited reason (63%) for joining the business network was to expand and grow (table 4.4, column B). This reason to join could be explained due to the Australian Government Department of AusIndustry making small businesses aware that formal networks could provide a growth advantage and encouraging them to seek this government assistance provided by participating in the Business Network Program (BNP). Government assistance will be discussed in research issue three.

This reason to join the network program, to expand and grow, could also be explained because the goal of most businesses is to expand and grow. More specifically, small businesses do not always have the required skills and resources to succeed on their own so they joined a network ‘to increase our skill base and expertise to expand’ (E). For example, ‘...volume of commodities, like if you go to Mitre 10 or somewhere they want to be assured of 50 pallets a month of a specific product.’ (K), where one small firm would not have the capacity alone to meet demand. Two cases adamantly believed in teamwork to expand and grow, ‘Well I’m a great believer in being a team player’ (J) and ‘I come from a military background and believe in teamwork’ (A).

The second most common reason (used by 38% of cases) to join a business network was to ‘specifically enter an overseas market, to export’ (table 4.4, column C). It was believed that to compete globally, a firm needed to be larger or appear larger, ‘to be stronger collectively in the international marketplace’ (C).

A third reason for joining a network was to ‘cut costs’ (table 4.4, column D). One case wanted to combine with other businesses that purchased similar raw materials so that in combination they could place larger volume orders, ‘For greater buying capacity, to be competitive by reducing costs of raw materials’ (L). There were no significant patterns found in cross comparisons regarding the size of the network but it is interesting to note that none of the successful networks cited cutting costs as their goal (table 4.4, column D). That is, the only networks that cited this reason for joining a network indicated their outcomes as poor or very poor (non successful). Perhaps cutting costs is not a good reason to get into networks because maybe it is a more negative approach when compared to business opportunities, growth, entering new markets or even needing the support and alliance of others – all positive reasons. That is, perhaps cost cutting is a more reactive rather than proactive approach in itself and may not be enough of a solid reason to join a network.

Table 4.4 Why join a network?

A Case	B To expand and grow	C To enter overseas market	D Cut costs	E Number of reasons given
A	✓ joint productivity to increase capacity			1
B	✓ wanted <i>funding</i> to increase production capacity			1
C		✓ to appear larger for business recognition		1
D	✓ strategy to support each other (vague)			1
E	✓ product development			1
F		✓ wanted <i>funding</i> for marketing purposes		1
G		✓ joint productivity to increase capacity		1
H	✓ product development			1
I		✓✓ joint production to increase capacity and wanted <i>funding</i> to start export process		2
J	✓ believed in teamwork (vague)			1
K	✓ product development			1
L			✓ joint purchase of raw materials	1
M	✓ expertise	✓ connections		2
N	✓ product development		✓ joint marketing	2
O		✓✓ product development and <i>funding</i> for marketing		2
P	✓ to do something (vague)			1
Totals	10	6	2	
>3	4	3	1	
=3	6	3	1	
Successful	6	3	0	
Non successful	4	3	2	

Source: developed for this research

Bold cases denote large networks (8) with more than three members (>3)

Non-bold cases denote small networks (8) with three members (=3)

Successful cases (9) are A through H plus J

Non successful cases (7) are I plus K through P

Finally, four networks (25%) joined a network because they believed AusIndustry would offer some 'financial assistance'. Two of the four cases that cited this reason for joining a network had additional reasons for joining, like product development and increased capacity.

In brief, all but one case (F) joined the network because they believed that 'joining forces with others could advantage them to expand and grow either in the domestic or global market'. The lead business in this single case (F) was very successful before joining the AusIndustry Business Network Program. They made the decision to participate in the program specifically for assistance with funding.

4.4.2 Time spent and frequency of formal meetings

Question two in the interview protocol asked the respondents what their level of involvement with the network was over the period of the AusIndustry Business Network Program. The question was based on how much time they devoted to the network. The reason for this question is that individual businesses maintained their normal independent operations whilst additionally working on a business network. Moreover, it was suggested in the literature (2.4) that time invested in establishing the relationships in networks is an important element to their success or otherwise. Thus it was thought that the success or discontinuation of the network may be related to the constraints of how much time was allocated by the lead business to establish and maintain the network.

Table 4.5, column B illustrates that the successful networks did indeed devote more time to the network business than the non successful networks (89%-14%). It would seem that the businesses who devoted more time gave the network a higher priority than those who did not. Further, these network members believed 'There was so much to be done' (D), and 'It was underestimated the [amount of] effort required' (O). Clearly the businesses who spent less time or little time did not give the network business top priority. For example, case P stated 'Normal business took up practically all of the time and then a very small percentage was put in the pot to see if we could make a joint attempt at whatever it was we were trying to do.' Case O was an exception because even though they considered themselves to be non successful, they did spend a very considerable amount of time spent on the network. In this particular case, an external factor was influential in the outcome, as seen later in the analysis.

Overall, the time spent was fairly equal between small and large networks and all cases agreed that they devoted much more time in stage one of the network development process because 'There was lots of paperwork and criteria to meet' (F). As expected, the time spent diminished after the goals and strategies were established in the first stage.

Formal meetings. This same attitude toward prioritising and allocating time for the network followed with the regularity of formal meetings (question three). Formal meetings varied from weekly to monthly to occasionally, but were held more regularly and more often with the successful networks (67%) than with the non successful networks (29%) (table 4.5, column C). Many of the non successful networks did not have a set schedule for meetings, meeting only '...twice or three

times yearly formally, but [spending] plenty of time on the phone' (L) (informal meetings).

Table 4.5 (column C) illustrates that there were more regular formal meetings with the small business networks than with the large business networks because in the cases with larger networks, 'not everyone could always attend' (O). All cases agreed that formal meetings were not the crux of the involvement because there were many phone conversations in the interim, '...always on the phone but not really formal meetings because of the lack of time of CEOs' (K). However, it would appear that in spite of this, the regularity of formal meetings did have some impact on the continuation of the network and thus its ultimate success. The data shows clearly that the successful networks devoted much more time and held more formal meetings much more often than the non successful networks.

Table 4.5 Amount of time spent on the business network and frequency of formal meetings

A	B		C	
	Amount of time spent on network business		Frequency of formal meetings	
Case	Little	Much	Not often	Often
A		✓		✓
B		✓	✓	
C		✓		✓
D		✓	✓	
E		✓		✓
F		✓		✓
G		✓		✓
H		✓		✓
I	✓		✓	
J	✓		✓	
K	✓		✓	
L	✓		✓	
M	✓			✓
N	✓			✓
O		✓	✓	
P	✓		✓	
Totals	7	9	8	8
>3	3	5	5	3
=3	4	4	3	5
Successful	1	8	3	6
Non successful	6	1	5	2

Source: developed for this research

Bold cases denote large networks (8) with more than three members (>3)

Non-bold cases denote small networks (8) with three members (=3)

Successful cases (9) are A through H plus J

Non successful cases (7) are I plus K through P

Overall, the time spent on formal meetings was fairly equal between the large and small networks although the large networks tended to meet formally less often than the small networks because it was more difficult to coordinate more people together at the same time.

4.4.3 How social aspects affected the network

Social aspects of a network's success were discussed in the literature in chapter 2 (section 2.4.3). The respondents were asked how the social aspects of trust,

commitment, and reciprocity affected the network in question five of the interview protocol. This was an open question so the respondents volunteered their answers and were not presented with any prompts. Each of these three social aspects will be discussed in turn.

Trust. Trust was defined for the respondents as a ‘firm belief that a person or thing may be relied upon’ (Oxford 1964, p1397). All networks agreed that trust was essential, with some stating, ‘Trust is critical at all times’ (C), and [trust] ‘...was the key to everything’ (A). Table 4.6 indicates that trust was high in all networks except two, both of which were non successful. Many noted that trust must be achieved through frankness, which included clarifying expectations, sharing information and honesty during communications. Case M said, trust ‘... is complicated in a network, and case B said trust is ‘...proven by doing’. The high level of trust indicated by most respondents can be explained because, for many who had previously worked together, the trust had been established over a period of years, ‘It takes a minimum of months [sic], up to years to develop trust’ (A).

The two networks that mentioned a lack of trust in the network both indicated that they were non successful although there were also networks indicating non success that *did* have trust. For one of the networks that did not have trust, it was commented that the facilitator had to continually resort to highlighting the financial benefits, appealing to the ‘dollar value’ to drive many of the members. ‘It was a big issue. They weren’t business people’ (O). The situation in this case continued during the latter stages of the network program and it was likely that this occurred because the professional people involved had always worked independently and perhaps did not have a cooperative business mindset. This network was the largest of the group. The other network (I) without trust in the initial stages of the program did develop some trust over the period (table 4.6, row I, column C) but did not start with it (table 4.6, row I, column B). Network I was the only case whose trust pattern changed over time through different stages of the network program.

Table 4.6 Level of trust in the network

Case	B Level of trust establishing the network		C Level of trust maintaining the network	
	Low	High	Low	High
A		✓		✓
B		✓		✓
C		✓		✓
D		✓		✓
E		✓		✓
F		✓		✓
G		✓		✓
H		✓		✓
I	✓			✓
J		✓		✓
K		✓		✓
L		✓		✓

M		✓		✓
N		✓		✓
O	✓		✓	
P		✓		✓
Totals				
>3	1	7	1	7
=3	1	7	0	8
Successful	0	9	0	9
Non successful	2	5	1	6

Source: developed for this research

Bold cases denote large networks (8) with more than three members (>3)

Non-bold cases denote small networks (8) with three members (=3)

Successful cases (9) are A through H plus J

Non successful cases (7) are I plus K through P

In brief, all members rated trust as extremely important to network success but in two cases it was lacking. Both of these cases were non successful networks. In one case, a small network, trust was salvaged later on but in the other case, that of the largest network, the lack of trust was a big issue and directly contributed to their discontinuation. The size of the network did not seem to be a factor affecting trust with both large and small networks all citing the importance of trust.

Commitment. Commitment was defined for the respondents as a ‘pledge or dedication to a course of action’ (Oxford 1964 p243). Table 4.7 summarises the respondents’ views on the level of commitment in their network in the establishment stage (column B) and also in the later stages of the BNP (column C).

Table 4.7 Level of commitment in the network

Case	B Level of commitment establishing the network		C Level of commitment maintaining the network	
	Low	High	Low	High
A		✓		✓
B		✓		✓
C		✓		✓
D	✓		✓	
E		✓		✓
F		✓		✓
G		✓		✓
H	✓		✓	
I	✓		✓	
J		✓		✓
K	✓		✓	
L		✓	✓	
M		✓		✓
N		✓	✓	

O	✓		✓	
P		✓	✓	
Totals	5	11	8	8
>3	3	5	4	4
=3	2	6	4	4
Successful	2	7	2	7
Non successful	3	4	6	1

Source: developed for this research

Bold cases denote large networks (8) with more than three members (>3)

Non-bold cases denote small networks (8) with three members (=3)

Successful cases (9) are A through H plus J

Non successful cases (7) are I plus K through P

Commitment, to some, meant having a clear strategy and common cause where everyone understood the benefits to each. Patterns in table 4.7 indicate that there was a high level of commitment by members in successful networks (78%), more so than in the non successful networks (58%) particularly during stages of establishing and maintaining the networks. One successful case (G) summed this up by stating that commitment ‘...was huge physically and emotionally’, but that they remained committed because ‘...our businesses are dependent upon each other to be profitable’. Commitment was demonstrated in the sense that, ‘The proof is in the pudding’ (B).

In contrast, commitment in the non successful cases was present in varying levels and was unbalanced, ‘...one [level] was not to put in but watch and see’ (N). Case (L) agreed, ‘When push came to shove and absolute commitment to the network was required, the network members weren’t able to provide that’.

It is interesting to note that the high level of commitment in the successful cases remained high from the initial stages to the ongoing phase. In contrast, the commitment was more varied for the non successful cases. For all but one of these non successful networks there was a high level of commitment in the initial stages but this diminished in the later stages of the network program. This pattern was seen equally in both small and large networks. In no case did commitment increase over time.

Reciprocity. Reciprocity was defined to the respondents as ‘mutual action, principal or practice of give and take’ (Oxford 1964 p1033). Case G summed the reciprocity situation pertaining to the members of unequal sizes and capacities, ‘...the bigger companies of course do more because they have more resources than the smaller ones, but they value the fact that the smaller companies are there and they do what they can. Proportionally they are equal’.

Table 4.8 illustrates that in the majority of both successful and non successful cases reciprocity was high initially (column B) but in almost half of all cases the reciprocity diminished over time (column C), some subtly and others dramatically. This could be explained by human nature and was summed up this way by case C, ‘In any community there is always some who take more than they give and some who give more than they take’. Case D also believed there should have been more sharing of tasks from the beginning and ‘...because of personal politics there was a

tendency to pass the buck. Some do more work'. This theory of human nature was explained further by case K,'s comment, 'I think it would be fair to say that there was a pre-occupation with each organisation's own interests, protecting their own patch...'.

In brief, patterns were similar between the large and small networks but a great variance occurred between the successful and non successful networks. That is, reciprocity was high in 78% of successful networks compared to 57% of the non successful networks in the initial stages of the network program (table 4.8, column B). In the latter stages of the network program the level of reciprocity was reported to have diminished to having a high level in only 56% of the successful networks and outstandingly no reciprocity at all in the non successful networks (table 4.8, column C).

Table 4.8 Level of reciprocity establishing and maintaining the network

A ---- ----- Case	B Level of reciprocity establishing the network		C Level of reciprocity maintaining the network	
	Low	High	Low	High
A		✓		✓
B		✓	✓	
C		✓	✓	
D	✓		✓	
E		✓		✓
F		✓		✓
G		✓		✓
H	✓		✓	
I	✓		✓	
J		✓		✓
K		✓	✓	
L		✓	✓	
M	✓		✓	
N		✓	✓	
O	✓		✓	
P		✓	✓	
Totals	5	11	11	5
>3	2	6	6	2
=3	3	5	5	3
Successful	2	7	4	5
Non successful	3	4	7	0

Source: developed for this research

Bold cases denote large networks (8) with more than three members (>3)

Non-bold cases denote small networks (8) with three members (=3)

Successful cases (9) are A through H plus J

Non successful cases (7) are I plus K through P

4.4.4 Contracts

The issue of hard contracts was explored in the interview protocol in question twelve. The AusIndustry Business Network Program was developed specifically for hard networks and this was discussed in the literature chapter 2 (section 2.2.2). All cases had in place a standardised contract between the lead business in the network and the AusIndustry Business Network Program because that was what was required to join the program and receive assistance. This was the only contract involved for ten of the sixteen cases (63%). However, in addition to the standardized contract for the BNP, a specialized, more specific contract was in place *within* the network for some (38%) (table 4.9, column B).

Table 4.9 Specific contracts in the networks

A Case	B Specific contract	C No contract
A	✓	
B	Memo of understanding.	
C	Adapted standardised contract	
D		✓
E		✓
F	allocated shares	
G		✓
H	<i>verbal agreement, written in the minutes of the meeting</i>	
I		✓
J		✓
K		✓
L		✓
M		✓
N	We had a legal firm draw it up	
O		✓
P		✓
Totals	6	10
>3	3	5
=3	3	5
Successful	5	4
Non successful	1	6

Source: developed for this research

Bold cases denote large networks (8) with more than three members (>3)

Non-bold cases denote small networks (8) with three members (=3)

Successful cases (9) are A through H plus J

Non successful cases (7) are I plus K through P

Of these additional specialised contracts, all except for one were with the successful networks. That is, only one of the non successful networks had an additional specific contract (14%) compared to 56% of the successful networks. This could mean that there was more commitment on a purely legal basis for some of the successful networks by increasing the barriers to exit from the network and consequently increasing the levels of commitment and reciprocity. Indeed when the existence of contracts was cross compared to the levels of trust, commitment and reciprocity, it was found that those networks (non successful) that *began* with low trust did not have a contract. These additional contracts were equally used by both small and

large networks, thus showing no indication that the use of a hard contract was related to the size of the network.

4.4.5 Summary of how Internal Forces affected the outcomes of the networks

In summary, all but one case believed that joining forces with others could be an advantage to expanding and growing either in the domestic or global market. Thus there were no significant patterns found in cross comparisons regarding the size of the network or the successful/non successful networks pertaining to the need to join a network.

Internal forces examined in relation to network success included time spent for network activity and the social aspects of trust, commitment and reciprocity. It was found that successful networks spent more time on network business than the non successful networks but that the size of the network was insignificant in this regard. The social aspects of trust, commitment and reciprocity were more positively prevalent for the successful networks than the non successful ones. Small networks were slightly more likely (43%) to comment on the positive existence of these social forces than the large ones (32%), suggesting that in small networks it may be easier to develop trust, commitment and reciprocity because fewer people are involved.

Specialised contracts were more likely to be found in the successful networks suggesting that perhaps there was more commitment on a legal basis for these successful networks, that there were higher barriers to exit the network and perhaps this also forced an increase in the degree of commitment and reciprocity. There were no patterns in these findings between the large or small networks pertaining to contracts.

4.5 Research issue: 2 (part B) How and why did the external environment affect the outcomes of the networks?

In addition to the internal forces that affect the outcomes of business networks, there are five external environmental forces that could have affected the success or non success of these networks. The external environmental forces were discussed in the literature in section 2.6 and were explored in question seven of the interview protocol. The respondents rated the affects of the relevant forces as either *supportive* or *threatening* or *neutral* and justified these ratings with explanations. Each of these five external forces: 1) political, legal or governmental forces; 2) economical forces; 3) social or cultural forces; 4) technological forces; and 5) competitive forces, will be discussed in turn.

4.5.1 Political, legal or governmental forces

Table 4.10 illustrates that political, legal or governmental forces were seen to be overall more threatening in nature (column D) than supportive (column B) to all of the networks in the study for a number of reasons. One case believed that a particular overseas government was protecting their own industries, which made exporting to that country difficult. 'Governments in the countries we are exporting to can be threatening' (J). In Australia, legal problems lay mainly with the bank sector where, 'The legal infrastructure of banks and Telstra was threatening because

they would not recognise a 'network'. Accounts could be opened only in an individual or company name – not a network name' (N).

On the other hand, political, legal or governmental forces were also said to be somewhat supportive particularly as the funding made available in this project was from the government. 'The government made small business assistance available' (N). This particular form of government support will be discussed further in research issue 3.

Table 4.10 Effects of political, legal and governmental forces on the networks

A Political, legal, and governmental forces	B Supportive	C Neutral	D Threatening	E Number of responses per case
Case				
A	✓			1
B		✓		1
C			✓	1
D	✓		✓	2
E		✓		1
F			✓	1
G			✓	1
H	✓			1
I			✓	1
J	✓			1
K		✓		1
L		✓		1
M	✓		✓	2
N	✓		✓	2
O			✓	1
P		✓		1
Totals	6	5	8	
>3	2	3	3	
=3	4	2	5	
Successful	4	2	4	
Non successful	2	3	4	

Source: developed for this research

Bold cases denote large networks (8) with more than three members (>3)

Non-bold cases denote small networks (8) with three members (=3)

Successful cases (9) are A through H plus J

Non successful cases (7) are I plus K through P

In brief, one third of the respondents reported that the political, legal or governmental forces had no effect (neutral) on their networks, whilst one quarter of the respondents said that these forces were *both* supportive and threatening. It is interesting to note that political, legal or governmental forces were the least threatening of all the forces in the external environment *and* at the same time they were the least supportive. Cross comparisons indicate that this particular external force was not strongly linked to the success or non success of these networks nor were these forces affecting the size of the networks.

4.5.2 Economic forces

Economic forces were seen by respondents to be overall more threatening in nature (table 4.11, column D) than supportive (column B). However, as with the political,

legal and governmental forces, economic forces were not seen to be linked to either the success or non success of the networks in aggregate results. In spite of this general trend, one network firmly believed that, ‘The Asian [economic] crisis directly and utterly caused our demise’ (O). Other threatening economic issues that were reported by respondents were high exchange rates, high cost of travel overseas and high prices in general.

Table 4.11 Effects of economic forces on the networks

A Economic forces Case	B Supportive	C Neutral	D Threatening	E Total Responses per case
A	✓			1
B			✓	1
C	✓		✓	2
D			✓	1
E			✓	1
F			✓	1
G		✓		1
H		✓		1
I			✓	1
J	✓			1
K		✓		1
L			✓	1
M			✓	1
N			✓	1
O			✓	1
P		✓		1
Totals	3	4	10	
>3	3	3	4	
=3	1	1	6	
Successful	3	2	5	
Non successful	0	2	5	

Source: developed for this research

Bold cases denote large networks (8) with more than three members (>3)

Non-bold cases denote small networks (8) with three members (=3)

Successful cases (9) are A through H plus J

Non successful cases (7) are I plus K through P

In contrast, one respondent reported that, ‘Exchange rates were good for exporting’ (C) and another said, ‘It was all during a good period of time economically’ (J). This supportive nature of the economy appears to have favoured only three of the 16 networks (19%) and these three were also successful networks. This is a fairly normal occurrence with economic factors, particularly exchange rates, often favouring one industry category at the expense of others.

In brief, economic forces were not seen to be linked to either the success or non success of the networks except for one network who blamed their non success almost

entirely on the Asian economic crisis. Overall, the impact of economic forces was equally felt by both large and small networks.

4.5.3 Social and cultural forces

Social and cultural forces appeared to be more neutral in nature (table 4.12, column C) or tending to be considered slightly supportive (column B) when compared to those external forces previously mentioned. The supportive nature of this factor appeared to be more connected to lifestyles and to being able to create demand for products. In this supportive light one case reported that social and cultural forces were ‘...very supportive. Our product is trendy. People love our product’ (J).

For those networks who indicated that social and cultural forces were somewhat threatening in nature, most of the issues were noted in terms of difficulties with languages when dealing with international markets and channel members, ‘...you know, communication. It was not threatening but it was difficult’ (E). Similarly, cultural differences when doing business overseas was also mentioned in relation to this factor, ‘they wouldn’t sign contracts with females. We had to hire a male to deal with them’ (F).

In brief, these social and cultural forces did not greatly affect the outcomes of the networks in this research nor did these forces appear to affect large or small networks differently.

Table 4.12 Effects of social and cultural forces on the networks

A Social/ cultural forces ----- Case	B Supportive	C Neutral	D Threatening	E Total responses per case
A	✓		✓	2
B		✓		1
C	✓			1
D		✓		1
E			✓	1
F			✓	1
G		✓		1
H		✓		1
I		✓		1
J	✓			1
K		✓		1
L		✓		1
M	✓			1
N		✓		1
O	✓		✓	2
P		✓		1
Totals	5	9	4	
>3	3	5	1	
=3	2	4	3	
Successful	3	4	3	
Non successful	2	5	1	

Source: developed for this research

Bold cases denote large networks (8) with more than three members (>3)

Non-bold cases denote small networks (8) with three members (=3)

Successful cases (9) are A through H plus J

Non successful cases (7) are I plus K through P

4.5.4 Technological forces

Table 4.13 illustrates that technological forces were more supportive in nature (column B) than threatening (column D) overall. Technology was seen as supportive in the sense that computers and internet communications improved the potential for business success, and some of the networks in this program were already in technology oriented industries, ‘This industry leads the way in technology. There is good research and development in place (C).

Table 4.13 Effects of technological forces on the networks

A	B	C	D	E
----------	----------	----------	----------	----------

Technological forces Case	Supportive	Neutral	Threatening	Total responses per case
A	✓			1
B		✓		1
C	✓			1
D	✓			1
E	✓			1
F			✓	1
G	✓			1
H		✓		1
I		✓		1
J	✓			1
K		✓		1
L	✓			1
M	✓			1
N	✓		✓	2
O	✓			1
P			✓	1
Totals	10	4	3	
>3	5	3	0	
=3	5	1	3	
Successful	6	2	1	
Non successful	4	2	2	

Source: developed for this research

Bold cases denote large networks (8) with more than three members (>3)

Non-bold cases denote small networks (8) with three members (=3)

Successful cases (9) are A through H plus J

Non successful cases (7) are I plus K through P

It was noted however that small networks were more likely to see technological forces as threatening than large ones primarily because ‘It [technology] drives the cost up’ (N) and it ‘[technology]...means that the investment that we have to make becomes greater (P). The results clearly demonstrated however, that there was very little variance between successful or non successful cases and between large or small networks in relation to the impact of technological forces on success or non success of these networks.

4.5.5 Competitive forces

The impact of competitors was examined in relation to Michael Porter’s Five Forces of Competition (discussed in the literature section 2.6.5); and these forces are: power of suppliers; power of customers; likelihood of substitute products; competitive rivalry; and barriers to entry to the industry. Note that a low impact is positive (indicated by +) for the business networks in relation to these forces (table 4.14 columns A-D) except for barriers to entry (column E) where a low impact would be seen as negative to the network (indicated by -).

Power of Suppliers. The power of suppliers (column B) was considerably higher for the non successful networks than the successful networks and somewhat higher for the small networks than the large networks but was not reported to directly impact the outcomes of any of the networks in this research.

Power of Customers. The power of customers (column C) was extremely high in almost all the networks, both successful and non successful and large and small networks. However, according to the respondents, this competitive force did not directly impact network outcomes with the exception of one network. This one particular network was successful either due to (or in spite of) having only one single customer, a government contract. Thus this single customer alone had the power to change the outcomes of that network, for example if the contract was cancelled for any reason

Likelihood of substitute products. There appeared to be a higher likelihood of substitute products (column D) for the small networks compared to the large networks and again the likelihood was higher for the non successful networks when compared to the successful ones. However the likelihood of substitute products was not reported to have any direct impact on the outcomes of any of the networks in this research.

Competitive rivalry. High levels of competitive rivalry (column E) were reported by respondents in non successful networks more than those reported by respondents in the successful networks with the same ratio occurring in the large networks compared to the small networks. The different levels of competitive rivalry however did not appear to directly affect the outcomes of the networks.

Table 4.14 Effects of Michael Porter’s five forces of competition on the networks

A Case	B Power of suppliers		C Power of customers		D Likelihood of substitute products		E Competitive rivalry		F Barriers to entry		G Total +/- competitive forces per case	
	Low +	High -	Low +	High -	Low +	High -	Low +	High -	High +	Low -	+	-
A		✓		✓	✓		✓			✓	2	3
B		✓	✓		✓			✓		✓	2	3
C	✓			✓		✓		✓		✓	1	4
D		✓		✓		✓	✓			✓	1	4
E	✓			✓		✓		✓	✓		2	3

F	✓			✓		✓	✓		✓		3	2
G	✓			✓		✓		✓		✓	1	4
H	✓			✓	✓			✓		✓	2	3
I		✓		✓	✓		✓			✓	2	3
J		✓		✓	✓		✓			✓	2	3
K		✓		✓		✓		✓	✓		1	4
L		✓	✓			✓		✓		✓	1	4
M	✓			✓		✓		✓	✓		2	3
N		✓		✓		✓		✓		✓	0	5
O	✓		✓		✓			✓		✓	3	2
P		✓		✓		✓		✓		✓	0	5
Totals	7	9	3	13	6	10	5	11	4	12		
>3	4	4	3	5	4	4	1	7	1	7		
=3	3	5	0	8	2	6	4	4	3	5		
Successful	5	4	1	8	4	5	4	5	2	7		
Non successful	2	5	2	5	2	5	1	6	2	5		

Source: developed for this research

Bold cases denote large networks (8) with more than three members (>3)

Non-bold cases denote small networks (8) with three members (=3)

Successful cases (9) are A through H plus J

Non successful cases (7) are I plus K through P

+ denotes favourable condition

- denotes unfavourable condition

Barriers to entry. In contrast to the other four forces of competition in Michael Porter's model where a high level rating of the particular force would be considered negative to the networks, high barriers to entry to the industry (column F) would be seen as positive to the network. Two thirds of the networks in this research reported low barriers (easy entry) into their respective industries but that the possibility of easy entry did not impact the outcomes of their networks. Nor was a high barrier to entry to the various industries of the other third of respondents thought to impact the outcomes of these networks.

Generally, when considering the tally of influence from these five forces of competition (Column G), the forces seemed to be more of a negative nature than a positive nature in all but two of the cases (one small successful and one large non successful network). However, the general element of competition did not directly affect the outcomes of the networks according to the respondents in this research. There appeared to be no major differences in any particular one of these five forces of competition between the successful networks compared to the non successful networks. Similarly, there seemed very little difference overall between the size of the networks and how they rated the importance of these forces.

4.5.6 Summary of external environmental forces affecting the outcomes of the business networks

It is interesting to note that political, legal or governmental forces were the least threatening *and* the least supportive of all the forces in the external environment when measured on a continuum. Thus, political, legal and governmental forces did not appear to affect the success of the networks.

Economic forces were seen to be more threatening in nature than supportive and again the threatening nature of these economic forces was not seen to be linked to either the success or non success of the networks nor the size of the networks in aggregate results.

Social and cultural forces appeared to have a neutral or slightly supportive impact on the success of the networks in this research. This situation was fairly equal between successful and non successful networks and between large and small networks. Thus, social and cultural forces did not appear to affect the success of these networks.

Technological forces were more supportive in nature than threatening and this view was equally held by both successful and non successful networks. It would appear however that the size of the network is relevant in how much of an impact this factor has on a business network with smaller networks citing issues in 'keeping up' with changing technologies, mainly due to resource limitations.

Overall, external factors were seen to be slightly more threatening to the success of these networks than they were supportive but in summary, the external environmental forces proposed by the literature as impacting business success did not appear to affect the success of these networks from the AusIndustry Business Network Program.

4.6 Research issue 3: How did facilitation affect the networks?

The third research issue concerns the importance of the facilitators' contribution to establishing and maintaining the network. This was discussed in section (2.7.3). This question is of importance because the key area of government assistance in the AusIndustry Business Network Program (BNP) was to provide a professional business consultant, free of charge, to establish the network. Business networks can operate with or without a facilitator but these businesses were mostly quite new to the formalized network concept and therefore required some leadership and guidance in establishing and dealing with network dynamics. These facilitators were trained specifically by AusIndustry for this program.

The potential networks were able to choose a facilitator from a list of facilitators distributed by the BNP. Each of these networks had a different facilitator. The trained facilitators could also formulate appropriate networks from their own client bases. However, in only two cases the facilitator organised the introductions. 'He identified the parties and got them together. 'He drew a picture, identifying the benefits' (A). In contrast, fourteen of the networks had already known and selected their members prior to formalizing the network and therefore did not require introductions.

The official role of the facilitators for all networks was to explore and determine the feasibility of the business network and to generate firm agreements in phase one of the AusIndustry Business Network Program. Question six in the interview protocol was developed to explore the case participant's perceptions and experience toward the facilitators' role in: co-coordinating exploration and feasibility and firming agreements; management of network business procedures; ongoing business management including monitoring progress; and social bonding and motivation. Each of these will be discussed in turn.

4.6.1 Facilitators' role in coordinating exploration and feasibility and firming agreements

As part of the initial feasibility study in this program, developing a formal business plan was imperative to each network and a condition of entering into the AusIndustry Business Network Program. The facilitators' involvement with developing business plans varied. Table 4.15 (column B) illustrates that in eleven of the sixteen cases (69%) the participants perceived the facilitator to have a major role in stages one and two of the BNP, coordinating exploration and feasibility and firming agreements, 'He formalised everything' (N). In most of these eleven cases the facilitator did even more than was required of him under his contract to the government: 'He was vital to it. (B), and 'He had much to do. The person was excellent' (K).

In contrast to the major role in these eleven cases, three participants indicated that the facilitator played a minor role, even going so far as to say that they were dissatisfied with the role of their facilitator, with one network (successful) stating, 'He suggested lots of things but in the end we seemed to do most of the work for funding' (D). Another network (unsuccessful) suggested that the facilitator '...tried but did not know our industry' (I).

Overall, cross-comparisons of the data provided in table 4.15 indicate that success or non success of the network did not seem to be linked to the involvement of the facilitator because 86% of the non successful networks indicated that the facilitator played a major role in their network exploration, feasibility and firming of agreements (column B) and a major role was also played by facilitators in 56% of the successful networks. Across all network sizes the facilitator mostly played a major role thus indicating no effect of network size related to facilitator of role coordinating exploration and feasibility and firming agreements.

Table 4.15 Facilitators' roles

A Facilitator role ----- Case	B Coordinating exploration, feasibility & firming agreements (stages one and two)		C Management of network business procedures (stage three)		D Ongoing business management including monitoring progress (stage three)		E Social bonding and motivation (stages one and two)		F Total of minor/major roles per case	
	Minor role	Major role	Minor role	Major role	Minor role	Major role	Minor role	Major role	Minor roles	Major roles
A		✓		✓		✓	✓		1	3
B		✓	✓		✓		✓		3	1
C		✓	✓		✓		✓		3	1
D	✓		✓		✓		✓		4	0
E	✓		✓		✓		✓		4	0
F		✓	✓		✓		✓		3	1
G	✓			✓		✓	✓		2	2
H	✓			✓	✓		✓		3	1
I	✓		✓		✓		✓		4	0
J		✓		✓	✓		✓		2	2
K		✓	✓		✓		✓		3	1
L		✓	✓			✓	✓		2	2
M		✓	✓			✓	✓		2	2
N		✓	✓		✓		✓		3	1
O		✓		✓		✓		✓	0	4
P		✓	✓			✓	✓		2	2
Totals	5	11	11	5	10	6	15	1	41	23
>3	2	6	4	4	5	3	7	1	18	14
=3	3	5	7	1	5	3	8	0	23	9
Successful	4	5	5	4	7	2	8	1	25	11
Non successful	1	6	6	1	3	4	6	1	16	12

Source: developed for this research

Bold cases denote large networks (8) with more than three members (>3)

Non-bold cases denote small networks (8) with three members (=3)

Successful cases (9) are A through H plus J

Non successful cases (7) are I plus K through P

4.6.2 Facilitators' role in management of network business procedures

Once the network was formally established, the role of the facilitator diminished, that is, he had less to do with stage 3 of the program, maintaining the network and managing network business procedures (discussed in the literature section 2.7.3).

Table 4.15 (column C), illustrates that most of the respondents (69%) claimed that they continued to work with the facilitator but in a lesser role and to varying degrees. In some networks the facilitator continued to stay in contact but left the business of the network up to the members, 'He showed leadership and gave us direction' (A), whilst in other networks he left them almost completely alone, 'I hope I'm not being unfair or unkind...I think that our consultant was more keen on the process that had been set down than identifying outcomes' (K).

It is interesting to note that the actual form of the facilitators' involvement appeared to be less related to the networks' successes than to a network's non success, with 57% of non successful cases reporting a major role played by the facilitator in stage three of the network's development compared to only 22% reporting a major role in successful networks. Perhaps more facilitation of the management of network

business procedures could have saved some non successful networks? The facilitator played a major role equally in the small networks and the large networks at this stage.

4.6.3 Facilitators' role in ongoing business management including monitoring progress.

Again, more than half (63%) of the respondents stated that the facilitator had more of a minor role in ongoing business management and monitoring the progress of the network (table 4.15, column D), 'We had to monitor his lack of progress' (D). However, the respondents whose networks were monitored felt that the facilitators' participation continued to the extent that 'He tried to keep things moving forward' (P).

Cross-comparisons continued to show (table 4.15, column D) that success was not linked to the facilitators' high level of involvement of business management and monitoring progress. In fact there appeared to be an inverse correlation in terms of ongoing business management whereby 57% of the non successful cases tended to have a major involvement from the facilitator compared to only 22% of the successful cases. This is consistent with the facilitation of network business in stage 3 and could be explained in that perhaps the successful networks already had the skills to monitor their networks but the non successful networks had to rely more on a facilitator and thus when their involvement lessened they did not have the skills or motivation to continue. No patterns emerged regarding the size of the network and the role of the facilitator in managing ongoing networks business including monitoring progress.

4.6.4 Facilitators' role in social bonding and motivation

Social bonding and motivation was discussed in the literature (section 2.4.3) and social bonding was also discussed in research issue two (section 4.4.3). Bonding and motivation is generally most important in networks during stage one, the exploration stage of the AusIndustry Business Network Program, and stage two, the feasibility stage. As illustrated in column E of table 4.15, the facilitator was perceived to have had a major role in bonding and motivation in only one network, 'There were newsletters and trips' (O). This was the largest network consisting of twenty-two members, most of which did not know each other prior to this network's formation. However, several respondents believed that even though the facilitator did not play a role in the bonding because, '...it was already in place' (G), there was still a minor role played in motivation, 'He was involved and had positive input' (C) and '...motivation because he had a local perspective' (B). Overall the facilitators' role in social bonding and motivation was not linked to success or non success nor were there patterns in the size of the network.

4.6.5 Government assistance

Government assistance was discussed in the literature (section 2.7). All cases received government assistance from the AusIndustry Business Network Program to establish their networks. Thus, it was circumstances in the firms' internal environment that necessitated that they utilise outside assistance to establish a business network. As indicated at the start of this section, most of the government

assistance was provided in the form of the services of a business consultant to facilitate the establishment of a network and a program of seminars that taught potential members about network processes, advantages, and disadvantages. Therefore, question 6.1 of the interview protocol asked respondents if the network would have been possible without government assistance and how that assistance could have been improved.

Additionally, extra funds for marketing purposes or other expenses of the network were made available to networks if they applied for it separately. This assistance was more customised in nature in that purposes and amounts varied according to what the networks were doing and what they applied for. This information was confidential and not made available to the researcher thus making this discussion very sensitive.

Would the network have been possible without government assistance?

Table 4.16 illustrates that the majority of successful cases would have indeed been possible without government assistance (column B) because some of these networks were strong to begin with. Some did state that even though it could have been possible without the assistance (column C): ‘...what the government assistance allowed us to do was grow at a much faster pace’ (G), and ‘It was a good catalyst to get us started’ (A). Case E agreed, ‘...any assistance you can get from government is most welcome’.

Table 4.16 Would the network have been possible without government assistance?

A Case	B Yes	C No
A	✓	
B		✓
C	✓	
D		✓
E	✓	
F	✓	
G	✓	
H		✓
I	✓	
J		✓
K		✓
L		✓
M	✓	
N	✓	
O		✓
P		✓
Totals	8	8
>3	2	6
=3	6	2
Successful	5	4

Non successful	3	4
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Source: developed for this research

Bold cases denote large networks (8) with more than three members (>3)

Non-bold cases denote small networks (8) with three members (=3)

Successful cases (9) are A through H plus J

Non successful cases (7) are I plus K through P

In contrast, the majority of the non successful cases believed that nothing would have happened without government assistance, which indicates that many would not have considered a network situation without government intervention. Case J stated, ‘We needed the money’. Case P indicated that it would not have been possible nor did the assistance insure them success, ‘...when you are dealing with entities that are not in control of their own destiny, government assistance doesn’t really have much impact’.

The majority of small networks indicated that their network would have been possible without government assistance whilst most of the large networks indicated it would not have been possible with government assistance. One large network said that they ‘...wouldn’t have done it’ (B), and Case L echoed this sentiment, ‘...they provided us with the opportunity’. Case K agreed, ‘I doubt if anyone else in the organization would have come up with an idea’

How to improve government assistance

Table 4.17 (column B) indicates that more than one third of the cases (38%) were satisfied with the government assistance and did not think any improvements were necessary. This sentiment was fairly equally spread between the successful and non successful networks and the large and small networks. These networks generally agreed that the program was ‘...well structured...’ (A), and, overall it was, ‘...a good learning experience’ (B). Case L stated, ‘...we got terrific support from the government. They’ve been fantastic. I don’t think they could have done any more in that sort of work environment.’

This same proportion of cases believed that the processes of the government for the network program or assistance should be less strict (table 4.17, column C) and more tailored to the individual needs of the particular network. This criticism was cited slightly more often by the successful networks than the non successful networks. Case M agreed, ‘They are too theoretical but need to look at what is more important for the business’ and added, ‘The government needs to be more output driven’.

Table 4.17 How to improve government assistance

A Case	B No improvement needed	C Be less strict/ have less red tape	D Give more funding	E Give marketing assistance
A	✓			
B	✓			
C		✓		
D		✓		
E			✓	
F			✓	
G			✓	
H	✓			
I		✓		
J	✓			
K		✓		
L	✓			
M		✓	✓	
N				✓ for research
O		✓	✓ for marketing	
P	✓			
Totals	6	6	5	1
>3	2	3	1	0
=3	4	3	4	1
Successful	4	2	3	0
Non successful	2	4	2	1

Source: developed for this research

Bold cases denote large networks (8) with more than three members (>3)

Non-bold cases denote small networks (8) with three members (=3)

Successful cases (9) are A through H plus J

Non successful cases (7) are I plus K through P

Another popular suggestion for improvement (31%) was to give more direct funding (table 4.17, column D), ‘You need to throw money at us because there are costs involved from the word go’ (E). Case G was even more adamant about funding, ‘We needed several hundred thousand dollars’. Both of these cases were successful networks and felt that they could have succeeded without government assistance. In contrast, successful case A said ‘I don’t believe in handouts’ and non successful case J said, ‘Members need to contribute more - not just rely on government funding’.

Finally, one other suggestion was for the government to ‘Provide a researcher for more formalised market research for this network’ (N) (table 4.17, column E).

4.6.6 Summary of research issue 3

All of the business networks believed that joining forces with other businesses had the potential to give them a competitive advantage, thus reinforcing the original motivation to join a network. However the successful cases believed they could have formed the network without government assistance and that the assistance provided basically needed no improvement. In contrast, the non successful cases believed that nothing would have happened without government assistance and most of the non successful cases thought the government assistance could have been improved by providing additional and freer funding sources. The large networks agreed that nothing would have happened without government assistance whilst the small networks believed their network *would* have been possible without assistance.

4.7 Conclusions

This chapter began with a brief description of each of sixteen networks that participated in the AusIndustry Business Network Program. The role of this chapter was to present and summarise the data obtained from these sixteen cases, to seek to analyse the data in cross-case comparisons and to identify patterns in that data that would solve the three research issues. The findings and resulting patterns pertaining to each of the research issues were summarized at the end of each section of this chapter. No attempt was made in this chapter to relate these findings to the existing literature because that is the role of chapter 5 where conclusions and implications will be drawn.

The next and final chapter will therefore conclude this thesis by comparing the literature in chapter 2 with the findings in chapter 4. It will then discuss the implications of this research's findings for theory and for policy and practice. Finally it will provide the limitations of this research and make suggestions for future research.

5 Conclusions and implications

5.1 Introduction

The purpose of this research was to address the research question: *How and why did the business networks in the AusIndustry Business Networks Program succeed or not succeed?* More specifically, three research issues were developed from this research question in chapter 1:

RI 1: How and why was network success evaluated?

RI 2: How and why did the internal and external environment affect the outcomes of the network?

RI 3: How did facilitation affect the network?

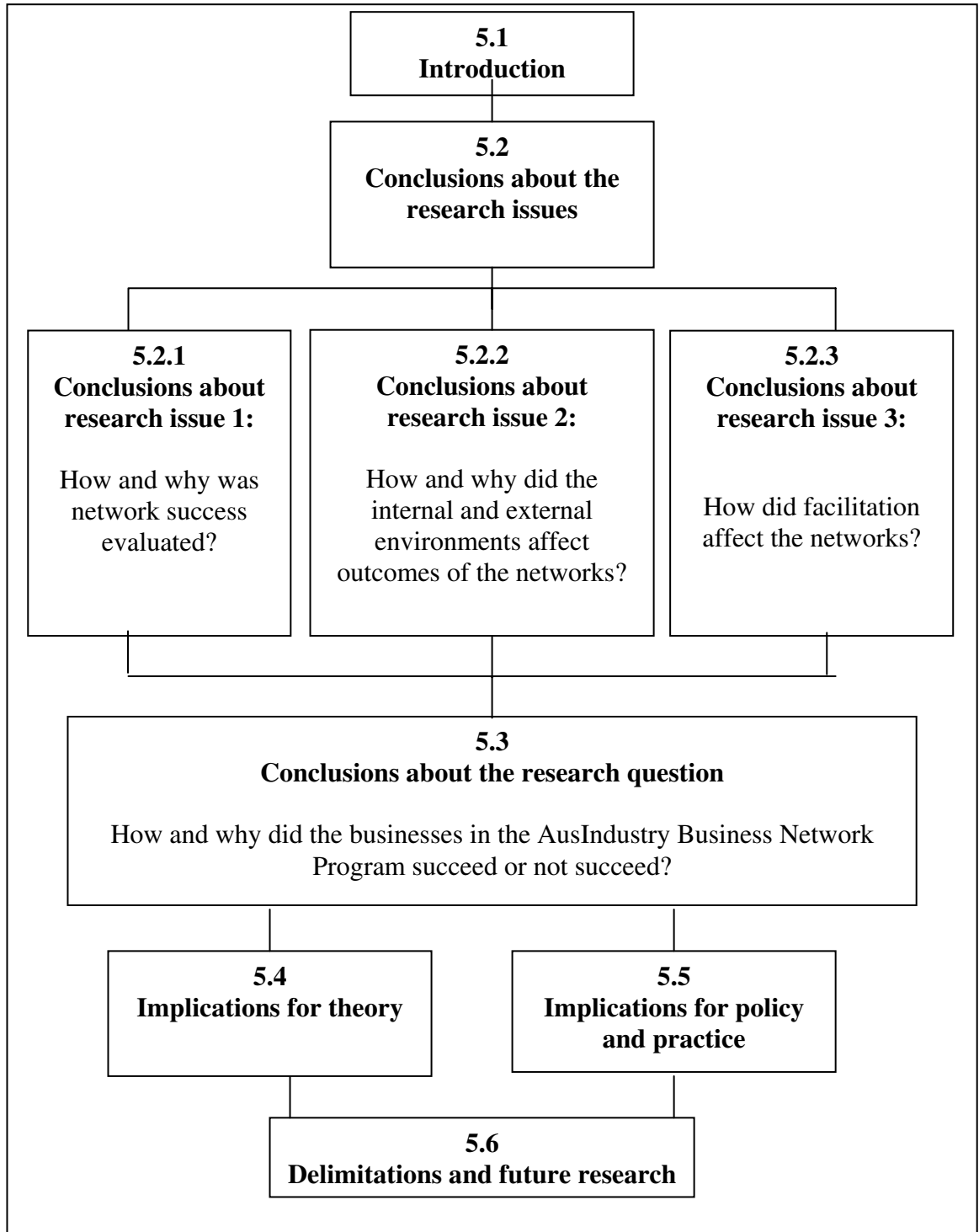
Chapter 1 set the scene for this research by providing the background to the research and discussing the contribution of this research to the current body of academic knowledge as well as its importance for future government policy making. The methodology to research these issues was proposed and delimitations and an outline of this research was presented.

Chapter 2 reviewed and synthesised the literature relevant to these research issues and focussed on network theory, types of networks, characteristics of networks, the benefits and disadvantages of business networks, success factors of business networks and government facilitated network programs. From this literature a conceptual model was developed to be tested in the next stage of the research process.

Chapter 3 justified and detailed the proposed methodology which was embedded in a realist paradigm using a case study approach. It outlined the case study and interview protocols and discussed the data collection and analysis methods to be used including both theoretical and literal replication.

Chapter 4 presented the patterns of results of the data analysis, which were examined in relation to each of the three research issues proposed in chapter 2. Chapter 4 provided the basis from which conclusions could be drawn in this final chapter.

Figure 5.1 Chapter 5 outline with section numbers



Source: developed for this research

This final chapter therefore, will conclude the thesis by comparing the literature in chapter 2 with the data analysis findings from chapter 4 in relation to the three research issues. Conclusions about the research question are then explained with consideration given to the new conceptual model. This chapter also outlines the implications of the findings for theory and implications of the findings for policy and practice. This chapter will then provide a discussion of the limitations of this research, and will conclude with recommendations for further research. An outline of chapter 5 is illustrated in figure 5.1.

5.2 Conclusions about the three research issues

In this section the findings about the three research issues from chapter 4 are compared to the extant literature presented in chapter 2. That is, the main concepts raised in the literature review relating to each research issue are summarised and compared to the research results. This comparison serves to confirm or disconfirm the literature and to show where this research extends the existing literature, as well as to reveal gaps in the literature that may highlight areas for future research.

5.2.1 Conclusion about Research issue 1: How and why was network success evaluated?

Research issue 1 was concerned with how and why network success was evaluated. It was therefore considered necessary in this research to determine whether the networks examined were evaluated as successful or non successful and what measures were used to determine this evaluation. The respondents from the AusIndustry Business Network Program in this research rated their own perceptions on their network success, with approximately half of them rating themselves as successful and half rating themselves as non successful.

The literature (section 2.8.2) revealed many possible quantitative and qualitative measures that could be used by businesses to evaluate their success. These measures of evaluating network success were used equally amongst the successful and non successful networks and amongst the large and small networks.

This research found that multiple measures of business success were used with a strong emphasis placed on the qualitative measures over the quantitative ones. Traditional measures of success for businesses are based on a quantitative orientation, for example, numbers of sales, which can be compared to other similar industries (Kane 1986; Coditz & Gibbins 1981). Many of the successful networks used quantitative measures, that is, their *sales figures*, but few of the non successful

networks indicated that they used these types of measures. Therefore, the findings of this research *confirm* the literature in that many firms now believe that heavy emphasis on financial measures solely is not required in order to determine business success and, that non-financial measures can provide a more balanced method by which to review business performance (Ittner & Larcker 1998; Lingle & Schiemann 1996; Newing 1995).

One measure of business success defined in the literature was *business continuance*, that is, an ability to make a go of it (Watson & Everett 1996). Indeed, this simple qualitative measure, in the context of network continuance, was the measure used by half of the respondents (both successful and non successful) to determine their success.

Other qualitative measures of success can include achievement of business goals or objectives, for example, improvements in distribution, recognition or reputation, quality, product design, or customer service (Glaister & Buckley 1998). This particular measure, achieving or not-achieving *long-term goals*, was used as a measure of business success by a number of networks and included aspects such as achieving the goal of brand awareness, achieving a formal merger or achieving new product development.

The least used measure of success or non success for networks examined in this research was again a qualitative assessment, *a general feeling*. Only two networks suggested that members just agreed about how they felt about the outcomes of the network business.

Further, many of the successful networks employed a combination of measures more often than the non successful networks to evaluate their outcomes. This phenomenon of successful networks using multiple measures of evaluation in contrast to non successful networks using only one measure of evaluation was *not evident* from the literature but could be explained in that perhaps the non successful networks did not want to elaborate further on the *dimensions* of their non success. They may have felt it necessary to only name one area of non success – in this case discontinuance of the network.

In brief, the networks were asked to explain which measure they used to determine their own success. Non success was clearly determined if the network was discontinued and this single qualitative measure of evaluation, *business continuance*, was enough for some networks to consider themselves successful. However, many networks used additional quantitative measures such as *economic success*, a measure more commonly used as a benchmark in business for measuring success. Other bases used by networks to evaluate success or non success in this research were:

achievement of *long-term goals*, such as brand awareness, new product development or joint venture; and just a *general feeling* amongst the participants.

5.2.2 Conclusions about Research issue 2: How and why did the internal and external environments affect the success of the networks?

This research issue was divided into two parts, part A about the internal environment and part B about the external environment. Part A will be discussed first, followed by part B.

Research issue 2 *part A* was concerned with how and why the internal environment of the BNP networks may have affected the outcomes of those networks. Four main influences on networks within the internal environment were raised in the literature: 1) the internal need to join a business network; 2) time and involvement devoted to the network; 3) social factors of a) trust, b) commitment, and c) reciprocity; and 4) contracts. It was therefore considered necessary in this research to determine to what extent these influences were in place in the networks.

1) The internal need to join a business network. The literature (section 2.4) showed that co-operative business networks can provide a competitive advantage in some circumstances, particularly when a firm does not have the internal resources and capabilities for growth and development, but that the benefits of networks depend upon a firm's goals (Rosenfield 1996; Gadde & Håkansson 1993; Axelsson & Easton 1992; Ford 1990; Penrose 1968). This research *found* that, regardless of the size of the network, all of the successful businesses had a single specific goal for joining a network but that the majority of the businesses in the non successful networks had dual goals. Further, the few businesses in non successful networks that had only a single goal had not clearly specified nor communicated their goal. Thus the findings of this research *confirm* the literature that goals need to be clear and specific in order to monitor and achieve them and the findings of this research *extend* the literature by showing that benefits for cooperating business networks could be realised if goals are limited in number.

Moreover, key literature in the form of network manuals cited a combined total of 31 specific benefits for joining networks (table 2.3) (BIE 1995, BNP 1995, SND 1995, Buttery 1992). Of the four most frequently listed benefits in these manuals: 1)

product development; 2) access to technology; 3) operational expertise; and 4) reliable supply, only six businesses in this research (38%) cited one of these reasons for joining a network. Four of these six businesses were in successful networks. Thus, 44% of these successful networks and 29% of non successful networks in this research were motivated to becoming a network for the possibility of gaining the same benefits as cited in the literature, therefore *confirming* this proposition. The size of the network did not impact on the reason to join a network.

Additionally, an important *finding* was that two businesses joined networks in order to achieve a benefit of cost reduction. However these networks were non successful, thus bringing to point that this particular benefit of cutting costs may be a negative, reactive reason to join a network rather than a positive, proactive and more solid reason.

2) Time devoted to network business. Benefits from business cooperation are available to all types of firms but the degree of benefit and range of benefits varies. The greater chance of benefits and successful outcomes is usually associated with the firms who co-operate the most, that is, firms who devote considerable time to cooperative activities (BIE 1995). One of the most commonly cited disadvantages with networks (table 2.4, row 14) is the amount of time required to develop the cooperation arrangement (BIE 1995, BNP 1995, SND 1995, Buttery 1992). This research *found* that all but one of the businesses in the successful networks devoted considerable time to the network business and most of these successful networks held frequent formal meetings. In contrast, all but one of the businesses in the non successful networks spent very little time on network business and most of these held infrequent formal meetings.

These findings therefore *clearly confirm* the literature that sufficient time is required for network success and that the time required is a disadvantage of networking. There was no great difference in the time spent on network business between the large and small networks but there was a greater frequency of formal meetings in small networks with most large networks citing reasons relating to the difficulty of getting members together as a reason for less contact. Thus, the literature could be

extended to make noteworthy the contradictory findings of both the importance and the difficulty of allocating formal meetings for large networks.

3) How the social aspects of trust, commitment and reciprocity affected the network. Von Neumann's (1972) game theory, otherwise known as the "prisoners' dilemma", demonstrates that all players are collectively better off if they cooperate, that is, what each player receives depends on what the other player does, thus illustrating that the critical components of game theory are based on elements of a) trust, b) commitment, and c) reciprocity. These will now be discussed as they relate to this research issue.

a) Trust. Trust was defined for the respondents as a 'firm belief that a person or thing may be relied upon' (Oxford 1964 p1397). Trust has been shown to be crucial to realising many transactions and is needed for collaboration (Milgrom & Roberts 1992, Håkansson & Gadde 1992). Further, the degree of trust between individuals in an organisation will influence the degree of formal ties (Milgrom & Roberts 1992). This research *found* that all members rated trust to be extremely important to network success and that in one case in particular, lack of trust was a big issue and directly contributed to the discontinuation of their network, thus *confirming* the literature. Moreover, the importance of trust was equally high in both non successful and successful networks, thereby suggesting that a high level of trust does not necessarily insure network success on its own but that without it the potential for success is negligible. The importance of trust did not appear to be affected by the size of the network.

b) Commitment. Commitment was defined as a 'pledge or dedication to a course of action' (Oxford 1964 p243). Commitment may be achieved by developing relationships (Ford 1997). Developing a relationship is a major adaptation by a company and as such the adaptation marks a commitment by the company to the relationship.

This research *found* that commitment was high in the successful networks but low in the non successful networks, thus *confirming* the literature that commitment is essential to the success of business networks.

Additionally, commitment overall tended to diminish over time in these networks and in no instance did commitment increase from a low level to a high level. Perhaps business networks could be trained in how to increase commitment through social and economic embeddedness. *Social embeddedness* in the network can provide rich information that a network actor may not otherwise have, thus providing a foundation for commitment (Hertz 1992). *Economic embeddedness* of large expenditures or investments can assure commitment too (Milgrom & Roberts 1992). Another way to help achieve commitment is the role of reputation, because not fulfilling obligations can result in a reputation for untrustworthiness (Milgrom & Roberts 1992). Large and small networks were quite equal in terms of the levels of commitment reported.

c) Reciprocity. Reciprocity is defined as a ‘mutual action, principal or practice of give and take’ (Oxford 1964 p1033). The everyday informal activities assume a circular causal relation between the network level and the production level (Johanson & Mattsson 1992). A reciprocal orientation is related to the perceptions of one party about another party’s abilities, expertise, and knowledge as well as the other party’s motives and intentions and is a key element in a business network (Wilson & Jantrania 1997).

This research *found* that patterns of reciprocity were similar between the large and small networks but that a great variance occurred between the successful and non successful networks. That is, reciprocity was high in successful networks compared to non successful networks in the initial stages of the network program (table 4.8, column B). In the latter stages of the network program, the level of reciprocity was reported to have diminished in some of the successful networks and in all of the non successful networks (table 4.8, column C).

Therefore, these results *confirm* the literature suggesting that reciprocity is vital to the success of business networks and that a lack of reciprocity will ultimately result in network non success.

4) Contracts. The literature (section 2.2.2) compared *hard* networks to *soft* networks and noted that often networks that are only loosely linked but do not commit resources are *soft* or informal networks. Some networks are legally formed for a specified period and these are termed *hard* networks (Perry & Pyatt 1995; Buttery & Buttery 1995). The AusIndustry Business Network Program was aimed specifically to develop hard networks. However, it was *found* that these hard network contracts were standardised and were between the AusIndustry Business Network Program and the lead business only, because that was what was required to join the program and receive assistance. This meant that the other businesses in the network could elect to establish either hard or soft networks, with many of those interviewed opting for the informal soft approach.

Further, the literature in this area supported that contracts serve to set expectations, establish decision processes to deal with inevitable unforeseen circumstances and encourage commitment. Therefore, contractual arrangements may be effective checks on post opportunism (section 2.4.4) (Milgrom & Roberts 1992; Williamson 1996).

This research *found* that *formal contracts* were in place between the participants in more than half of the successful networks compared to only 14% of non successful networks who tended to rely more on informal arrangements and agreements. This then *confirmed* the literature that contracts serve to encourage commitment. However, formal-legal ties may not be stressed when the emphasis is placed upon trust. Thus it may be that the degree of trust will influence the degree of formal/legal ties (Milgrom & Roberts 1992) which in turn can impact commitment and reciprocity. This additional complexity apparent in the relationship between these social factors and the formality of legal ties is unexpected and not evident in the extant literature relating to business success. Thus, this finding *extends* the literature even though further research would be required to clarify and define the interrelationships between these factors.

In conclusion, it would appear from these findings that the reasons for joining a network could improve the chances of success if they are clear and articulate and limited in number. Moreover, it was *found* that if the motivation to join was a somewhat negative, reactive basis like cost savings, then that may not be as strong a reason for joining a network when compared with a more positive and proactive basis. The findings of this research *clearly confirm* the literature that sufficient time is required for network success and that the time required is a disadvantage of networking. However these findings also *extend* the literature to make noteworthy the difficulty of allocating formal meetings for large networks. Further, it was noted that trust is extremely important to network success and that lack of trust can directly contribute to the discontinuation of a network. Findings that a high level of trust does not necessarily ensure network success on its own also provide a *contribution* to the literature in this area.

The extant literature noted that commitment and reciprocity are essential to the success of business networks and this was also *supported* by this research. In addition, it was noted that a lack of both reciprocity and commitment will ultimately result in network non success.

This research *found* that *additional formal contracts* were in place between the network players in more than half of successful networks compared to 14% of non successful networks, thus *confirming* the literature that contracts can serve to encourage commitment.

Research issue 2 *part B* was concerned with the external environment and five main influences on networks within the external environment were assessed: 1) political, legal or governmental forces; 2) economic forces; 3) social or cultural forces; 4) technological forces; and 5) competitive forces. The findings of this research, in relation to each of these external forces in turn, will now be compared to the literature.

1) Political, legal or governmental forces. The literature (section 2.6.1) suggested that political, legal or governmental forces can both influence and limit the business success of various organizations (Kotler 1999; Aaker 1992). Overall, the *findings* in

this research (section 4.5.1) suggested that these forces were more threatening in nature than supportive to all of the networks in the study. Political upheavals and changes in government policy occur daily and can have an enormous effect on international business. For example, governments can implement policies to control import and export laws, patents, tax rates (Jeannet & Hennessy 1995). Most of the exporting business networks felt that indeed foreign governments tried to protect their own industries from imports and in doing so created barriers and hindrances to their successful operations.

On a domestic level federal and state governments are major regulators, deregulators, subsidisers and customers in business (Jeannet & Hennessy 1995). In one case in particular, problems were experienced in relation to laws in the banking sector where phone accounts could not be opened as a network entity (N). However in spite of this one case, most of the business networks felt that domestic governmental forces were somewhat supportive because assistance was made available to small businesses. In particular the AusIndustry Business Network Program made possible the facilitation and funding to these small businesses for the purpose of establishing the networks that they were part of. This government assistance will be addressed further in research issue 3 - facilitation (section 5.2.3).

Therefore, whilst in *agreement* with the literature, it was noted in this research that legal or government forces could be both threatening *and* supportive but that these forces were seen by all networks as the least threatening and, at the same time, the least supportive of the five forces in the external environment.

2) Economic forces. The literature (section 2.6.2) discussed that economic forces consisting of factors that affect foreign and domestic dollar values, inflation and interest rates, also impact spending patterns and consumer purchasing power which in turn impact business performance. Further, these economic forces are in a constant state of transition and can severely affect businesses (Kotler 1999; David 1999; Jeannet & Hennessey 1995). The *findings* in this research (section 4.5.2) suggested that, even though some networks were affected adversely by economic forces others were affected positively by these forces, but that the overall threatening nature of these economic forces was not seen to be linked to either the success or non success of the networks in aggregate results.

Although the impact of economic forces was felt by most networks, they did not directly associate this external force with their success or non success. They did agree that, in accordance with the literature, business networks must consistently monitor economic influences and have in place alternative strategies with which to respond to them as needed (Kotler 1999; David 1999; Jeannet & Hennessey 1995).

3) Social and cultural forces. The literature (section 2.6.3) stated that the social and cultural environment is made up of institutions and other forces that affect

society's basic values, perceptions, preferences and behaviours and that these forces have a major impact on the way people live, work, produce and consume (Kotler 1999; David 1999). The findings in this research (section 4.5.3) indicated that, aside from communication difficulties with foreign languages, social and cultural forces appeared to be neutral in the overall evaluation of network success. This finding was therefore *not completely consistent* with the literature in that we would have expected some impact – either positive or negative – from this factor.

4) Technological forces. The literature (section 2.6.4) commented that the fast pace of the technological environment is a dramatic force that shapes the destinies of industries and markets. This force can both present opportunities in relation to the development of new products and pose threats due to the escalating costs of staying up-to-date with these new technologies (Kotler 1999; Aaker 1992). The results in this research (section 4.5.4) clearly indicated that technological forces were seen to be more supportive in nature than threatening particularly in relation to the accessibility of computers and communications. However the small networks did note some issues in relation to higher costs and difficulty in leveraging to stay in touch with new technologies.

Thus, these findings *confirm* the literature, in particular, that the effect of recent advances in telecommunication and data transmission capabilities extends the reach of many business networks and is therefore a benefit to their overall business success. Yet this opportunity comes at a cost and with constant change comes costs to stay in touch (Jeannet & Hennessey 1995).

5) Competitive forces. The literature (section 2.6.5) concluded that to be successful, a business must do a better job of satisfying customers than its competitors so business strategies must be geared to the forces of competition (David 1999; Kotler 1999; Aaker 1992; Jeannet & Hennessey 1995). Indeed, the *findings* of this research clearly indicated that competitive forces had a high impact on their success or non success of all business networks. In fact, of all the forces in the external environment, networks in this research commented that competition had the highest impact thus *confirming* the literature.

However, in relation to competition, Porter (1980) further noted that businesses can identify different types of competitors within their particular industry by considering the five major forces that drive industry competition. These forces are: 1) intensity of rival competitors in an industry; 2) the potential for new entrants; 3) the potential of substitute products; 4) the bargaining power of suppliers; and 5) the bargaining power of buyers. Porter noted that businesses that report a low impact in relation to these forces would be a positive outcome except for the potential for barriers to entry for new market entrants where a low impact would be seen as negative to the network (Porter 1980). However, this research found that there were no major differences in any particular one of Porter's (1980) five forces of competition in relation to the reported business success of the networks interviewed.

In summary then, in relation to the affect of external forces on the success or otherwise of the networks in the Ausindustry Business Network Program, *competitive forces* had the highest impact on business networks' success or non success. In contrast the *political, legal, or government forces* had the lowest impact of the five external environmental forces considered. The impact of *economic forces* was felt by most networks, which *confirmed* the literature, suggesting that business networks must consistently monitor economic influences and have in place alternative strategies with which to respond to economic forces (Kotler 1999; David 1999; Jeannet & Hennessey 1995). *Technological forces* were seen to extend the reach of business networks even though the associated higher costs tend to affect the small networks more greatly. *Social and cultural forces* presented some difficulties in relation to foreign language but can also result in an increased favourable product demand.

5.2.3 Conclusions about research issue 3: How did facilitation affect the networks?

The third research issue concerns the facilitators' contribution to establishing and maintaining the Ausindustry business networks and the impact of this contribution on the success of the networks. Four main conclusions can be made from the findings about this research issue in relation to: 1) the facilitators' role in coordinating exploration and feasibility and firming agreements; 2) the facilitators' role in management of network business procedures; 3) the facilitators' role in ongoing business management including monitoring progress; and 4) the facilitators' role in social bonding and motivation. In addition, the issue of government assistance (5) was also considered in relation to this research issue because it was the AusIndustry government program that provided the assistance of a facilitator to the networks. Each of these will be addressed in turn.

1) The facilitators' role in coordinating exploration and feasibility and firming agreements. The literature (section 2.7) presented information that the Danish government, after recognizing networking benefits, started a program in 1989 which was subsequently adopted by many other governments as the model for facilitating business networks (Holmes 1995). In turn, the AusIndustry Business Network program closely based its model on the best features of a number of international programs and in particular drew on Norwegian expertise to put their Network Broker Development Program in place (BNP 1995).

Using these models, the official role of the facilitators (network brokers) for all networks in this research was to explore and determine the feasibility of the business network and to firm agreements in phase one of the AusIndustry Business Network Program (BNP). These facilitators were to assume a leadership role in the network and to be a catalyst for positive change and effective development of the team. Each facilitator's involvement varied and this research *found* (section 4.6.1) that in two thirds of the networks the participants perceived the facilitator to have a major role in coordinating exploration and feasibility and in firming agreements between network participants. In spite of this, cross-comparisons of the data gathered in this research indicated that the success or non success of the network did not seem to be linked to the involvement of the facilitator in relation to these particular activities.

2) The facilitators' role in management of network business procedures. Once the network was formally established, the role of the facilitator diminished. That is, the facilitators continued to work with the networks but in a lesser role maintaining the network and to varying degrees managing network business procedures. The *findings* of this research (section 4.6.2) suggested that the facilitator was perceived to have played only a minor role in management of business procedures for nearly all of the non successful networks. In contrast, approximately half of the successful networks reported that the facilitators were perceived to have played a major role in the management of network business procedures. Thus, the facilitators' involvement in the management of network business procedures appeared to be less related to the networks' successes than to a network's non success. However it is not conclusive that more facilitation of the management of network business procedures could have saved some of the non successful networks.

3) The facilitators' role in ongoing business management including monitoring progress. After initially facilitating the creation and establishment of a business network, facilitators were required to facilitate sustenance of the networks by monitoring progress until ultimately they would step to the background and allow the network players themselves to accommodate their own on-going collaboration (BNP 1995; Kanter 1994). This research *found* (section 4.6.3) that more than half of the networks perceived that the facilitator had a minor role in ongoing business management and monitoring of the progress of the network. In fact there appeared to be an inverse correlation in terms of ongoing business management whereby 57% of the non successful networks tended to note that their facilitator had a major involvement compared to only 22% of the successful networks. Thus, cross-comparisons showed that network success was not linked to a facilitators' high level of involvement of business management and monitoring progress. It is possible that the successful networks may have already had the skills to monitor their networks whilst the non successful networks may have had to rely more on a facilitator and thus may not have had the business skills necessary to ensure success on their own.

4) The facilitators' role in social bonding and motivation. There is a vast amount of literature pertaining to social bonding (section 2.4.3) which is said to occur through multi-level, person-to-person contact during which trust may develop (Buttle & Ahmad 1999). Trust, reciprocity, and commitment have a strong role in the formation of social bonds between the actors in the business networks and have been shown in the literature to be key success factors of networks (Buttery & BATTERY 1994; Håkansson & Snehota 1995; Håkansson & Gadde 1992; Turnbull & Wilson 1989; Axelsson & Easton 1992). In the AusIndustry Business Network Program the facilitators were firstly trained in Kanter's (1994) group development model and then were required to create and sustain an effective network with attention given to the need to develop a climate of trust between all cooperating firms (BNP 1995).

This research *found* (section 4.6.4) that only one network perceived that the facilitator had a major role in bonding and motivation within the network. This was noted in relation to the largest network consisting of twenty-two members. In this large network most of the members did not know each other prior to their network's formation. In contrast, all of the other network members had known and been associated with each other prior to the formulation of the AusIndustry Business Network Program's formal network. Therefore, most of the cases felt the bonding was already in place. Thus the facilitators' role in social bonding and motivation was not linked to success of the networks in these cases. However in the case of the one large network, the role of the facilitator in this area was noted as being linked to the network's success.

5) Government assistance. The role of government assistance crossed several areas of this research. Government influence on business was discussed (section 2.6) in the literature as part of the external environment that can affect business networks and government assistance was discussed again in section 2.7.3 in relation to the role of the facilitator, because the facilitator was provided by the government (AusIndustry). Moreover, it was circumstances in the firms' internal environment, discussed in the literature (section 2.5) regarding the benefits of business networks that necessitated that outside (government) assistance should be utilised to establish a business network. This specific area of government assistance to businesses will be explained further here as it relates to the AusIndustry Business Network Program.

The level and type of government assistance in the creation of business networks varies from country to country, with some governments giving direct assistance like providing facilitation services and others setting up bodies to indirectly assist and encourage networking in various capacities. Examples of these include many programs set up to help link firms by identifying mutual interest partner candidates, and providing some funding for these ends (Buttery 1992). Other examples are where advice and a database of worldwide contacts for potential alliances is provided and may include staff in the field working with companies, regional offices, and counsellors (Holmes 1995; SBRG 1990).

The Danish program proved successful and ended after only a few years as there was no further need for it because almost all small and medium sized enterprises came to know the basics and benefits of networking and would choose it as a natural option. The AusIndustry Business Network Program recruited management consultants and trained them specifically to: facilitate business cooperation for the program; start the links and assess feasibility; facilitate communication and cooperation; formalise a network strategy and business plan, and the AusIndustry Business Network Program provided a program of seminars that taught potential members about network processes, advantages and disadvantages.

Additionally, extra funds for marketing purposes or other expenses of the network were made available to networks in the AusIndustry Business Network Program if

they applied for it separately. This funding assistance was more of a customised nature in that purposes and amounts varied according to what the networks were doing and what they applied for. This information was confidential and not made available to the researcher thus making this discussion very sensitive. Therefore, it is assumed that questions to respondents about government assistance implied a reference to the government assistance mentioned in the preceding paragraph, since there was no discussion about extra funding. Therefore, it is important to discuss, a) whether the network would have been possible without government assistance and, to further enrich the value of this research, b) how the assistance could be improved.

a) Would the network have been possible without government assistance?

This research *found* (section 4.6.5) that the majority of successful cases would have indeed been possible without government assistance because some of these networks were strong to begin with, although some networks perceived the assistance was still helpful. In contrast, the majority of the non successful cases believed that nothing would have happened without the government assistance, which indicates that many would not have considered a network situation without the government intervention. The majority of small networks indicated that their network would have been possible without government assistance whilst most of the large networks indicated it would not have been possible with government assistance

b) How the government assistance could be improved? This research *found* (section 4.6.5) that more than one third of the networks were satisfied with the government assistance and did not think any improvements were necessary. These networks generally agreed that the program was worthwhile. Another third of the networks believed that the processes of the government, for the network program or for assistance, should be less strict and tailored more to the individual needs of the particular network. Some networks suggested that the government could provide more funding. Finally, one other suggestion was for the government to 'Provide a researcher for more formalised market research for this network' (N).

Therefore in conclusion, it would seem that the success or non success of the network did not seem to be linked to the involvement of the facilitator in coordinating exploration and feasibility and in firming agreements between network members. The facilitators' involvement in the management of network business procedures appeared to be less related to the networks' successes than to a network's non success. However it is not conclusive that more facilitation of the management of network business procedures could have saved some non successful networks. Similarly network success was not linked to a facilitators' high level of involvement in business management and the monitoring of progress. It is not conclusive that the successful networks may have already had the skills to monitor their networks whilst the non successful networks may have had to rely more on a facilitator. Finally, most of the cases felt the bonding was already in place before the formalization of a business network because almost all of the network members already knew and were associated with each other. Thus the facilitators' role in social bonding and motivation was not linked to success of the networks.

5.3 Conclusions about the research question

From the case study conclusions about the three research issues addressed in section 5.2, it is now possible to draw together these conclusions and implications to further the understanding of the research question (Perry 1998), which is:

How and why did the networks in the AusIndustry Business Network Program succeed or not succeed?

This research introduced measures of success as defined by the networks themselves. That is, network members evaluated their own outcomes often using multiple measures, both qualitative and quantitative. More than half of the networks (56%) evaluated themselves as being successful with the most common evaluation method being the continuance or discontinuance of the network.

It was concluded in this research that the motivation for joining a network could markedly impact the success of the network and that the specific reasons for joining a network should be few in number and clearly specified. For example, successful networks said that they achieved their single goal but, in contrast, the non successful networks had multiple goals. Therefore, if the non successful networks could achieve one goal (but not all of them) they may consider themselves non successful. This result was *not evident* in the literature reviewed in chapter 2.

Another finding noted that considerable time is clearly required to ensure network success and that the amount of time needed is actually a disadvantage of networking. This finding is *consistent* with the literature however the difficulty of allocating sufficient time for formal meetings and strategic discussions, particularly for large networks, was not emphasized.

The role of trust in business networks has been studied previously and it has been found to be a crucial aspect in the formation and success of business networks. The *findings* from this research *concurred* with these results *but noted further*, that whilst trust is an essential element in success of business networks, a high level of trust does not necessarily ensure success. This conclusion was evident in those networks in this study that were non successful, but who never-the-less had high levels of trust.

The literature relating to business success posited that the social aspects of business networks, i.e. trust, reciprocity and commitment, are essential elements. Trust, reciprocity, and commitment have a strong role in the formation of social and structural bonds between the actors in the business networks and indeed are the key success factors of many networks (Buttery & Buttery 1994; Håkansson & Snehota; Håkansson & Gadde 1992; Axelsson & Easton 1992; Turnbull & Wilson 1989). However, this research found that a lack of either of these alone could result in a non successful network. That is, these elements are essential in combination. *In addition to the literature* on social aspects of business networks, this research also *found* that both reciprocity and commitment can, and often do, diminish over time and that they need to be constantly reinforced through contractual arrangements and training of network members to ensure that they remain the focus of the relationships between the members of a network and thus can contribute to eventual success.

Further, in relation to the issue of formal contracts, in this study it was found that formal contracts between the network members increased the levels of commitment

and reciprocity and thus increased the chances of success. This *finding* appears to *differ* from the literature on business success, which states that formal ties (such as contracts) are not necessary when trust is high. Whilst this might be true, in this research we noted that increased levels of trust, reciprocity and commitment can actually result from the existence of formal contracts and further, that those networks that had formal contracts between network members experienced higher levels of these factors than those without these contracts. In contrast, the literature noted that a higher level of trust may be required to reach the formal contract stage (Smith & Holmes 1997). It would seem that the contracts themselves assisted in keeping the focus of the network members on these social aspects, thus leading to the eventual success of these networks. As previously noted, the AusIndustry Business Network Program focused on targeting hard networks (those with contracts) however, it appears that many of the networks investigated in this research were not really hard networks in the sense that they did not have strong formal contractual ties amongst themselves.

Another factor that was considered to be important in relation to the determination of network success or otherwise in this research was the external environment. All five environmental factors were noted by the networks as having an impact on their business generally, but in most cases they did not think that these factors contributed directly to the success of these networks. In spite of this, of the five factors examined, competition was noted as having the highest impact and government, political or legal issues the lowest impact. Respondents indicated that whilst these factors were important and certainly could create challenges or opportunities for their businesses, that generally they considered them to have more of an indirect effect on their eventual success. These results have been incorporated into the revised conceptual model in figure 5.2 where it can be seen that the external environment is quite separate from the internal environment and that two factors that were seen to be of low impact (technology and social cultural) have been dismissed. The original model proposed that the internal and external environments were integrated and that all five external factors had the same degree of importance in the determination of business network success.

Finally, this research found that facilitation per se did not necessarily contribute to a network's success but that possibly a lack of appropriate facilitation could contribute to the non success of those networks. It was clear that the small networks needed less facilitator guidance overall and that the large networks definitely needed facilitation and guidance. Table 5.1 illustrates that the *style* of facilitation at the various stages of the network process were more important to the likelihood of success, rather than the mere presence of a facilitator. Specifically, successful networks noted that the facilitator played a major role in the critical start-up phase and that this role diminished in the ongoing business phase. In contrast, for non successful networks the reverse was true. It appears that, in spite of the major role of the facilitator in the later stage of the program, once the critical start-up phase was passed the increased efforts by the facilitator could not reverse the outcome.

Table 5.1 Style of facilitation

	Successful networks	Non successful networks
Start-up phase	Major role	Minor role

Ongoing business phase	Minor role	Major role
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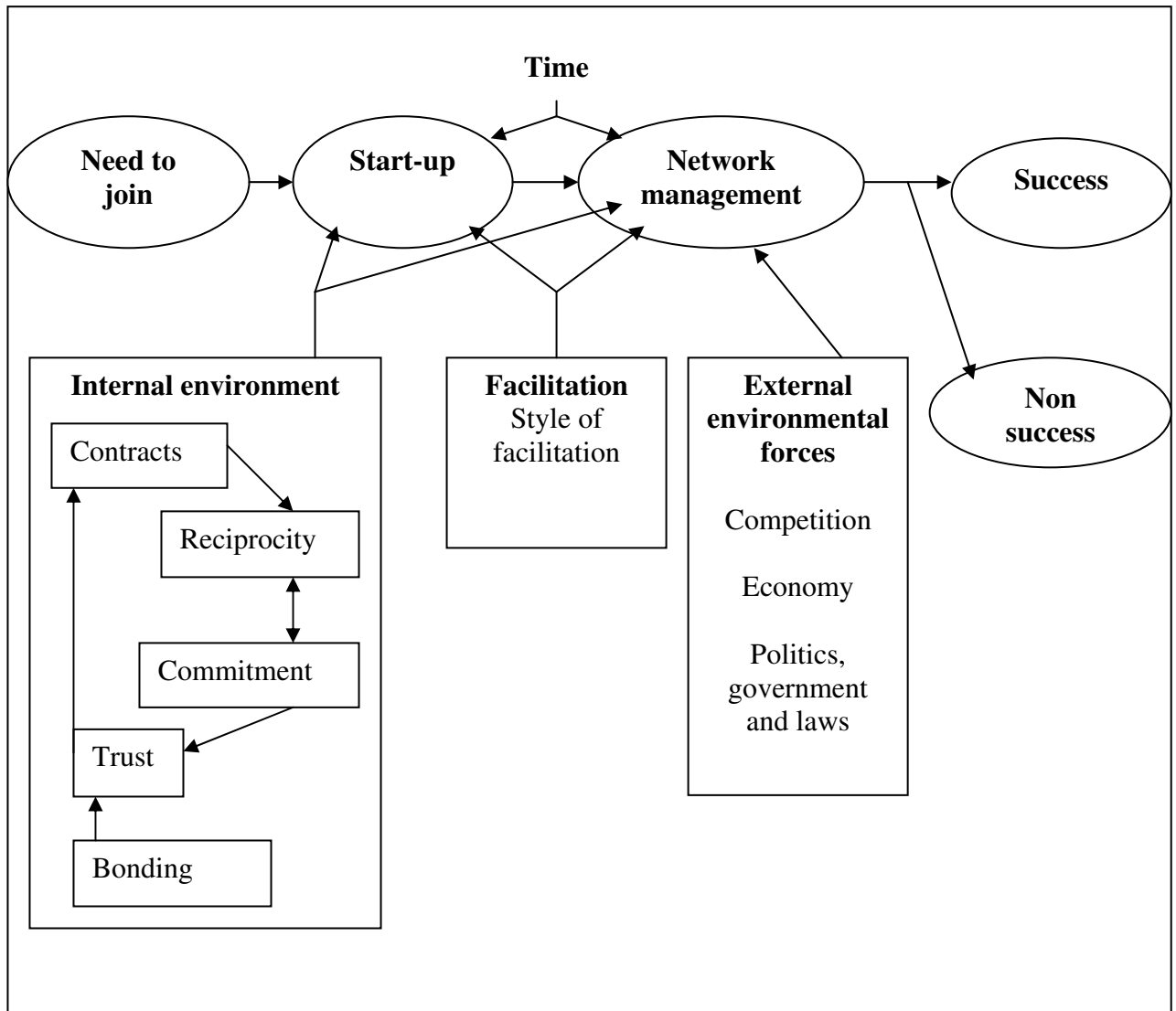
Source: developed for this research

From the results of the data analysis in chapter 4, we were able to describe the *elements* in the revised conceptual model (figure 5.2):

- The *start-up* stage of network formation involves understanding the motivation to network, that is, to understand each business's *need to join* a network. Time and facilitation strongly assist to establish a solid internal environment in this stage.
- *Time* is important in the network management stage as well as the start-up stage and can assist in leading a network to success, combined with other positive factors, but lack of time could independently lead a network to non success.
- *Bonding* needs to occur before enough trust is developed to start a network. Bonding takes time and can change over time and the facilitator may or may not be involved in the bonding, but the style of facilitation may impact the quality of this bonding.
- *Trust* may occur after bonding and is essential for network start-up. Trust must be positive throughout the network process and combine with other elements to succeed, but if there is a lack of trust, this factor alone can contribute to non success of a network. Trust is also linked with contracts.
- The trust factor is directly linked with *commitment* and *reciprocity*, which flow back and forth and these factors need to occur in the start-up phase and in the management of network business phase. These factors require allocated time to make them positive. If these factors in combination are positive they can enhance the possibility of a successful outcome for the network but either factor, reciprocity or commitment, may independently contribute to non success of a business network
- A formal or hard network must be started with a contract. A *contract* drives commitment and reciprocity, which in turn drives trust. If *all* of these factors of bonding, trust, commitment and reciprocity in combination (in the internal environment) are right, the possibility of a successful outcome for the network can be enhanced. However, if *any single one* of these factors is not right, then each of these factors *on their own* could lead a network directly to non success.

- *Facilitation* appeared to be important in the initial phases of the network process particularly with the internal factors of the network, and in the network management phase to a point where facilitation may be phased out when the network is up and running well. The style of facilitation can enhance success or may lead directly to non success. Facilitation also requires time from the network members for meetings and planning.
- Similar to the internal factors, positive management of the *external factors* in combination could enhance the possibility of success, but it was thought by some respondents in this research that either the general economy or government factors or competition alone could independently lead a business network to non success. Two of the external environmental factors listed in the original conceptual model, the social/cultural and technological factors, did not appear to affect the outcomes of the networks in this study so they were not included in this revised model.

Figure 5.3 Revised conceptual model



pattern of interactions; b) the style of facilitation being more important than facilitation itself; c) removed line between facilitation and the internal factors because some networks did not utilise a facilitator directly for some of those elements; and d) reduction in the number of external factors that impact network success. These were key findings of this research.

5.4 Implications for theory

This research contributes to the general level of knowledge about business networks and provides new insights into network theory and the value of networks using an original application of existing knowledge. That is, this study particularly researched a formal Australian business network program and was the first study of this program using an in-depth case study methodology. This research confirms the literature that the factors in the internal environment are important to the success of business networks and it contributes to the literature by providing new insights into those relationships between the variables in the internal environment and how they impact the success or non success of business networks.

Pertaining to the role of formal contracts and the relationships between these variables in the internal environment, it was seen that a formal contract serves to drive the factors of reciprocity and commitment, which in turn, ultimately drive trust. The extant literature stopped at the point of stating that trust is critical to the success of a network but did not include suggestions that a high level of trust does not necessarily ensure network success as was concluded from this study. The literature also did not particularly reflect that lack of reciprocity and commitment could lead to a diminishing level of trust and thus also increase the chances of non success.

Additionally, although the literature suggested that networks may need a higher level of trust to reach the contractual stage, it did not link in the effect of formal contracts to the relationship between those internal factors. This has implications for management of networks as well. The literature discussed formal ties in business networks and defined hard networks as having contracts but it did not discuss the level or specificity of contractual arrangements, which was found to be an important issue in this research. This research confirmed the literature that contracts between network members increased the levels of commitment and reciprocity but disconfirmed some literature that states that formal ties are not necessary when trust is high.

The extant literature suggested that time is important to networks and that it is one of the disadvantages of business networking (section 2.5.2) but did not really detail how or where time fitted in to network business and activities and what role time had. This research has discussed the importance of time in relation to various factors in the internal environment, in the start-up and management phases of the network and in relation to time involved for meetings with a facilitator. It was particularly noted in this research that there was more difficulty in allocating time for formal meetings in large networks because of the many members that must synchronise time schedules.

Additionally, this research partly focused on the impact of the role of the facilitator and the importance of the style of the facilitator, which was deficient in the literature. It was found that it was not just important that networks had a facilitator but that the style of facilitation was critical. It was found that the networks needed to have a decreasing amount of facilitation involvement which confirms the guidelines for government programs but extends the literature that if facilitation is not focused in the critical start-up phase then increasing facilitation later on will tend not to 'rescue' a network heading for non success.

Moreover, it was found in this study that the start-up stage was critical and important to the eventual success of the network whereas the literature indicated that the start-up phase was just a part of the process. The start-up stage was found to be critical in this research because it appeared that if the networks did not get all the elements right at the beginning of network formation then the rest did not really matter because by then success was not recoverable. Therefore, it is quite clear in this research that the start-up phase needs a lot of careful attention, which also has strong management implications as a point for monitoring network progress.

Finally, this research has taken an Australian point of view which was found to be consistent with the general literature, that all of the factors listed in the theoretical

model do impact the outcome of a network's success or non success. More interestingly though and extending the literature, is the finding that a business network needed to *have all* of the factors in the internal environment working well along with good facilitation and good time management and good knowledge of and responses to the external environmental forces to be successful. In contrast however, a network needed to *only have one* of those elements missing or not at optimum levels to be non successful or to increase the chances of non success. This is unique and interesting and has not actually been found before so clearly.

This research has contributed to the literature pertaining to measures of success of networks by asking network members how they themselves measured their network performance outcomes. Network continuance was determined to be the most common measure of success for the cases in this study. Therefore, the finding that these businesses rated themselves as non successful because they did not continue the network, extends the literature by considering 'network continuance' to be a determining factor in rating success of business networks thus adding to the existing determining factors of achievement of other goals.

5.5 Implications for policy and practice

In the previous section implications for theory were addressed and following from that knowledge are implications for management and practice. According to Robert Bowen, Queensland State Manager for the AusIndustry Business Network Program (pers. comm., 25 March 1999), this knowledge can contribute to network education and training in business schools and can contribute to the development of future government policy pertaining to network programs. It must be noted however, that because of this research's case study methodology, and thus interpretive approach, the identification of issues presented here are descriptive only and should not be considered as prescriptive (Perry & Coote 1994).

An important finding in this research relates to the level of formal contractual arrangements required for hard networks to be successful. Whilst the AusIndustry Business network Program thought that they were specifically targeting hard networks, and indeed there was a contract between the sponsoring organisation and each network in the program to the level that the network would be included in the program, it appeared that perhaps formal ties needed to be taken to the next level. That is, that the sponsoring organisation needed to make sure that there was another contract in place amongst the network members themselves that dealt with issues of reciprocity, commitment, time allocation and those types of responsibilities.

Therefore in terms of management practice, the findings are that, for these sorts of business networks to be successful there needs to be not only formal contracts between the sponsoring organisation and the network, which details things like the degree of facilitation and funding, but there also needs to be formal contracts between the participants of the network and each other, which details each member's responsibility to the input of the network. This would assist to reverse the situation that occurred in the networks studied in this research where commitment overall tended to diminish over time and in no instance did commitment increase from a low level to a high level. Additionally, if responsibility is detailed in these contracts,

perhaps the business networks could be trained in how to increase commitment through social and economic embeddedness (Hertz 1992).

This concern with formal contractual ties could be a strong monitoring point for management and policy after the critical start-up phase to see if they go on to the next phase. It was found in this research that not only do government programs need to have businesses with the motivation to join a network program, but that the start-up phase also appeared to need a lot of careful attention. It is at this stage that the attention to issues of contracts, trust, commitment and reciprocity come in for management. The networks need to have had enough time in bonding and planning on what each business's responsibility was and have it in a detailed written agreement.

These issues of trust, responsibility and commitment being set out and agreed upon in contracts appeared to require more facilitation than activities in the latter management phase of the network program. The cases in this research indicated that if the involvement of the facilitation was not high in the initial start-up phase of the program than it was too late for a facilitator to try to salvage a network later on. That is, if everything was put right in the initial phase then the network could become self sufficient and removed from facilitation but that if it was not right than extra facilitation would not help.

Finally, management could benefit from knowing that small networks in this study appeared to need less assistance and large networks needed more assistance. Additionally, as an aside, many respondents recommended that future government program guidelines be more tailored to individual needs.

5.6 Delimitations and future research

This research was limited in its case study methodology, to an inductive, qualitative approach to analytical generalisation of building and refining theory rather than statistical generalisation (discussed in section 1.4, and justified in section 3.3) (Yin 1994). Therefore, future research using a deductive method, for example a survey, is needed to test the theory and establish external validity and generalisability.

The business networks in this study were limited to some in Queensland and Victoria and the market conditions in these regions could have influenced the results. Therefore, further research could be conducted in other states in Australia to determine the extent of external validity and the degree to which these research results are similar under other market conditions. Moreover, further research could be undertaken in other countries to confirm whether the elements found here are generic or idiosyncratic to all government facilitated business networks. Future research could also segment industry types in order to increase the degree of cross comparisons.

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Business network research project/case study interview protocol

Researcher: Barbara Sweeting

Introduction

Thank you for agreeing to participate in this university research project. This research will benefit people like you because it will help in establishing and developing other business networks and aid in the success of future government network assistance programs.

Purpose of research

The purpose of this research is to understand how and why business networks in the AusIndustry Business Network Program have succeeded or non successful and how you would measure the success or non success of the business network. This research is particularly interested in the processes of developing the network, establishing its relationships, and considering outside factors that may have affected the network.

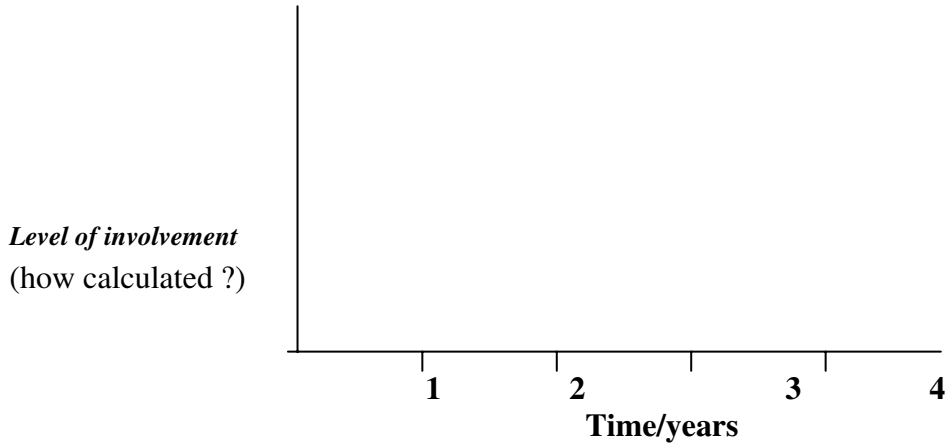
Ethics

Ethical considerations are important to me and I will assure you that this research is confidential and you and your firm will remain anonymous. In the report each respondent will be called Company 'A', 'B', and so on. Therefore, your ideas will not be able to be traced back to you.

I request to tape the interview so that I can check my data and enhance my data analysis. If you agree to being taped you are welcome at any point to stop the taping. May I have you permission to tape the interview please?

Do you have any final questions?

2) How did your level of involvement with the network change through time, and *why* did it change?



Why? _____

3) How many networks members are/were there in your network_____? How did you meet the other network members, and how often?

How met? _____

How often met? _____

4) How would you describe the type of network?

What did you do? _____

- *pooled*
- *sequential*
- *complementary*

5) How did these social aspects establish and maintain your network?

Establishing Maintaining

Trust: (*firm belief that a person or thing may be relied upon*)

Commitment: (*dedication to a course of action*)

Reciprocity (*mutual action, principal or practice of give and take*):

6) Overall, what was the role of the facilitator in all of this?

Establishing _____ Maintaining

Coordinating exploration and feasibility and firming agreements:

Management of network business procedures:

Ongoing business management including monitoring progress:


Social bonding, motivation:

6.1) Would this network have been possible for you without government assistance?
How could assistance be improved?

7) How did the external environment affect your business network, and at what stage?

Political, legal, governmental forces:

Supportive Threatening



Economical forces:

Supportive Threatening



Social, cultural:

Supportive Threatening



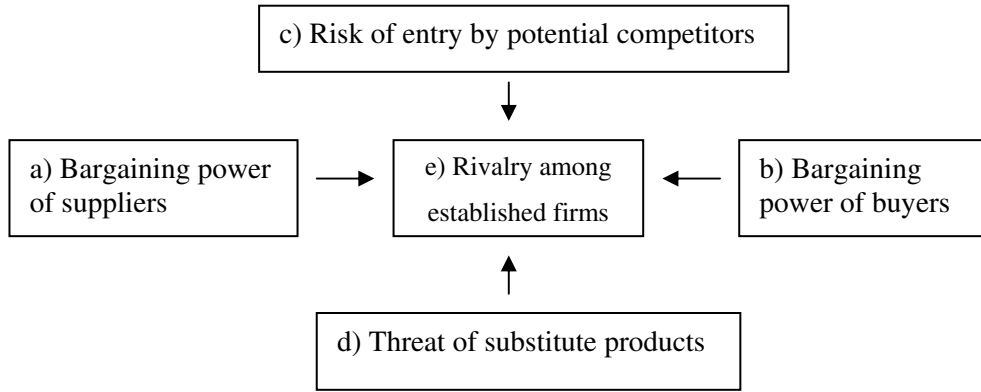
Technological forces:

Supportive Threatening



Competitive forces:

Michael Porter's five forces of competition model



a) How powerful are the suppliers to the industry? (For example, if there are *many* suppliers then their power may be *low*)

HIGH MEDIUM LOW

b) How powerful are the customers in the industry? (For example, if there are *many* customers, then their power may be *low*)

HIGH MEDIUM LOW

c) How easy is it for businesses from outside the industry to enter the industry? (For example, large investment costs of buying or building a new factory may *lower* the power of these potential entrants)

HIGH MEDIUM LOW

d) How likely is it that possible substitutes for your product could be a threat in the future? (For example, interstate fast rail travel is a possible substitute for airline travel, but it is a *low* threat)

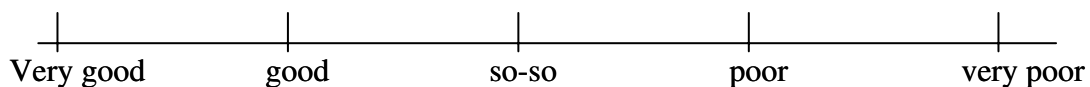
HIGH MEDIUM LOW

e) How intense is the rivalry between existing, competing businesses with the industry?

HIGH MEDIUM LOW

source: Perry 1992

8) How would you evaluate the network's outcomes?



9) On what do you base your evaluation of the network's outcomes and why?

*why base on
that?*

10) In your opinion, what caused these outcomes?

11) In your opinion, how could the network have improved?

12) Was the contract standardised or specific and how did it affect the network?
