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Power Struggle in the Food Chain?

Lessons from Empirical Studies on Power Influences in Chains and Marketing Channels

Vera Belaya ¹, Jon Henrich Hanf ²

¹ Leibniz Institute of Agricultural Development in Central and Eastern Europe (IAMO), Germany

² Leibniz Institute of Agricultural Development in Central and Eastern Europe (IAMO), Germany



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Abstract. Power plays a key role in any chain relationship. In the past large manufacturers such as Unilever and Nestle were the most dominant players in the chain. However, as a result of consolidation among retailers, power has shifted towards retailers. Nowadays such retailers as Wal-Mart, Carrefour, and Tesco are seen as powerful gatekeepers controlling the access to the end consumer. Moreover, branded manufacturers and large multinational retailers become increasingly dependent on fewer and larger suppliers who can deliver high quality products at competitive prices. Since many decades there is discussion going on about the role of power in chains and marketing channels. In order to understand how power and its interactions with other constructs in the chain can be used beneficially for management of the whole chain, it is of great importance to investigate the influences and effects of power. Some of the phenomena which are said to be influenced by power include performance, satisfaction, commitment, relationship quality, conflict, compliance, problem solving, chain integration and collaboration. In this context, the aim of our work is to analyze and systemize existing empirical studies, which measure the influences of power on other phenomena, and discuss the strengths and weaknesses of existing conceptualizations of power, in order to add clarity to the existing turmoil in the literature and contribute to the understanding of the role of power in chains and marketing channels for managerial purposes.

Keywords: Power, Power Conceptualization, Supply Chain, Supply Chain Network

1. Introduction

Nowadays the top three places in the list in terms of retail sales are taken by Wal-Mart of the US, Carrefour of France and Tesco of Britain (Deloitte, 2009). Such retailers are seen as powerful gatekeepers controlling the access to the end consumer. In the past, manufacturers controlled distribution and ‘pushed’ goods through relatively small retailers. Today, the vast size of the large retailers means they have been able to move to a system where they can ‘pull’ goods through from the manufacturers (Ogbonna and Wilkinson, 1998). Today some retailers find themselves much bigger in size than their suppliers, and size brings power. While retailers derive their power from size and market access, a manufacturer must derive its power from advertising and product innovation investments in brand equity (Kumar, 2005). Others assume that power of the retailers has increased as a result of store brand entry, which has changed the nature of manufacturer-retailer interaction (Hoch and Banerji, 1993, Raju et al., 1995, Hoch 1996). In any case, international food retailers and manufacturers have been able to gain a leading position in supply chains. Worldwide a group of global players with enormous power has emerged among manufacturers and retailers (Lang, 2003). Therefore, power has shifted along the food supply chain towards big branded processing companies and retailers (Bourlakis, 2001), where they are seen as supply chain captains, which coordinate their suppliers and set the process standards throughout the whole supply chain, and main gateway to consumers and gate-keepers between producer and consumer.

Therefore, the truth is that power does not belong to retailers and processors solely. There are situations in which retailers, which are seen as chain captains and administrative centers of supply chain networks are also at the mercy of other supply chain members. For example, suppliers seem to have some possible avenues of control over category management decision making (Lindblom et al., 2007). The focal actor can also be dependent upon the different resources that the suppliers can provide (Medcof, 2001). For example, the phenomenon called ‘paradox of power’ makes retailers dependent on a small number of large category suppliers, who can deliver safe products of consistently high quality on a large scale at competitive prices and who have the potential (and desire) to innovate and add value to commodity-orientated categories like fresh meat (Fearne and Dedman, 2000). In this way powerful retailers and

branded processing companies may become more reliant and dependent on their suppliers who become the providers of brand integrity, which results in a less powerful position for retailers.

Research has shown that each supply chain member of the network tries to assume a dominant position that gives control over other members and the ability to demand more value (Cox, 1997, 2001; Lamming, 1993; Caldwell, 2003 and Watson et al., 2003). Retailers and manufacturers exist in a competitive environment and stores within different channels compete for the same consumers and carry the same merchandise (Kotler, 2003). Each party tries to achieve maximum revenues using its power. Suppliers are interested to deliver according to their terms and receive good prices for their produce. Manufacturers want their products to have an optimal place at the retailers' shelves and sufficient quantities of products in order to avoid stock-outs. Retailers are interested to sell only those products which bring them the maximum profits and have acceptable price levels which they pay to their suppliers. Since all supply chain members have some power, there is a power play going on within supply chain networks. In order to clarify the often used word 'power' in our discussion, let us look more closely at the existing definitions, concepts and possible classifications of this phenomenon, with which we deal in our paper.

Since many decades there is discussion going on about the role of power in chains and marketing channels. In order to understand how power and its interactions with other constructs in the chain can be used beneficially for management of the whole chain, it is of great importance to investigate the influences and effects of power. Several studies on marketing channels have shown that channel power has significant impact on the buyer-supplier relationship and performance in channel distribution (Etgar, 1978; Gaski and Nevin, 1985; Liu and Wang, 2000; Lee, 2001) and that the power relationship has implications for the development of partnerships as the structure of the power-dependence relationship determines the level and features of a trading relationship and the performance outcomes (Frazier and Antia, 1995; Gattorna and Walters, 1996).

All of them agree to that fact that power is central to understanding distribution channels and supply chains (Alderson, 1957; Heskett et al., 1970, Stern and Beier, 1969), which cannot be ignored by anyone interested in understanding how organizations work and end up doing what they do (Mintzberg, 1983) and is at the heart of any business-to-business relationship (Cox, 2001). Bowersox and Closs (1996) view power as one of the three concepts (along with risk and leadership) necessary for understanding supply chain arrangements. Watson et al. (2003) calls power 'an inherent element of supply relations' motivating it by the existence of cooperation and competition in any trading relationship. So according to the literature there is no doubt that power represents a very important issue when studying supply chain networks and marketing channels, but what is 'power'? It seems like there has been much disagreement about its exact definition.

Some of the phenomena which we found to be influenced by power include firm profitability (Galbraith/Stiles, 1983), dealer satisfaction (Scheer and Stern, 1992), channel conflict (Gaski and Nevin, 1985; Cather and Howe, 1989; Johnson et al., 1993; Jap and Ganesan, 2000), effects of various sources of a channel member' power among each other (Gaski, 1986), problem solving (McAlister et al., 1986), readiness to respond to a request (Keith et al., 1990), incentive for distributors to improve their role performance (Iglesias et al., 2000), relational exchange process (Rokkan and Haugland, 2002), alignment of contractual safeguarding of buyer-specific and supplier-specific investments (Buvik and Reve, 2002), supplier satisfaction (Benton and Maloni, 2005), channel solidarity (Hu and Sheu, 2005), channel climate and solidarity (Hu et al., 2005), compliance (Payan and McFarland, 2005a), satisfaction (Ramaseshan, 2006), collaboration in virtual organisations (Johnston et al., 2006), in-store promotions and pricing (Lindblom et al., 2007), trust and commitment (Leonidou et al., 2007), chain integration (Zhao et al., 2008), structure of management control (Yan and Gray, 1994).

Reve and Stern (1979) in their work "Interorganizational Relations in Marketing Channels" made an overview of empirical studies of power and conflict in vertical marketing systems, in which they described the existing studies from 1972 till 1975. However, there has not been any work published since then which would summarize the existing empirical studies on power beginning from 1976. This gap in the literature and the necessity to take a look at the multitude of empirical studies on power which have been written since 1976, have led us to the idea of writing this paper. In this context, the aim of our work is to analyze and systemize existing empirical studies, which measure the influences of power on other phenomena, and discuss the strengths and weaknesses of existing conceptualizations of power, in order to add clarity to the existing turmoil in the literature and contribute to the understanding of the role of power in chains and marketing channels for managerial purposes.

2. Power

Difficulty with defining power

There are many various definitions of power existing. We get an impression that generations of sociologists, psychologists, political scientists and economists have spent a lot of effort to clarify the meaning of the concept of power. Some authors agree that power is an extremely troublesome, elusive, notoriously evanescent and subjective concept (Bierstedt, 1950; Bachrach and Baratz, 1962; Ramsay, 1996), a vague, poorly defined 'primitive' term (Hage, 1972) and a difficult idea to pin down (Clegg et al., 2006). In fact, Cartwright (1959) even points out that a lot of authors 'invent' their own definitions to suit their needs. We look in the literature before we begin to use the term 'power' in our research. However, it is not our intention to provide our own new definition of power. Our aim is rather to contribute to the understanding of what this phenomenon is, which is meant by 'power'.

Power in philosophy

The overview of the definitions of power known in philosophy gives us the impression that the question of what power really is, has been occupying the minds of philosophers since many hundreds and decades of years. One of the first definitions of power is truly the one of Hobbes, who described power as 'a man's present means, to obtain some future apparent good' (Hobbes, 1651). The commanding nature of power has been underlined by Jouvenel (1945), who points out that the act of commanding and obeying is the essence of power itself. The multitude of contradictory names which power has been called is quite impressive. For example, Morris (1987) states that power is 'a dispositional concept', which is 'neither a thing (a resource or vehicle) nor an event (an exercise of power)', but 'a capacity', whereas Foucault (1990) suggests to treat power as 'the name that one attributes to a complex strategic situation in a particular society' indicating that power 'is not an institution, and not a structure; neither is it a certain strength we are endowed with'. More confusing seems to be the view of Dyrberg (1997), who asserts that power represents no identity and that it is simply 'the limit of the language'. Similar view is represented by Holm (2002), who call power 'nothing but illusion, a theoretical entity that is needed by virtualists in order for their model to avoid immediate implosion'. As the literature shows power in philosophy has been given a lot of consideration and has been quite often misleadingly defined in abstract terms, which are difficult to grasp for our research purpose, except that power is a capacity to obtain some value driven by one's own interest.

Power in psychology

However, apart from philosophy power has received attention in psychological literature. In the psychological context power is often referred to as 'ability' (French and Raven, 1960; Blau, 1964; Kanter, 1977; Gaski, 1984; Schminke, 1992; Slack, 1997) or 'capacity' (Tawney, 1952; Robbins and Barnwell, 1998) to do something. This ability or capacity is used for modifying the conduct of other individuals (Tawney, 1952), mobilizing resources (Kanter, 1977), causing (Gaski, 1984), bringing about outcomes (Schminke, 1992) and generally changing something (Simon, 1953; Cartwright and Zander, 1968). This characteristic of power 'to change something' seems to be put a lot of emphasis on in psychology. The concept of making change is observed in structuration theory, according to which power is the means of getting things done and, as such, directly implied in human action. The loss of the capacity to make a difference is powerlessness. Therefore, power is the capacity of the individual to 'make a difference' to a pre-existing state of affair (Giddens, 1984). The next interesting observation is the relation of power to behaviour. In fact, quite a lot of definitions of power in psychology contain the term 'behaviour' (Simon, 1953; Simon, 1957; Mechanic, 1962; Mullins, 2007) or the term 'conduct' (Tawney, 1952). One of the theories which put the concept of behaviour in its focus is field theory, according to which behaviour results from tensions between an individual's self-perceptions and the environment. Power of person A over person B is determined in terms of the force A could bring to bear on B and the resistance B could offer. Mathematically the power of A over B is defined as 'the quotient of the maximum force that A could (or possibly could) induce on B and the maximum resistance that B could offer' Lewin (1951). In general, the psychological view of power is very much based on relationships and behaviour among individuals, according to which power is an ability or capacity to change or modify behaviour of other individuals in a dyadic interpersonal relationship in order to achieve desired outcomes through a set of rewards or punishments.

Power in sociology

In sociology the concept of power has been basically introduced by Weber (1947) who defines power as 'the probability that one actor within a social relationship will be in a position to carry out one's own will despite resistance, regardless of the basis on which this probability rests'. One has to say that most concepts of power are founded on this one of Weber's (Buckley, 1967; Bredemeier and Stephenson 1962).

A starting point for our discussion of power from the sociological perspective could be event-structure theory, which uses the conception suggested by Dahl (1957), who defines power of A over a in terms of 'the probability that a will do x in response to A 's request minus the probability that a would do x in the absence of A 's request'. Dahl's definition can be understood as referring to that special subset of causal relations he chooses to call power. In the event-structure theory the concept of power is broadened to include not only what A makes a to do, but also what he prevents a from doing.

In social exchange theory relations are viewed as power relations and the outcome of any particular exchange depends upon the relative power of the participants. Power is viewed as the mechanics that can explain these relations among participating actors. Homans (1974) state that ' A 's power over B is the extent to which A can affect B 's behaviour (through exchange)'.

According to rational choice theory, in which all actions are assumed to be fundamentally rational in character and actors calculate the likely costs and benefits of any action before deciding what to do, the notion of power is a generalization of the wealth concept in economic theory (Fararo, 2001).

Network exchange theory has its peculiarity in the fact that it puts power in relation to nodes and positions in the network which allow achieving favorable outcomes. Cook et al. (1983) define power in any dyadic exchange as relation AB (where A and B are actors, and x and y are resources introduced in exchange), the power of A over B is the potential of A to obtain favorable outcomes at B 's expense.

Power-dependence theory views social relations in terms of mutual dependence between the parties and locates power at the interdependencies among actors embedded in those social relations. Emerson (1962) states that the power of A over B is the amount of resistance on the part of B which can be overcome by A , therefore, the power of A over B is equal to and based upon the dependence of B on A .

Resource dependency theory specifies the basis of the created dependencies among the actors in form critical resources. Therefore, power is based on the control of resources that are considered strategic within the organization (Pfeffer and Salancik, 1978) and is often expressed in terms of budgets and resource allocations (Pfeffer and Moore, 1980; Mudambi and Navarra, 2004). According to resource-dependency theory power is conceptualized as the amount of resources controlled by actors. Power-dependence and resource-dependency theories offer a view that power is proportional to the degree of dependence among actors acquired either through control of scarce resource or something else.

The sociological view of power is widely represented by a group of exchange theories, in which social interactions are seen as exchanges among the multiple actors. Quite a number of theories underline the close connection of power to wealth and ownership of valuable objects or resources. A number of sociological theories have equally defined power as a specific type of relation not only between individuals as in psychology but also within a group of persons or among groups. Therefore, from sociological perspective power is an ability to intentionally make someone do something in order to fulfill one's own will or goal against existing resistance from the side of the weaker party in a dyadic relationship or within a group.

Power in politics

Political scientists have also made their contribution to the development of the body of literature on power. One of the most often referred definitions is the one of the political scientist Dahl (1986). He defines power as 'the ability of one individual or group to get another unit to do something that it would not otherwise have done'. This perspective is also shared by other researchers (Salancik and Pfeffer, 1977; Stanfield and Carroll, 2004). Others define power in terms of 'the participation in the making of decisions' (Lasswell and Kaplan (1950). In fact power is referred to as the ability to change or influence 'decisions' also by other political scientists (Easton, 1953; Bernhagen, 2003) as well as 'actions' of other individuals (Easton, 1953; Easton, 1958) and 'freedom of actions' (Oppenheim, 1961; Mokken and Stokman, 1976). Some of the authors (Lasswell and Kaplan 1950) are even more specific to the subject of

how such outcomes can be achieved. For example, Sharp (1980) refers to power as “the totality of means, influences, and pressures - including authority, rewards, and sanctions - available for use to achieve the objectives of the power-holder”. From this perspective power appears to be formidable and even negative. However, political power is also seen from the positive and constructive side. Wilson (1913) states that power ‘consists in one’s capacity to link his will with the purpose of others, to lead by reason and a gift of cooperation’. Others address power in terms of ‘the opportunity to build, to create, to nudge history in a different direction’ (Nixon in Pfeiffer, 1992) or ‘capacity to restructure actual situations’ (MacMillan, 1978).

Power in economics, management and marketing

Applied to the economic context power is defined quite similarly, namely as ‘ability’ (Emerson, 1962; El-Ansary and Stern, 1972; Wilkinson, 1973; Schmid, 1978; Bartlett, 1989; Schmid, 2004), ‘capacity’ (Mintzberg, 1983) or ‘capability’ (Ratnasingham, 2000) to ‘to influence the intentions and actions’ (Emerson, 1962), ‘decisions’ (El-Ansary and Stern, 1972; Wilkinson, 1973) and/or ‘behaviour’ (Wilkinson, 1973) or ‘implement one’s interests’ (Schmid, 1978) in the economic environment. Emerson (1962) defines it as “the ability of one firm to influence the intentions and actions of another firm” and Ratnasingham (2000) refers to it as “the capability of a firm to exert influence on another firm to act in a prescribed manner”.

A point of departure in the discussion of power from the economic and managerial point of view could be the transaction cost theory which rests on the basic premise that firms try to internalize those activities that they are able to perform at lower costs. According to Williamson (1975) each partner is motivated by the self-interest of retaining an advantage for themselves and that a situation of power must be the ideal position to be in. As a result, the firm with most power seeks to minimize his transaction costs, and the less influential channel member is forced to bear the burden of increased transaction costs involved in an exchange process by incurring more transaction specific investments.

From the point of view of agency theory which is concerned with resolving two problems in agency relationships: the conflict of the desires or goals of the principal and agent and the problem of risk sharing that arises when the principal and agent have different attitudes towards risk (Eisenhardt, 1989). The principal’s key problem is that the agent always retains control over his actions, and may work to his own advantage. In this case the principal always tries to act in such a way as to align agent’s interests with those of his own and, therefore, to retain power over the actions of the agent.

Another approach to power is provided by the game theory. For example, the prisoner’s dilemma constitutes one of the problems in game theory. No matter what the other player does, one player will always gain a greater payoff by playing defect. The amount of payoffs determines the power of the player. The game theoretic concept that is closest to the notion of power is bargaining power (Osborne and Rubinstein, 1990), which is determined by the extent to which players can influence the division of contested resources.

The theory of competitive strategy views power in terms of supplier and buyer power driven by the number of major customers of a supplier’s component, a supplier’s market share of a given component, the number of suppliers from which a buyer purchases a particular component, the number of potential suppliers for a given component, and the amount of revenue a supplier generates from a single buyer, the uniqueness of the product or service, as well as the cost of switching from one product to another (Porter, 1980).

There are also other perspectives on power formed by marketing, chain and network science, supply chains and marketing channels literature. Most definitions of power in studies on marketing channels are based on that one of El-Ansary and Stern (1972) who define power as ‘the ability of a channel member to control the decision variables in the marketing strategy of another member in a given channel at a different level of distribution’. Cox (2003) defines power in supply chains as ‘the ability of a firm (or an entrepreneur) to own and control critical assets in markets and supply chains that allow it to sustain its ability to appropriate and accumulate value for itself by constantly leveraging its customers, competitors and suppliers’. Hu and Sheu (2003) view power in terms of strategy-influencing source that is oriented from one channel member to another. Other authors use more or less similar definitions of power and derive them from already mentioned ones.

In general economics does not deal with the definition of the construct of power itself, but rather overtakes it from socio-economic strands of sciences and applies it into the economic settings. Economic view reflects the assumption that firms act according to the principle of partially rational and partially bounded rational behaviour and assumes that actors are motivated by the possibility of making a profit. Power in economics is associated with payoffs, possession of valuables, minimizing costs and maximizing gains and with the aim to gain as much profit as possible even if this requires aggressive acts and coercion.

Summarizing statement

The conclusion can be made, that power is always used to influence the decisions, actions and behaviour of the others for own profit and represents optimal and efficient behaviour of the power holder. The examination of all of these definitions of power from different perspectives allows us to conclude that power generally refers to the ability, capacity or potential to get others do something, to command, to influence, to determine or to control the behaviours, intentions, decisions or actions of others in the pursuit of one's own goals or interests against the will of the power target, as well as to induce changes, to mobilize resources, to restructure situations, etc. All these definitions of power seem to use similar terms and have a common sense and reflect both the commanding as well as constructive nature of power.

3. Conceptualization of power in empirical studies

As stated by many authors there is no single conceptualization of power (Dahl 1957; Bacharach and Lawler 1980). Dahl (1957) pointed out it quite well in saying "...all we have or can have is a great variety of operational concepts no one of which is strictly comparable with another" and suggested labeling them: power 1, power 2, etc. In the previous chapter we have given an overview of existing definitions and theoretical views of power found in philosophy, psychology, sociology, political science and economics, management and marketing. This has been the first step in clarifying the construct of power.

In this chapter we present the multitude of power conceptualizations found in the body of empirical studies dealing with studying the effects of power on other phenomena. As Table 1 shows, the conceptualizations of power found in the reviewed empirical studies include: *dependence*; *power sources* (reward, coercion, expert, referent, legitimate power, coercive vs. noncoercive, mediated vs. nonmediated, opportunistic power, informational power); *influence strategies* (request, recommendation, legalistic plea, promise, threat); *influence* (attributed, manifest, achieved); *potential (unexercised) vs. exercised power*; *structural vs. bargaining power*; *context-based vs. resource-based bargaining power*; *control over the economic issues vs. control over marketing issues*; *market-based approach* (number of buyers and sellers on the market as well as number of transactions the buyer and seller were allowed to complete); *dual notion of essentiality and exclusivity*. Our aim is to look at the previous approaches to conceptualizing power and to acquire an insight into how we can conceptualize it for using it the context of agri-food supply chains and networks.

Dependence

Quite a few researchers have used in their study the concept of dependence in order to conceptualize power (Kale, 1986; Kim et al., 2004; Bunduchi, 2007). In the study of Kale (1986) dependence is defined as the degree to which the target firm needs to maintain its relationship with the source in order to achieve its desired goals. He assumes that this approach is especially appropriate for studying channel systems because the relatively clear-cut goals of each channel member can be easily identified. The view of the concept of power in terms of dependence has also been underscored in the study of Kim et al. (2004). The authors state that power fundamentally resides in the dependence of one actor on another. Although both actors are mutually dependent in an exchange, it does not mean that they are always equally dependent on each other. The less dependent actor will maintain a power advantage, resulting in a power imbalance. In essence, asymmetric dependence between two actors in an exchange relation constitutes the essence of the concept of power dependence. Bunduchi (2007) also views power in terms of dependence and access to critical resources. According to her study an agent has power only if others are dependent on the resources that the agent commands and access to these resources represents the primary stimulus for organisations to engage in interactions.

Power sources

There are a number of studies (Gaski, 1986; Yeung et al., 2009; Rawwa et al., 1997; Lindblom et al., 2007; Keith et al., 1990), which are based on the taxonomy of French and Raven (1959). French and Raven (1959) identified five types of power, each based on its source or origin: coercive, reward, expert, legitimate, and referent power. Coercive power enables an individual to punish others. Reward power depends on the ability of the power holder to offer rewards to others. Expert power is derived from the skills or special knowledge in a specific subject. Legitimate power stems from a legitimate right to influence and an obligation to accept this influence. Referent power depends on an ability to be attractive to others and depends on the charisma and interpersonal skills of the power holder.

Klein Woolthuis et al. (2002) use a notion close to the meaning of coercive power. They call it “formal control” which is used as safeguards against the hazard of opportunism. Since one has no reliable ex ante knowledge of whether, and when, opportunism will occur, one should employ safeguards against the hazard of opportunism. The safeguards are primarily based on exercising coercive power or ‘deterrence’ (Shapiro et. al., 1992, Maguire et. al., 2001): hierarchical supervision, contract enforcement and monitoring, threat of ‘exit’ (Hirschman, 1970), damage of reputation, and impairment of hostages. These safeguards constitute what we call ‘formal control’. They function as power mechanisms (Blau, 1964).

In order to capture the different facets of power even better, some more sources have been added to the seminal taxonomy of French and Raven (1959). In their study Rawwa et al. (1997) draws on argumentation of Tedeschi and Bonoma (1972) who have shown that one source of power is based on the A’s ability to control critical aspects of B’s environment so as to affect B’s strategies in the desired direction, which they called opportunistic power source. Its use has been defined as seeking “self-interest with guile” (Williamson, 1975) and concerns possession and dissemination of valuable information and is based on deceit and opportunism of the power holder.

Some authors have used dichotomies of power such as coercive vs. non-coercive (Cather and Howe, 1989; Hu and Sheu, 2005; Hu et al., 2005; Payan and McFarland, 2005a), which was suggested by Hunt and Nevin (1974). While coercive sources of power arise from punishment, non-coercive sources arise from rewards or high quality assistances.

A number of studies (Johnson et al., 1993; Brown et al., 1995; Zhao et al., 2008; Maloni and Benton, 2000) apply the taxonomy of power sources developed by Johnson et al., (1985), who grouped the original power sources into mediated (reward, coercion, legal legitimate) and nonmediated (referent, expert, traditional legitimate, and information) power sources. With some limited variation Benton and Maloni (2005) apply coercive-mediated (coercive and legal legitimate) vs. reward-mediated taxonomy of power sources.

Influence strategies

Another big group of studies apply the concept of influence strategies. Kale (1986) is using the classification of influence strategies (threat, promise, legalistic plea, recommendation, request, information exchange). Recommendation means that influencing party stresses that specific action is needed to achieve desired outcomes. Information exchange is expressed when influencing party supplies information with no specific action requested or otherwise indicated. Promise is observed in case when influencing party certifies to extend specified reward contingent on the less powerful party’s compliance. Request means that influencing party asks the less powerful party to act; no mention of subsequent sanctions. Legalistic plea is made when influencing party contends that the less powerful party’s compliance is required by formal agreement. Threat means that influencing party informs the less powerful party that failure to comply will result in negative sanctions. Frazier and Rody (1991) have identified four noncoercive strategies (information exchange, discussion of business strategy, requests, and recommendations) and three coercive strategies (promises, threats, and legalistic pleas) of relevance to suppliers and distributors alike. Venkatesh et al. (1995) also differentiate among noncoercive, soft coercive and hard coercive strategies within the influence strategies.

Influence (attributed, manifest and achieved)

Another group of studies use the concept of “influence”. For example, Kale (1986) has used the term “attributed influence” as a concept of power. In his paper attributed influence refers to the degree of control a dealer perceives a manufacturer to exert on the dealership. Mohr et al. (1996) use the notion of “achieved influence”. Although power is commonly expressed as the ability of one party to influence another (Gaski 1984), control is best viewed as an outcome of power and results when a firm is successful in modifying its partner’s behaviours (e.g., Anderson and Narus 1984; El-Ansary and Stem 1972; Etgar

1976; Skinner and Guiltinan 1985). This difference is consistent with Frazier's (1983b) distinction between the ability to influence, or power, and "achieved influence", or control. In their model, they address the effects of manufacturer control over the dealer. Manufacturer control implies that the dealer has yielded to the manufacturer's wishes, possibly acceding to demands, acquiescing to requests, or relinquishing decision-making autonomy. In other words, dealers that do business with high-control manufacturers yield decision-making authority to the manufacturer. Kohli (1989) uses in his study the conceptualization of power in the form of "manifest influence", which refers to changes in purchase decision-related opinions and behaviour of buying center members that result from the individual's participation in a buying center (Kohli and Zaltman, 1988).

Potential (unexercised) vs. exercised power

Several authors have recognized the distinction between actual or exercised and potential or unexercised power. In fact, as we have observed from the previous chapter, power is usually defined as a capacity to control or influence others. But the capacity to perform acts of control and their actual performance are clearly not the same thing. The distinction between "possessing or having power" and "exercising power" seems to make big difference for several authors. For example, Hart and Saunders (1997) point out the fact that power can be potential and exercised. They state that potential power relationships exist even though no immediate outcome is evident, or no obvious power attempt has been made (Provan et al., 1980). Potential power could be a source of influence even when it is not exercised. For example, the more dependent firm in a dyad may comply with something it believes that the more powerful firm wants, even though the more powerful firm may never make the request. By contrast, exercised power is most likely to be a factor of influence where a less powerful firm has not yet adopted EDI with any of its trading partners. Power is exercised by the use of certain mechanisms which have important consequences for the way that EDI is used. These mechanisms range on a continuum from persuasive to coercive.

Structural vs. bargaining power

Drawing on empirical findings from industrial buyer-seller relationships, Buvik and Reve (2002) use the classification of power according to "ability to safeguard specific assets by exercising control over the supplier" - structural power (e.g. buyer concentration)" and "ability to influence the terms and conditions of contracts - bargaining power. As pointed out by Heide and John (1988), there is a connection between resource-based dependence and asset specificity, in that asset specificity reinforces the replacement problem of resource-based dependence, which in turn concerns the tension between the motivation and the ability to structure exchange relationships in the desired way. In the resource-dependence perspective, structural power is expected to affect the transacting parties' ability to align their desired governance arrangements (Heide and John, 1992). This situation might reduce the buying firm's ability to achieve the safeguarding it desires if the supplier possesses strong bargaining power (Heide and John, 1988).

Yan and Gray (1994) refer to power as to the notion of bargaining power indicating a bargainer's ability to favorably change the bargaining set, to win accommodations from the other party, and to influence the outcome of a negotiation. They differentiate between context-based and resource-based bargaining power. Context-based can be derived from having alternatives, such as other potential partners with whom to negotiate or other channels through which to accomplish the same mission the joint venture is to achieve. The components of resource-based bargaining power signify the resources and capabilities committed by the partners to a joint venture. These resource contributions are either explicitly specified in the joint venture agreements (contracts, memorandums, and licenses) or verbally recognized by both partners during negotiations.

Context-based vs. resource-based bargaining power

Iglesias et al. (2000) classify power in terms of control over issues in bargaining processes in marketing channels. Control over the economic issues of the exchange (for example, manufacturer price, or deferred payments in manufacturer-distributor relationships). These issues directly affect the profitability of the buyer and the seller; thus, both firms will always be interested in maximizing their control. A maximum control over these issues does not necessarily mean a maximum pressure on the partner (which could be pernicious in the long term), but does imply maintaining prices and deferred payments in a convenient interval for the firm. Nevertheless, the distribution of the channel incomes among members will strongly depend on the distribution of the control over these issues. Control over marketing issues (for example, distributor assortment, merchandising, design of promotions, distributor price, distributor services). These

issues affect the image of the manufacturer's products and so, the performance of the entire channel. The manufacturer is frequently interested in controlling these issues to achieve a correct development of his marketing strategy; but the distributor is often also interested because they could affect his costs and his own image and marketing strategy.

Market-based approach

McAlister et al. (1986) uses the market-based approach to conceptualizing power, which includes number of buyers and sellers on the market as well as number of transactions the buyer and seller were allowed to complete. For two of the markets there were equal numbers of buyers and sellers. In the other two markets there were two sellers for every buyer-a power imbalance in favour of the buyers. Orthogonal to this power manipulation, power was manipulated by the number of transactions each channel member could complete. In two of the markets, buyers and sellers were limited to completing at most nine transactions. In the other two markets, buyers were limited to 12 transactions and sellers were limited to six transactions-a power imbalance in favour of the seller as there was more demand for the goods than the supply could fulfil.

Dual notion of essentiality and exclusivity

Galbraith/Stiles (1983) use the concept of essentiality and exclusivity to grasp the idea of power in their study. They state that firm A has power over Firm B to the extent that Firm A can get Firm B to do something it would not otherwise do. The basis for such power is grounded in: (1) the essentiality (or importance) of the function a firm performs in the production chain, either by product or service, and (2) the exclusivity by which the firm performs that function. The dual notion of essentiality and exclusivity keys the power relationships within the chain of production and distribution.

After looking into the empirical studies, we have discovered that researchers have been confronted with the task to conceptualize the idea of power in a specific empirical setting in order to study its effects on other phenomena mentioned earlier. They include: *dependence*; *power sources* (reward, coercion, expert, referent, legitimate power, coercive vs. noncoercive, mediated vs. nonmediated, opportunistic power, informational power); *influence strategies* (request, recommendation, legalistic plea, promise, threat); *influence* (attributed, manifest, achieved); *potential (unexercised) vs. exercised power*; *structural vs. bargaining power*; *context-based vs. resource-based bargaining power*; *control over the economic issues vs. control over marketing issues*; *market-based approach* (number of buyers and sellers on the market as well as number of transactions the buyer and seller were allowed to complete); *dual notion of essentiality and exclusivity*. Following advice of Bacharach and Lawler (1980), who state that 'when doing research in order to capture the term of power we must identify a more concrete phenomenon or idea to which the primitive term points', we analyze the main approaches to conceptualizing power according to suitability criteria (setting/context of application, managerial implication, unit/level of analysis) with an aim of coming to the most suitable for using it the context of agri-food supply chains and networks.

4. Discussion and concluding remarks

In this chapter we build our discussion around the three in our opinion most important and also widely applied conceptualizations (dependence, power sources, influence strategies). The concept of power as dependence is found in many different settings including from broker- principal relations (Keith et al., 1990), distribution channel in the tungsten carbide tool industry in India (Kale, 1986), Keiretsu member firms (Kim et al., 2004) as well as the nature of inter-organisational relationships of Internet based electronic markets (Bunduchi, 2007). The concept of power sources is used, for example, in channel relationship and both supplier and retailer (Brown et al., 1995), in channels of distribution of independent U.S. pharmacists (Rawwa et al., 1997), distribution channel relationships of U.S. automotive Industry (Maloni and Benton, 2000). Influence strategies are used, for example, in the study of supply retail firm which began using EDI (Hart and Saunders, 1997), in the setting of distribution firms of specialty tools and fasteners in the US (Payan and McFarland, 2005a), suppliers and the purchase committee members National Association of Purchasing Management (Venkatesh et al., 1995).

Beier and Stern (1969) suggest that the approach of conceptualizing power as dependence is especially appropriate for studying channel systems because the relatively clear-cut goals of each channel member can be easily identified. However, Cook et al. (1983) point out the difficulty with power-dependence

concepts is that they are too closely bound to dyadic analysis. In examining the distribution of power in a supply chain network, one has to take into account not only dyadic relationships but also the network level.

According to our reviewed literature we can say that no study was found which examines the effects of power on other phenomena on a network level. This fact makes us raise the question whether it is possible at all to study power otherwise than dyadically. It seems like the nature of the power relationship dictates that there is always a power holder and a power target, or, expressed differently, a more powerful and a less powerful actor. In fact, according to Blau (1964) relationships characterized by co-equal influence do not even qualify as power relationships. So the nature of power relationships presupposes an asymmetrical distribution of power among the actors, assumingly two of them if we speak about the dyadic level. But in our case we intend to study the effects of power in cooperation and coordination issues within a supply chain network. Whether there is any chance to study power in a triad or within a bigger network remains unanswered.

However, what we observe is that the concept of dependence is also found in combination with power sources or influence strategies. Payan and McFarland (2005a) argue that channel studies typically include dependence as a precursor to the use of influence strategies. However, these studies do not elucidate how dependence and the use of influence strategies operate together to achieve compliance. Kelman and Hamilton (1989) provide some theoretical direction. They define dependence as the extent to which the target perceives the source as instrumental to the achievement of its goals, and they suggest that the target is dependent on the source to the extent that the target perceives that the source can facilitate or impede the target's goals.

It is also not clear whether and if yes than how the concept of dependence can be combined with power sources. There seems to be similarity in the way some researchers define influence strategies and power sources or bases. But taking into account the opinion of Dahl (1957), who stated that influence strategies represent the "means" or "instruments" A uses to exert power over B against the discussion of power sources (bases) by French and Raven (1959) upon which power may be derived, it seems logical that influence strategies may be applied as mechanisms to exert power derived from the bases of power. For example, a power holder may derive his power from coercive power source and use it to exert his power in the form of threats, punishments or other actions, which would represent influence strategies. In that way the logical connection between sources and strategies of power application seems to be existing.

So power sources (information, rewards, punishments, etc.) are just sources or bases and represent some kind of resources available to firms in applying them for the purpose of exerting power or building other constructs such as trust, commitment, etc. For example, we find similar bases for trust (calculus-based, experience-based, cognition-based, goodwill, and affect-based trust). So it is possible to identify five common origins of power and trust: fear of punishment or trouble; repeated rewards or positive actions; knowledge, information or competence; established or accepted norms or laws; affection, reputation, image or identification with the other. The same parallel can be drawn assumingly with other constructs such as commitment, satisfaction, etc. which also may be derived from similar sources or bases.

Probably, most of the mentioned conceptualizations are not able to capture simultaneously all the dimensions of power discussed above despite their interconnected and often overlapping nature. However, it is necessary to at least define whether it makes sense to analyze different power typologies within a particular relationship. Since power is a multidimensional concept, it seems necessary to apply conceptualizations of power that account for different power dimensions. We argue that in terms of supply chain networks such conceptualizations of power could include at least the aspects of dependence, sources of power and influence strategies as instruments of exerting power derived from different sources.

These conceptualizations in combination seem to reflect our purpose – namely finding the right conceptualization for grasping the idea of power in agri-food supply chain networks as effective mechanism for achieving cooperation and coordination among supply chain network actors. In order to manage supply chain networks successfully the knowledge of different power sources is essential. In particular, managers should be aware of the fact that power may have different effects on coordination and cooperation depending on its source. When solving coordination and cooperation problems, managers need to assess the costliness of the chosen power based on the available source. For managerial implication this means that knowing the sources and application strategies of power one can help to work out strategies how to design their management practices to successfully manage supply chain networks.

Concluding, we have to state that the construct of power still has to be advanced in order to better understand the role of power and determine the pattern of its distribution in supply chain networks. Strategic by their nature, such networks are characterized by the presence of the overall network's goals that are most often set by the focal company. Additionally, there are goals of the single actors constituting the network. On account of this, Frazier (1983a) states that the higher the level of ideological agreement on goals, the less need will exist for the use of power.

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Appendix 1. Power Classification Criteria and Level of Analysis Addressed in Empirical Studies on Power

| Study | Coercive | Reward | Legitimate | Referent | Expert | Coercive/ Noncoercive | Other criteria | Level of analysis | |
|-------------------------|----------|--------|------------|----------|--------|--------------------------|--|-------------------|---------|
| | | | | | | | | Dyadic | Network |
| Galbraith/Stiles (1983) | | | | | | | | X | |
| Gaski/Nevin (1985) | X | X | X | X | X | | | X | |
| Gaski (1986) | X | X | X | X | X | | | X | |
| McAlister et al (1986) | | | | | | | | X | |
| Kale (1986) | | | | | | | Influence strategies (request, recommendation, legalistic plea, promise, threat) and attributed influence | X | |
| Kohli (1989) | X | X | X | X | X | | Manifest influence, informational power, departmental power | X | |
| Keith et al. (1990) | X | X | X | X | X | | Informational power | X | |
| Frazier/Rody (1991) | | | | | | X | Influence strategies (request, recommendation, promise, threat, and legalistic plea) | X | |
| Scheer/Stern (1992) | X | X | | | | | Noncontingent reward, positively and negatively framed contingent reward, and contingent penalty. | X | |
| Johnson et al. (1993) | | | | | | | Mediated/ Nonmediated influence strategies | | |
| Yan/Gray (1994) | | | | | | | Context-based/ Resource-based bargaining power | X | |
| Brown et al. (1995) | X | X | X | X | X | | Mediated/ Nonmediated power (legitimate power as legal and traditional legitimate) | X | |
| Venkatesh et al (1995) | X | X | X | X | X | | Influence strategies (requests, information exchange, recommendations, promises, threats, legalistic pleas), information power, manifest influence | X | |
| Mohr et al. (1996) | | | | | | | Manufacturer control | X | |

| Study | Coercive | Reward | Legitimate | Referent | Expert | Coercive/ Noncoercive | Other criteria | Level of analysis | |
|----------------------------------|----------|--------|------------|----------|--------|--------------------------|---|-------------------|---------|
| | | | | | | | | Dyadic | Network |
| Rawwa et al. (1997) | X | X | X | X | X | | Opportunistic power | X | |
| Hart/Saunders (1997) | X | | | | | | Potential/ Exercised power, Persuasive power | X | |
| Maloni/Benton (2000) | | | | | | | Mediated/ Nonmediated power | X | |
| Jap/Ganesan (2000) | | | | | | | | X | |
| Iglesias et al. (2000) | | | | | | | Control over the economic issues and control over marketing issues | X | |
| Dawes/Massey (2001) | | | | | | | Influence strategies (threats and legalistic pleas), departmental power, manifest influence | X | |
| Rokkan/Haugland (2002) | | | | | | | | X | |
| Buvik/Reve (2002) | | | | | | | | | |
| Chan/Lee (2002) | | | | | | | Power of suppliers and power of IT | X | |
| Klein Woolthuis et al. (2002) | | | | | | | Formal control | X | |
| Kim et al. (2004) | | | | | | | | X | |
| Chatziaslan et al. (2005) | | | | | | | | X | |
| Benton/Maloni (2005) | | | | | | | | | |
| Hu/Sheu (2005) | X | X | X | X | X | | | X | |
| Hu et al. (2005) | | | | | | X | | X | |
| Payan/McFarland (2005a) | | | | | | X | | X | |
| Ramaseshan (2006) | X | X | X | X | X | | | X | |
| Johnston et al. (2006) | | | | | | | | X | |
| Lindblom et al. (2007) | X | X | X | X | X | | | X | |
| Leonidou et al. (2007) | | | | | | X | | X | |
| Bunduchi (2007) | | | | | | | | X | |
| Zhao et al. (2008) | X | X | X | X | X | | Mediated/ Nonmediated power | X | |
| Yeung et al. (2009) | X | | | | | | | X | |

Appendix 2. Empirical Studies on Power Influences in Supply Chains and Marketing Channels

| Author | Study | Research design | Empirical Setting | Method of analysis | Sample size | Level of analysis | Operationalization of power | Results and implications |
|--------------------------|---|---|---|--|---|--|---|---|
| Galbraith/ Stiles (1983) | Study on extended rivalry as cross-industry relations within the chain of production and distribution | Field study | A cross-section of U.S. manufacturing firms | Two stage least squares method (2SLS) | 200 corporations representing over 1200 separate businesses | Dyadic: power between supplier and buyer | Power as a single construct | The results of the estimated model support the hypothesis that power conditions between adjacent stages in the production chain are related to firm profitability. |
| Gaski and Nevin (1985) | Study on the effects of coercive and noncoercive power sources in marketing channels | Field study | Distribution system of the Melroe Division of the Clark Equipment Company | Regression analysis, t-test | 238 dealers and 43 district managers | Dyadic: power between the Clark Equipment Company and dealers | Coercive/non-coercive dichotomization of power | The results support the proposition that exercise of the coercive power source by a supplier has a stronger effect on dealer satisfaction and channel conflict than the mere presence of that power source. In contrast, exercise of the reward power source seems to have only a marginal impact on these dependent variables. |
| Gaski (1986) | Study on effects of various sources of a channel member's power among each other | Field study (mail survey and subsequent telephone interviews) | Distribution system of the Clark Equipment Company | LISREL, structural equation modeling (SEM) | 21 completed questionnaires | Dyadic: power between manufacturer and dealer | Reward, coercion, expert, referent, and legitimate power sources | The research findings introduce a new complexity to the consideration and investigation of power related phenomena in distribution channels. The use of reward and coercion may have a compound impact on one's power. |
| McAlister et al (1986) | Study on the use of a moderately high externally set profitability constraint as a goal-setting mechanism for controlling channel negotiators | Laboratory experiment (four experimental sessions of a market simulation) | MIT Sloan School master's students | The market method | Four classes of students | Dyadic: power between buyers (retail stores) and sellers (manufacturers) | Power as a single construct determined by manipulating the number of buyers and sellers in each of the four markets, as well as the maximum number of transactions the buyer and seller were allowed to complete. | An unbalanced power condition leads the channel members to divert their attention from problem solving to identifying the extent to which they can benefit (avoid harm) from the power imbalance. |

| Author | Study | Research design | Empirical Setting | Method of analysis | Sample size | Level of analysis | Operationalization of power | Results and implications |
|------------------------|---|--|---|--|--|---|--|---|
| Kale (1986) | Study of dyadic channel relationships in India | Field study | The distribution channel in the tungsten carbide tool industry in India | Correlation Analysis | 51 dealers representing four different manufacturers | Dyadic: power between manufacturer and dealer | Power conceptualized through dependence, influence strategies (request, recommendation, legalistic plea, promise, threat) and attributed influence (degree of control a dealer perceives a manufacturer to exert on the dealership). | The study findings generally suggest that the more powerful manufacturers in a sellers' market are perceived to rely on threats, promises, and legalistic pleas to influence their dealers. |
| Cather and Howe (1989) | Study of distribution channel management strategies of the property-liability insurance industry | Field study (mail questionnaire) | Managers of exclusive agency and independent agency insurers | Factor analyses, t-tests | 94 respondents | Dyadic: power between independent and exclusive agency insurers | Coercive/non-coercive dichotomization of power | Results indicate that the use of coercive strategies was associated with increased channel conflict for both independent and exclusive agency insurers. The use of noncoercive strategies was associated with decreased channel conflict for independent agency insurers. |
| Kohli (1989) | Study of factors that affect an individual's influence in a buying center. | Field study (personal Interviews, mail survey) | National Association of Purchasing Management | Factor Analysis | 251 members | Dyadic: power between source and target | Manifest influence (changes in purchase decision related opinions and behaviour), informational power, departmental power (the status of a source's department) | The study reported assesses the relative importance of several influence determinants by simultaneously examining a more comprehensive set of variables than were used in previous individual studies. |
| Keith et al. (1990) | Study of the effects of broker's dependence on a principal on the principal's use of influence strategies | Field study | Food broker firms - members of the National Food Brokers Association (NFBA) | ANOVA, Regression analyses, t-tests, Factor analysis | 232 brokers | Dyadic: power between food broker and supplier | The first factor was type of power base with five levels- reward, coercive, expert, information, and referent. The second factor was the dependence of the broker on the principal and had two levels- high and low. | Results suggest that a broker's dependence on a principal has a strong effect on the broker's readiness to respond to a request made by the principal. The greater the broker's dependence, the more likely the broker was to respond to the principal's request. |

| Author | Study | Research design | Empirical Setting | Method of analysis | Sample size | Level of analysis | Operationalization of power | Results and implications |
|-------------------------|--|---|--|--|------------------------------------|--|---|---|
| Frazier and Rody (1991) | Study on the use of influence strategies in interfirm relationships in industrial product channels | Field study | National distributors with sales revenues between \$1 and \$10 million | MANOVA, Correlation Analysis | 930 industrial distributors | Dyadic: power between supplier and distributor | Influence strategies (request, recommendation, promise, threat, and legalistic plea) | The noncoercive and coercive categorization of influence strategies adopted in the study appears somewhat simplistic and crude, partly because of our inability to make use of the recommendation strategy measures. |
| Scheer and Stern (1992) | Study on the effect of influence type and performance outcomes on attitude toward the influencer. | Laboratory research (12 treatment conditions in a 4 X 3 factorial design) | Diagnostix Distribution Company, a distributor of medical diagnostic equipment | Variance and correlation analysis, Factor analysis | 233 MBA students and 32 executives | Dyadic: power between manufacturer and distributor | Noncontingent reward, contingent reward (positively framed), negatively framed contingent reward, and contingent penalty. | Identical power resources had different effects on the target's satisfaction and trust when they were exercised negatively rather than positively and contingently rather than noncontingently. |
| Johnson et al. (1993) | Study of the influence of perceptions on control and conflict in the relationship | Field study | Japanese distributors of U.S. products | Factor Analysis | 74 respondents | Dyadic: power between U.S. supplier and Japanese distributor | Mediated/non-mediated dichotomization of power | This study has demonstrated empirically, that the social psychological factors of trade relationships must adapt when the relationships cross cultural boundaries. |
| Yan and Gray (1994) | Study on bargaining power effects on the structure of management control in a joint venture and venture performance. | Field study (in-depth interviews) | Partners from the U.S. and China | Case Analyses Method | 4 joint ventures | Dyadic: power between partners from the U.S. and China | Power conceptualized as context-based bargaining power (stakes and availability of alternatives) and resource-based bargaining power (the resources and capabilities committed by the partners to a joint venture). | The findings of this comparative case study provide confirmative evidence that the relative levels of joint venture partners' bargaining power has a significant impact on the pattern of parent control in the venture's management. |

| Author | Study | Research design | Empirical Setting | Method of analysis | Sample size | Level of analysis | Operationalization of power | Results and implications |
|------------------------|---|--|--|---------------------|-----------------|--|--|---|
| Brown et al. (1995) | Study on the impact of the supplier's use of power on the retailer's commitment to the channel relationship and both supplier and retailer performance | Field study (pre-test interviews, mail survey) | Farm equipment dealers in Iowa, Nebraska and Kansas | LISREL 7 | 203 dealers | Dyadic: power between dealers and buyers | Power is conceptualized a mediated (i.e., reward, coercion, legal legitimate) and nonmediated (i.e., expertise, referent, information, traditional legitimate) | The findings of this study provide partial support for the notion that the effectiveness of power usage is moderated by the balance of power. When the retailer is more powerful, the supplier's use of mediated power erodes the retailer's commitment to the channel relationship to a greater degree than when either the supplier is more powerful or when power is balanced. |
| Venkatesh et al (1995) | Study on the pervasiveness of the six influence strategies | Field study (mail survey) | Members of the National Association of Purchasing Management | Factor analysis | 187 respondents | Dyadic: power between suppliers and the purchase committee members | Power conceptualized as five power bases corresponding to influence strategies (requests, information exchange, recommendations, promises, threats, legalistic pleas) and manifest influence | Findings suggest that noncoercive strategies (i.e., information exchange and requests) and recommendations (a soft coercive strategy) are the most frequently used strategies, whereas threats and promises (high on instrumentality) are used the least. |
| Mohr et al. (1996) | Study on the effects of the interrelationships of governance and communication on collaborative communication on channel outcomes across various levels of integration and control. | Field study | Computer franchise channel | Regression Analysis | 125 respondents | Dyadic: power between manufacturer and dealer | Power conceptualized as manufacturer control (dealer's perceptions regarding the degree to which the manufacturer controlled or influenced the dealer's decisions and operations). | The findings for manufacturer control indicate significant interactions between control and collaborative communication for all three outcomes. More collaborative communication has a stronger, positive effect on outcomes under low-control situations, and a weaker, positive effect under high-control situations. |

| Author | Study | Research design | Empirical Setting | Method of analysis | Sample size | Level of analysis | Operationalization of power | Results and implications |
|--------------------------|---|--|---|--|---|---|--|--|
| Rawwa et al. (1997) | Study on the processes of managing conflict in channels of distribution by utilizing power | Field study (mail survey) | National sample of independent U.S. pharmacists | LISREL VII | 551 independent retailers | Dyadic: power between retailer and wholesaler | Opportunistic, reward, coercive, referent, expert and legitimate power sources | Respondents agreed that the use of reward power enhances the use of referent, expert and legitimate power sources, while the use of coercive power detracts from the use of referent, expert and legitimate power sources. |
| Hart/Saunders (1997) | Study on the implications of new organizational forms, extending prior work which has considered interfirm linkages only at a general level but not in detail | Field study (case study consisting of a set of interviews) | Large office supply retail firm which began using ED1 | Descriptive statistics | Director of Distribution and Distribution Systems and the ED1 Coordinator of the retail firm. | Dyadic: power between supplier and buyer | Potential versus exercised power, persuasive versus coercive power | The case suggests how ED1 adoption and use can be an opportunity for developing trust. It provides evidence of trustful behaviour emerging particularly from the explorations carried on with certain special suppliers. |
| Maloni and Benton (2000) | Study on power effects on the distribution channel relationships | Field study | U.S. Automotive Industry | Structural equation modeling, Confirmatory Factor Analysis (CFA) | 180 Tier I suppliers of the Chrysler Corporation and Honda of America | Dyadic: power between suppliers and buyers | Mediated/non-mediated dichotomization of power | This paper provides both instigation and insight for the academic and practitioner pursuit of power influences in the supply chain. Despite the value of this research in exposing power issues, it does not offer a complete analysis of power effects. |

| Author | Study | Research design | Empirical Setting | Method of analysis | Sample size | Level of analysis | Operationalization of power | Results and implications |
|-------------------------|---|--|---|---|--|--|---|---|
| Jap and Ganesan (2000) | Study on management of the hold-up potential of these transaction-specific investments (TSIs) through the use of three control mechanisms | Field study | Independent retailers, retail cooperatives, and national retailers from all the supplier's geographic markets in the U.S. | ANOVA, Confirmatory Factor Analysis (CFA), Regression Analysis | 1457 respondents | Dyadic: power between suppliers and retailers | Power conceptualized through interdependence magnitude and asymmetry, number of alternatives available to the retailer, length of the relationship with the supplier, type of retailer. | The results indicate that the retailer's perceptions of supplier commitment are positively related to its evaluation of supplier performance and satisfaction and negatively related to conflict. |
| Iglesias et al. (2000) | Study on the effects of exclusivity agreements on marketing channels | Field study (mail survey) | Manufacturing companies and wholesalers in the beverages industry in Spain | Factorial Analysis of Variance, ANOVA | 241 distributors and 151 manufacturers | Dyadic: power between wholesaler and supplier (manufacturer) | Power conceptualized as control over the economic issues (control over prices and control over deferred payments) and control over marketing issues (control over the distributor's assortment, over the design of promotions, and over the wholesaler's prices to customers). | The results obtained in the empirical research showed the weak ability of these exclusivity agreements to provide an incentive for distributors to improve their role performance. |
| Dawes and Massey (2001) | Study of the nature of one of the least understood of marketing's cross-functional relationships (CFRs) | Field study (identical pre-tested, self-administered mailed questionnaire) | Australia and the UK | MANOVA: GLM procedure of SPSS, confirmatory factor analysis (CFA), AMOS | 201 respondents | Dyadic: power between sales manager and | Power conceptualized as influence strategies of (1) threats and (2) legalistic pleas, departmental power (refers to the relative importance of a department to an organization in general), manifest influence (actual effect in terms of changing the opinions and behaviours of other members). | Overall, 17 out of the 20 hypotheses were found to be statistically significant. Consequently, very strong support is found for the model. |

| Author | Study | Research design | Empirical Setting | Method of analysis | Sample size | Level of analysis | Operationalization of power | Results and implications |
|----------------------------|---|---|---|--|--|--|---|---|
| Rokkan and Haugland (2002) | Study on the effect of power and effectiveness on the relational exchange process between voluntary retail chains and their vendors. | Field study | Retail chains | OLS regression analysis | 3 chain-vendor cases | Dyadic: power between the chain and the vendor | Power as a single construct | One major contribution of this study is to show that characteristics of one interorganizational system (the chain) have an impact on another interorganizational system (the chain-vendor relation). This study has pointed out some important factors of effective interorganizational governance. |
| Buvik and Reve (2002) | Study on the buyer's power influences on the alignment of contractual safeguarding of buyer-specific and supplier-specific investments. | Field study | Manufacturing firms in Chemical Production (25%) and Engineering Production (45%) | Regression analysis | 151 industrial marketing relationships | Dyadic: power between supplier and buyer | Power as a single construct conceptualized as the ratio of supplier-dependence and buyer-dependence | This research has addressed two specific aspects of business-to-business relationships economic dependence and relational ties and both seem to be significant antecedents of contractual governance in buyer-seller relationships. |
| Chan/Lee (2002) | Study to test a model of electronic procurement (e-procurement) adoption behaviour by Small- to Medium-sized Enterprises (SME) | Multiple case study research (interviews with SME personnel, direct observations and documents) | Garment manufacturer and trading firms belonging to the SME sector in China | Tables, matrices and other graphical representations | Four cases | Dyadic: power between suppliers and buyers | Power is classified as power of suppliers and power of IT | Power of suppliers is not as significant as expected. Although e-procurement is a synchronous adoption of technology, none of the firms interviewed consider power of suppliers as an important factor driving them to adopt e-procurement. |

| Author | Study | Research design | Empirical Setting | Method of analysis | Sample size | Level of analysis | Operationalization of power | Results and implications |
|-------------------------------|--|---|---|--|---------------|--|--|--|
| Klein Woolthuis et al. (2002) | Study of all combinations of high/low trust and high/low formal control in four longitudinal case studies. | Longitudinal case studies (documents and three face-to-face interviews) | Producer and seller of specialty foods, industrial designer, entrepreneurial firm, pharmaceutical firms | Two-by-two factorial design: high/low trust and high/low formal control. | Four cases | Dyadic: power between | Formal control (private and legal ordering mechanisms (safeguards) to protect against opportunistic behaviour) | Research shows that relationship between trust and formal contracts is a complex and dynamic one. Formal as well as non-contractual agreements can have different meanings in trusting atmospheres and in those where fear of opportunistic behaviour prevails. |
| Kim et al. (2004) | Study on the differentiation of the benefits accruing from keiretsu affiliation across member firms depending on their power in (or dependence on) the keiretsu | Field study | Keiretsu member firms | Regression analysis with dummy variables | 295 firms | Dyadic: power between keiretsu member firms with strong and weak power | Power as a single construct | The results provide general support for the proposition that the keiretsu can be conceptualized as a power dependence system, hence the effects of keiretsu member affiliation differ across individual members according to their power dependence relationships within their keiretsu. |
| Chatziaslan et al. (2005) | Study on analysis of Power in Buyer-Supplier Relationships in the Pharmaceutical Supply Network in the UK National Health Service and its Application to International Markets | Field study (semi - structured interviews based around standard protocols/questionnaires) | The UK pharmaceutical supply chain | The cross-sectional sampling approach | 8 individuals | Dyadic: power between manufacturing and wholesaling organisations | Power as a single construct | The analysis of power distribution in indicates that the power a chain member holds is directly related to whether the product concerned is a branded or a generic pharmaceutical. Apart from the therapeutic value of the pharmaceutical and the existence of substitutes, supply chain power also seems to be linked to the ownership and exploitation of resources. |

| Author | Study | Research design | Empirical Setting | Method of analysis | Sample size | Level of analysis | Operationalization of power | Results and implications |
|--------------------------|--|-----------------|---|---|-----------------|---|--|--|
| Benton and Maloni (2005) | Study on the influences of supply chain power on supplier satisfaction. | Field study | The automobile industry | Exploratory factor analysis (EFA), Structural equation modeling (SEM) | 195 respondents | Dyadic: power between supplier and buyer | Non-mediated power sources (expert and referent), coercive-mediated power sources (coercive and legal legitimate), reward-mediated power | These results show the importance of effective power management as an approach to enhance the integration of the supply chain. This leads to a critical awareness of supply chain power influences for both practitioners and researchers. |
| Hu and Sheu (2005) | Study of the linkages among these dimensions of channel relationships | Field study | Taiwanese personal digital assistant industry | LISREL | | Dyadic: power between dyadic channel members | Power conceptualized as coercive/non-coercive influence strategies | Results indicate that channel climate has a significant impact on channel solidarity; however, this impact may be mitigated by both channel power and the use of noncoercive influence strategies. Channel members with relatively more power appear able to determine the degree of channel solidarity through the use of effective noncoercive influence strategies. |
| Hu et al. (2005) | Study on the relationships of channel power, channel climate, and solidarity in personal digital assistant (PDA) firms | Field study | Taiwanese PDA franchise channel | LISREL 8.2 | 126 respondents | Dyadic: power between franchisor and franchisee | Coercive/non-coercive dichotomization of power | This study has built a conceptual framework among channel power, noncoercive influence strategies, channel climate, and solidarity, six corresponding hypotheses are postulated. The results imply that the mutual speculations between the target member and the source member still remain in the interest-induced power interaction process. |

| Author | Study | Research design | Empirical Setting | Method of analysis | Sample size | Level of analysis | Operationalization of power | Results and implications |
|-----------------------------|--|-----------------|--|---|---|--|---|--|
| Payan and McFarland (2005a) | Study on the effects of noncoercive influence strategies on compliance. | Field study | Distribution firms of specialty tools and fasteners in the United States | LISREL 8.54, Multiple Regression Analysis | 363 owners and managers | Dyadic: power between supplier and dealer | Coercive influence strategies (threats, promises), noncoercive influence (rationality, recommendations, information exchange, and requests) | In summary, this study makes several important contributions. The effectiveness of channels' influence strategies in gaining compliance (their fundamental purpose) is emphasized. |
| Ramaseshan (2006) | Study of channel exchange relationships in China on department stores' relationship with their tenants | Field study | Chinese department stores in Shanghai and Guangzhou | LISREL 8 | 295 sub-tenants was drawn from the 1210 names provided by the department stores | Dyadic: power between department stores' and their tenants | Coercive/non-coercive dichotomization of power | From the findings, the nonsignificant relationship between contingent use of coercive power on both economic and social satisfaction suggests that Chinese channel members behave differently from their Western counterparts in responding to channel partner coercion. |
| Johnston et al. (2006) | Study to explore the issues of collaboration in virtual organisations | Case study | UK companies across a range of manufacturing and service industries | Self-Assessment Methodology | 25 SMEs | Dyadic: power between suppliers and | Power as a single construct | Getting SMEs to collaborate outside of a major contract allows SMEs to build mutual trust to the benefit of all. However, achieving this is an immensely difficult task. Whilst some will become involved in a formal partnership, such as a supply chain, most will not because they have no power in such a system unless they have 'expertise leverage' |

| Author | Study | Research design | Empirical Setting | Method of analysis | Sample size | Level of analysis | Operationalization of power | Results and implications |
|------------------------|--|--|--|---|--|---|--|---|
| Lindblom et al. (2007) | Study on suppliers' control over category management (CM) in the context of Finnish and Swedish supplier-retailer relationships. | Field study | Manufacturing firms in the fast-moving consumer-goods industry in Finland and Sweden | ANOVA, F-test, t-test | 116 respondents from the marketing departments of supplier firms | Dyadic: power between suppliers and retailers | Power conceptualized as French and Raven's five bases of social power. | The study revealed that both Finnish and Swedish suppliers have most influence over in-store promotions and least influence over pricing. In the Finnish context, the extent of power is dependent on the market position of supplier. So-called market leaders i.e. suppliers that have highest market share in the focal category have more control over CM tactics than smaller suppliers. |
| Leonidou et al. (2007) | Study of the working relationships among U.S. export manufacturers of industrial goods and foreign customers | Field study | U.S. export manufacturing firms | Descriptive statistics, Confirmatory factor analysis (CFA), Structural equation model | 1500 firms | Dyadic: power between manufacturers and foreign customers | Coercive/non-coercive dichotomization of power | One central conclusion which can be drawn from this study is that the nature of the power source exercised plays an instrumental role in fostering or weakening trust and commitment in international business relationships, through the mediating role of conflict and satisfaction. |
| Bunduchi (2007) | Study to analyse the outcome that the use of Internet based electronic markets has on the nature of inter-organisational relationships | Instrumental case study research design (semi-structured interviews) | Petrotell a service company belonging to one of the four major petroleum companies | Interpretive research approach | Single case | Dyadic: power between Petrotell and smaller companies | Power as a single construct | The paper proposes a framework based on the combination of TCE and SET approaches to analyse inter-organisational relationships and the outcome that the use of EM has on the nature of these exchanges. |

| Author | Study | Research design | Empirical Setting | Method of analysis | Sample size | Level of analysis | Operationalization of power | Results and implications |
|---------------------|--|---------------------------|--|--|---------------------------------|---|--|--|
| Zhao et al. (2008) | Study of the impact of power and relationship commitment on chain integration (CI), using power–relationship commitment theory | Field study (mail survey) | Chinese Manufacturer s Association for Hong Kong | Exploratory and Confirmatory Factor Analysis (CFA, EFA), ANOVA, Structural equation modeling (SEM) | 617 randomly selected companies | Dyadic: power between manufacturer and customer | Power sources according to French and Raven (1959), mediated/non-mediated dichotomization of power | This study makes a contribution to the SCM and relationship management literature by systematically examining the influence of power on relationship commitment in a SC context. The results show that appropriate use of power can significantly enhance relationship commitment. |
| Yeung et al. (2009) | Study of the effects of trust and coercive power on supply chain integration | Field study (mail survey) | Chinese Manufacturer s Association for Hong Kong | Exploratory and Confirmatory Factor Analysis (CFA, EFA), Cluster analysis, MANOVA | 617 randomly selected companies | Dyadic: power between manufacturer and customer | Power is conceptualized as French and Raven’s coercive power source | The findings suggest that using power and trust to manage relationships can improve supply chain integration. Managers should combine these two methods to achieve better integration. |

Appendix 3. Overview of the Empirical Studies on Power according to Reviewed Journals and Key Words

| Journal | Keywords | Study |
|---|----------|---|
| Working paper | Power | - Chatziaslan et.al. (2005) - Maloni and Benton (1999) - Dawes and Massey (2001) - Lindblom et.al. (2007) - Klein Woolthuis et al. (2002) |
| International Journal of Retail & Distribution Management | Power | - Dapiran et.al. (2003) |
| Academy of Management Journal | Power | - Yan and Grey (1994) |
| Journal of International Business Studies | Power | - Johnson et.al. (1993) |
| Journal of Marketing | Power | - Mohr et.al. (1996) - Kohli (1989) - Keith et.al. (1990) - Venkatesh et.al. (1995) - Frazier and Rody (1991) |
| The Journal of Risk and Insurance | Power | - Cather and Howe (1989) |
| Journal of Marketing Research | Power | - Jap and Ganesan (2000) - Kale (1986) - Gaski (1986) - McAlister et.al. (1986) - Gaski and Nevin (1985) - Scheer and Stern (1992) |
| European Journal of Marketing | Power | - Rokkan and Haugland (2000) |
| Journal of Marketing Channels | Power | - Iglesias et.al (2000) |
| Industrial Marketing Management | Power | - Leonidou et.al. (2007) - Hu and Sheu (2005) - Bunduchi (2007) |
| Strategic Management Journal | Power | - Galbraith and Stiles (1983) - Kim et.al. (2004) |
| Scandinavian Journal of Management | Power | - Buvik and Reve (2002) |
| International Journal of Networking and Virtual Organisations | Power | - Johnston et.al. (2006) |
| Journal of Business Research | Power | - Rawwas et.al (1997) |
| Journal of Retailing | Power | - Brown et.al. (1995) - Ramaseshan et.al. (2006) |
| Organization Science | Power | - Hart and Saunders (1997) |
| Proceedings | Power | - Chan and Lee (2002) |
| International Journal of Production Economics | Power | - Yeung et.al. (2009) |
| Journal of Operations Management | Power | - Zhao et.al (2008) - Benton and Maloni (2005) |
| Working paper | Control | - Chatziaslan et.al. (2005) - Maloni and Benton (1999) - Lindblom et.al. (2007) - Klein Woolthuis et al. (2002) |
| International Journal of Retail & Distribution Management | Control | - Dapiran et.al. (2003) |
| Academy of Management Journal | Control | - Yan and Grey (1994) |
| Journal of International Business Studies | Control | - Johnson et.al. (1993) |
| Journal of Marketing | Control | - Mohr et.al. (1996) - Kohli (1989) - Keith et.al. (1990) |
| The Journal of Risk and Insurance | Control | - Cather and Howe (1989) |

| Journal | Keywords | Study |
|---|-----------------|---|
| Journal of Marketing Research | Control | - Jap and Ganesan (2000) - Kale (1986) - McAlister et.al. (1986) - Scheer and Stern (1992) |
| Journal of Marketing Channels | Control | - Iglesias et.al (2000) |
| Scandinavian Journal of Management | Control | - Buvik and Reve (2002) |
| Organization Science | Control | - Hart and Saunders (1997) |
| Strategic Management Journal | Control | - Kim et.al. (2004) |
| Journal of Retailing | Control | - Ramaseshan et.al. (2006) |
| International Journal of Production Economics | Control | - Yan Yeung et.al. (2009) |
| Journal of Operations Management | Control | - Zhao et.al. (2008) - Benton and Maloni (2005) |
| Industrial Marketing Management | Control | - Bunduchi (2007) |
| Working paper | Dominance | - Chatziaslan et.al. (2005) - Lindblom et.al. (2007) |
| International Journal of Retail & Distribution Management | Influence | - Dapiran et.al. (2003) |
| Academy of Management Journal | Influence | - Yan and Grey (1994) |
| Journal of International Business Studies | Influence | - Johnson et.al. (1993) |
| Journal of Marketing | Influence | - Mohr et.al. (1996) - Payan and McFarland (2005) - Kohli (1989) - Keith et.al. (1990) - Venkatesh et.al. (1995) - Frazier and Rody (1991) |
| The Journal of Risk and Insurance | Influence | - Cather and Howe (1989) |
| Journal of Marketing Research | Influence | - Kale (1986) - Gaski (1986) - Scheer and Stern (1992) |
| Industrial Marketing Management | Influence | - Leonidou et.al. (2007) - Hu and Sheu (2005) - Bunduchi (2007) |
| Strategic Management Journal | Influence | - Galbraith and Stiles (1983) - Kim et.al. (2004) |
| Scandinavian Journal of Management | Influence | - Buvik and Reve (2002) |
| Journal of Retailing | Influence | - Brown et.al. (1995) - Ramaseshan et.al (2006) |
| Organization Science | Influence | - Hart and Saunders (1997) |
| Working Paper | Influence | - Maloni and Benton (1999) - Dawes and Massey (2001) - Lindblom et.al. (2007) |
| Proceedings | Influence | - Chan and Lee (2002) |
| International Journal of Production Economics | Influence | - Yeung et.al. (2009) |
| Journal of Operations Management | Influence | - Zhao et.al (2008) - Benton and Maloni (2005) |