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Collaboration Between Firms:

the Process of Institutionalisation of Business Networks

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ABSTRACT

Organisations increasingly establish collaborative relationships with other organisations in order to face the challenges of competition. Such arrangements can take different forms including joint ventures, strategic alliances and networks. This research is based on an empirical analysis of networks as a form of collaboration. The presentation draws on work conducted in Australia on a sample of organisations involved in the AusIndustry Business Networks Program, as well as the population of Cooperative Networks incorporated by the Registry of Co-operatives of New South Wales. Although registered under a Cooperatives Act, these cooperative networks are networks of, essentially, small business, involved in 'soft' networks as opposed to the 'hard' networks of the Business Networks Program. The research identified characteristics, differences and similarities between the two types of collaborative arrangement. The paper will focus on the elements that makes one network more effective than other networks, drawing on the statistical analysis of responses to questionnaires from 16 networks, and 33 organisations. In particular, it will look at the role of the facilitator or broker in promoting networks. The role of public agencies involved in the promotion of networks will also be considered and some implications drawn as to how such network organisations might be organised to operate more effectively in future.

Collaboration Between Firms:
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Introduction

Organisations increasingly establish collaborative relationships with other organisations in order to face the challenges of competition. Such arrangements can take different forms including joint ventures, strategic alliances and networks. In particular, the 'network' concept is becoming prominent in much recent organisation theory literature. Theoretically, Jarillo (1988), Jarillo and Ricart (1987), Powell (1987, 1991) and Thorelli (1986) have extended the empirical contributions by Coase (1937) and Williamson (1975, 1985) from markets and hierarchies to include networks. According to Jarillo (1988: 31), networks have become a 'fashionable topic'. In this paper I first analyse the need for organisations to collaborate with other organisations, describing advantages and disadvantages of collaboration. Then, a description of two different forms of collaboration, voluntary and induced, is presented. These forms of collaboration allow to analyse networks form of organisation in Australia. Data from empirical research are presented.

Options for Organisational Strategic Action

Traditionally, business studies view organisations as being involved in fierce competition to achieve a bigger share of the market. More recently, however, research suggests that organisations may take one of three different ways to achieve their competitive strategy. 'Fierce competition' may be just one of these. Firms may 'go it alone', vertically integrate or collaborate:

'*Go it alone*' *in the market.* This means that organisations go as single entities to the markets to obtain what they need for their activities. This represents the

* The author thanks Professor Stewart Clegg for his help in the preparation of this paper.

traditional view of economic actors as competitive and 'possessively individualistic' (MacPherson, 1962)

Vertical integration. In order to secure raw materials and intermediate goods necessary for their activities, organisations seek for more stable markets through merger or acquisition with other organisations. Traditionally, the way organisations obtained knowledge or access to resources that they did not already make was through vertical integration, either via acquisition, or through merger (Powell, 1987). Vertical integration was the most common form of organisation used to obtain secure materials for production. Vertical integration was useful in slow markets where organisations did not need to adapt rapidly, when the technological change was less dynamic than in present times (Jarillo, 1993; Powell, 1987).

Collaboration with other firms. A new form for organising economic activity is represented by collaboration. Rapid technological changes, shortening of product life cycle, and specialisation of the market (Powell, 1987) are some of the reasons why organisations establish collaboration with other organisations. Firms are no longer seen as big enough or powerful enough to face the constant changes of the environment. Uncertainty, one only a contingency of theory, has become an overwhelming characteristic of modern organisational life. Thus, organisations seek to establish collaborative arrangements with other organisations to fulfil their needs and complement their activities.

What is Collaboration?

According to Gray's (1989: 5) definition, probably the most cited in the field, collaboration is

> '…the process through which parties who see different aspects of a problem can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible'

More recently, Himmelman (1996: 28) stresses the exchange and resources elements when he considers collaboration as

> 'exchanging information, altering activities, sharing resources and enhancing the capacity of another for mutual benefit and to achieve a common purpose'

Collaboration implies commitment by participants. Each one of the members should contribute to the network with a product or service that other participants need.

Several potential benefits can be obtained by collaborating with other firms. First, increasing efficiency because organisations can concentrate on their core competencies while giving less central aspects of their operations to others to perform. Second, reducing transaction costs, because as research and development are areas that have become more and more expensive, sharing knowledge and expertise with other organisations diminishes the cost involved in the whole process. Third, sharing resources, as well as information about markets, products and processes with the members of the network improves information scanning. Fourth, generating economies of scale due to reductions in average costs, because an increase in production. Fifth, economies of scale provide better access to critical resources, thus reducing risk and diminishing uncertainty for organisations that makes it difficult for a single firm to invest in new areas. Sharing with other organisations reduces the risk of new investments, and greater flexibility. Finally, organisations can learn from sharing information and ideas as network participants access new skills and diffuse knowledge within their organisations.

But collaboration has also disadvantages. Some of the perceived disadvantages of cooperation include *having* to share expertise with others. In this way , organisations fear that they will lose part of their advantages over competitors. Management control may be reduced as organisations involved in networks have to spend time in activities related to the networks. Dependence on external organisations may increase because members have to share with other organisations. More bureaucracy may be created by the necessity to organise the network as well as dependency created by greater financial ties with other organisations in order to fulfil network commitments. Finally, there may be more restricted access to the world of external organisations due to the arrangements entered into to create the network (Mythvold *et al.*, 1995; Buttery and Buttery, 1994).

Basis of collaboration

Collaboration may be entered into a number of bases:

1) Voluntary basis: collaboration takes place between individuals or organisations that realise the need to join efforts with other individuals or organisations. Collaboration emerges from one or various participants in the venture, as an internal impulse. Joint ventures and strategic alliances are examples of voluntary collaborative efforts. No one is forced to be a joint venture partner ally.

For some authors a strategic alliance involves 'cooperation between two or more independent firms involving shared control and continuing contributions by all partners' (Yoshino and Rangan 1995: 17). Other researchers, such as Parkhe (1991: 581), consider that strategic alliances are 'relatively enduring interfirm cooperative arrangements, involving flows and linkages that utilise resources and/or governance structures from autonomous organisations, for the joint accomplishment of individual goals linked to the corporate mission of each sponsoring firm.' Lei and Slocum (1992: 81) identify alliances as 'coalignments between two or more firms in which the partners hope to learn and acquire from each other the products, skills and knowledge that are not otherwise available to their competitors.'

According to Bartol *et al*. (1995: 99) a '*Joint venture* is an agreement between two or more organisations to jointly produce a product or service.' In general, in this kind of inter-firm relationship, a third entity is created, owned and managed by the participants within the relationship. The main reasons businesses form a joint venture are to reduce costs and risks, often through developing new technologies. In general, organisations involved in joint ventures seek to take mutual advantage of each other's synergies, thus allowing them to join together in an activity that otherwise would be difficult to achieve if these organisations were to go it alone.

2) Induced basis: this define the situation where collaborative arrangements have to be externally coordinated, usually where an external influence promotes collaboration. In this case, the initiative to collaborate comes from either a lead organisation or the institutional environment. Induced collaboration takes the form of "networks". Various examples of an induced basis for collaboration can be mentioned, including the most influential efforts: 1) The Danish Cooperation Network Program effective for the period 1989-1992. The program focuses on the development of Small and Medium sized Enterprises (SMEs) as part of industry policy. The Danish program was the first national initiative to promote business networks (Chaston, 1995; Liston, 1996). 2) The Norwegian Business Programme started in 1991 and is programmed to cease in 1998. 3) In Australia, The Business Networks Program, based on the previous mentioned programs, has framed collaboration institutionally (Subsequently, the Business Network Program will be explained in detail).

Following Powell (1987, 1991), a 'network' is a third form of coordinating economic activity, one with its own logic, in which network members have a long-term and recurrent relationship. Trust is an important element for the duration of the relationship, and participants are interdependent, having complementary strengths with mutual benefits. Networks have no common ownership, and typically, commitment by parts to the relationship is medium to high. Also networks have a certain degree of flexibility enabling them to respond to their environment.

No type is pure in reality, of course. For instance, Jarillo (1988) proposes the concept of 'strategic network' as a form of cooperation between organisations that is somewhere between hierarchies and markets.

> [A strategic network is web of] long-term, purposeful arrangements among distinct but related for-profit organisations that allow those firms in them to gain or sustain competitive advantage vis-a-vis their competitors outside the network (Jarillo 1988: 32)

For the purpose of this paper, a network is a long-term (rather than spot-market or momentary) relationship between organisations as actors that share resources to achieve negotiated actions, and joint objectives (Jarillo, 1988; Powell, 1991; D'Cruz, 1993; Hakansson, 1992; Hallen *et al.*, 1991). It should be a long-term relationship because in the short term, members could take advantage of other members and, under these conditions, the relationship will not prevail. It is only in the long run, that members or participants derive a mutual benefit from the relationship; in the short term, some of the members may derive benefits but it is not likely that these will be those striven for with all participants in the network. Sharing resources is vital for establishing long term relationships. Only on the basis of common sharing can a network be established. A network should thus have common goals for its members in order to achieve negotiated outcomes.

Different theoretical approaches have been relevant for the study on networks; of these one particularly influential approach has been Transaction Costs Economics (TCE), as developed by Oliver E. Williamson (1975, 1985).

Transaction Costs

Oliver E. Williamson's work (1975, 1985) in Transaction Cost Economics has had a great impact on researchers such as Jarillo (1988), Jarillo and Ricart (1987), and Powell (1990). According to Williamson, the basics of Transaction Costs Economics are that individuals seek to economise in their transactions by looking for efficiency. For Williamson,

> a transaction occurs when a good or service is transferred across a technologically separable interface. One stage of activity terminates and another begins. With a well-working interface, as with a well-working machine, these transfers occur smoothly. In mechanical systems we look for frictions: do the gears mesh, are the parts lubricated, is there needless slippage or other loss of energy? The economic counterpart of friction is transaction cost: do parties to the exchange operate harmoniously, or are there frequent misunderstandings and conflicts that lead to delays, breakdowns, and other malfunctions? (1981: 552).

The assumptions that Transaction Costs Economics requires as theoretical a priori include two *individual behaviours*. These involve an assumption that economic actors characteristically will display both bounded rationality (Simon, 1947) and opportunistic behaviour. What predispose actors in their bounded rationality and opportunistic behaviour are the three other basic assumptions of the TCE approach. These concern the transacting environment rather than the transacting agents: *asset specificity*, *uncertainty*, and *frequency of transactions*. Because of the bounded rationality of individuals, economic exchange will characteristically be organised by contracts when assets are specific, conditions uncertain and transactions frequent. Contracts serve to limit the increase of actor opportunism. Such contracts can be internal (employment contracts) or external (suppliers contracts). Asset specificity refers to the assets invested or required to complete any transaction that are particular to a specific transaction and that have no alternative applications (Kalleberg and Reve, 1993). Williamson (1981: 555-556; 1989: 143) considers that asset specificity can take various forms: site specificity, identified with Thompson's description of the 'core technology'; physical asset specificity;

human asset specificity; dedicated assets and brand name capital. Williamson argues, however, that asset specificity will lead to market contracts while hierarchical contracts occur when asset specificity increases.

The general academic view of transaction costs is to regard it as an approach that theoretically designs mechanisms to support efficient economic transactions (Heide, 1994). A central thesis of the transaction cost approach is that as the uncertainty of transactions increases, as a measure of performance, there will be a shift from markets to hierarchies to manage economic relations. According to this approach, there are certain costs associated with any transaction. In the absence of transaction costs, organisations do not need to integrate functions with other organisations and the market-based structure will be the most efficient form of relationship. In a case where transaction costs rise sufficiently, the market option is not a suitable solution and so organisations have to integrate functions through recourse to hierarchy (Jarillo, 1988).

Jarillo (1988) suggests that there are four types of organising economic activity depending on the 'legal' organisation and the 'kind of relationship': markets and hierarchies (Williamson, 1975), 'clans' (Ouchi, 1980) and strategic networks.

From a different perspective, other kind of research (Powell, 1991; Ring and Van de Ven, 1992), suggests that the TCE approach is too simple to explain economic activity because such activity not only takes place in the continuum of markets and hierarchies; also, there are other activities or transactions that take place in the long-term, are recurrent, and cannot be placed in either a market or in a hierarchy. They are network arrangements where trust and interdependence take a central role in the economic activity. In such arrangements, organisations complement each other on a reciprocal basis allowing, in the long term, for stability in the collaboration.

Empirically, within the network type, a common differentiation is made between ‘soft’ and ‘hard’ networks.

Soft and Hard Networks

Soft Networks

Research (Williams, 1996; Cragg and Vargo, 1995) suggests that a network can be more or less structured, according to the extent of interactions between its members. A basic distinction in understanding networks is between that of a 'soft' and 'hard' network. *'Soft'* networks represent an informal group or a 'loose' arrangement where ideas are discussed among participants with the principal aim being to exchange information and where resource commitment is minimal or null. A Cooperative Network would typically be example of 'soft' network. A Cooperative Network is ‘a group whose primary activity is the provision of information and services to members, via networking methods.’ (Watts, 1995). According to Douglas Watts (1995), the most important characteristics of a Cooperative network are that it does not trade, except in information; has no liability; does not issue shares, and does not pay corporation taxes.

The population of Cooperative Networks in Australia is eight; all of them are registered as such in the Registry of Cooperatives of New South Wales, a dependency area of the Department of Fair Trading, one of the ministerial responsibilities of the state government.

Hard Networks

A *'Hard'* network, by contrast to a 'soft' network, is a much more formal way of organising relationships. Here, the level of commitments and obligations is set out in written form as a formal way of organising relationships. Where there are relatively few network partners there is little difference between a hard network and a joint venture. Examples of 'hard' networks include the Danish, Norwegian, New Zealand, and Australian business network programs. It is to the latter that we are now turn on attention.

The Australian Business Networks Program

Based on the Norwegian experience, the Australian federal government launched the Business Networks Program (BNP) in May 1995 as an initiative of AusIndustry, with a budget of AU$ 25 million. "The aim of the program is to encourage businesses to cooperate in areas of strategic business, including exporting, import substitution, sharing costs for production, research and development, and marketing" (Ministry for Industry, Science and Technology, 1995: 1). Following the Danish and Norwegian programs, the BNP uses brokers or facilitators for creating and sustaining networks. The BNP founded about 400 networks from which there are currently about 240 networks set up and running. The program ceased in June 1998, as the funding for the program was only available until that date. The premise of the scheme's 'sunset clause' was that the networks it helped establish would either become self-sufficient and ongoing, or they would cease to exist, or become meaningless.

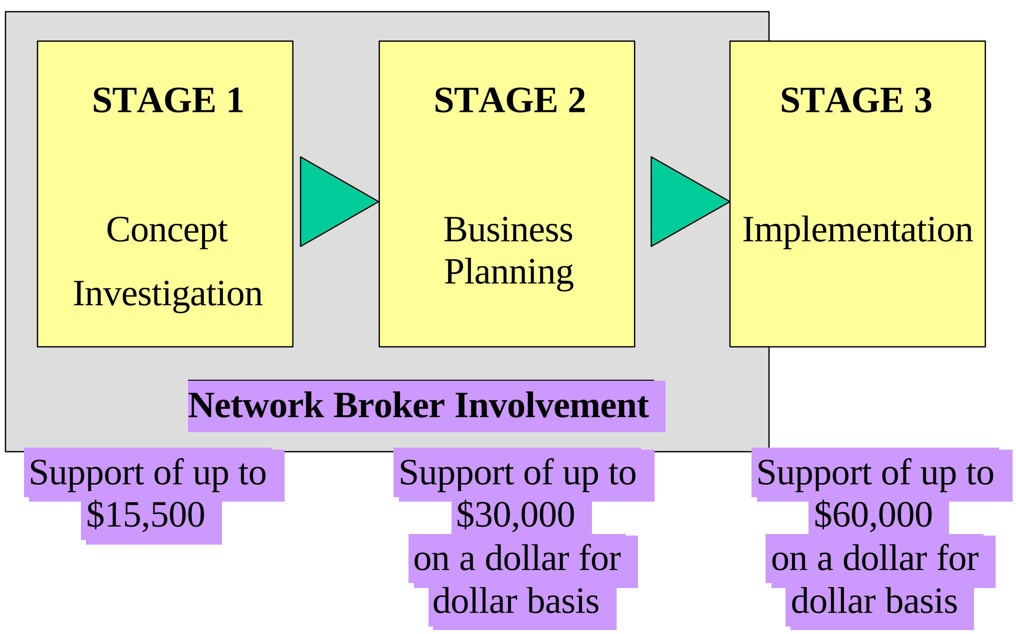
According to AusIndustry (1995a), the Business Networks Program had three stages:

1) *Feasibility Report Stage*: this included the selection of partners, the establishment of a specific network concept and a feasibility study, as well as the establishment of a working relationship. The broker's role was to establish the feasibility report for the network. At this stage, the network could be granted up to $15,000 for the broker's services, but the network had to pay extra for specific advice. This first stage should be completed in 6 months.

2) *The Business Planning Stage*: this second stage included the development of cooperation as a basis, the formulation of the cooperation agreement, and the preparation of the business plan for the network. The latter should include an

assessment of business objectives, financial projections, market analysis and confirmation or whether the network wants to proceed to the final stage of the program. Networks could obtain up to $30,000. This stage was to be completed within a further 6 months.

3) *Implementation of the Business Plan*: the third stage included the establishment and operating the network, and the further development of cooperative relationship, according to the strategic plan established in the previous stage. At this stage, the AusIndustry program provided 50% of operating costs (non-capital items) up to a maximum of $60,000. (Minister for Industry, Science and Technology, 1995; AusIndustry, 1995b; Business Networks; Bureau of Industry Economics, 1995).



The Present Research

The principal objective of the research is to examine collaboration between organisations in both business networks and cooperative networks on the basis of an exploratory study of the relationships between firms in several networks in Australia. The study was conducted to determine (1) what elements enter into network formation, and (2) what makes one network more effective than another network? Additional elements considered in the research include the Public Policy implications of network organisations and a comparison of ‘hard’ (Business) and ‘soft’ (Cooperative) networks.

Methodology

The data analysis is based upon a survey of 17 collaborative arrangements in Australia: 8 Business Networks, 8 Cooperative Networks and one ‘independent’ network (It is ‘independent’ because is neither a network formed under the umbrella of the Business Network Program nor is it registered in the Registry of Cooperatives as such).

The first steps of the research, before moving into the second phase of fieldwork, included the development of a theoretical model to provide a ‘sensitizing frame’, exploratory interviews with business networks, and the development of a questionnaire.

The second phase of fieldwork included applying the questionnaire to network members; interviewing brokers and staff from the AusIndustry BNP, the Registry of Co-operatives of NSW, and various government bodies, as well as attending network meetings and conferences.

The research process included 20 Interviews, the application of 33 questionnaires, participation in the formation of a Cooperative Network and attending and participating in 15 network meetings.

What are the elements that affect network formation?

Trust

Many scholars have written about trust from different perspective. Gambetta considers that we trust someone, meaning “that the probability that he will perform an action that is beneficial or at least not detrimental for us is high enough for us to consider engaging in some form of cooperation with him”

(Gambetta, 1988: 217). In order to simplify understanding of trust I accept Thorelli’s position (1986), in which he considers trust as an ‘expectations’ concept based on confidence that the network relationship will continue in the future. It is a long-term vision based on the reputation and previous performance by network members. It can be defined as "an assumption or reliance on the part of A that if either A or B encounters a problem in the fulfilment of his implicit or explicit transactional obligations, B may be counted on to do what A would do if B's resources were at A's disposal." (Thorelli, 1986: 38)

What are the components of trust? At the minimum most people would agree that the following qualities should be present: integrity; loyalty; competence; consistency, and openness. Where trust is present it can reduce 'transaction costs' (Williamson, 1975, 1985) associated with exchanges with others. High levels of trust lead to informal assurances supporting or aiding in the interpretation of, perhaps even replacing, formal contractual commitments.

Hypothetically, trust increases where each project team is self-sufficient and includes 'outsiders' like user-representatives. Trust would be expected to increase also when organisations have had previous contact. When teams have a social and celebratory dimension trust levels, typically, would be expected to increase. Also, where project participants have prior experience with relevant technology or previous cooperative programs it seems increase the probable likelihood of success in any given project. Another element that has a positive effect on trust, one would anticipate, would be the intensity and duration of the relationship. The more the relationship is in the long-term, the more likely trust is to increase.

Power

Power is a central element for the understanding of networks. There are different assertions about what is power: Weber (1947) defines power as "the probability that one actor within a social relationship will be in a position to carry out his own will despite resistance". Power has been conceptualised elsewhere in terms of the idea of 'circuits of power' (Clegg, 1989). For Thorelli (1986) 'Power is the central concept in network analysis'. Crucial to this conception is the argument that power is not a thing, or a resource, but a property of a system of flows through relationships. He conceives of power as the ability to influence the decisions or actions of others. He identifies five distinct sources of power such as economic base, technology, expertise, trust, and legitimacy. The way power is manifested is through advantage in one or several of these areas. Hence, networks can be conceptualised as a system of power flows. The way that these relationships are structured forms the articulation of the network.

The network position of an organisation, as result of previous activities by members in the network, is an important element in the exercise of power. Network members who achieve better position in the flow will exercise more power through the determination of their own strategy, and the strategy of the network, as a whole.

Communication

Communication flows refer to the way information circulates within and between the members of the network. Relevant aspects of the variables will include factors such as: the degree of transparency in communication; the regularity of communication; the degree of formality of communication; the extent of routinisation of communication; media of communication, and the frequency of their use; as well as who initiates communication.

Commitment

Organisations have to commit certain amounts of specific resources to the network, from the outset. 'Commitment captures the perceived continuity or growth in the relationship between two firms' (Anderson *et al.*, 1994).

Network commitment involves a perception that the relationship between firms will continue to grow.

The broker

The broker is an external agent who helps organisations to set up a network, define the strategic plan, and mediate in cases where conflict arises as a consequence of the consecution of the goals or strategic. Gray (1989) argues that sometimes a facilitator is necessary to resolve existing conflict. Brokers play this role. Gray proposes various activities to be developed by brokers that include assessing overall readiness to collaborate, getting the parties to the table, minimising resistance, ensuring effective representation, and establishing a climate of trust. Empirically, brokers were a constitutive feature of the BNP in Denmark, Norway and in Australia. Indeed, the Australian program was cloned in an act of institutional mimesis from the Norwegian program.

Snow, Miles and Coleman (1992) and Snow and Thomas (1988) argue that brokers may play three different roles: First, as *Architect,* which in many ways is the most influential for the accomplishment of the network. In this role, the broker facilitates the emergence of specific operating networks. Second, as *Lead Operator,* where brokers formally connect specific firms together into an operating network, they take advantage of the conditions created by *the architect.* Third, as *Caretaker,* where brokers have to monitor large number of relationships, which means the sharing of information among firms, incorporating or promoting new members into the network, and controlling members that may be risky for the network.

Having defined the conceptual elements of networks, what are the empirical findings?

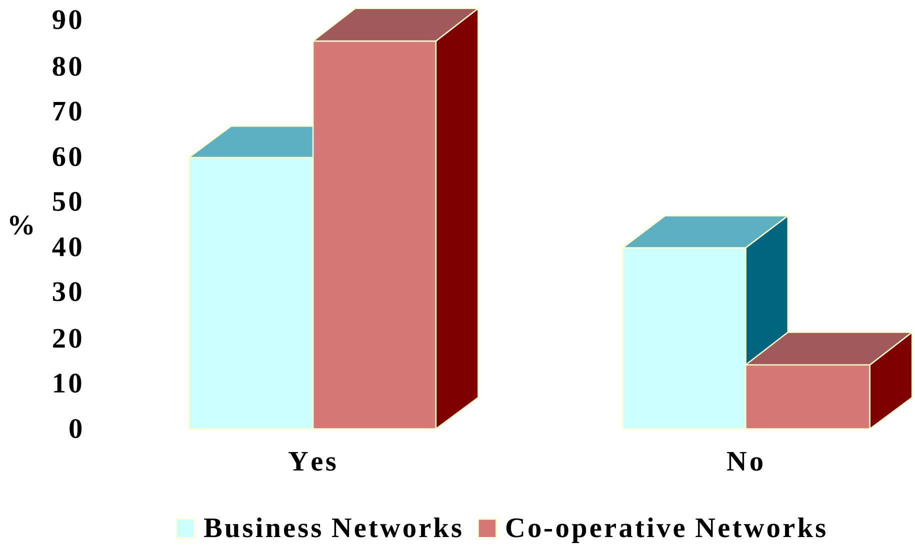
Research findings

Trust

Complete trust is important but not a crucial element in networking. A minimum level of trust is necessary for the formation of the network. More than 50% of members did not have previous relationship with other members prior to the formation of the cooperative network. Even when previous research (Mintzberg *et al.*, 1996) suggests that collaboration could be between competitors, in the present research perceptions about competition within the network are divided. Some network members consider competition as 'essential', while others do not accept competition at all. There is a slight difference between the type of networks under analysis: in the case of cooperative networks members consider that the network *should not* admit competitors as members, but at the same time, members think they should discuss the existence of competitors. In the case of Business Networks the situation is different: here members believe that the network *should* admit competitors as members.

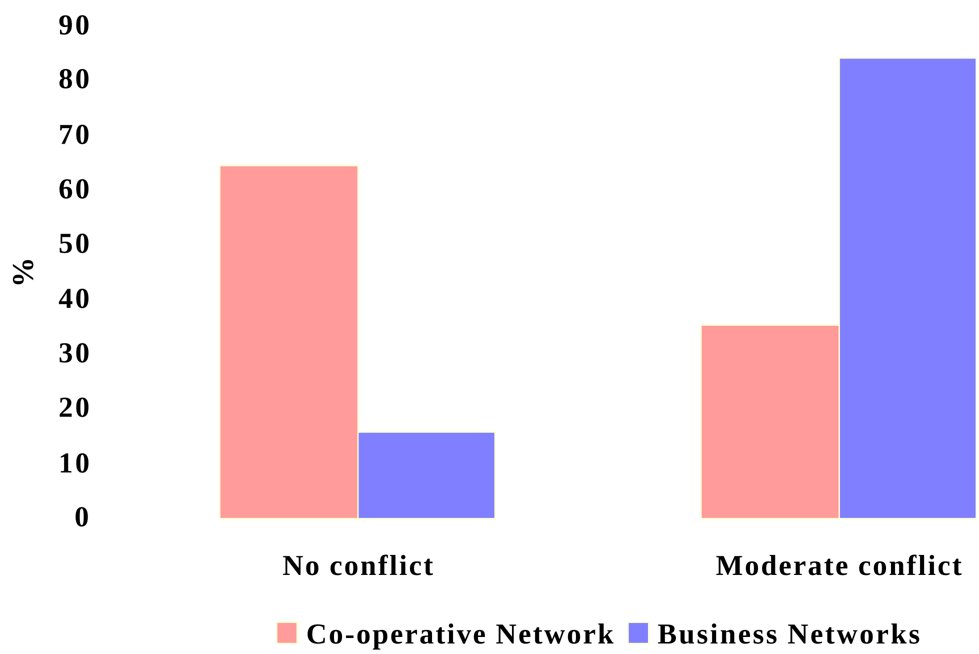
There is a high level of trust between cooperative network members. There view to a great degree is that no one will behave opportunistically or take advantage of other members, so that they consider that they can share information freely with other members. In business networks, on the other hand, while members believe that they can trust other network members, it is not a blind trust, because they are not convinced about other members' behaviour (figure 1). Thus, trust is more conditional for hard networks.

Figure 1: To what extent members trust in other network members



While members in business networks perceive a moderate level of conflict within the network, members of cooperative networks consider that the level of conflict is very low (figure 2).

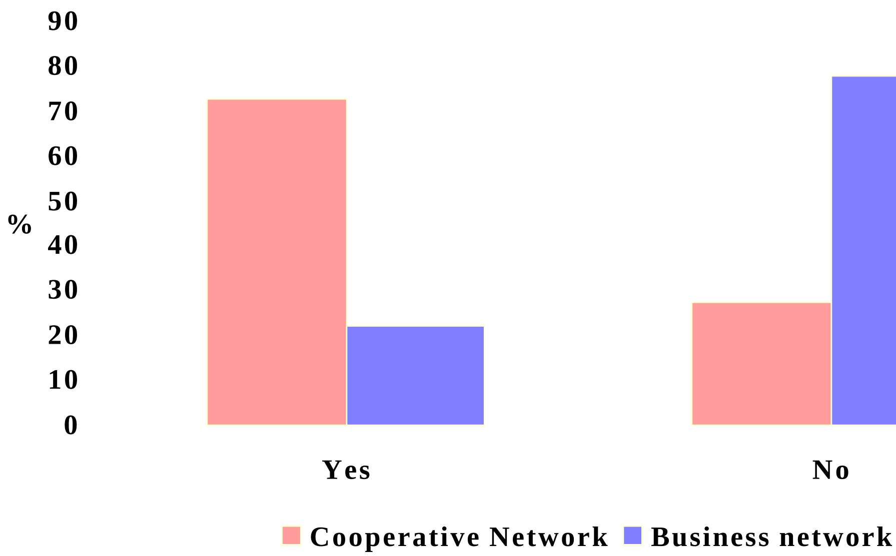
Figure 2: Perceived level of conflict



Commitment

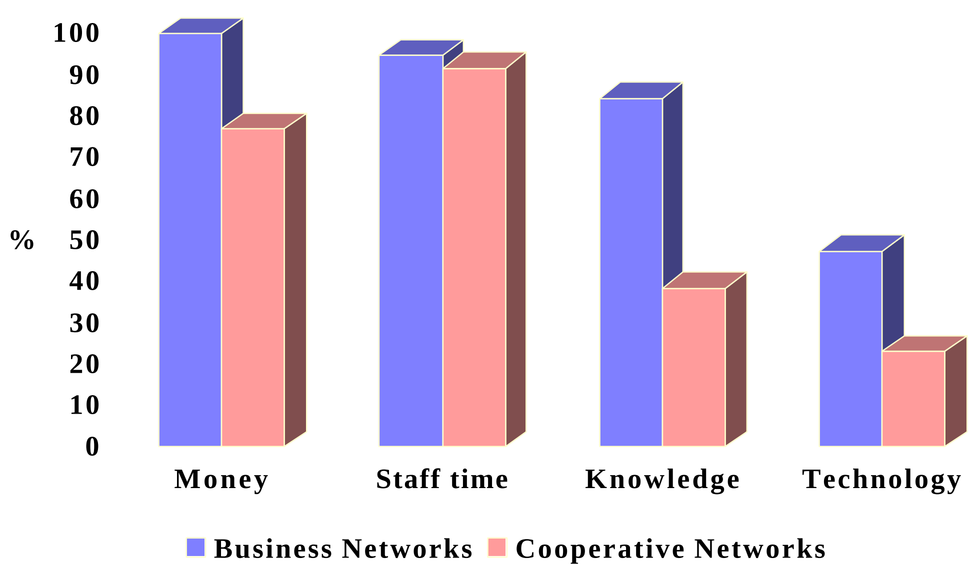
While cooperative networks members think that resources are contributed equally to the network by participants of the venture, the business networks participants are less sure (figure 3). However, there is a common perception that collaboration between members has increased over the life of the network.

Figure 3: Perception of equal contribution by members



Members consider that the most important elements of commitment to the network include money, staff time, knowledge and technology (figure 4).

Figure 4: Members' commitment to the network



Communication

Communication patters are similar in both soft and hard networks. No significant differences emerged. Networks are a good forum to share information and to discuss ideas and organisational problems. Participants consider that there are no difficult issues to raise, that members can have open discussions in their monthly meetings, that any issue can be raised for discussion without problem. When any member has raised a particular problem, asking for support from other network participants, they have been satisfied with the information, advise, and ideas received from these other network members.

As a contradiction in the findings, one may note that members believe that they can share their organisational problems with other network members, so when they have a business problem they do not contact other network participant. In general, contact between members outside formal meetings is rare, and contact is limited mainly to monthly meetings.

The Institutional Environment

In each case, the networks depend on actors in the institutional environment. However, these actors differ in each case. During the period of functioning of the BNP, more than 400 networks were funded, of which 240 are currently in operation. The BNP has created the grass roots for networking through its funding scheme. In the case of the Registry of Cooperatives, the Registry does not give any further promotion for the development of cooperative networks, other that to register them through the normal channels of the Registry. Yet, each is an important element of the institutional environment.

The Broker

The broker and the chairperson play a very important role in the formation and survival of both kinds of network. In the majority of cases it was a broker who initiated the formation of the network (figure 5). Brokers may have made themselves necessary but they have not made themselves liked. Satisfaction by members with the contributions made by the broker to the network is poor and it is limited to areas such as members motivation, supply of information and contacts, and facilitating, in a low level, the access to obtain government funding. Figure 5 combines the data on both networks.

Expectations

Even though expectations from members of both hard and soft types of network vary, in general they display low levels of satisfaction. Members believe that their expectations about risk reduction and cost reduction have not been satisfied. Some elements have been provided to members including access to knowledge and access to expended markets (figure 6). At the same time, members do not regret being a network member, and they manifest interest in continuing to be involved in another network, but they also consider that this would be likely to happen under different conditions.

Figure 5: Who invited members to join the network?

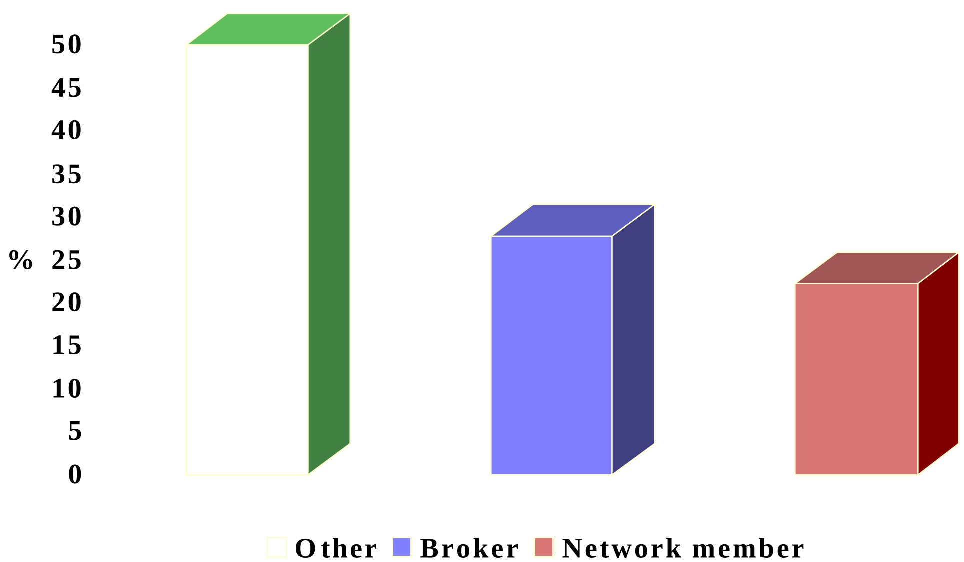
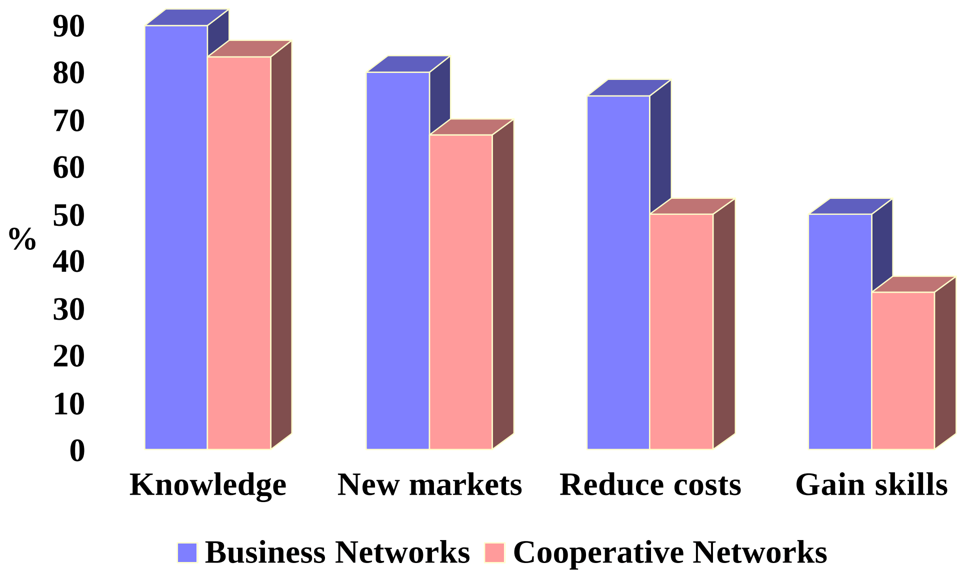


Figure 6: Members expectations by joining the network



Business Networks and Cooperative Networks

Members of both business and cooperative networks believe that the network in which they are involved has not always followed its strategic plan: in many cases members consider that the 'the strategic plan is unrealistic'. It is for this reason perhaps, that members of cooperative networks are not convinced that their network is effective, that the majority of them remain undecided.

In general, business networks have smaller numbers of members than cooperative networks. The business networks tend to take the form of strategic alliances where the minimum possible number of members is desired. On the other hand, cooperative networks, because of their key characteristic of sharing information, need larger number of members to create a critical mass to obtain maximum benefit from the venture.

In the majority of the networks, most of the members have had a previous relationship with other network members. This is not the case of cooperative networks where most participants did not have a previous relationship.

Member organisation performance has been positively affected by being in the network in areas such as access to knowledge, product quality, product innovation, access to technology, product diversification and market innovation.

Why do Australian Networks fail?

Previous theory (Miles and Snow, 1992) suggests that some of the reasons why networks could fail include: the dependence of members on a focal firm, making organisations lose their individual participation in the market; the limiting of creativity by network participants, and excessive controls by the network designed to prevent opportunism.

The findings of the research add to the previous elements the following causes of network failure:

Lack of resources: the most important reason for network failure relates to the lack of financial resources. Development of new markets or products requires a great quantity of resources that in many cases are not available for SMEs. This is the case of a business network formed to develop a new engine but the lack of resources made the venture unsuccessful.

The chairperson: the chairperson of the network plays the role of conductor. The chair directs the efforts of the members to achieve a common goal. There are cases where the chairperson, because of lack of commitment or interest, has left the network and it has failed as a result. For instance, the case of a food network that had to merge with another more structured network to maintain members involved in networks.

The Broker: in many cases the broker forced the creation of the network, because of his/her business interest, without a clear understanding by members of the implications of networking. Many cases illustrate this cause of failure. Another food network is broken driven because the chairperson can not by himself conduct the network.

The strategic plan: in the majority of the cases, especially in cooperative networks, the strategic plan was unrealistic. Largely this was due to the desire of the broker to set up the network in the fastest possible way in order to get funding from bodies such as the Regional Development Office. For instance, the participants of a service network have this perception of the strategic plan of the network.

Lack of members: in the particular case of cooperative networks, the fact that there are enough members in the network to create a critical mass means that the principal aim of sharing knowledge and information becomes restricted. While cooperative networks need a larger number of participants to be effective, the fact that there are large numbers and few resources means that the network often fails. The members of a food network have been reduced considerably in the last year making the members that stay in the network to doubt about the future of the network.

What makes a network more effective than another does?

Now that the reasons for network failure have been presented, it is necessary to define what makes one network more effective than another. From the statistical analysis of frequencies of data on both cooperative and business networks, network effectiveness can be seen to be a function of the level of trust between members, commitment by members to the network, and the level of conflict existing in the networks.

The more there is trust between network members; the more there is commitment to the network by participants in the venture, and the more that there is a certain level of conflict, the network will be more effective.

Recommendations and conclusions

While the Network form of collaboration clearly exists it has yet to be properly understood in both theory and practice. Networks do not replace markets or hierarchies, but they do complement and change these in important way. Practically, networks are created for the mutual benefit of participants in the long term. Network members' have to recognise that some benefits of networking, such as access to knowledge, and access to markets can be achieved in the short term, but benefits, such as reduced costs and reduced risk may only be achieved in the long term, as a consequence of the short term achievements. It is impossible to think of a cost reduction in the short term; this happens only when better ways of communication have been developed; when mutual understanding between members has improved, and when an increased level of trust is maintained, such that we can observe greater benefits for the participants from the collaborative agreement. Networks require a practical shift from short term to longer term mind sets that many small business people may find difficult.

Is important that members differentiate these short and long term expectations. Network members should be able to identify and recognise changes in the short term including: the existence of better relationships, better understanding between members, and better knowledge of each of the participants.

The role of the brokers should be reconsidered. Being an important cause of network promotion and creation, they are also an important cause of network failure. There is a common feeling that brokers promote networks simply because it is a way for them to do business. Under these circumstances the organisations involved in networking are not necessary important to the brokers. Primarily, they are the way to get income.

In the longer term, it is important to remember that the business culture of competition has to be changed to a business culture more appropriate to that of collaboration. To develop organisational culture is not so simple that it can be easily changed. Organisations, in particular their managers, have to realise that collaboration is a better way to deal with the new global culture of competition and that may mean a small cultural revolution on their part..

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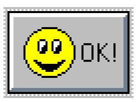

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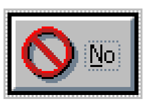

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