

**INTERFIRM NETWORK  
CONTENT ANALYSIS**

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**Abstract** – This paper explores and describes some directions within the field of interfirm networks. The directions correspond to an aggregation of 210 different papers in order to achieve a content trajectory. Papers analyzed are based on a collection from 1961 until July 2002 from a number of databases. The papers were categorized into different categories. The categories used in this paper are as follows: author; year; name of journal; theoretical base; approach in the paper; methods used; unit of analysis in the paper and focus of content. Further the categories are quantified in a number of histograms. The paper also includes an appendix which consists, except from the categories, also a column with some concluding remarks from the paper; proposals for further research and also a quotation in order to enable some kind of validation process for the reader. The findings are mostly descriptive but will reveal some interesting data about common research techniques and approaches used. The main contribution is to reveal and offer a platform for upcoming research within the area of network related research.

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## 1 INTRODUCTION

As two or more firms share ideas, knowledge, risks, governance, strategy, logotype, reputation, information, familiarity, or any other purpose scholars, policymakers and other stakeholders pursue an agglomerated body as a formal or informal interfirm network. Interfirm networks push the speed of globalization as the individual businesses of late more consciously search for partners that complement or reinforce ones own resource domain, increase ones own competitiveness and link ones contacts externally to critical managers within ones field. It is no exaggeration to highlight interfirm network as one of the primary and dominating forces to understand both global movements; growth of firms; and strives to transmission policies to facilitate survival and prosperity in specific regions. These forces are attained by multiple academic traditions such as organizational, economic and sociological questioning the legal, strategically, organizational and administrative boundaries of the firm. Although, any or tiny attempts are completed to outline concepts, approach, method, theory and unit of analysis used as scope of evidence to understand the trajectories and contents in the field of interfirm networks.

Contents or extensive literature reviews are traditionally used to capture the given circumstances and contexts under what sociological, business and economical behaviors operate. Extensive literature reviews thus is the systematic technique of generating necessarily axioms to establish a chain of evidence to a certain phenomenon. This kind of extensive literature reviews have also been published in several different areas. Elango and Fried (1997) summarized 99 articles within franchising into three main streams. Huse (2000) selected specific articles from eight leading management journals and found 91 articles that especially took a close look at boards of directors during the years 1952 – 2000. Dodgson (1993) explored in his literature review papers related to organizational learning. Dangayach and Deshmukh (2001) categorize 260 articles from 31 different journals in the field of

manufacturing strategy. Ratnatunga and Romano (1997) explored 725 articles and the roughly 16 720 citations used in these articles studying small enterprises, and narrowed the sample using subjective criteria from used topics, method and objectives of study in order to facilitate a tailored classification. Interfirm networks has so far not taken advantage from this kind of extensive studies, nor is very few attempts in general made to find guidelines how to work and categorize extensive material.

Nohria and Eccles (1992) in the classic book about networks come out with guidelines and implicit assumptions for studies within the field of networks. Also, Nohria and Eccles (1992) suggest an organization of the network concept. According to the conceptual confusion argued by Nohria and Eccles (1992) this paper contain following two main objectives:

- (1) Explore and describe what directions and implicit assumptions that monitor the field of interfirm networks; and
- (2) Accumulate a large proportion of studies in order to contribute to the development of organizational content analysis.

## **2. METHOD USED**

Interpretive reading entails systematic documenting of what each domain of data (article or document) represents (Mason, 1996). Systematical categorizing process (content analysis) facilitate clusters that infers with the given subject and concept. Stringent content analysis reveal constituted implicit rules and norms for a given concept or phenomenon.

The overall aim of this study is to accomplish and reveal contents not to claim to a certain discourse<sup>1</sup> (directions) within the field of interfirm networks. According to Ahl (2002)

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<sup>1</sup> Discourse reflect a mini-regime of truth, which means that it creates rules of statements and written words in order to organize what is right and wrong (Bergström and Boreus, 2000). Discourses include unconscious assumptions from the paradigm. Foucault explains the content as a way to enable the hierarchs of the spoken and written language and a way of organizing the written and spoken words (Florén and Ågren 1998). In this order the content is understood as something that legitimate statements, minds and action.

content analysis is restricted to quantification of words and but can not per se claim any discourse within the field. However a content analysis may provide trajectories which are the base to develop an understanding of the given discourse. The paper is focused to categorize 210 different studies or articles. Categorizing the different papers and studies served as a mode to differentiate the selected studies from one another (see appendix). The categories also represent domain for the potential future discourse.

Using different categories to approach a concept is a common way for researchers to initiate the implicit and explicit taken for granted measures in several different disciplines (Mason, 1996; Kumlien and Axelsson, 1999; Hertzberg, Ekman, Axelsson, 2001). Using written truth as a base for analysis has become common in research, not just as a descriptive secondary data analysis, but also as a base for understanding concept development in terms of content analysis (Bergström and Boreus, 2000; Ahl, 2002). Content analyses usually approach contents in different settings (Bergström and Boreus, 2000). Detecting of specific words and the contents may thus help to explore the implicit meaning of the words (Bergström and Boreus, 2000). In this sense content analyses may also be a sophisticated technique to explore the trajectories in different documents or scientific papers. Literature studies can also reveal more straight forward demands such as used form, general content, style and layout.

## **2.1 SELECTION OF PAPERS**

In order to collect representative papers as grounding for the content a randomly selection from common databases were conducted. Databases used are Academic Search Premier; Business Source Premier, Econlit, ASIA, SCANP, SCIMA, HELICON and LIBRIS. In a first attempt 35 868 articles responded to the keyword "Network(s). The concept of network includes a magnitude of issues and academic disciplines, such as engineering and issues and related to technical oriented networks and different system. In order reduce the number of

papers to a manageable amount and at the same time ensure coverage the concept of interfirm networks some narrowed keywords were employed (i.e. Virtual organizations; Interfirm networks; Network organizations; Virtual corporations; Virtual enterprises; Imaginary organizations; Inter-firm networks; and Industrial networks) . Further a more senior colleague from the area of networks sorted out articles on subjective basis, in order to clean up from papers that possibly still remain outside the focused term interfirm networks. However this study is still restricted to a limited area, and limited to papers that only represent a given library access based on a payment, that was found at Luleå University of Technology.

### **3. THEORY AND RESULTS ANALYZED IN A CONSECUTIVE ORDER**

*In the following part the different categories will be presented. Each category will be viewed as an issue from a theoretical perspective and finally be presented as a table. The appendix of this paper confirms assessment of the individual papers including all combinations that prevail among selected papers. For example it is not unusual that those who conduct empirical interfirm network studies also use multiple theories, unit of analysis and/or methods to understand this complex phenomenon. One of the main issues is thus that lots of researchers' only implicitly touch upon a theory without explicit stating the theoretical base used. However in order to achieve an aggregated view I have, on basis of my understanding, used senior advice, information from both used references and implicit writing in the paper in order to estimate the lack of explicit declaration. The categories are as follows: year; type of journal; theoretical base; approach; method used; unit of analysis; focus of content; and contribution to research. Except from this order the paper will in the final appendix include: papers enumerated by author and journal; view contribution to research in an extended form; highlight a number of proposal for further research; and for each paper expose a representative quotation which purposely intends to serve as a validation base for readers.*

### 3.1 YEAR

I will briefly declare the idea of bringing year in as a category. Nohria and Eccles (1992) argue interfirm networks has lately received recognition as an academic discipline and thus also received an increased attention in published articles. In this study I am able to confirm, according to selected papers, that interfirm networks have received an increased attention recently. A frequency table respectively showing intervals of papers published every five

<b>TABLE 1: NUMBER OF ARTICLES UNDERTAKING NETWORKS EVERY FIVE YEAR PERIOD</b>	
Year	Number of Articles
1961-1965	2
1966-1970	1
1971-1975	1
1976-1980	9
1981-1985	14
1986-1990	13
1991-1995	45
1996-2000	91
2001-	27

years. According to my sample there is an increased number of published papers (see table 1). The collection of papers in this is study is limited to June 2001, hence there is no scope of evidence to discuss trends beyond that date. However we know, interfirm networks as phenomenon coming out of plain collaboration between two or more businesses have a tradition longer than that from 1961.

### 3.2 THEORETICAL DOMAIN FOR PAPERS APPROACHED

One of the main purposes with this study was to learn more about theory building and theories related to the network approach. Since a PhD-process also contains an individual education this part was essential for my understanding of the area. Understanding networks can obviously be understood from a magnitude of different perspectives, which is shown in the upcoming table about different theoretical domains. This part of the study is also one of the most individually challenging, since it in many cases were very difficult to estimate what theoretical base the individual researcher based his or her conclusions on. A lack of

deduction to current theories forced me to either classify some of the paper as either unclear in terms of theoretical base or estimate the paper. Since this is an education and since I think it is challenging to organize current research in order to understand how to learn more about networks I assessed unclear use of theory on the basis of my personal understanding; screening references and reference list made in the article; by advice; and finally by reading the implicit meaning between the lines.

However the most common theories network theory, theories related to strategic management, evolutionary theory, exchange theory, transaction cost theory and resource based theory emerge often in combination with one another or in combination with some other theory.

As table 2 reveals there is lots of theories related to the network literature. Many of these seems also interrelated to one another. For instance I have clashed resource dependency with resource based perspective/theory. A clash of some other theories might have been possible too, for instance Panopticom theory, is similar to agency theory, whereas ideas from system theory brought as antecedent to some of the understandings found in theories related

<b>TABLE 2: THEORETICAL BASE IN APPROACHED ARTICLES</b>	
<b>Theory (x) Used</b>	<b>Total Number (x) Theories</b>
Transaction Cost Theory	25
Resource Based/ Dependence Theory	15
Network Theory	128
Organizational Theory	18
Evolution Theory	23
Political Economy Theory	7
Exchange theory	11
Game theory	4
System theory	3
Theories Related to Strategic management	30
Agency Theory	1
Communication Theory	4
Institutional Theory	1
Grounded Theory	2
Small Group Theory	1
Self-efficacy Theory	1
Social Theory	2
Labor Process Theory	1
Panopticom Theory	1

to networking theory. Moreover the concept strategic management itself includes a magnitude of theoretical approaches, which explains strategic behavior.

The use of theory seems still as a divisive part in networking theory. Lots of studies represent empirical evidence that exemplify a success or a failure by using theories related to interfirm networks. The lack of good theoretical explanations might depend on complexity of the interfirm networking phenomenon. So, how did I value theory? Since theory building is such an important part in all research I will shortly explain how theory contribution can be build. A good theory is practical, functional and is thus restricted to follow a set of criteria that needs to be followed in a proper way. In it self a valuable theory offer the possibilities and limits of a given phenomenon. Each phenomenon is restricted to a number of specific assumptions. These assumptions or working conditions which declare the possibilities and limits are usually declared in the definition. The definition will more or less clarify the conceptual and contextual boundaries. Moreover a good theory is also revealing something new. A new theoretical contribution can however declare new complementing items that support an existing theory. New theory contributions also capture new empirical evidence that confirm validity of existing theory. A good theory is declaring the set of variables and how these are interrelated to one another in a proposed model. Popper also argue the important criteria of falsification, which in it self obligate the researcher to find the logical or empirical elements that facilitate theoretical testing. However, these are only some of the elements that constitute good theory. These elements have all together been worked out throughout the cumulative process in this paper and could be helpful when one is about to assess a reliability of a given testable phenomenon.

Theories related to interfirm networks seem to rely on a set of different theoretical approaches. Lots of theoretical evidence signifies interfirm networks as parts to understand for instance governance, information systems, resource allocation or mechanisms that shift

our attitudes. The different scholars thus use the concept of interfirm network to understand partial phenomenon of social, organizational or technical science by merging the narrow supporting theory to the overall holistic theory. All together these approaches serve a holistic view of theories related to interfirm networking. According to these results it is somewhat clear that there has been plenty studies describing the phenomenon and exemplifying different results in an interfirm networking context. However, there are still few studies undertaking an organization behavior aspects and how behavior is linked to interfirm networks. As carriers of theoretical understanding to unionized behavioral shifts institutional theory, small group theory and parts of general network theory organize mechanisms to interfirm networks. Although the few examples of institutional theory according to this literature study, may point out that there is a growing need for more exhaustive understanding of the behavioral mechanisms. Plenty of the articles in this study where related to a mix of theories in strategic management, which could in itself indicate the grand need to explain where success and failure emerge. However strategic management has not succeeded to find any general theory. Maybe even strategic management would benefit from focusing on the behavioral aspects, and in light of success and failure.

We can also see (table 2) that agency theory is also to a less extent used, but governance issues, as in agency theory are many times covered in light of transaction cost theory. A very clear implication is also that a mixed combination of two or more theories may help the researcher to understand the phenomenon of interfirm networks. The multiple theory usage is probably even to a great extent explaining the lack of general theory, as still being in an infant theory development stage. However it may also be alarming if the multiple usages reflect confusion in the field of network theory. According to the definitions it's the network academic discipline could only benefit from a strict declaration of all necessarily assumptions tested in the model.

### 3.4 APPROACH

According to Yin (1994) a research approach could be either serve explorative, descriptive, explanatory or predictive/ normative purposes. The assessment of explanatory, descriptive and explorative

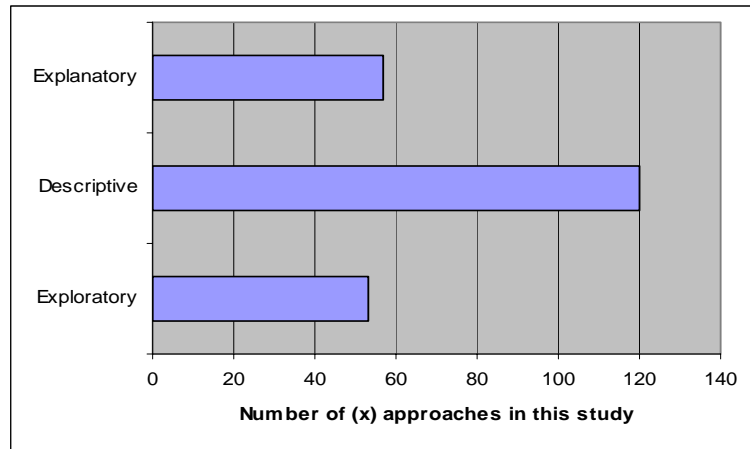


DIAGRAM 1: DISTRIBUTION OF USED APPROACH

paper is one of the most challenging parts in this paper. Different traditions and different individual backgrounds are affecting if a paper is explaining or describing. A very quantitative scholar may ask for numerous examples to generalize, and hence build theory. On the other hand a qualitative scholar exemplifies his or her hypothesis by a case, and hence explains the phenomenon through the given example (-s). Let's also presume both qualitative and quantitative scholars select their sample size and sample attributes carefully in order to cover their undertaken definition. A reconciliation of the two different contradictory perspectives might be facilitated by using the two perspectives by turns. For instance a good case study approach may gain from exhaustive quantitative descriptive statistics in order to understand the phenomenon. On the other hand a quantitative study may benefit from a more comprehensive study of the individual items. Together both quantitative and qualitative studies are assessed based on the logical and theoretical framework in beforehand and its relation to its findings. Hence, organization of theoretical and logical links to past studies may decide whether a study is capable of explaining anything.

According to findings in this literature study it is not astonishing that the descriptive part is most frequently represented. Since interfirm networks symbolize a relatively young

and complex phenomenon there should logically be an extensive need of descriptions. Again the complexity itself may foster a tradition to describe the phenomenon from various aspects in order to ensure construct validity. Interfirm networks as a complex phenomenon in this paper reveal that there multiple approaches embedded in analyzed articles. Also, many papers clearly state their approach, but in a number of cases the individual paper has been categorized by my individual presumptions.

### 3.5 METHODS USED IN APPROACHED PAPERS

Again research on interfirm networks calls for several disciplines and hence also multiple methods. Lots of research analyzed in this paper represents a triangulating tradition, where multiple sources of evidence are used to understand the phenomenon. However the fact

Experiment	6
Survey	68
Literature studies	75
Case studies	97
Observation	10
Longitudinal	13
Briefcase	36
Simulation method	2

that interfirm networks many times concern human relations limit the use of certain methods, for instance human experiments will involve too many ethical dilemmas and constraints in terms of participations willingness. It still remains interesting and challenging to find forms to carry out experiments in the area for interfirm network research. Scenarios as a similar approach to experiments have strong explanatory power to the limited coefficient the model test.

According to these results several categories are presented in table 3. Survey category includes those explicitly describing a quantitative number of actors, businesses, cases or transactions. Survey category also contains those testing hypothesis and propositions by a generalized number of units. Literature studies capture complementary archival or document analysis, historical evidence, content analysis and traditional literature studies. Case studies include comparative examples of networks in different countries, as well as

traditional examples of exemplifying for instance a success story. Briefcase as a way of assessing evidence rely on Alexander (1997) collecting portfolios of commentaries, opinions and research experiences into one paper. Briefcases have in this paper facilitated difficult assessments, where the method has not been clearly declared. Simulations apply to game-theory scenarios or test different logistical tests of utilizing integrated supply networks.

The results implicate that studies in circulation to a tiny sparsely extent undertake longitudinal studies or studies on plain observational basis. The lack of longitudinal studies might be an explanation of the interfirm network concept as a relatively new mode of organization. Otherwise the results show a quite good balance between case studies, surveys and studies based on literature basis. It is anyway worthwhile to emphasize that most network studies mix a multiple number of methods.

### 3.6 UNIT OF ANALYSIS IN PAPERS APPROACHED

Unit of analysis is one of the most central parts in every approach undertaking interfirm network analysis. Since an interfirm

network contains multiple units of analysis (i.e. resources, routines, behavioral cognitions, relations, business entity, subgroups,

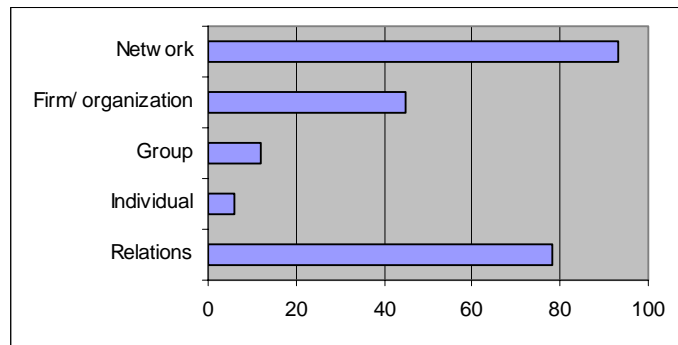


DIAGRAM 2: UNIT OF ANALYSIS IN 210 ARTICLES

individuals, transactions, holistic systems, and geographical areas) scholars need to clearly present what unit of analysis the results represent. It is essential for the readers to have a clear understanding of issue addressed but also how this issue is approached. The pinpoint that is placed as the central for the study is here understood as the unit of analysis.

Early studies of economics usually focused on the business itself or the routines within it. Provan and Brinton (1995) argue that the traditional approach of dyad relations had shifted and unit of analysis are lately more focused on the system as whole. However the unit of analysis shifts among different perspectives and the reader needs to be attentive to the used unit of analysis. In order to understand systems the researcher often operationalized the unit of analysis to include a multiple unit of analysis (Yin, 1994; Miles and Huberman, 1994). Consequently this means the firm often seen as the main focus of analysis, but an extended understanding will demand analysis within levels that “should” be captured within the firm (Williamsson, 1981). Due to the diffuse boundaries Williamsson (1981) uses the term efficient boundaries to reflect upon the units that really involve a firm performance. However Williamsson (1981) extends a fair view of a firm to also include a final level capturing how human assets are organized. However transaction cost economies that Coase (1937) and Williamsson represent are mostly concerned about optimizing governance by altering a governance structure within a firm to external sources such as market, since these are more efficient, given the assumptions. However the criticism about focusing on efficient governance is highly criticized by a magnitude of research. Nelson and Winter (1982) argue that classical models are not challenging the true issues. Classical models will only yield explanation power to micro economic models and totally reject the issues behind undertaken assumptions. As a consequence to these statements Nelson and Winter (1982) rather prefer weight models of relative importance to a certain model. Since the evolution and survival of firms are in interest of this theory the evolutionists strive to understand purposes and selection among the variety that is offered. The evolutionary perspectives rather concern about routines as main unit of analysis in order to understand the performance within the interfirm network. The criticism against transaction cost theory is also raised by structural theorists. Granovetter (1985) heeds for the embeddedness in the system and argues that the rational assumptions

made by transaction cost theories will fail, since concepts such as trust will unsettle this kind of assumptions. By that Granovetter (1985) explicitly states that a lawyer or other law people make sure the agreed will are followed in the contract, but “only” until counterparts in the contract disagree. The concepts of sociological nature will rather then focus on the system and understand ties between different nodes. A systems perspective is therefore demanded to understand this kind issues.

According to the results of this study, it is obvious that multiple unit of analysis is used. Moreover its alarming lots of research do not explicitly state the undertaken unit of analysis. Consequently one has to assess what “glasses” that really justify the results. It is unfair to say results are meaningless unless one has a clear unit of analysis, but an unclear unit of analysis does consequently diminish the construct validity.

### 3.7 ESTIMATED FOCUS OF CONTENT IN APPROACHED PAPERS

A rigorous number of keywords are listed in table 4. These keywords work as a platform to assess focus (-s) in the studied papers. Table 1 unfolds contradictory contents referring to different perspectives on the concept of interfirm networks. I believe on the basis of this study (see table 4) that traditional focus on firm would emphasize the importance authority (formalization and centrality) by control, and act opportunistically with high internal efficiency (flows and workflows). These words could all symbolize rigidity to the own company, unless you try to control it externally by creation a common authority. Instead a growing number of contradictory focuses appear such as boundary spanning, trust as control mechanism to, interdependent relation to increase flexibility. These contradictory evidence somewhat signal a growing need to find moderators that may reconcile the tension between the perspectives. There might be explanations to why some firms, conditions, or industries are suited better to a certain perspective.

According to the result of this study few have addressed motives/ drivers/ reasons/ causes and still few have looked deeper into mechanisms and flexibility. Success and survival is also to a less extent represented in this evaluation. Another important area of study should be tailored to prerequisites and grounds for establishing any kind of collaboration. Why do we collaborate – is trust the answer?

However we seem to have a fair number of studies related to strategic issues in general. The dominating focuses seem to concentrate on the concept of interfirm network in describing and conceptualizing the nature/ form, structure, characteristics, pattern/ configuration, composition/ types and design as well as the category capturing different nuances of relations/ linkages and ties. We also seem to have according to table 4 a relatively good picture of the milieu surrounding the interfirm network in the category context/ environment. Trust as a recurrent explanation is also well represented in this study. Bottom-line levels of trust may somewhat symbolize the reason or prerequisite in every collaborative incentive.

As this study serves as a platform for my further studies, I tried to interpret the

<b>TABLE 4: FOCUS OF CONTENT IN THE ARTICLES</b>	
<b>Focus of content</b>	<b>Σ</b>
Antecedent /origin	3
Authority	1
Autonomy/independence	5
Behavior	1
Boundary	7
Broker /project manager / brokerage	6
Capability	1
Centrality	2
Communication	7
Conflict /Friction/ Tension	3
Context /Environment	16
Control	1
Cooperation /Collaboration	6
Coordination	3
Creation /Formation / Evolution /Emergence /Life cycles	5
Culture	6
Decline /Disbanding / Instability /Dissolution	1
Decision-making	3
Effectiveness /Performance /Outcome	3
Embeddedness	1
Ethics	1
Factory /Manufacturing aspects	1
Flexibility	1
Flows /Workflows	14
Formalization	3
Governance	5
Growth	7
Information technology /Infrastructure	7
Interdependence / dependence	3
Knowledge /competence / Learning	14
Management aspects	2
Mechanism	1
Motives /Drivers /Reasons /Causes	3
Nature /Form / Structure / Characteristics /Pattern /Configuration /Composition /Types /Design	54
Opportunism	4
Power	3
Prerequisites /Preconditions /Conditions	2
Relations /Linkages /Ties	40
Risk /Pitfall	2
Selection of partners	11
Strategic issues	28
Success /survival	4
Trust	17
Uncertainty	2
Complimentary	1
Change	2

individual categories to some purposes. I believe this way of activating the ideas in the table might also help other to find reasons and opportunities to study networks. I also believe the focus of content table may help less senior students of tailoring their studies to interfirm networks.

### 3.8 ASSESSED CONTRIBUTION TO RESEARCH IN APPROACHED STUDIES

As a final accumulated category I worked to assess the contribution of each paper. Evaluating the contributions may reflect the most difficult part of this study.

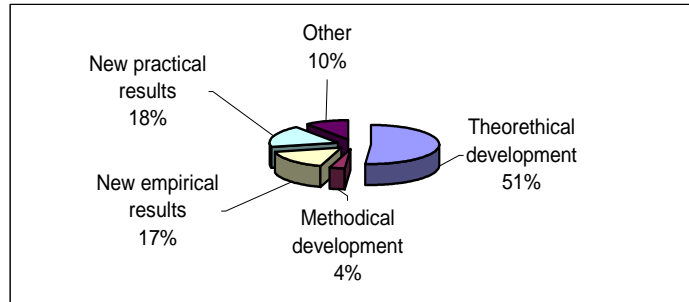


DIAGRAM 3: CONTRIBUTION TO RESEARCH

Everything one say could be a contribution in itself, on the other hand a scientific contribution may require much more accurate and measurable terms of what constitute a contribution. Most of the journals have the interest of a theoretical development in a specific field. But as it came up earlier in my previous discussions of this study a vague theoretical and conceptual ground foster a rich flora of descriptive papers, mapping all conditions instead of offering nice and clean explanations. Interfirm networks as a complex concept including multiple contextual factors have benefited from many rich descriptions, not necessarily only because of the unclear conceptual grounds. The rich descriptions are probably also stressed by the fact that interfirm networks have symbolized one of the grounds in the “new economy” with rapid change of new techniques, products and markets. Hence, clarifying and finding new axioms that may help to understand interfirm network, have been assessed as theoretical development, despite the fact that the paper in it self did not per se develop a theory or even organize the paper to a theory in a proper way.

According to these results (see diagram 3) more than half of the paper represents a theoretical development. Numerous papers contribute mainly with practical implications

(18%) or new empirical results (17 %). As many journals in the management field especially ask for practical implications, much of the contributions also focus on such outcomes. There is also several papers (10 %) which is classified as “other”. The “other” category include papers that are difficult to assess, but also those with a new focus but not necessarily organized to a theory and those sharing their experiences in terms of opinions, without claiming a theoretical, practical or methodical justification. Methodical development is sparsely represented in the papers. The tiny interest to develop applicable methods may describe the fact that few journals see themselves as forums for methodical development. Sophisticated use of methods and using new advanced methods may instead be an intrinsic mechanism in weather a paper is accepted for publication or not.

## **5. CONCLUSIONS**

First of all it is not surprising that the interest of networks is increasing in terms of papers published. This paper confirms the fact stated by Nohria and Eccles (1992) that the interest of interfirm networks in the academic world has increased. However this fact is not surprising rather like opening an open door.

The fact that most of the research in the field of networks are approached to describe networks instead of explore or explain may probably most likely be explained by the fact that the concept is relatively immature. Interfirm networks as a new concept facilitate an understanding of the “new economy”. Interfirm networks as basic unit of analysis may help to understand “how and why” the extended firm goes beyond its natural administrative boundaries. More depth studies penetrating individual cases with multiple methods and unit of analysis may also enhance understanding of mechanisms constituting success. More in depth studies may also detect conduits to successful individual and collective management. Studies of late have not mapped the parsimonious or overarching model that both capture success mechanisms of interfirm networks and the moderating factors that reconcile generated

paradoxical results. More parsimonious studies may also help to organize the contextual determinants important for individual industries. A parsimoniously organized perspective may help to confirm weights of individual factors. As Nohria and Eccles (1992) and Nelson and Winter (1982) point out, new methods at a micro-perspective may reveal a more generic view of what constitutes a success.

The main objective of this paper was to outline some directions within the field of interfirm networks. It is obvious that the interfirm network approach does not just allow, but even stress the use of multiple theories, methods, approaches and unit of analysis. However the complexity and multiple perspectives may still require strict descriptions of what roles each individual item play. Thus, is a rich description of assumption or context of significant importance for developing interfirm research to an accepted area of research!

The second objective of this paper was to develop an instrument and technique to receive an accumulated content within the field of organizational studies. The instrument has worked in a proper way, even though each category is broad and thus requires detailed notes. However the evaluation technique has been under a cumulative development throughout the process. The cumulative process include a techniques to assess unclear information for instance detecting patterns in references the individual scholar (-s) do; how strictly they follow principles for correlating individual items; and what academic tradition the individual study may represent. Hence, I believe more specified and standardized principles for judgment of the individual papers may increase the reliability of this kind of studies.

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## **APPENDIX**

The appendix that follows includes all 210 articles. The table view how each article is assessed. The appendix works as a platform to evaluate how reliable each of the different categories aggregated on the previous section are. The table thus justifies my results, since the differences in all the papers offer a variety of different opportunities. The procedure of interpret the individual papers took more than a year and in an early stage of my PhD – student procedure. The long time and the fact that this is a pioneering form of accumulating literature may have affected the results. Assessments of the individual paper may vary, in cases of when there was a lack of explicit statements in the paper (see also chapter 3 “Theory and results in a consecutive order). The table will also enable and enticing validation of the results by offering a column including a quotation summarizing a part of the paper analyzed. Of practical reasons this study does not formally provide a reference list to the studied papers, since the papers in this case are basically grounded results and not reference literature. However the appendix in itself may provide information enough to get a hold of the studied papers.

Nr	Author (s)	Year	Name of article	Name of journal	Theoretical view	Approach	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Quotation
1	Achrol, R.S	1997	Changes in the theory of inter-organizational relations in marketing: toward a network paradigm	Journal of the academy of marketing science	Network theory, Game theory	Descriptive	Briefcase	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	This paper is conceptual framework which increase the understanding of communication processes in both dyadic and network perspective	"...focuses on identifying the different forms of network organization..." p 58
2	Ahuja, G (1)	2000	Collaboration networks, structural holes and longitudinal study	Administrative Science Quarterly	Network theory	Explanatory	Survey, longitudinal, Hypothesis	Relation	Broker/ project manager/ brokering/ embeddedness	Theoretical development	Describes different types of business networks and has also a focus on conceptual framework.	"...explicitly recognize the quality of the linkage-formation process and builds on both the strategic needs and social structural perspectives." p318
3	Ahuja, M.K	1999	Network structure in virtual organizations	Organizational science	Network theory	Descriptive, Explanatory	Survey, Network analysis	Network	Context, environment	Theoretical development	Is the fit between task and structure affect network performance.	"It empirically examines the structure of virtual organizations and provides a foundation for theory building regarding this increasingly popular type of environment." p 754
4	Aiken, M & Hage, J	1968	Organizational interdependence and intra-organizational structure	American sociological review	Organizational change theory	Exploratory	Survey, Hypothesis	Relation	Relations/ linkages/ ties	New empirical results	Decision making and communication in networks	"...involving interdependencies in more critical areas, and involve organizations having similar goals." p 928-929
5	Aljointsijärvi, K, Tikkanen, H	1998	Competence development within industrial analyzing a case	Journal of business marketing	Resource dependence/ based theory	Exploratory	Case studies, Longitudinal	Network	Structure/ Form/ Characteristics/ Pattern/ Configuration/ Industry/ Types/ Design	Theoretical development	Industrial networks and cluster competence	"...purpose of this paper is to introduce a conceptual framework and a few examples..." p 139
6	Aldrich, D	1998	The new value chain	Information week	Network theory	Descriptive	Briefcase	Network	Flows/ Workflows	Theoretical development	Opinions on networks	"...traditional retailers disseminating product information... Web's more efficient information processing capabilities..." p 278

Nr	Author(s)	Year	Name of article	Name of Journal	Theoretical view	Approach	Method	Unit of analysis	Focus / discussed in the article	Contribution to research	Concluding remarks	Proposal for further research	Quotation
7	Alexander, M	1997	Getting to grips with the virtual organization	long range planning	Network theory	Descriptive	Literature review/essay	Network	Boundary	New practical results	Determining organizational boundaries		"Briefcase is a primary, opinion, research experience." p. 122 "Constructing explanatory or predictive models of organizational behavior using data from cross-sectional exploratory studies..." p. 497
8	Alter, C	1990	An exploratory study of conflict and coordination in interorganizational service delivery systems	Academy of management journal	Evolution theory	Exploratory, Descriptive	Survey, Case studies	Relation	Conflict/friction/tension	Theoretical development	Model conflicts		
9	Anderson, J.C & Hakanson, H	1994	Dyadic business relationships within a business network concept	Journal of marketing	Network theory	Descriptive	Case studies, Observations, Network analysis	Firm/ organization	Relations/linkages/ties	New empirical results	Discussing dyadic business relations	Research on business relationships within business networks	"...description of a company's environment." p. 1
10	Aoyama, Y	1999	Policy interventions for network formation: Contrasting historical underpinnings of small business policy in Japan and USA	Small business economics	Evolution theory, Political economy theory	Descriptive	Case studies	Firm/ organization, Network	Cooperation/Interaction, growth	Theoretical development, New empirical results	This paper undertakes the importance of small businesses What are critical conditions for sustainable development of business networks?		"Policies have in part played a role in the development of previous small business policy." p. 227
11	Arndt, J	1985	The anthropology of interorganizational networks in marketing	Scandinavian journal of management studies	Resource dependency theory, Resource based theory, Network theory, Evolution theory	Descriptive	Observations, Longitudinal	Network	Creation/Formation/ Evolution/ Emergence/ life cycles, Culture, Decline/ Disbanding/ Instability/ Dissolution	Theoretical development	Examine the role of cultures		"The metaphors derived from the corporate culture tradition suggest research strategies different from the currently popular single-shot, cross-sectional surveys of network members." p. 176

Nr	Author (s)	Year	Name of article	Name of journal	Theoretical view	Approach	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Quotation
12	Atkins, M & Dawson, P	2001	The virtual organization: forms of ICT-based work arrangements	Journal of general management	Network theory	Explanatory	Briefcase	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	New practical results	Using new information technology in innovation and work processes	"As a string point, the model we have described provides a framework for understanding ..." p. 50
13	Baker, W.E	1990	Market networks and corporate behavior	American journal of sociology	Organizational theory	Descriptive, Explanatory	Comparable (case) analysis	Relation	Power, Relations/ linkages/ issues, Strategic issues	Theoretical development	Argue that market relations are socially structured. Baker argues corporations manipulate the market intensity.	"Though each firm's practices must take into account corporate and needs, organizational structure reflects the characteristics of the specific products and transactions..." p. 41
14	Baker, V. & Faulkner, R.R	1991	Strategies for designing inter-organizational services	California management review	Strategic Management theory	Descriptive	Briefcase	Firm/ organization	Strategic issues	New practical results	Strategies for supplier management	"...successful managers avoid sole-source and use a variety of multiple-source strategies to maximize the performance of inter-organizational services. But managers of service suppliers lack a practical management framework..." p. 44
15	Barnatt, C.(1)	1995	Office space, Cyberspace and virtual organization	Journal of general management	Resource dependence/ Resource based theory	Exploratory	Comparable (case) analysis	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	New practical results	Impact of development in computer and communication technology on organizational structures new communication technique impact on virtual organizations	As resource to both theory and current practice, this paper draws together common themes concerning virtual organizations by exploring the impact of development in computer and communication technologies upon working practices and organizational structures. P.8
16	Barnatt, C.(2)	1997	Virtual organizations in the small business sector: The case of CRM management resources	International small business journal	Resource dependence/ Resource based theory	Descriptive	Case studies	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	New practical results	This paper discusses virtual organizations based on lean principles, surrounded of a central broker	"Key to this conclusion is an analysis of CRM's policy of charging members a monthly fee in order to permit them to remain part of the organizational collectives." p.45

Nr	Author (s)	Year	Name of article	Name of journal	Theoretical view	Approach	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Proposal for further research	Quotation
17	Beamont, J.R.	1992	Managing the environment: Business opportunity and responsibility Industrial districts and industrial networks: Towards a new paradigm of regional economics	Futures	Strategic Management theory	Exploratory	Briefcase	Firm/organization	Context, environmental, Strategic issues	New practical results	Discuss when and where to use a proactive strategy rather than reactive ones and conceptualize several concepts such as growth, competence, strategy, re-development and capacity		"It is argued here that business has both a liability and an opportunity to assist in environmental management and development. Initiatives should become proactive, rather than reactive in this respect." p.187
18	Belussi, F.	1996		European studies	Evolution theory	Descriptive	Literature review/essay	Network	Nature/ Form/ Structure/ Characteristics/ Configuration/ Types/ Design	Theoretical development			"... Describe the laws and motion of local systems..." p.6 "Some specific characteristics appear to be particularly important in the ability of emerging firms to control network-related sunk costs and to benefit from externalities and other technological opportunities created within their internal network and (b) the ability to transfer capabilities throughout their internal and external network." p.426
19	Belussi, F & Arcanangelo	1998	A typology of networks: flexible and evolutionary firms	Research policy	Transaction cost theory, Network evolution theory	Descriptive	Comparable analysis	Network	Governance	Theoretical development	Evolution of network proposed process	Comparisons of strong and weak characteristics of different network typologies	
20	Benassi, M.	1995	Governance framework process approach	Scandinavian Journal of Management	Network theory	Exploratory	Literature review/essay	Network		New empirical results	Theory, typology, role of government		"... understand in the behavior of firms." p. 270

Nr	Author (s)	Year	Name of article	Name of Journal	Theoretical view	Approach	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Proposal for further research	Quotation
21	Benson, K	1975	The interorganizational network as a political economy	Administrative science quarterly	Exploratory	Literature review/essay	Network		Context, environment, Strategic issues	Theoretical development	Managing businesses to fit into given context. The paper also contains well developed theoretical framework, theory and discussion of explanatory principles in network theory.		"...network is a minimal unit of analysis in the study of advanced industrial societies." p.229
22	Biggiero, L.	2001	Self-organizing processes in building entrepreneurial investigation	Human Systems management	Descriptive	Case studies	Network		Nature/ Form/ Structure/ Characteristics/ Patterns/ Configuration/ Types/ Design	Theoretical development	Empirical and theoretical focus on self procedures.		"Finally, the past emphasis on dyadic interorganizational relations clearly has limitations." p.392
23	Boje, D.M & Whetton, D.A	1981	Effects of organizational strategies and contexts on centrality and influence in inter-organizational networks	Administrative science quarterly	Explanatory	Survey	Firm/ organization		Centrality	Theoretical development	Testing model, tailored in network analysis.		buying decisions. p.115
24	Bonoma, T.V	1982	Major sales: Who really does the buying	Harvard business review	Descriptive	History review	Individual		Strategic issues	Theoretical development	Explanation of buying behavior		"Prominence in the societal influence network is measured on an asymmetric basis...general involvement in the network." p.90
25	Bovasso, G	1992	A structural analysis of the formation of a network organization	Group and organization management	Descriptive	Survey/ Network analysis	Relation, Network		Broker/ project manager/ brokerage, Centrality, Strategic issues	Methodical development	This paper proposes a framework especially in terms of resource control and management involvement.	Emphasize that network analysis is important tool in structural and process approaches.	

Nr	Author (s)	Year	Name of article	Name of journal	Theoretical view	Approach	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Quotation
26	Brito, C.M	2001	Towards an industrial theory of industrial networks and industrial marketing	Journal of business and industrial marketing	Network theory	Descriptive	Observations	Relation	Relations/ linkages/ ties	Theoretical development	Forms of exchange	"Firms are not independent entities acting on the market." p.151
27	Bruce, M., Leverick, F., Litter, D. & Wilson, D	1995	Success factors for collaborative product development: A study of information and communication technology	R & D Management	Network theory	Descriptive	Survey, Literature review/ essay	Relation	Motives/ drivers/ reasons/ causes	Theoretical development	How to measure collaboration success	"A tension exists between collaborating and being competitive." p43 "...local firms pursue individualistic strategies rather than value coordination... equating self-sufficiency with success." p 96-97
28	Bull, C.A., Pitt, M. & Szarka, J	1991	Small firms and industrial districts	Entrepreneurship	Network theory	Explanatory	Survey, Comparable (case) analysis	Network	growth, Knowledge/ competence/ learning	Theoretical development	Innovations, Industrial districts and Growth	"...based on a study of domestic JV between two computer services firms..." p28
29	Buono, A.F	1990	Managing Joint Ventures: inter-firm tensions and pitfalls	Sam advanced management journal	Network theory, Strategic Management theory	Exploratory	Longitudinal	Network	Control, Strategic issues	New practical results	Opportunities, challenges and problems with joint ventures	"...the ability to leverage alliances and the need to retain a particular identity creates a constant tension between autonomy and cooperation... competition and cooperation." p216
30	Burn, J. & Barnett, M	1999	Communicating	IEEE Transactions on professional communication	Network Political economy theory	Descriptive	Literature review/ essay	Network	Boundary, Culture, Formalization, Nature/ Form/ Structure/ Processes/ Configuration/ Composition/ Types/ Design	New empirical results	Explains in a satisfying way how virtual organizations emerge as a result of cultural forms.	"Without the ability to identify who has the key information, who the experts are, and, who needs to be consulted, the organization's decisions are unlikely to be optimal." p. 22
31	Burn, J.M & Cowan, E	1999	Knowledge management: Strategies for virtual organizations	Information Resources management journal	Network theory	Descriptive	Literature review/ essay	Relation, Individual, Group, Firm/ organization, Network	Creation/ Evolution/ Emergence/ Cycles, Nature/ Form/ Structure/ Characteristics/ Patterns/ Configuration/ Types/ Design, Strategic issues	Theoretical development	This paper discusses forms, new structures and impact of organizational change	

Nr	Author (s)	Year	Name of article	Name of Journal	Theoretical view	Approach	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Proposal for further research	Quotation
32	Burt, R.S., Christman, K.P., & Carr, H.C.	1980	Testing a structural theory of corporate cooperation: Interorganizational directorate ties as a strategy for avoiding constraints on profits	American sociological review	Network theory	Explanatory	Survey, Network analysis	Relation, Network	Autonomy/independence, Relationships/ ties	New empirical results	This paper highlight the concept of interfirm network autonomy	Border and manager inter-ties must be taken into account. The social capital, but there is a need to clarify if such patterns actually generate any profits!	"In conclusion the model of structural autonomy seems to be accurate in predicting where directorate ties occur. The American economic relations, intended to eliminate market constraints." p. 837
33	Bush Jr, J.B. & Frohman, A.L	1991	Communication in a network organization	Organizational dynamics	Strategic Management theory	Exploratory	Case studies	Firm/ organization	Context, environment, information technology/ infrastructure, Knowledge/ competence/ learning	New practical results	This paper discuss how to use information in strategic change processes		"This sequential model has established itself primarily because of its compatibility with the bureaucratic command and control concept of management in organizations." p.15
34	Buvik, A & Grønhaug, K	1999	Interfirm dependence: Environmental uncertainty and vertical coordination in industrial buyer-seller relationships	The international journal of management science	Organizational theory	Descriptive	Survey, Hypothesis	Firm/ organization	Uncertainty	Theoretical development	Uncertainty and the change process	Research on the perception of uncertainty	"This indicates that vertical co-ordination is less appropriate for the purpose of handling the adaptation to environmental uncertainty..." p.45
35	Byrd, T.A & Sankere, C.S	1995	The strategic risks of implementing global information technology	Information Strategy	Network theory	Descriptive	Briefcase	Firm/ organization	Information technology/ infrastructure, uncertainty, change	New practical results	Discussing risks and uncertainty in strategic planning		about environmental and organizational variables tends to increase the scope of the organization's..." p1
36	Camagni, R	1993	Inter-firm industrial networks: The cost and benefits of cooperative behavior	Journal of industrial studies	Network theory, Political economy theory	Explanatory	Literature review/ essay	Firm/ organization	Boundary, Formalization, Nature/ Form/ Characteristics/ Relations/ Configuration/ Composition/ Types/ Design, Partner selection	New practical results	Evaluate and explain what differ ties in informal and formal networks and clusters		"In this paper, a semantic field was proposed between the informal network relationship..." p.14 and "...conducted and explicit cooperation agreements..." p.14

Nr.	Author (s)	Year	Name of article	Name of journal	Theoretical view	Approach	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Quotation
37	Cavinato, J.L.	1991	Identifying total inter-industry gaps: for supply chain competitiveness	International journal of purchasing and material management	Strategic Management theory	Descriptive	Case studies	Relation	Trust	New practical results	Valuable information for purchasing managers.	"There are several practical implications of this research for purchasing managers" p.14
38	Chauston, I	1996	Critical events that creates gaps in the Danish technological institute SME structured networking model	International small business journal	Network theory	Descriptive	Observations	Network	Partner selection, Success/survival	New practical results	Model for network success	"... evolved a 5-phase model in which independent external to the network process assumes the role of broker and is responsible for guiding the inter-firm cooperation process." p.71
39	Chateni, & Manuel T.A	1993	Benefiting from external sources of technology	Research Technology Management	Strategic Management theory	Explanatory	Survey	Firm/ organization	Cooperation/ Collaboration, Strategic issues	New empirical results	This paper gives a recipe for strategic failure and success. Success is found in clear strategic decisions. Long run commitments and organizations with skilled personnel.	"... recipe for failure is based on only a few ingredients! This recipe calls for the following combinations: Lack of strategic commitment; Lack of strategic resources; Emphasis on short-term results; Weak commercial planning; Wrong places; Management inflexibility; Internal communication; teamwork." p.26
40	Chesbrough, H. W. & Teece, D.	1996	When virtual virtuous	Harvard business review	Strategic Management theory	Descriptive	Briefcase	Firm/ organization	Strategic issues	New practical results	Advantages and characteristics of virtual organizations.	"Virtual companies coordinate business through the marketplace." p65
41	Choi, T. Y. ; Dooley, K. J. & Rungtusanatham, M.	2001	Supply networks and complex adaptive systems: control versus emergence	Journal of Operations Management	Network theory	Descriptive, Explanatory	Literature review/ essay	Network	Flows/ Workflows	Theoretical development	Managing complexity through adaptive systems	"In conclusion, a complex adaptive supply network is a collection of firms that seek to maximize their individual profit and efficiency by exchanging information, production, and services with one another." p.365

Nr	Author (s)	Year	Name of article	Name of journal	Theoretical view	Approach	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Proposal for further research	Quotation
42	Christie, P.M. & R.R.	1998	Virtual corporations: A recipe for success	Industrial management	Network theory	Exploratory, Descriptive	Briefcase	Firm/organization	Partner selection, firm survival	Theoretical development	Success of a network depends in which degree customer strategy is central in the network instead of resource partners, trust, communication, information, skilled personnel and openness to firm (adaptability).		"Analysis of successful and unsuccessful organizations has resulted in the identification of several factors that may contribute significantly to the success of organizations." p.8
43	Clark, B.R.	1965	Interorganizational patterns in education	Administrative science quarterly	Evolution theory	Descriptive	History review	Firm/organization	Strategic issues	Theoretical development	Economic and organizational trends		"Generalizations developed toward such a theory would reveal many points of convergence in ideas derived from the study of interorganizational administration." p.233
44	Clemons, E.K. & Row, M.C.	1992	Information technology and industry: the changing economics of coordination and ownership	Journal of management information systems	Transaction cost theory	Descriptive	Briefcase	Relation	Information technology/infrastructure	Theoretical development	Information technology can reduce transaction costs and can be better utilized through cooperation.	"We need a theory of cooperative organization or organizational alliance." p.233	"In this paper we have tried to expand transaction cost economics to shed light on the emergence and cooperative relationships." p.24
45	Clemons, E.K. & Row, M.C.	1993	Limits to interfirm coordination through information technology	Journal of management information systems	Transaction cost theory	Exploratory	Case studies	Relation	Information technology/infrastructure	New practical results	Explored new aspects of product flow		"...Analysis of our study suggests that resistance is due to the impact of the new coordination..." p.73
46	Davis, T.R.V. & Daring, B.L.	1995	How virtual corporations manage the performance of contractors: The super bakery case	Organizational dynamics	Network theory	Descriptive	Case studies	Network	Relations/ linkages/ ties	New practical results	How performance can be evaluated through measurement of cost centers and increasing the insight of feedback-systems		"The absence of interorganizational control over the work of contractors means that managers in virtual corporations need a more sophisticated performance measurement and feedback system." p.71

Nr.	Author (s)	Year	Name of article	Name of journal	Theoretical view	Approach	Method	Unit of analysis	Focus / content distinct from the article	Contribution to the research	Concluding remarks	Proposal for future research	Quotation
47	DeToni, G & Nassimbeni, G (1)	1999	Buyer-supplier relational practices, policies and plant performance: results of empirical research	International Journal of Production resources	Transaction cost theory	Descriptive	Survey, Hypothesis, Comparable (case) analysis	Relation	Flows/ Workflows, Partner selection, Strategic issues	Theoretical development	Questioning how exchange works in terms of cooperation will lead to more successful exchange for both customers and suppliers than traditional market based exchange.	Complete description of exchange change	"Thus, as predicted by TCE theory, advanced international buyer-supplier interaction practices, like those implemented by JIT and co-design approaches, seem to be inoperable in international, pure market-based mechanisms." p 116
48	DeToni, G & Nassimbeni, G (2)	1994	Supply networks, stability and logistics implications, a comparative analysis of two districts The co evolution of new organizational forms in fashion industry: A historical and comparative study of Italy and the United States	Omega international journal of management	Transaction cost theory, Network, Organizational theory, Agency theory	Exploratory	Case studies, Comparable (case) analysis	Network	Boundary Context, environment, Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Organizational fit is necessary in a fast changing environment	More research should be done on transitional pilots	"To explore the connection between environmental dislocation and organizational transformational pilots" p 403
49	Duell, A-L & Ahlamo, A	1999	Interorganizational conflict: A review of an emerging field	Human relations	Network theory	Exploratory	History review, Comparable (case) analysis	Firm/ organization	Conflict/ friction/ tension	Theoretical development	A framework of general conflict theory	What technique and methods offer the most successful studies of conflict	"One aim of this paper is to make clear how the avoidance of conflict in the organizational setting..." p 352
50	DiStefano, T	1984	Interorganizational conflict: A review of an emerging field	Human relations	Network theory	Descriptive	Literature review/ essay	Relation	Conflict/ friction/ tension	Theoretical development	A framework of general conflict theory	What technique and methods offer the most successful studies of conflict	"One aim of this paper is to make clear how the avoidance of conflict in the organizational setting..." p 352

Nr	Author (s)	Year	Name of article	Name of journal	Theoretical view	Approach	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Proposal for further research	Quotation
51	Donkels, R & Lam-Brecht, J	1997	The network position of small business: An explanatory model	Journal of small business management	Network theory	Explanatory	Survey, Comparable (case) analysis	Relation	Nature/ Form/ Structure/ Characteristics/ Patterns/ Configuration/ Composition/ Types/ Design	New empirical results	Generating hypothesis of small business networks.	A growing need for research on small firm and research in the field of networks to entrepreneurial oriented approaches	"With this article, we try to fill the empirical gap by analyzing the causal relationship between entrepreneur- and enterprise-related factors in networks, with the intention of contributing to the understanding of the factors that promote the formation of networks." p.4
52	Dawling, M.J & Penning, W.D	1996	Multifaceted relationships between competition	Journal of management inquiry	Transaction cost theory, Resource dependence	Descriptive	Case studies	Relation	Flows/ Workflows	Theoretical development	Propositions on interconnected relations	How does multifaceted relationships affect strategy formulation	"We first describe... using resource dependence and transaction cost theories..." p.155
53	Duffy, M	1994	The Prescriptions for surviving and thriving in the virtual organization	Public relation quarterly	Strategic Management theory	Descriptive	Briefcase	Firm/ organization	Strategic issues	New practical results	How to manage a change with practical tools		"Based on my 15 years as a public relations and marketing communications manager, and in my research as a university professor..." p.40
54	Dunkerley, D. Spyeby, T & Thrasher, M	1981	Interorganizational networks: A case study of industrial locations	Organization studies (perhaps a book)	Transaction cost theory, Political economy theory, Exchange theory	Descriptive	Case studies, Comparable (case) analysis	Relation	Context, environment	New empirical results	This paper analyzes companies as controlling its environment to maintain a given power level. Well developed technological companies have their core competences embedded in a structure of strategic development groups.	Network analysis enable description and nature of relations.	"This case study analyzes a number of important issues of market-government relations..." p.2-13
55	Duysters, G., Hagedoorn, J	1995	Strategic groups and interfirm networks in international high-tech industries	Journal of management studies	Strategic Management theory	Explanatory	Survey	Network	Nature/ Form/ Structure/ Characteristics/ Patterns/ Configuration/ Composition/ Types/ Design	Theoretical development		A more dynamic perspective which concerns changes in strategic groups	"...strategic groups can be found in terms of clusters of companies that share behavioral structural and corporate characteristics..." p.360

Nr	Author (s)	Year	Name of article	Name of journal	Theoretical view	Approach	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Proposal for further research	Quotation specific as-sets: knowledge-sharing-relationships/ complementary resources/ capabilities and; effective governance." p 660.
56	Dyer, J. H. & Singh, P.	1998	The relational view: Cooperative strategy and sources of inter-organizational advantage	The Academy of Management Review	Transaction cost theory, Resource based theory, Network theory	Explanatory	Literature review/ Proposition	Relation, firm/ organization, network	Relations/ linkages/ ties	Theoretical development	Comparing the relational view with a resource based view in order to better understand the advantage		"...respective networks are formed by their societies and regions and particular institutional structures, by their organizational fields, by social groups, or by individual and actions of network members." p 12
57	Ebers, M & Jarillo, J.E	1998	The construction, forms and consequences of industry networks	International studies of management and organizations	Network theory	Descriptive	Comparable analysis (case)	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Governance structures of industry networks		"The two perspectives are not conflicting but are rather complementary explanations of why companies engage in joint ventures and programs." p 164
58	Edström, A., Högl, B & Norrback, L.E	1984	Alternative explanations of interorganizational relations: The case of joint programs and Joint Ventures in Sweden	Organization studies	Organizational theory	Explanatory	Case studies	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design/ Relations/ linkages/ ties	Theoretical development	Multiple perspectives enhance understanding of joint ventures rather than the use of conflicting dichotomy explanations.		"A theoretical model is demonstrated how motives, structural conditions and moves made by powerful as well as weak dependent firms interact in shaping the decision process..." p361
59	Eig, U & Johansson, M.	1997	Decision making in the interfirm Networks as a political process	Organizational studies	Resource dependence/ Resource based theory, Organizational theory	Explanatory	Case studies, Longitudinal	Network	Decision making	New empirical results	This paper discuss powerful positions and prescribe how one could select forum for political access. The paper exemplify explicit political behavior.		
60	Feigin, G.E., Lin, G.Y. & Yao, D.D	2000	A supply network model with base-stock control and service requirements	Operational research	Network theory	Descriptive	Literature review/ essay	Relation	Flows/ Workflows	New empirical results	Propose a new model of supply networks		"...describe a model of complex supply chains..." p216

Nr	Author (s)	Year	Name of article	Name of journal	Theoretical view	Approach	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Proposal for further research	Quotation
61	Feldman, M.P. & Ronzio, C.R.	2001	Closing the innovation gap: Moving from the shop floor to the biotechnology manufacturing laboratory	Entrepreneurship & regional development	Resource dependence/ Resource based theory, Network theory	Descriptive	Archival analysis	Firm/ organization	Knowledge/competences/ learning, Strategic issues	Theoretical development	Discuss special competence development processes and design.		"... this paper contrasts a model of the virtual corporations with vertical integration..." p2 Thus, without the focus formalistic structures or procedures, it becomes possible to take full advantage of the advantages of the network, particularly by exchanging experience, sharing know-how and allocating resources in the best possible way..." p. 300
62	Feneuille, S.	1990	A network organization: great challenges of complexity	European management journal	Network theory	Exploratory	Case studies	Firm/ organization	Context, environment	New practical results	This paper discusses how complexity is managed by interfirm networks. Managers of virtual organizations clearly define their target markets, their overall business strategy, and list the most important intentions of strategic performance.		"This paper seeks to describe the forms of the virtual organization and discusses the implications that this structure has for enterprise flexibility, competitiveness, and cost efficiency of organizations." p. 3
63	Fitzpatrick, W.M & Burke, D.R.	2000	Form functions and financial realities for the virtual organizations	Sam advanced management journal	Network theory	Descriptive	Briefcase	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Types/ Design	New practical results	Adoption is depending on how the firm works in terms of their complementary power autonomy also producing in short run and dynamics i the long run		"Capturing the essence of social structure, current interpretations of organization as adaptation, however, and as culture suffer from three basic failings; (1) they have artificially segregated complementary elements of collective life; (2) ...promoted a micro analytic orientation that underplays the embeddedness of networks in organizations...(3) ...stressed the short-run stability of structures at the expense of the long run dynamic process of structuring." p. 403
64	Fombrun, C.J.	1986	Structural dynamics within and between organizations	Administrative science quarterly	Evolution theory	Descriptive	Archival analysis, Literature review/ essay	Relation	Autonomy/ independence	New empirical results			Explaining the evolution of collective structures

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65	Foss, N.J	1999	Network, Capabilities and competitive advantage	Scandinavian journal of management	Resource dependence/ Resource based theory, Network theory	Explanatory	Literature review/ essay	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Clear conceptual suggestions of the network concept and firm capabilities.	"...resource based theory suggests one way to uncover the sources of competitive advantage of the network firm. Paragraphs led to the conclusion that network analysis is not a serious competitor to transaction cost economics." p203
66	Foss, N.J & Koch, C.A	1996	Opportunism, organizational economics and the network approach	Scandinavian journal of management	Transaction cost theory	Descriptive	Comparable (case) analysis	Relation	Opportunism, Trust	New empirical results	Outline some marks of identification in relations based on trust.	"The direct procurement of facilities, materials, products, services, and information, thus ensuring organizational survival has been an overriding reason for establishing inter-organizational relations." p.282
67	Galaskiewicz, J	1985	Interorganizational relations	Annual reviews sociology	Transaction cost theory, Resource dependence/ Resource based theory, Network theory	Explanatory	Literature review/ essay	Network	Antecedent/ origin	Theoretical development	Theoretical overview	"This essay explores alternative TEG forms, their characteristics and the criteria for their choice of corporate governance: flexible specialization, market uncertainty, product goodness, flexibility, confidence on trust, risk, self-organization, shared knowledge, and socio-territorial coherence." p.271
68	Georgantzias, N.C	2001	Virtual enterprise networks: The fifth element of corporate governance	Human systems management	Transaction cost theory, Exchange theory	Exploratory	Briefcase	Relation	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Forms and characteristics of virtual enterprise networks	"Flexibility is defined as the capacity to adapt across four dimensions; temporal, range, intention, and focus." p.373
69	Golden, W & Powell, P	2000	Towards a definition of flexibility: In search of the holy grail	The international journal of management science	Strategic management theory	Descriptive	Literature review/ essay	Firm/ organization	Flexibility	Theoretical development	Conceptualize flexibility	

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70	Goldman, S.L	1994	Agile competition and virtual cooperation: The next American century	National Forum	Strategic Management theory	Descriptive	History review and Briefcase	Firm/ organization	Context, environment	Theoretical development	Review of descriptive of agile companies		"Agility refers to the ability of the company to respond to a competitive environment of continuous and unanticipated market changes - to respond quickly to rapidly changing, fragmenting, global markets..." p 14
71	Granovetter & Sodal, G	1995	Inter-firm networks: Antecedents, Mediators & Forms	Organization studies	Evolution theory	Descriptive	Literature review/ essay	Network	Nature/ Form/ Structure/ Characteristics/ Patterns/ Configuration/ Context/ Typas/ Design	New empirical results	This paper offers an extensive literature review as well as a future models.	Create hypothesized model on this study	"...defining a wide range of network forms and mechanisms using a number of variables: social, economic and organizational dimensions and showing different coordination entities." p 183
72	Granovetter, A	1997	An organizational assessment of interfirm collaboration models	Organization studies	Evolution theory	Explanatory	Literature review/ Experiment	Network	Nature/ Form/ Structure/ Characteristics/ Patterns/ Configuration/ Context/ Typas/ Design	Theoretical development	Typology of inter-organizational organizations but also briefing governing works and different coordination mechanisms		"conflicts of interests make the use of both formal obligation and informal guarantee by external arbitrators and courts and internal systems and authorities effective and efficient at much lower levels of computational complexity." p 913
73	Gray, B	1985	Condition facilitating interorganizational collaboration	Human relations	Evolution theory	Exploratory	Literature review/ essay	Relation	Cooperation/ Collaboration/ Prerequisites/ conditions	Theoretical development	This paper has a general discussion regarding critical conditions in successful inter-firm networks.	Comparative analysis of successful collaborations in a different settings	"Successful collaboration, we suggest, depends upon the simultaneous satisfaction of several conditions at appropriate phases in the process." p932

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74	Griffith, D.A., & Harvey, M.G.	2001	Executive insights: An inter-cultural communication model for use in global inter-organizational network work	Journal of International marketing	Network theory	Explanatory	Propositions	Relation	Culture	New empirical results	This paper argue network success is derived from an active approach of establishing an inter-cultural communication relationships		"The standardization of the process of inter-cultural communication relationship development across an organization's relationship can help the operational network achieve economies of scale while allowing for adaptation of specific communication tactics across technology." p 97
75	Gulati, R. (2)	1999	Where do inter-organizational networks come from	American Journal of sociology	Network theory, Organizational theory, Evolution theory	Exploratory	Hypothesis	Relation, Network	Creation/ Formation/ Evolution/ Emergence/ life cycles, Formalization	Theoretical development	On the basis of an extensive literature review Gulati propose and test a model of networks.		"The results show that both interdependence and network effects between factors have a significant impact on new alliance formation." p1475-1476
76	Gummesson, E	1996	Relationship marketing and imaginary organizations: a synthesis	European Journal of marketing	Network theory, Strategic Management theory	Descriptive	Case studies	Network	Relations/ linkages/ ties	Theoretical development	About a more common language for relation marketing and bridging the network concept through marketing.	Find a language and synthesis between RM and NW	"The approach is theory generated on syntheses between observations and inductive, empirical studies." p. 32
77	Hagedoorn, J	1993	Understanding the rationale technology cooperation: Interorganizational modes of cooperation and sectorial differences	Strategic management Journal	Transaction cost theory	Explanatory	Archival analysis, Hypothesis	Relation	Partner selection, Strategic issues	New empirical results	Introducing different motives for technology cooperation.		Although there are a large number of motives we have shown that specific categories, i.e. market and technology-related motives, dominate the scene." p. 381

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78	Håkansson, H	1989	Technological collaboration in industrial networks	European Marketing Journal	Network theory	Descriptive	Survey	Network	Cooperation/ Collaboration, Flows/ Workflows, Partner selection, Trust	New empirical results	Listing important factors in collaboration such as collaboration, mutual trust, shared strategies and resource exchange utilization.		"...collaborative relationships are of strategic importance to companies. Second relationships are intensive, which makes them important. Third, the type of counterpart used for collaboration is important. And fourth, the organic features of relationships must be remembered. p.377"
79	Håkansson, H, Sjöstedt, J	1990	No business is an island: The network concept and its strategy	Scandinavian management	Network theory	Exploratory, Explanatory	Hypothesis	Firm/ organization	Relations/ linkages/ ties	New empirical results	Discussing boundaries of an organization and the organization's effectiveness.		"...relationship seems to suggest that enterprise should be conceived as a transaction in itself rather than a production function. Such a concept of enterprise could lead to a shift in focus, away from the control of resources towards the interactions of resources." p.199
80	Håkansson, H., Havila, V., Pedersen, A.C	1999	Learning in networks	Industrial marketing management	Network theory	Descriptive	Case studies	Relation	Knowledge/ competence/ learning	Theoretical development	Learning through relationships		"...relationship has a number of connections there are also a number of interactions where learning could appear: between products, between production and sales, and between people with different back-grounds and competencies." p.7415
81	Hjalme, M & Zinaida, F	2000	Small and medium sized tourism enterprises in sustainable management networks	Greener management international	Network theory	Descriptive	Case studies	Network	Success/ survival	Theoretical development	Success factors in tourism sustainability in networks		"...in local networks, the overarching goal of the sustainability networks studies was to improve the overall quality of life in the host region and to ensure the long-term capability of sustainability in the region." p.112

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82	Hall, R.H., Clark, J.P., Giordano, P.C., Johnson, P.V. & Roskel, M	1977	Patterns of inter-organizational relationships	Administrative science quarterly	Exchange theory	Exploratory	Survey Hypothesis	Relation	Relations/ linkages/ ties	Theoretical development	Explore rational processes. A perspective of how human resources in virtual organizations become human asset.		"...focuses on dyadic relationship among organizations that deal with problem youth. The analysis demonstrates that the political-economic model or exchange model of interorganizational relationships is useful, that this model loses its explanatory power under some conditions... p.457
83	Handy, C	1995	Trust and the virtual organization	Harvard business review	Network theory	Explanatory	Briefcase	Network	Trust	New practical results			"Trust inevitably requires some sense of reciprocity or reciprocal loyalty." p.48 "In this article we concentrate on joint trusts because the arrangements highlights the central issues of substantial, continuing cooperation between otherwise independent organizations." p.419
84	Harrigan, K.R. & Newman, W.H	1990	Bases of inter-organization cooperation: Propensity, power, persistence	Journal of management studies	Transaction cost theory	Descriptive	Literature review/ essay/ Case	Relation	Mechanism, Partner selection	Theoretical development	Contributes with framework and key factors in Joint Ventures.	Understanding of interorganizational cooperation in different contexts	More studies how firms combine price, authority and trust represent three government why they are a specific combination
85	Haugland, S.A. & Reve, T	1994	Price, Authority and Trust of inter-organization relationship	Scandinavian Journal of management	Transaction cost theory	Exploratory	Survey	Firm/ organization	Authority, Governance, Trust	New empirical results	Developing a model of governance		In this paper we argued that price, authority and trust represent three government why they are a specific combination." p.240

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86	HaYong Jang	1997	Cultural differences in an inter-organizational network: Shared public relations among Japanese and American companies	Public relations review	Network theory	Descriptive	Network analysis	Relation	Culture	New empirical results	This paper outlines the standings of cultural differences. The paper outlines some differences between networking in Japanese and US companies. Centrality is taken as an extent of Japanese interfirm relations.	More explanatory studies is needed with large samples. Additionally proposing network analysis to interfirm relations.	"Structural equivalence is the extent to which nodes have similar patterns of interaction. Nodes having similar structural approaches, two nodes may have similar attitudes not necessarily because they interact with each other, but because they jointly have a similar position in a network." p.329
87	Herbert, T.T	1984	Strategy and multinational organizational structure: An interorganizational relationship	Academy of management review	Organizational theory	Descriptive	Briefcase	Firm/organization	Strategic issues	Theoretical development	This paper offer a model of strategy and structure		"The model in this paper offers a format intended to be useful in identifying both underattended areas of international management and new approaches to these research questions." p.269
88	Holmlund, M & Törnros, J.E	1997	What are relationships in business networks	Management decision	Organizational theory, Exchange theory	Descriptive	Briefcase	Relation	Relations/linkages/ networks	Theoretical development	Typologies of different business networks		"The aim of this paper is to build a model of the relationship in a business marketing setting by using relational concepts." p.304
89	Huggins, R	2001	Inter-firm network policies, and firm performance: evaluating the impact of initiatives in the United Kingdom	Research policy	Network theory	Exploratory	Survey	Network	Relations/linkages/ Trust	Theoretical development	This paper suggest that formal rather than informal networks tend to generate economic growth		"This paper explores the strengths and weaknesses of inter-firm networks as a strategic resource...." p.443
90	Humphrey, Schmitt, H	1998	Trust and interfirm relations in developing and transition economies	The journal of development studies	Political economy theory	Descriptive	Literature review/essay	Firm/organization	Trust	Theoretical development	Collaboration should be based on trust and voluntary participation		"This article seeks to extend this debate empirically. Section II discusses the meaning of trust and prepares the conceptual ground." p.32

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91	Izushi, H.	1997	Conflict between two industrial technological adoption and inter-firm relationships in the ceramics industry in Seto, Japan	Regional studies	Network theory	Descriptive	Case studies	Firm/ organization	Knowledge/ competence/ learning	New practical results	How can a regional network meet technological change? A case study of a adoption process	"The Seto case suggests implications if the networks of the industrial district type are to be supported." p 299 "There is now a new actor in the market, the super subcontractor. These components of a system of suppliers of roofs, exterior finishing and carpentry works, who, together with the subcontractor, sub-builder..." p 299
92	Iwashita, S.	2001	Custom made housing in Japan and the growth of the subcontractor	Construction Management and Economics	Network theory	Descriptive	Archival analysis	Relation	Flows/ Workflows, Relations/ linkages/ ties	New empirical results	Describing different roles in customer liaison activities as contractor, subcontractor and super subcontractors.	"Those relationships have characteristics of a hierarchical relationship: relatively unstructured tasks, long-view, relatively unspecified contracts..." p 34
93	Jarillo, C.	1988	On strategic networks	Strategic management journal	Network theory	Descriptive	Literature review/ essay	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Conceptual framework and tools to evaluate market attractiveness.	"Explores the opportunities which challenges the transformation to the dynamic network for pre-emptive information systems field." p 25
94	Jarvenpaa, S., Ives, B.	1994	The global network organization of the future: Information management opportunities and challenges	Journal of management information systems	Network theory	Exploratory	Briefcase	Network	Information technology/ Infrastructure	New practical results	The paper tries to predict and explore the future challenges and opportunities of dynamic networks.	"The most important difference between the two approaches is the nature of the relationship. For us, industrial networks are characterized by lasting relationships among firms because such relationships can reduce costs of exchange and production and can promote knowledge transfer and change." p46
95	Johanson, J & Mattsson, L-G	1987	Interorganizational relations in Industrial systems-A research approach compared with the T.C. approach	Interorganizational Management and organization	Transaction Network theory	Descriptive	Comparable (case) analysis	Relation	Relations/ linkages/ Partner selection	Theoretical development	Multiple theoretical approach using both TCT and Network theory stand interfirm networks.	

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96	Jones, C., Hesterly, P.S. & Bozatti, S.P.	1997	A general theory of Network governance: Exchange conditions and social mechanism	Academy of management review	Transaction theory, Network theory	Descriptive and Exploratory	Proposition, Literature review/ essay	Network	Governance, Nature/ Form, Structure, Characteristics/ Patterns/ Configuration/ Composition/ Types/ Definitions/ Linkages/ Interrelationships/ ages/ ties	Theoretical development	Conceptual framework and definitions of network governance		"Our objective in this article is to provide a theoretical explanation of what conditions underlie network governance, rigorously has comparative advantage..." p.911
97	Jones, T., Bowie, N.E.	1998	Moral hazards on the road to the virtual corporation	Journal of business ethics quarterly	Transaction theory, Network theory	Descriptive	Literature review/ essay	Relation	Trust, success/ survival	Theoretical development	Conceptual framework of trust		"In this paper, we articulate three explanations for the development of trust in the rational self-interest (economic) model, trust results from the outgrowth of an iterated chain of contracts..." "...model trust is the by-product of the unanticipated interactions of individuals in a web social relations such that expectations and expectations are commonly shared." p.276
98	Kanet, J., Fajst, W. & Mertens, P.	1999	Application of information technology to the enterprise broker: The case of Bill Epstein	International journal of production economics	Network theory	Descriptive	Case studies	Relation	Broker/ project manager/ brokerage	Theoretical development	Phases of a virtual enterprise		"We have investigated here the case of Bill Epstein who is the founder of a virtual enterprise broker." p.32
99	Kasouf, C.-J. & Kelch, K.S.	1997	Interfirm relationships in the supply chain: the small suppliers view	Industrial marketing management	Network theory	Exploratory	Survey, Propositions	Relation	Context, environment, Cooperation, Complementarity, Change	Theoretical development	What effects relationships?		"Barriers to interfirm relationship, in many cases, may result from risk exposure or from differences in maintaining the relationship." p.7
100	Kasper, Fuehrer, E.C.	2001	Communicating trustworthiness and building trust in organizational virtual organizations	Journal of management	Evolution theory	Exploratory	Propositions, Literature review/ essay	Relation	Trust	Theoretical development	Proposes a theory of trust in organizational settings	Search for different types of trust, calculate trust	"We develop four propositions as a foundation for future research in this emerging area. The propositions provide a new perspective on the age-old topic of trust: 'Trust is not a...'" p.236

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101	Khalil, O S & Wang,	2002	Information technology enabled management for virtual organizations	International journal of production economics	Network theory, Strategic Management theory, Communication theory	Descriptive	Brief case	Relation	Communication, Relations/ link-ages/ ties	Theoretical development	This paper shed light on virtual organizations role as enhancing motivating organizations goal - congruence.	There is a growing need of research regarding IT & meta management to virtual knowledge systems and virtual organizations	"This paper elaborates on meta-management responsibilities, and discusses the role and challenges of support of virtual organizations." p128
102	Klein, M.M	1994	The virtue of being a virtual corporation	Best review - Life Health Insurance Edition	Network theory, Strategic Management theory	Descriptive	Brief case	Firm/ organization	Context, environment, Knowledge/ competence/ learning	New practical results	Reengineering helps traditional companies becoming more virtual in terms of faster service, increased efficiency, utilize technology, specialize and become more flexible in responding to change	"...virtual corporation has been reengineering corporation, it has greater customer focus and responsiveness, as well as reduced cycle times for new product introduction and order fulfillment processes." p. 89	
103	Kogut, B	2000	The network as knowledge: Generative rules and emergence of structure	Strategic management Journal	Network theory	Descriptive	Case studies	Network	Strategic issues	Theoretical development	A case study of Toyota production system	" networks as arising out of generative rules that guide the formation of relationships and code for principles of coordination." p.406	
104	Koon Hwat Low, B	1997	Managing business relationships and positions in industrial networks	Industrial marketing management	Network theory	Descriptive	Case studies	Network	Opportunism, Power, Strategic issues	Theoretical development	Extends understanding of given network positions and their relationships as strong and direct ties.	"...by maintaining and investing a number of strong long-term business relationships with its partners; the firm must also develop new positions." "...these positions do not exist because of business relationships are based on business personal relations that exist among network members." p. 190	

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105	Kumar, K & Van Dissel, H.G	1996	Sustainable collaboration: Managing conflict and cooperation in interorganizational systems	Management information systems (MIS)	Transaction cost theory, Resource dependence theory, Evolution theory, Exchange theory, System theory,	Descriptive, Explanatory	Literature review/ essay	Relation	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Conceptualizing interorganizational systems and describes clearly different motives of joining an alliance.	"...developing a typology for characterizing interorganizational systems (IOS) based on the dimension of interorganization interdependency in interfirm relationships..." p279
106	Kumar, N & Verin, L.W	1993	Conducting interorganizational research, using key informants	Academy of management journal	Network theory	Descriptive	Survey	Relation	Knowledge/ competence/ learning	Methodical development, new empirical results	Using informant approach and scrutinize interorganizational relationships.	In this article we describe the key informant methodology by researchers investigating interorganizational relationship." p 1633
107	Kurland, N.B & Egen, T.D	1999	Telecommunicating: Justice and control in the virtual organization	organizational science	Strategic Management theory	Exploratory	Survey, Hypothesis	Group	Communication	New practical results	This paper perform a description of the formalization role and test if formal staff has a supporting influence than personnel and informal communication	"This exploratory study began empirical inquiry into the relationship between and among telecommuting, managerial control..." p 511
108	Lamming; F., Finn- sen, T., Zheng, J & Harland, C.	2000	An initial classification of supply network work	International Journal of operations and production management	Network theory	Exploratory	Survey, Case studies	Network	Coordination, Factory/ Manufacturing as- pects, Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Types/ Design	Theoretical development, New practical results	Classification of different types of supply networks	"The survey indicated that firms have unique networks of products generally exchanged less information and knowledge of a strategic nature and with fewer but close partners." p 688
109	Larsen, K.P.T., McInerley, C.R	2002	Preparing to work in the virtual organization	Information and Management	Network theory	Descriptive	Survey	Group	Knowledge/ competence/ learning	Theoretical development	Teams and different types of networks	"The purpose of this paper is to describe methods and practices used in a cooperative effort to teach graduate students..." p 446
110	Lawrence; T.B., Hardy, C & Phillips, N.	2000	Institutional effects of interorganizational collaboration: The emergence of proto-institutions	Academy of management journal	Network theory, Institutional theory	Exploratory	Case studies	Relation	Autonomy/ independence	Theoretical development	Small institutional organizations changing through institutional entrepreneurship	"In this study we explored the institutional effects of collaboration..." p 281

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111	Lee, C.J	1995	The industrial network of small and medium sized enterprises	Journal industry studies	Network theory	Descriptive	Case studies	Network	Context, environment		This paper study examines SME networks and describes different industrial network cores	"This paper will analyze the competitive stages of these industrial networks." p.75
112	Levine, S & White, P.E	1961	Exchange as conceptual framework for the study of inter-organizational relationships	Administrative science quarterly	Exchange theory	Descriptive	Case studies	Relation	Relations/ ties	Theoretical development	This paper discuss the nature of the exchange concept	"The agreement upon a prior agreement, which may be implicit and informal, and fairly explicit and highly formalized." p 600
113	Lin, F-R., Lin S-C	2001	A conceptual model for virtual organizational learning	Journal of computing and electronic commerce	Resource dependence/ based theory, Network theory	Exploratory	Case studies, Literature review/ essay	Relation	Antecedent/ knowledge/ learning/ Relations/ linkages/ ties	Theoretical development	A conceptual model for virtual organizational learning is offered in this paper.	"We propose a model for virtual organization learning and describe that transitive memory systems are especially in a cyber community." p 173
114	Loebbecke, C & Jerald, T	1997	Concept and terminology for the virtual organization: The gerling journey	European management journal	Network theory	Descriptive	Case studies	Network	Boundary	New practical results	Implementing technique and virtuous helping in their adoption process and reducing risk	"This case study illustrates..." p 138
115	Lorenzoni, G & Baden-Fuller, C	1995	Creating a strategic center to manage a web of partners	California Management review	Network theory	Descriptive	Case studies, Longitudinal, Literature review/ essay	Network	Broker/ project manager/ Brokerage, Efficiency/ Performance/ Partner selection, Strategic issues	Theoretical development	Extends the broker concept and calls it strategic center	"In this article, we examine three dimensions of strategic center: as a creator of value for its partners; as leader, rule setter and creator; as builder and; as simultaneously structuring and strategizing." p 147

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116	Lynne, M.M., Marville, B & Agres, C.E	2000	What makes a virtual organization work	Sloan management review	Network theory	Descriptive	Case studies	Network	Governance	New practical results	How motivate and govern sustainable development of open source products such as Linux	"What motivates people to participate in open-source projects... explore some of the factors that shape this important decision by studying the relationships of integration..." p.263
117	MacMillan, I. C., Hambrick, D. Penings, J. M.	1986	Uncertainty reduction and the threat of supplier retaliation: two backward integration decision	Organization Studies	Strategic Management theory	Exploratory	Survey	Relation	Flows/ Workflows	New practical results	Concluding remarks present implications for vertical integration	"Supply chain is about buying right things and shortening cycles." p 106
118	Magretta, J	1998	Fast, Global, and entrepreneurial: management, Hong Kong style	Harvard business review	Network theory	Exploratory	Case studies	Firm/ organization, Network	Antecedent/ origin, flows/ Strategic issues	New practical results	This paper is an example of a case study of a large export trading company	"what does your company need to do to survive and prosper in a period of transition." p.103
119	Malone, M & Davenport, W	1992	Virtual corporation	Industrial management	Strategic Management theory	Explanatory	Briefcase	Firm/ organization	Knowledge/ experience/ learning/ Strategic issues	New practical results	This paper is build on virtual organization	"Agility means knowledge and a virtual organization to exploit profitable opportunities in a volatile marketplace." p 61
120	Mason-Jones, R & Towill, D.R	1999	Total cycle time compression and the agile supply chain: the effect of relationships on interorganizational commitments in conducting business in Australia and China	International journal of production economics	Strategic Management theory	Descriptive	Experiment	Firm/ organization, Network	Flows/ Workflows	New practical results	Practical implications while implementing agile	
121	Mavondo, F.T. & Rodrigo, E.M	2001		Journal of business research	Network theory	Descriptive and Explanatory	Survey, Hypothesis, literature review/ essay	Relation	Relations/ ties linkages/ Structure/ Form/ Characteristics/ Pattern/ Composition/ Types/ Design	Theoretical development	Interpersonal commitments are antecedents to organizational commitment	"empirically tests a conceptual model of relationships..." p.111
122	Miles, R.E & Snow, C.C (3)	1995	The Network firm	Organizational dynamics	Network theory	Descriptive	Case studies	Relation, Group, Firm/ organization		New practical results	Building the spherical network - common barriers.	"In this article we describe the concept of a spherically structured firm" p 5

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123	Miles, R.E & Snow, C.C.(1)	1992	Causes of failure in NW organizations	California management review	Network theory, Policy theory, Primary theory	Descriptive	Briefcase	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Typology/ Types/ Design	Theoretical development	This paper examines typology and evolution of different network work	"The stable network - has its roots in the structure and organization of the functional organization. It is designed to serve a mostly predictable market by linking independently owned specialized assets along a given product or service chain." p.63
124	Miles, R.E & Snow, C.C.(2)	1986	Organizations: New concepts for new forums	California management review	Strategic Management theory	Exploratory	Briefcase	Network	Strategic issues	Theoretical development	Gives a critical discussion to what forms a dynamic network work	"A new organizational form - a unique combination of strategy, structure, and management processes that we refer to as the dynamic network. The new form is both a competitive result of today's environment." p.62
125	Miller, K & Scott, C.R	1995	Principles for organizing the political economy of Network structure	Journal of public administration research and theory	Network theory, Grounded theory	Descriptive	Case studies	Network	Relations/ linkages/ ties	New empirical results	Findings of this paper is rooted in grounded theory approach on IOR	"Presents a grounded theory of coordination and communication." p.679
126	Milward, B.H & Provan, K.G	1998	Business relationships and managerial challenge of network era	Industrial marketing management	Network theory, Evolution theory	Explanatory	Survey	Relation	Effectiveness/ Performance/ outcome	New empirical results	This paper offers empirical results that gives a better theoretical understanding	"The finding that monopoly was the alternative to multiple organizational forms was not a popular conclusion, although the conclusion that the only one study, which limits generalizability." p.218
127	Müller, K.K & Halinen, A	1999	Business relationships and managerial challenge of network era	Industrial marketing management	Network theory, Strategic management theory	Descriptive	Literature review/ essay	Network	Autonomy/ Independence, Strategic issues	Theoretical development	This paper gives an extensive theoretical discussion to what forms a managerial point of view	"We propose a network management framework that is used for discussing the current managerial implications of the evolution of the industrial network theory..." p.413

Nr	Author (s)	Year	Name of article	Name of journal	Theoretical view	Approach	Method	Unit of analysis	Focus / content discussed in the article	Contribution to research	Concluding remarks	Proposal for further research	Quotation
128	Molnar, J.J & Rogers, D.L	1979	A comparable model of inter-organizational conflict	Administrative science quarterly	Evolution theory	Explanatory	Survey	Relation	Conflict/ friction/ tension/	Methodical development	This paper model inter-firm conflicts		"This study differed from many others because it focused on comparative properties of organizational structures. The properties of the organizations individually." p 420
129	Murto-Koivisto, E., Routamaa, V & Vesalainen, J	1996	The prerequisites for different types of successful interfirm cooperation in the SME sector	Journal of business ethics	Network theory	Descriptive	Case studies, Observations, Individual	Network	Nature/ Form/ Structure/ Characteristics/ Patterns/ Configuration/ Types/ Design	Theoretical development. New theoretical results	This paper clearly describe typologies of different SME inter-firm networks	Propose studies regarding standardized appropriate ethics that respond to globalization and its forces.	"...based on a longitudinal research project, stresses the importance of distinguishing between various types of SME inter-firm cooperation." p 109
130	Muskin, J.B	2000	Interorganizational ethics: Standards of behavior	Journal of business ethics	Strategic Management theory	Descriptive	Case studies, Literature review/ essay	Relation	Ethics	Theoretical development	In this study one receive framework that give the elements in Japanese culture		"Trust, in turn, is the complex of business behaviors that organizations mutually rely upon as a basis for committing to, entering, and sustaining a relationship." p.283
131	Nassimbeni, G	1998	Network structures and coordination mechanism	International Journal of Production & management	Transaction cost theory	Descriptive	Literature review/ essay	Relation	Nature/ Form/ Structure/ Characteristics/ Patterns/ Composition/ Types/ Design	Theoretical development	Framework for the classification of Networks structures		intends to: point out a few basic typologies within the variety of network structures present in the literature; analyze the main interdependency forms and coordination mechanisms operating on them." p.539
132	Naylor, B.J., Naim, M.M., & Berry, D	1999	Legality: Integrating paradigms in the total supply chain	International journal of production economics	Network theory	Exploratory	Case studies, Comparable analysis (case)	Network	Flows/ Workflows	New practical results	Comparison of two different paradigms, agile and lean		"Leanness means developing a value stream to eliminate waste, including time, and to ensure a level schedule." p 108

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133	Nooteboom, B	1999	Innovation and interfirm-implications for new policies	Research policy	Resource based theory	Explanatory	Literature review/essay	Firm/organization/Network	Motives/ drivers/ reasons/ causes	New practical results	This paper contributes with new findings on governance based on trust.	"Horizontal co-operation, between firms with similar products in the same markets, raises suspicions of collusion, but here also the central issue is whether horizontal alliances limit entry of new firms, productivity, technologies, p. 794
134	O'Donnell, A.; Cummins, D.; Carson, D	2001	The network construct in entrepreneurship research: A review and critique	Management decision	Network change theory	Descriptive	Briefcase	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Composition/ Types/ Design, Relations/ Linkages/ ties	Theoretical development	This paper follows different nature of different networks	"This paper begins by addressing the issue of the analysis in an entrepreneurial context." p.749
135	Oliver, C.	1991	Network relations and loss of organizational autonomy	Human relations	Resource dependence based theory	Descriptive	Survey	Firm/organization	Interdependence/dependence	Theoretical development	An interesting question is addressed in this paper, viz. how does it play in a network?	"This study is among the first to examine the organizational autonomy in inter-organizational relations and to compare multiple types of relations as a basis for predicting the establishment of interfirm relations." p. 959
136	Olkonen, R.; Tikkanen, H & Alajoutsijärvi, K	2000	The role of communication in business relationships and networks	Management decisions	Network theory	Descriptive	Literature review/essay	Relation	Relations/ link-ages/ ties	Theoretical development	This paper is conceptual framework which increase the understanding of communication processes in both dyadic interfirm networks.	"a conceptual framework on the role of communication in business relationships and networks is proposed." p. 403
137	Osborn, R & Hagedoorn	1997	The institutionalization and evolutionary dynamics of interorganizational alliances and network	Academy of management Journal	Transaction cost theory	Explanatory	Briefcase	Relation	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Types/ Design	Theoretical development	This paper offer a review of different alliances	"...mix of theoretical perspectives and methodologies to understand the formations, evolution, and outcomes of organizational alliances and networks." p. 261

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138	Oxley, J.E	1998	Institutional environment and the mechanism of the impact of intellectual property protection on the structure of inter-firm alliances	Journal of economic behavior & Organization	Transaction cost theory/ Institutional theory	Descriptive	Survey, Hypothesis	Relation	Governance	New empirical results	Testing TCT in order to examine the costs of governance. What is risk and cost reduction? How can independent firms can improve competitive advantages and minimize transaction costs and maintain flexibility. Also implications of how to understand inter-firm relations within various networks	More explorative, more research on environmental attributes for transaction costs are if you look at the number of firms involved in the network	"...governance alliances is described..." p 285
139	Park, S.H	1996	Managing an interorganizational Network	Organizational studies	Transaction cost theory	Exploratory	Case studies, comparable (case) analysis	Relation	Cooperation/ Collaboration	New empirical results			"...considering risk and cost implications working with others." p.795 "Describes a model demonstrating that inter-firm cooperation is best fostered by repeated contact, low discount rates and the clustering of cooperating firms." p. 63
140	Parkin, R.J	1999	Cooperative inter-firm relations: A game theoretic approach and application to furniture research	Kyklos	Game theory	Descriptive, Explanatory	Case studies		Relations/ links, Trust	Theoretical development	Hypothesize that interfirm cooperation and exchange is maintained by the relationship.		

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141	Pfeffer, J. & Nowak, P.	1976	Joint ventures and interorganizational interdependence	Administrative Science Quarterly	Transaction cost theory, Resource dependence theory, network exchange theory	Exploratory	Survey, hypothesis	Relation, network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	This paper explores risky behavior in Empirical studies that visualize those who enjoyed many joint ventures tend to be more risk willing, than those who are affiliated organizations venturing for the first time.	"In analyzing linkages among several organizations, several linkages could be analyzed: (1) the number of linkages a given organization has with its environment; (2) the intensity, formalization, standardization, duration, and nature of the linkages characterizing the relationship between two organizations; and (3) the presence of a pattern of linkages among organizations and the pattern of that linkage." p.399
142	Phillips, A.	1960	A theory of organization	Quarterly Journal of Economics	Organizational theory	Descriptive	Literature/ review/ essay	Relation, network	Decision making Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Contribution of this paper is that decision making should benefit from a decision interest.	"A combination of organization theory and the theory of small groups suggest four generalizations concerning structures of complex oligopolistic markets and the efficiency of interfirm decisions." p.607
143	Pihkala, T., E. Rajamäki, & J. Vesiläinen	1999	Virtual organization and SME: a review and model development	Entrepreneurship and regional development	Resource dependence/ Resource dependence/ Network theory	Exploratory, Explanatory	Case studies	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	SME and virtual entrepreneur organization	"...review of the literature on networking and resources, which result in the development of a framework for the analysis of the varying conditions and characteristics of the four SME's..." p.335
144	Poon, T.S-C.	1998	Inter-firm networks and industrial development in the global manufacturing system: Lesson from Taiwan	The economic and global labor relations review	Network theory	Exploratory, Descriptive, Explanatory	Case studies	Network	Context, environment, Creation/ Evolution/ Emergence/ life cycles, Prerequisites/ conditions	Theoretical development	Roles of the state and private sector in creating interfirm networks	"...horizontal cooperative production network in which firms cooperate with one another on a complimentary basis to obtain, produce, and distribute social components or perform specific kinds of processing services..." p.264

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145	Porter, A.M	2000	The virtual corporation: Where is it?	Purchasing	Network theory	Descriptive	Survey	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Central topic is outsourcing		"...survey of 1400 of the nation's largest companies finds no widespread trend toward outsourcing of manufacturing activities." p. 40
146	Powell, W.W	1990	Neither market nor hierarchy	Research in Organizational Behavior	Network theory	Explanatory	Comparable (case) analysis	Relation	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Discuss whether reputation and management fields and examples of a wide range of organizational arrangements that can be characterized as networked. p. 295		"I call the literature in a number of social science and management fields and examples of a wide range of organizational arrangements that can be characterized as networked." p. 295
147	Powell, S & Gallegos, F	1998	Securing virtual corporations	Interfirm strategy: Strategic executive journal	Network System theory	Exploratory	Brief case	Network	Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Findings regard to strategic and goals in virtual organizations		"The term virtual corporation refers to what many analysts believe is the successful 21st century competitor." p. 34
148	Premaratne, S.P	2001	Network resources and small business growth: The experience in Sri Lanka	Journal of small business management	Network theory	Exploratory	Survey, Hypothesis	Relation	Relations/ linkages/ Types	Theoretical development	Searching for opportunity costs of networks and advantages of it.		"The success of small business networks depends on informal personal networks" p. 363
149	Provan, K.G & Millward, B.H (1)	1995	A preliminary theory of interorganizational network effectiveness	Administrative science quarterly	Transaction cost theory, Network theory	Exploratory	Case studies, Comparable analysis, Literature review/ essay	Group	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Methodical development	Provide understanding of networked and its effectiveness. This paper also argue that success of SMEs is dependent on a personal network.	Recommends longitudinal studies emphasize the importance of using the suited methods	"This study uses what Yin (1984) has referred as the survey approach, in which multiple levels of analysis (individual, agency, and network) are used to develop an in-depth picture of a single case." p. 35

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150	Provan, K.G & Sebastian, J.G (2)	1998	Network within Networks	Academy of management journal	Transaction cost theory, Network theory	Exploratory, Descriptive, Explanatory	Survey	Individual Group	Nature/Form/Structure/Characteristics/ Patterns/ Configuration/ Composition/ Types/ Design	Theoretical development	Suggest different sources to network performance		"This study examines the use of cliques analysis for explaining network effectiveness." p 104
151	Provan, K.G (1)	1983	The federation as an inter-organizational linkage network	Academy of management review	Network theory	Descriptive, Explanatory	Hypothesis, Compare (case) analysis	Network	Nature/Form/Structure/Characteristics/ Patterns/ Configuration/ Composition/ Types/ Design	Theoretical development	Typology of different network characteristics	To test these hypotheses empirically	"This paper examines the federation as a unique type of interorganizational linkage network. First, it discusses the nature of the relationship between organizations and how they may form or affiliate with a federation. Then, it describes the various types of federations that exist." p 444
152	Provan, K.G (2)	1982	Interorganizational linkages and influence over decision and making	Academy of management journal	Resource dependence, Resource based theory, Network theory	Explanatory, Descriptive	Survey, Hypothesis	Relation	Interdependence/dependence	Theoretical development	Empirical relationship between different nodes	How and in what ways nodes modify their resource dependence	"Because resources are critical to survival of health services organizations but for defining what they do, how they do it, the acquisition, utilization, and general availability of resources seem to be key factors for explaining why some agencies are more successful than others..." p 104
153	Provan, K.G & Sebastian, J.G (1)	1996	Interorganizational cooperation in community health care: source based experience	Medical care research & review	Network theory	Explanatory	Survey, Hypothesis, Comparative (case) analysis	Group	Relations/linkages/ties	New practical results	Discuss how resource allocation in nonprofit system	Collaboration in network works & highly important in understanding future firm	
154	Pyatt, R.T	1996	Chinese business networks and entrepreneurial clans in Thailand	Asia Pacific Business review	Network theory	Explanatory	Survey	Network	Opportunism, Trust	Theoretical development			"The cousin of power and influence is trust." p 5

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155	Pyatt, R.T. & Trimarchi, M.	1998	Inter-organizational networks: intra-Asia business: A four-country study	Asia Pacific business review	Network theory	Explanatory	Survey	Relation	Relations/ linkages/ ties	Theoretical development	How customer aspects in terms of their demand can be expected or fulfilled through interaction.		"strategies on both commercial and technical aspects, as well as factors which help to establish relationships; factors as emphasized in the interactions approach." p.48
156	Rae, L.	1998	Knowledge sharing and the virtual organization: the first century challenges	Thunderbird international review	Organizational theory	Exploratory	Case studies	Network	Knowledge/ competence/ learning	New practical results	Organizational development through knowledge sharing		"organizations do not need more technology and technology networks of pioneering entrepreneurs. It was found that pioneering entrepreneurs employed personal networks in working to a larger extent to obtain critical resources." p.521
157	Ramahandran, K. & Ramnarayan, S.	1993	Entrepreneurial orientation and networking: Indian evidence	Journal of business venturing	Resource dependence/ Resource based theory, Network theory	Descriptive	Survey, Case studies, Propositions	Relation	Broker/ project manager/ broker, environment, growth, interdependence	New empirical results	Entrepreneur as broker and society development with an agent network maker	Propose increased entrepreneurial development areas with an agent network thinking	"The buyer incurs the setup cost for several similarly suppliers to reduce trading costs and competitiveness opportunities supplier behavior." p.348-349
158	Richardson, J.	1993	Parallel sourcing strategies and performance in the Japanese automobile industry	Strategic management journal	Strategic Management theory	Descriptive	Comparable (case) analysis	Network	Relations/ linkages/ ties	Theoretical development, New empirical results	Long term relationships and problems with supplier performance		"Three promising alternatives of self-organizing networks are proposed: recursively, redundancy, and self-consciousness." p.19
159	Richter, F.-J.	1994	The emergence of corporate alliance network-conversion to self-organization	Human systems management	Network theory	Descriptive	History review, Literature review/ essay	Network	Nature/ Form/ structure/ functions/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Conceptualizing alliance networks	Suggest studies about inherent power relations.	

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160	Riggins, F.-J.	1994	Interdependent benefits from interorganizational systems: Opportunities for business partner reengineering	Journal of management information systems	Network theory	Descriptive	Survey, Hypothesis	Relation	Relations/ Issues/ Nature/Form/ Structure/ Characteristic/ Pattern/ Configuration/ Composition/ Design, Trust	New empirical results	This paper discuss business partner reengineering interfirm systems	Game theory modeling risk in affiliation with other external sources.	"...game theoretic modeling should be considered to arrive at efficient mechanisms to distribute the surplus generated from inter-organizational systems." p.55
161	Ring, P.S & Van de Ven, A.H	1994	Development processes of cooperative interorganizational relationships	Academy management review	Network theory	Explanatory	Observation Longitudinal	Individual	Trust/ Family/ Structure/ Characteristics/ Pattern/ Configuration/ Design	New empirical results	Take a qualitative look at the nature of IOR, trust and what is generating growth in network organizations	Study develop mental processes of trust	"...a conceptual framework for cooperative interfirm relations emerge, grow, and dissolve over time." p.91
162	Ritter, T	1999	The networking company: Antecedents for cooperation and networks works effectively	Industrial marketing management	Network theory	Descriptive	Survey	Relation	Coordination	New practical results	Manager implications and relations in networks	Suggest hypothesis relationships	"Corporate culture is probably the most difficult precondition to improve because it can be done only by running it at all." p.478
163	Ross, A., Venkatasubramanian, M.A & Ernstberger, K.W	1998	Reconfiguration the supply network using current data	Decision sciences	Network theory, Strategic Management theory	Exploratory	Case studies, Literature review/ essay	Network		Methodical development	Method development	Extend the proposed model to mathematical distribution	"This paper presents a methodology for reconfiguring existing supply chain network." p.707
164	Ross, A.D	1998	A two-phased approach to supply network reconfiguration problem	European journal of operational research	Strategic Management theory	Descriptive	Case studies	Network	Flows/ Workflows	Theoretical development	This paper contribute with strategic planning and simulations		"The computational design of this study systematically varies the problem parameters and parameters and varies specific simulated annealing control parameters." p19
165	Ross, A. D.	2000	Performance-based strategic resource allocation in supply networks	International journal of production economics	Strategic Management theory	Exploratory	Simulation method	Network	Strategic issues	Methodical development	Exploring the distribution for force maximization through heuristic testing of both planning and structural model		"We address the strategic nature of defining service areas and allocating resources to them." p.256

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166	Rothaermel, F.T	2001	Virtual inter-net communities and commercial success: individual and community-level theory provided in the typical case of time-zone.com	Journal of management	Network theory	Descriptive	Proposition, literature review/essay/Case	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Types/ Design	Theoretical development	Internet activities are innovative organization forms	Interesting firm or industry possibility proposed model.	"This paper attempts to develop theory at two levels..." "The theory presented here is intended as a case study..." p.299
167	Rowley, T., Behrens, D. & Behrenhardt, D	2000	Redundant space structures	Strategic management journal	Network theory	Descriptive	Survey, Case studies	Relation	Boundary, linkages/ ties, Trust	Theoretical development	Strong and weak ties and how they are performance		"Firms enter strategic alliances with competitors to gain access to external resources, share risks and cost, or pool complementary competences..." p.371
168	Schopler, J.H	1987	Interorganizational Origins Structures, and outcomes	Academy of management review	Exchange theory, Small group theory	Exploratory	Literature review/essay	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Types/ Design	Theoretical development	Generating hypothesis model dealing with interfirm groups		"Interorganizational groups are composed of members, representing organizations and community constituencies, who meet periodically to make decisions relevant to their common concerns, and whose behavior is regulated by a common set of expectations..." p.703
169	Sengupta, S	1995	Some antecedents of exclusivity in bilateral inter-organizational relationships	Marketing letters	Transaction cost theory, Network theory, Organizational theory	Explanatory	Survey	Relation, Firm-organization	Relations/ linkages/ ties Nature/ Form/ Structure/ Characteristics/ Configuration/ Types/ Design		This paper is tailored to importance of interfirm networks.		"We test relationships between excludent antecedent variables from transaction-cost analysis, resource dependence theory, and organization theory..." p.33
170	Shao, Y.P., Liao, S.Y & Wang, G	1997	A model of virtual organizations	Journal of information science	Network theory	Explanatory	Case studies	Relation	Relations/ linkages/ ties Nature/ Form/ Structure/ Characteristics/ Configuration/ Types/ Design	Theoretical development	More research is demanded to understand the impact of new technology.		"Four key characteristic variables of virtual organization are discussed in this paper..." p.311

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171	Schemerhorn, J.R. & Shirland, L.E	1981	Hospital administrator left needs for inter-organization and actual cooperative outcomes by their hospitals.	Decisions sciences	Network theory, Political economy theory, Exchange theory	Exploratory, Explanatory	Survey, Hypothesis	actor/ organization	Relations/ linkages/ ties	Theoretical development	Organizations protect certain resources and study authors suggest that organizations should rather exchange bases with other firms	Exploring decision making in inter-organizational cooperation	"This paper present analysis of data gathered at both the individual and organizational levels of analysis in order to gain further insights into the dynamics of inter-organizational cooperation..." p.487
172	Snow, C., Miles, R.E	1992	Managing 21:st century network organizations	Organizational dynamics	Network theory	Descriptive	Archival analysis, Literature review/ essay, Briefcase		Broker/ project manager/ Management aspects, Nature/ Form/ Structure/ Characteristics, Configuration/ Composition/ Types/ Design, Strategic issues	Theoretical development, New practical results	This paper discuss the role of inter-firm ties with the opportunities in a global competition		"For these smaller, more adaptive companies, the global economy contains not only an increasing number of competitors but also candidates for outsourcing and partnering relationships." p.8
173	Sotto, R	1997	The virtual organization	Accounting management & information technology	Strategic Management theory	Exploratory	Literature review/ essay, Briefcase	Net-work	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Discuss on axioms the ontological status of information technology in organizations		"...point out certain basic ontological dimensions of information technology of relevance to organizational action..." p.38
174	Speier, C., Harvey, M.G & Palmer, J	1998	Virtual management of global marketing relationships	Journal of world business	Transaction cost theory	Descriptive	Case studies	Relation	growth, Risk/ pitfall	Theoretical development	Contribute with numerous typologies...		"...briefly describe virtual organizations that can be used in a marketing context..." p.264

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175	Staples, D.S., Hulland, J.S. & Higgins, C.A	2000	A self-efficacy theory explanation for the management of remote workers in virtual organizations	Organizational science	Strategic Management theory, Self-efficacy theory	Explanatory	Hypothesis	Network	Management aspects	New practical results	This paper discusses different roles of managers about their listening skills as the most critical personal quality.	"...self-efficacy beliefs form a central role in the regulatory process of an individual's motivation and performance are governed. Self-efficacy beliefs determine how much effort people will spend on a task and how long they will persist with it. Strong self-efficacy beliefs exert greater efforts to master a challenge while those with weak self-beliefs are likely to reduce their efforts or even quit." p 759
176	Stern, R.N	1979	The development of organizational control networks: The case of intercollegiate athletics	Administrative science quarterly	Network theory	Explanatory	History review	Network	Relations/ linkages/ ties	Theoretical development	This paper argue network analysis do not fully explain the structures. Stern argues several contextual factors all important to understand the structure. Hence is complemented with a method needed to fully understand the setting of inter-firm structures!	"Network analysis must consider the interorganizational activity which occurs. Beyond the measurable determinants of structure, several contextual factors all important to understand the structure. Hence is complemented with a method needed to fully understand the setting of inter-firm structures!" p 265
177	Strader, J.S., Lin, F.R. & Shaw, M.J	1994	Information infrastructure for electronic virtual organization	Decisions support systems	Network theory	Exploratory	Comparable (case) analysis/ simulations	Group	Communication	New practical results	This paper proposes that more accurate information systems may utilize the collaboration between virtual (SCN) supported increase resource allocation.	"For our study we simulate the operation of traditional supply chain networks (SCN) and compare it with their performance in a more virtual (SCN) supported by a improved information structure."

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178	Sydow, J & Wideler, A.	1998	Organizing and evaluating inter-firm networks: A structuralist perspective on Network processes and effectiveness	Organizational science	Social theory	Descriptive	Literature review/essay	Relation	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design	Theoretical development	Briefing the theory of structures and studying the interfirm network		"...interfirm network is conceived as an institution that arranges relationships among distinct but related for-profit organizations which is characterized a specialized kind of network relationship, a certain degree of reflexivity, and a logic of exchange that operates differently from that of markets and hierarchies." p.266
179	Symon, G.(1)	2000	Information and communication technologies and the network economy: A critical analysis	Journal of occupational and organizational psychology	Labor process theory	Descriptive	Literature review/essay	Firm/organization	Information exchange/ Infrastructure, Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Composition/ Types/ Design		Discuss the growing need of conceptualizing and questioning if network really is a new form. Raising critique network concept.		"...ICT can actually bring these changes about and to what they can support the new structures and new way of working requested." p.334
180	Talluri, S., Baker, R. C. & Sarkis, J.	1999	A framework for client value-chain networks	International journal of production resources	Network theory	Descriptive	Survey	Network	Context, environmental flows/ Workflows	Theoretical development	Value-chain networks can enhance the ability to respond to customer expectations in a satisfying way	Suggest research that takes departure from broker perspective used in this process a theoretical perspective.	"A stable network organization engages in a moderate level of outsourcing. Usually, in this type of network, a set of vendors supply the lead firm. Dynamic networks are formed by a group of client companies." p.134
181	Talmud, I & Mesch, G.S.	1997	Market embeddedness and corporate instability: The evolution of industrial networks	Social science research	Resource dependence/ Resource based theory, Network change theory	Descriptive	Survey, Archival analysis	Relation	Relations/ linkages/ ties	Theoretical development	This paper discuss strong and Israeli companies.	There is a growing need for research that assess the length of ties to political capital and its structural influence for performance.	"The first part of this paper presents the research problem, using models of social capital and structural exchange." p.419

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182	Tseng, C.H., Yu, C., M.J. & Seetoo, D.H.W	2002	The relationship between types of network organizations and adoption of management mechanism: An empirical study of knowledge transactions of MNC's subsidiaries in Taiwan	International business review	Network theory, Evolution Network theory	Descriptive	Survey, Hypothesis, Literature review/ essay	Relation	Knowledge/ competence/ learning	Theoretical development	This paper discusses knowledge transactions and processes to change in management in multinational corporations		"Considering the knowledge transactions between headquarters, subsidiaries, and MNCs, this article is classified into three types of network organization in this research." p 212
183	Tsuchiya, T & Tsuchiya, S	1999	Policy exercise: An essential enabler of virtual corporation	International journal of production economics	Evolution theory, Organizational theory	Exploratory	Literature review/ essay	Firm/ organization	Knowledge/ competence/ learning	Methodical development	This paper contributes with new methods of learning		"In virtual corporation, companies share costs, skills and talents to global markets, with each partner contributing what it's best at." p 221
184	Tyler, K., McGirr, D & Stanley, E	1998	Conceptualizing Technology, relationship, time, and financial services virtual organization	The service industries journal	Marketing theory	Explanatory	Case studies	Firm/ organization	Strategic issues	Theoretical development	Empowering employees created the total effectiveness.		"The aim of this research was therefore to analyze the impact of technology in a financial services network." p 71
185	Usdiken, B	1983	Interorganization linkages among similar organizations in Turkey	Organization studies	Network theory, Organizational theory, Evolution theory	Exploratory	Survey	Relation	Relations/ linkages/ ties	Theoretical development	Small and infant organizations gain strategic power in order to compete with other organizations." p 161		"Results have shown that cooperation can and does develop between a number of competing organizations." p 161
186	Van der Aalst, W	1998	Loosely coupled interorganizational workflows: modeling and analysis work-flows crossing organizational boundaries	Information and management	Network theory	Descriptive	Hypothesis	Network	Boundary, Flows/ Workflows	New empirical results	Modeling and analyzing work-flows.		"Interorganizational workflow offers companies an opportunity to reshape business processes beyond the boundaries of their own organizations." p 67-75
187	Van der Meer-Kooistra, A. & Vriesman, E.G.J.	2000	Interfirm transactional relationships: The case of industrial relations and main-tained	Accounting, Organizations and society	Network theory	Descriptive, Explanatory	Case studies	Relation	Opportunism, Trust/ Nature/ Form/ Structure/ Interaction/ Partner/ Configuration/ Composition/ Types/ Design	Theoretical development	New forms of outsourcing add mutual dependence and closer relations		"The new form of outsourcing makes for a closer relation between out-sourcer and contractor, so that dependence increases." p 74
188	Van de Ven, A.H	1976	On the nature, formation and maintained of relations among organizations	Academy of management review	Organizational theory	Exploratory	Hypothesis	Firm/ organization	Design	New empirical results	Framework to differentiate resource dependence change systems		"This article attempts to answer these questions for practical and theoretical reasons." p 24

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189	Van de Ven, A.H & Walker, G	1984	The dynamics of inter-organizational coordination	Administrative science quarterly	Network theory, Organizational theory	Explanatory	Survey, Longitudinal Hypothesis	Relation	Communication, Relations/ linkages/ ties	Theoretical development	Discuss the role of resources in communication processes		"...examines patterns of coordination of organizations..." p. 19
190	Van de Ven, A.H., Walker, G & Liston, J	1979	Coordination patterns within organizational network work	Human relations	Organizational theory	Exploratory	Survey	Group	Relations/ linkages/ ties	New empirical results	Discuss different motives on why communication should be tested with one another in interfirm networks (i.e. Resources, transactions, services, planning and coordination	Propose that these results should be tested with hypotheses to gain new theoretical results	The longitudinal research reported here... p.598
191	Venkateshram, N & Henderson, J.C	1998	Real strategy for virtual organization	Sloan management review	Network theory	Exploratory	Briefcase	Firm/ organization	Culture, Strategic issues	New practical results	Practical implications for action to new businesses		"...study to conceptualize the architecture of organizing." p. 33
192	Vopentesta, A., Iregui, J. & Zupappa, M	2001	Models and methodology for simulating virtual enterprising in educational environment	European journal engineering education	Network theory	Descriptive, Explanatory	Experiment	Network	Information technology/ infrastructure	Methodical development	Simulating virtual enterprising on the web by using experiments in an internet world		"Our work aims to contribute to creating a paradigm shift in educational engineering, providing innovative teaching methods which are relevant to modern engineering." p.392
193	Voss, H	1998	Virtual organization	Strategy & leadership	Network theory	Descriptive	Briefcase	Network	Nature/ Form/ Structure/ Characteristics/ Patterns/ Configuration/ Composition/ Types/ Design	New practical results	Characteristics of network and virtual organizations		"...foundations for building in-depth research. In small Companies, networks, as accompanying scenarios." p. 12
194	Walters, D & Buchanan	2001	The new economy, new opportunities and new structures	Management decision	Network theory	Descriptive	Briefcase	Network	Motives/ drivers/ reasons/ causes	Theoretical development	Structure and forces in the new economy		"Successful virtual enterprises are those that are planned. Companies in successful laboratories have clear plans concerning the type and extend of their involvement." p. 831

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195	Weisenfeld, U., Fisser, O., Pearson, A & Brockhoff, K	2001	Managing technology as a virtual enterprise	R & D management	Resource dependence/ Resource based theory, Network theory	Descriptive	Survey, Case studies, Literature review/ essay	Network	Relations/ linkages/ ties	Theoretical development	Virtual corporations share R&D information sources in order to achieve flexibility and rapidly change and respond to global competition	More research is needed on practical problems of different commitments, information management and marketing	"In this paper we discuss the approach taken by one particular virtual company" 323
196	Westphal, J.D., Seidel, M.D.L., Stewart, R.J.	2001	Second-order imitations: Uncovering latent effects on board network ties	Administrative science quarterly	Network theory, Strategic Management theory	Descriptive	Survey, Longitudinal, Hypothesis	Relation	Relations/ linkages/ ties, Strategic Context	Theoretical development	Board interlocks affect strategic decision making such as second order imitation		A long tradition of research in organization theory has examined the diffusion of technology, policy, and strategy through social networks... p 717
197	Weather, J.K., W.B	1999	Structure-driven strategy and virtual organization design	Business horizons	Network theory, Strategic Management theory	Descriptive	Briefcase	Network	Nature/ Form/ Structures/ Characteristics/ Pattern/ Configuration/ Types/ Design, Partner selection	New practical results	Strategies in successful companies		"Successful organizations adapt to their environment." p. 13
198	Whetten, D.A	1981	Interorganizational relations: A review of the field	Journal of higher education	Network theory	Explanatory	Survey, Literature review/ essay, Document search method	Network	Autonomy/ independence, Decision making	Theoretical development	Steps for creating coordination	Important that future research examine more closely the long tradition in sociology	"... purpose of this article is to review the research conducted on these agreements. Finally, these results suggest that research in this field needs to be sensitive to the negative effects of interorganizational relationships." p 342
199	Whetten, D.A & Chung, T.A	1979	The instrumentality of interorganizational relations: Antecedents and Consequences of linkage formation	Academy of management journal	Organizational theory	Explanatory	Survey, Hypothesis	Firm/ organization		Theoretical development	How can interaction process be enhanced	Suggests that research in the field need to be more sensitive to negative effects of interorganizational relationships	

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200	Wiesenfeld, B.M., S. Raghuram, S. & Garud, R.	2001	Organizational identification among virtual workers; The role of need affiliation and perceived work based social support	Journal of management	Evolution theory	Descriptive, Explanatory	Survey, Hypothesis	Firm/ organization	Behavior	Theoretical development	Highlight the importance of individual settings in the virtual organizations	"In sum, the present study explores the relationships between need for affiliation, work based social support, and the organizational identification variables." p.227
201	Wildeman, L.	1998	Alliances and networks: The next generation.	International journal of technology management	Network theory	Descriptive	Survey	Network	growth, Partner selection	Theoretical development	Lack of complementarity will lead to disbanding	"...motives for forming alliances. Most important are complementary skills (especially in R & D) market access, (particularly the issue of sales channels), and economy of scale relationships in manufacturing." p100
202	Wilkinson, I & Kipnis, D	1978	Interfirm use of power	Journal of applied psychology	Social theory	Exploratory	Case studies	Firm/ organization	Power	Theoretical development	Skewed power balance render source allocation. The power of the partner will take a greater share of available resources.	"The major finding of the present study was that strong and weak means of influence can be predicted from knowledge of the relative power of the contending organizations, the kinds of conflict between them and the amount of support that the target organization manifested." p 319
203	Wilkinson, I., C. Young, J. C. Welch, D & Welch, L	1998	Dancing to success: export groups as dance partners and the implications for network development	Journal of business & industrial marketing	Network theory	Exploratory	Case studies, in a comparable (case) analysis	Network	Nature/ Form/ Structure/ Characteristics/ Pattern/ Configuration/ Industry/ Types/ Design, Trust	New empirical results	Firms need to be skilled in managing internal and external work relations	"Our analysis examines the interrelated action and the development of networks and relations among people and firms and their interaction with external agencies." p.503

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204	Wilson, F	1999	Cultural control within the virtual organization	The sociological review	Panopticom theory	Descriptive	Literature review/essay	Firm/ organization, network work	Coordination	New practical results	Propose that panoptical quality systems are superior to loose replaces with loose bounded virtual networks that focus on norms rather than control.	Propose rather than rules.	"In theory, the virtual organization is a network of information and manufacturing and administrative services using integrated computer and communications technologies to differing groups of personnel for business purposes." p. 675
205	Yoo, S.B	2002	Web-based knowledge management for sharing product data in virtual enterprises	International journal of information economics	Communication theory	Descriptive	Case studies	Firm/ organization	Communicate	Theoretical development	How share product data in organizations	Suggests an agent model of product development.	"In information technology, ontology is the working model of the relationships and interactions in some particular domain of knowledge or practices. I broaden the scope of the metadata presented in the previous subsection can be in "ontology." p.176
206	Young, A. & Kielbaso, A.	2001	Sustainable supply network management	Corporate Environmental Strategy	Network theory	Descriptive	Literature review/essay	Network	Flows/ Workflows		Describing the logistics and issues in sustainability supply networks		"Our results broadly support the thesis that trust in relational exchange influences negotiation processes and outcomes, although the precise nature of the link is somewhat different from initially proposed." p. 153
207	Zahra, A.; Muehly, B. & Perrone, V	1998	Does trust matter? Exploring the effects of interpersonal trust on performance	Organizational science	Network theory	Exploratory	Survey, Hypothesis	Relation	Trust	Theoretical development, new empirical results	Does trust really matter in organizational performance?		

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208	Zaheer, A., Venkatraman, N	1995	Rational government as an international organizational strategy: An empirical test of the role of trust in economic change	Strategic management journal	Transaction cost theory	Explanatory	Survey, Hypothesis	Firm/ organization	Trust	Theoretical development	Model of relational governance based on trust.	"This paper builds a transaction cost reasoning and evaluates and emerging view that no single determinants, primarily embodied trust - which we term sociological in order to distinguish between more traditional transaction cost determinants and complementary ones in the governance of exchange relationships" p 373-374
209	Zhou, Q & Besant, C.B	1999	Information management in production planning for a virtual enterprise	International journal of production resources	Strategic Management theory	Descriptive	Briefcase	Network	Communication	New practical results	Architecture of virtual enterprises	"...virtually, the management of a virtual enterprise will be much more complicated than current enterprises." p 209
210	Zhuge, H., Chen, J., Feng, Y & Shi, X	2002	A federation-agent workflow-based framework for virtual organization development	Information & Management	Communication theory	Explanatory	Simulation method	Relation	Communication	Theoretical development	Information systems in virtual organizations	"...virtual organizations have the following main characteristics: autonomous management, ...predefined tasks and management rules; active participation; ...intuitiveness...; adaptability..." p 326