# Power asymmetries in the wine chain – Implications for the management of the chain

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**Abstract**

Due to the characteristics of wine, it is usually not produced and marketed in vertically integrated chains but rather in vertical collaborations also called "supply chain networks". Being of strategic nature, such networks can be characterized as pyramidal-hierarchic collaborations which possess a focal firm (chain captain) coordinating the network in a hierarchical style. The focal firm in the wine sector faces the challenge to manage and integrate many (small) wine growers, whereby wine cooperatives also play a key role. Due to the pyramidal-hierarchical structure of supply chain networks power is an essential part of them, and the fact that it is asymmetrically distributed among the participating parties is quite obvious, which might pose difficulties for member-owned wine cooperatives. The aim of our article can be delineated from the problem setting. Speaking about power in the wine supply chain we do not refer to market power. But what is power? Studying the literature shows that there is no clear answer to this question. Thus, the first aim of our research is to elaborate on that question and provide an answer. We then continue by analysing power distribution between cooperatives and retailers, and between cooperatives and their members, and discuss managerial implications.

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## 1 Introduction

Wine production in Germany has a tradition of more than 2000 years in each of the 13 German quality wine-growing regions along the rivers Rhine, Neckar, Main, Mosel, Saar, Ruwer, Ahr, Saale, and Unstrut. Traditionally in Germany, viticulture was one of several different plantations on most farms, and the farms as well as the vineyards were very small. Corresponding with the structural change in the agricultural sector, the farms increased their acreage and production as they specialized. The necessity for high intensity of labour hours on the one hand and the simple equipment for small growers on the other hand makes viticulture economically attractive for full-time as well as part-time farmers. Thus, the majority of wine growers are members of cooperatives so that in some regions, co-ops hold a market share of nearly 75 %. The three main distribution channels are discount retail chains, retailers, and direct sales of the producers. The continuing increase of sales volume in the retail distribution channels leads to a shift in the power in the wine chain. Competing fiercely German wine producers must aggressively meet the demands of their customers, both consumers as well as retail customers. Therefore, even cheap wine has to be of acceptable quality. Comparing the average prices, it is evident that the quality requirements on German wine are more demanding than ever. Retail customers are particularly interested in professional supply chain management, so that strictly coordinated vertical linkages are gaining importance.

Because wine growing and production require particular knowledge wine is usually not produced and marketed in vertically integrated food chains but rather in vertical collaborations also called “netchains” (Lazzarini et al., 2001) or “supply chain networks” (SCN) (Hanf and Kühl 2005). Due to the characteristics of wine, generally networks in this sector are strategic networks. Such networks can be characterized as pyramidal-hierarchic collaborations (Jarillo, 1988). On account of this, they possess a focal firm (chain captain) coordinating the network firm in a hierarchical style. Additionally, the intensity of the relations within strategic networks is rather high and they inhere to recurrent interactions (Burr, 1999). The focal firm is in general that firm that is identified by the consumers as being ‘responsible’ for the specific food item, e.g. manufacturers in the case of a producer brands and retailers in the case of distributors own brands. The other network actors are more or less heavily dependent on the focal company because of (long lasting) explicit or implicit contracts. The level of dependency is usually higher for vertical than for horizontal ties (Wildemann, 1997). In the case that the focal organization itself is dependent on critical inputs of its supplier a mutual dependencies exists so that the supplying organizations restore some power of the focal company (Medcof, 2001). This argumentation of the resource dependency theory (Pfeffer/Salancik, 1978) is getting evident if the procurement relationships in today's wine business are taken into account. The highly specialized equipment of the processing firms requires continuously high specifications on the inputs so that the processors cannot dispose suppliers frequently. For example, in order to be able to market wine under the new 'profile wine concept' in Germany the vines must be rated, labour-measures in the vineyards must be defined over the year, special harvesting requests must be fulfilled even the vines have to be registered by the Federal Wine Authorities. Thus, the wine maker is (heavily) depending on the wine growers. Nevertheless, as the focal company is the core element of the SCN it must have also the power to align the actions of the network partners so that it has the ability to manage the network in order to realize the strategic objectives.

This means in the wine sector that the focal company faces the challenge to manage and integrate many (small) wine growers in the supply chain network. Thus, being the traditional form of horizontal cooperation cooperatives play a key role hereby. However, due to their status coops are member orientated which might result in integration problems in such customer-oriented supply systems. Furthermore, due to the pyramidal-hierarchical structure of SCN power is an essential part of them and, therefore, an unequal power distribution between the chain actors is obvious. As a member-owned enterprise coops this might lead coops into great difficulties. Here one as to differ between two cases. A) Difficulties resulting from power asymmetries with the non-members, i.e. buyers from and sellers to the coops. Particularly since often buyers – such as large retailers – can be considered to be the focal company. B) Power imbalances with the members i.e. considering the governmental level members as the owners of the coop have some formal power over the coop while on the other side coops as the buyer / supplier in turn have power over the members.

The aim of our article can be delineated from the problem setting. It is obvious that speaking about power in supply chain networks we do not refer to market power. But, what is really power? Studying the literature shows that there is no easy answer to this question. Thus, the first aim of our research is to elaborate on that question and to provide an answer. Knowing about what we talk we want to continue by analysing the power distribution between co-ops and retailers, and between coops and their members. In order to handle these tasks we will restrict coops to marketing coops of the Raiffeisen type. By using the German wine sector and hence wine co-ops we try to show the relevance that our study has in and for 'real (business) life'.

## 2 The German wine sector and wine cooperatives

### 2.1 The sector

The German wine sector is still dominated by small wine growers so that there are more than 34,375 wine-businesses. Nearly half of them cultivate less than 1 ha vineyard while only about 2,000 wine growers own more than 10 ha. The majority (more than 58,000) of wine growers are members of cooperatives. In 2007 the German cooperative sector could be divided into 214 primary co-ops and two secondary co-ops. However, only 130 of the primary co-ops possessed their own vinification facilities. The acreage planted with vines by all members increased up to 31,342 ha, so that more than 31% of all German area was under cultivation. In the financial year 2006/2007 wine co-ops produced 3.1 million hectolitres wine, accounting for over 30 % of the total wine-production in Germany. In particular, in the regions of Baden, Württemberg, and Franken, where grape production is dominated by part-time viticulturists, membership in cooperatives is widespread. As table 1 shows, in some of those regions, co-ops hold a market share of over 75 %.

Table 1: Wine harvest 2005

| Region | Total* hl | Cooperatives** Quantity hl | Cooperatives** Percentage % |
|---|---|---|---|
| Rheinhessia | 2,555,064 | 160,876 | 6.3 |
| Pfalz | 1,884,891 | 396,510 | 21 |
| Rheingau | 202,028 | 19,284 | 9.5 |
| Hessische Bergstrasse | 29,288 | 22,241 | 75.9 |
| Ahr/Mosel-Saar-Ruwer/Mittelrhein/Nahe | 1,663,887 | 296,288 | 17.8 |
| Baden | 1,247,439 | 866,420 | 69.5 |
| Württemberg | 1,124,724 | 895,493 | 79.6 |
| Franken | 400,182 | 160,209 | 40 |
| Sachsen/Saale-Unstrut | 47,190 | 28,699 | 60.8 |
| Total | 9,154,693 | 2,846,020 | 31.1 |

Source: *Statistisches Bundesamt 2006; ** DRV-Weinwirtschaftsjahr, 2006

On top of the German wine production that accounts for roughly 10 million hectolitres of wine additional 12 million hectolitres are imported, so that the total wine market has a volume of roughly 22 Mio hectolitres, The three main distribution channels are discount retail chains (40% market share), retailers (30% market share), and direct sales of the producers (19% market share). An increase in the sales of discounters and retailers has been observed for many years leading to significant changes. First, because often consumers buying in retail outlets are occasional wine drinkers, they are looking for uncomplicated signals, such as reputation or brands, to signal quality. This trend is mirrored in the rising importance of wine brands such as "Balaton" or "Blanchet" and in the fact that the majority of retail customers choose imported wines with an easily understandable and asymmetric information-reducing label (Schweickert, 2001). Because consumers are often baffled by the jargon on German wine labels (Johnson, 1995) and often have been disappointed with their quality retailers demanded some changes so that the profile wine concept has been introduced (Schweickert, 2002). On the one hand it groups wine accordingly to two easy understandable labels and on the other hand requires a firm boundary overlapping quality management system. Second, the intensive competition has lead to decreasing prices so that today the average price for German wine is 3.48 Euro, and the average price for imported wine is 2.97 Euro. However, since particular wine from the 'new world' is designed to please the consumers taste even this cheap wine has to be of acceptable quality. Third, in order to export wines the foreign competitors dispose over sophisticated managerial and logistical processes so that they are able to cater to the rising demands of the retailers on professional supply chain management, in terms of time delivery as well as minimum quantities. Hence, SAP Business One or equivalent IT-Infrastructures managing intra (e.g. ERP systems) and inter-firm (e.g. CRM and SRM systems) processes can be regarded as today's must haves (Lebensmittelzeitung, 2008). Overall, it is to notice that the continuing increase of sales volume in retail distribution channels and the related occurring changes also leads to a shift in the power in the wine chain in favour of the retailers.

### 2.2 Raiffeisen cooperatives in the wine sector

The description of the German wine market has shown that wine cooperatives have a special role in the market. According to their statutes, wine cooperatives are self-help organizations for wine growers. Their aim is to improve the economic situation of their members by collaboration in vinification and marketing of the grapes or their processed products. Accordingly, the general function of wine cooperatives is to process grapes; produce must; and vinificate (fermentation, fining, clearing, and other oenological practices in the cellar for winemaking), bottle, and market the wine. Thus, the wine co-ops are so indispensable to part-time wine growers that in many communities they are common institutions with a social impact similar to that of local governments (Hoffmann, 2000).

In accordance with the general Raiffeisen cooperative system, a secondary "central-wine co-operative" ("central co-op") has been established in both of the wine-growing regions of Baden and Württemberg, where there are more than 70 non-vinificating wine cooperatives ("dry" wine co-ops). For them, "central co-ops" function as the vinificating unit so that the "dry" wine co-ops only have to collect the grapes of their wine growers and deliver the grapes of the whole vintage. Another task of the "central co-op" is to stabilize the supply. Therefore, many of the wine co-operatives with their own vinification ("wet" wine co-ops) deliver a contractual share of bulk wine from their vintage. However, there are significant differences regarding the business concepts of the primary co-operatives with their own vinification. Hoffmann (2000) divided the "wet" wine co-ops into three different groups. First, there are "wet" wine co-ops which are active on a limited local or regional market called "Local Heroes". They have created a very high consumer preference for their products in their local markets and they often control the predominant part of the local vineyards. Those in the second category of "wet" wine co-ops have established a kind of "brand" with the name of their village or community. Such products vary widely in quality and are often positioned in the middle and upper quality segment in the specialized retail and the restaurant branch. The third category consists of larger vinificating co-ops which are both positioned in the middle and upper quality segments and are active in the price-dominated retail and bulk-wine competition.

Table 2: German Wine cooperatives

| Region | Coops Total | "Wet" Coops With own vinification |
|---|---|---|
| Rheinhessia | 11 | 10 |
| Pfalz | 21 | 21 |
| Rheingau | 8 | 7 |
| Hessische Bergstrasse | 2 | 2 |
| Ahr/Mosel-Saar-Ruwer/Mittelrhein/Nahe | 11 | 11 |
| Baden | 96 | 46 |
| Württemberg | 67 | 31 |
| Franken | 5 | 5 |
| Sachsen/Saale-Unstrut | 2 | 2 |
| Total | 223 | 135 |

Source: DRV-Weinwirtschaftsjahr, 2006.

Because retailers have the major stake in the wine marketing channel, cooperatives must use different distribution channels to market their products. Facing the demands of the retailers, such as continuously supplying them on a national basis, has led to some structural adjustments in the cooperative sector. Because the majority of the "wet" wine co-ops cannot afford to have their own distribution force, "central cooperatives" have gained importance. They mainly operate upstream in the wine chain, selling bottled wine from "wet" wine co-ops to retailers nationwide. By being centralized and marketing large quantities, they are able to meet the retailers' demands of high quantities paired with high demands on the IT infrastructure.

For example, retailers demand to set the standards in the digital exchange, i.e. electronic orders and invoices between two ERP systems. Not complying with these standards leads to a 2% reduction of the paid bill by. Because of these sanctions, the task of the "central co-ops" is to collect the wines from the "wet" co-ops by paper orders and invoices and sell them to the retailers by electronic interfaces. Thus, in general, the "central wine co-ops" mediate between the primary cooperatives and the retailers by marketing wine nationwide and managing the relations with the retailers. Particularly "Local Heroes" benefit because they can focus their marketing efforts on specialized retailers (special wine stores), local retailers, restaurants, and direct selling (Albert, 2008). In regions without "central coops" it is observable that larger "wet coops" (third category) grow in volume by merger and/or collaboration with other coops so that they can also cater to the retailers demands (Weinwirtschaft, 2007).

Demanding higher quality and larger quantities retailers facilitate some traditional (quality) problems which coops face. Eilers and Hanf (1999) showed in general that it is not clear who is the principal and who is the agent, i.e. both the cooperatives and the members can be principals and agents. For this reason, neither leadership mechanisms nor selective terms of delivery can be enforced by the cooperatives, i.e. the members can deliver all the commodities which alternative dealers do not accept. Cooperatives that are forced to accept these commodities face the problem of adverse selection. Furthermore, Cook (1995) pointed out free riding problems, horizon problems, portfolio problems, control problems, and influence cost problems. This means in the wine context that each viticulturist that belongs to a "wet" wine co-op can produce the grapes for every wine that he wishes, regardless whether the grapes match the consumer quality criteria in taste. As a result, members select their grapes adversely so that they sell the better-quality grapes to other mostly private owned enterprises. Furthermore, this problem is catalysed since usually "wet" wine co operatives pay the same price for the same grape, graded to six predicate levels which are determined by a minimum degree °Oechsle. Thus, from the introduction of the new profile wine concepts particularly "wet" coops could profit because it enabled them to install a quality management that demands more than waiting to see what the vintage will bring and making the best with the raw material. Under the new concept, wine growers (members) need to know in advance which care and attention measures they will use to achieve the optimum grape quality for a special type of profile wine: appropriate vine-cutting, adjusted green cover and fertilization, special vine protection, and desuckering and thinning out surplus grapes. Moreover, a rating of the vines, defined labor-measures in the vineyards over the year and special harvesting requests must be conducted and supervised by the co-op. Thus, wine co-ops know the quality levels to be expected by the documentation of each vintage; therefore, they can plan the process and rate the grapes before they are pressed so that co-ops pay more for those grapes that produce a higher-quality wine (Hanf/Schweickert 2007).

Summarizing the paragraphs on the German wine sector and German wine coops we notice that due to the changes of consumer behaviour retailers – particularly discount chains are gaining importance and power. This again leads to a shift in distribution. Today wine has to be distributed throughout the whole nation so that the reliability of supply and thereby supply chain management is also gaining in importance. Because of the increased importance of wine imports – particularly from the 'new world' – branded wines which are facilitated with high performance supply chain in the back are increasing their shares in the retail shelves. This development has severe consequences on wine coops in Germany. In order to stay on the market they have to rework their distribution channels, distribution management, and their supply chain management. Consequently they have to engage themselves into supply chain organisations which are of pyramidal-hierarchical structure. Furthermore, secondary coops such as the "central co-ops" are gaining in importance. Due to the increased demands on quality and efficiency it is of increasing importance that the management of primary coops are able to control and monitor the production processes of their members and their suppliers. Thus, we conclude that studying power, its distribution and the thereof resulting consequences for relationships among the actors of the whole supply chain and their management is of great importance.

## 3 Power

### 3.1 Definition of Power

But, what is "power"? Most people believe to know the meaning of this phenomenon. However, Bierstedt (1950) claims that we all know perfectly well what it is until someone asks us. Bacharach and Lawler (1980) say that "power is necessarily a vague, poorly defined 'primitive' term that serves best merely to sensitize us to aspects of the bargaining process that might otherwise go unremarked... thus we must ask not what is power, but to what phenomena does the notion of power sensitize us." Generations of philosophers, political scientists, sociologists, psychologists, and economists have tried to elaborate on the concept of power and to define this notion from different perspectives.

Having examined definitions of power from different perspectives (Economics, Management science, Network science, Philosophy, Political science, Psychology, and Sociology) (Blau, 1967; Buckley, 1967; Dahl, 1986; Emerson, 1962; Gamson, 1968; Hu and Sheu, 2003; Hunt and Nevin, 1974; Lasswell and Kaplan, 1950; MacCall, 1978; McClelland, 1975; Murdoch, 1995; Russell, 1938; Salancik and Pfeffer, 1977; Tan, 1952; Tawney, 1931; Weber, 1947; Wilemon, 1972; Wilkinson, 1974; Wilson, 1913; Wrong, 1979; we conclude that the notion of power is seen very similarly in different sciences with a difference of a context in which it is applied. Power is present everywhere – in human relations, society and state, channels and networks. It always has a power holder, a target and a source. It 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 despite resistance. Furthermore, it refers to the capability to induce changes, to mobilize resources, and to restructure situations.

### 3.2 "Power over" and "Power to"

As mentioned above, all definitions of power seem to use similar terms and have a common sense. However, all definitions of power can be divided into two groups: "power over" someone (Weber, 1947) and "power to" act or do something (Palermo, 2000). In the first case power represents a conflict relationship. For example, "A gets B to do what B would not otherwise have done". Therefore, A is more powerful than B, because it possesses the means which possibly threaten or make B to act in the way which is favourable for A. This is a clear case of the "power over" relationship. However, let us assume that both actors have an unequal opportunity to achieve their goals and pursue their interests. "A has a greater capacity to achieve his goals than C has". In that case we also say that A is more powerful that C, but it is not the case of a conflict relationship. This relationship can be called the "power to" rather than "power over" relationship, since the power of the power holder A is based on his freedom to pursue his interests in respect to C.

Elliott (1980) views the "power to" concept as a system property rather than as a property of individuals or groups, which enables the successful realization of system goals. He argues that the reason why management requires the “power over” is to ensure that it can control the activities and coordinate them with other areas of managerial activity, so as to safeguard the attainment of managerial objectives and goals. In other words, management requires “power over” in order to maintain its “power to” and realize systems goals. Sodano (2006) expresses the opinion that “power over” refers to the “dark side” of the concept, i.e. power as control, command, coercion, whereas “power to” refers to the “bright” side of the concept, i.e. power as possibilities, freedom, opportunities. It seems that both these conceptualizations of power are significant in understanding the nature of power.

### 3.3 Power sources

The power of one actor over another social actor is determined by the power sources available to the former (El-Ansary and Stern, 1972). A firm’s total power can be a combination of several kinds of power. 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 mediate punishments to others. For example, to dismiss, suspend, reprimand them, or make them carry out unpleasant tasks. It is usually based on the expectation of punishments and/or threats and relies on the belief that punishments will be forthcoming or rewards will be withheld unless the requested behaviour is exhibited (French and Raven, 1959; Blau, 1967). In the supply chain network context coercive power reflects the fear of a network member to be punished if he fails to comply with the requirements of the focal company. However, consistent use of punishments and/or threats may encourage the affected firm to dissolve the trading relationship; because of this, coercive power is normally employed when the power advantage is clear and the influenced party’s alternatives are limited (Bowersox et al. 1980).

Reward power depends on the ability of the power holder to offer or mediate rewards to others. It is based on the degree to which the individual can give others a reward of some kind such as recommendations, desired gifts, and increases in pay or responsibility. If a focal company can mediate rewards due to the access to resources which are valuable for other supply chain network actors, then it can make the actors to perform in the way the company desires. A firm’s ability to use rewards as a source of power may increase after rewards have actually been employed, because the perceived probability of the promise to deliver is intensified (Cartwright, 1965).

Expert power (also called informational) is derived from the skills or special knowledge of an individual or a group in a specific subject. This knowledge applies to the restricted area in which the specialist is trained or qualified. The degree of power depends on the scarcity and the need of theses skills for others. It is worth to mention that this source of power may generate a response of trust and credibility. In case with a supply chain network the expert power of a focal company can be achieved if the network actors perceive or believe that it possesses a special knowledge valuable for them. For example, manufacturers are often expected to have special knowledge about new products and promotion to assist the dealers.

Legitimate power stems from internalized values which dictate that there is a legitimate right to influence and an obligation to accept this influence. This kind of power is based on some kind of a commonly accepted code or standard and usually involves positions and not personal qualities of individuals. It is also called position power and usually accompanied by various attributes of power such as uniforms, offices etc. It is based on the belief by one firm that another firm has the 'right' to prescribe behaviour (French and Raven, 1959). A focal company in this case should be recognized in the eyes of the network members as having a "right" to make specific decisions and expect compliance with regard to these decisions.

Referent power is based on an individual's ability to be attractive for others and build loyalty and depends on the charisma and interpersonal skills of the power holder. French and Raven define the source of referent power as "a feeling of oneness... or a desire for such an identity". Identification can be said to occur when an individual accepts influence because he wants to establish or maintain a satisfying self-defining relationship to another person or a group (Kelman, 1958). It is difficult to identify specific instances of pure referent power in interfirm relationships; referent power usually occurs in conjunction with some other form of power and plays a stabilizing role (Beier and Stern, 1969). In the supply chain context this power is observed when network actors want to join a network.

## 4 Power distribution along the wine chain

Having worked out a clarification of the construct 'power' we have to acknowledge that elaborating on the actual power distribution in a supply chain e.g. the wine chain is of great challenge. Reducing this discussion on the market shares of certain players and than comparing these positions is by fare not enough. In order to capture this challenging task in the following paragraph we will first consider power in the relationship retailer coop whereas we assume that retailers are acting as the chain captain[2]. Afterwards we will address power between coops and their members.

### 4.1 Retailer - cooperatives

As shown above most often German wine coops do not dispose over well known brands. Thus, if a consumer buys wine in a supermarket most often the wine coop is unknown so that the consumer make the retailers liable for the product quality. This is particular true for discount chains – counting for 40 % of total wine sales) where most often wineries and wine coops do not want be recognized. Thus, if the retailer is liable with its own reputation / brand for the quality it will demand the lead in the supply chain network. Due to its position power the retailers should dispose over power 'to' do what they want and to some extent 'over' their suppliers. Particularly the network structure (pyramidal-hierarchical) gives the retailer coercive power. The thread to delist wine coops is being reported to be constantly used. This power source seems to be the one most often used by retailers. Especially direct after huge vintages the retailers try to force their suppliers to reduce their prices at once (sometimes only via facsimile) as soon as the retailers read articles, what will happen to the average wineprice in the future. Rather seldom one hears about the use of reward power by retailers. However, it was reported to us that if a coop implements certain IT-enablers such as EDI retailers honour these efforts by giving more favourable conditions. Being positioned right at the end consumer and therefore interacting intensively with them retailers possess an enormous amount of knowledge about consumer demands and wishes resulting in expert power regarding consumer demand. As a result retailers order their suppliers to produce exactly according to specific standards set by the retailers. In a few cases retailers with a high reputation (particularly specialized wine shops) dispose over referent power. Being one of their suppliers wine coops hope to participate from the retailers high reputation. An example is one of the largest German specialized wine shops called Sansibar. Thus, overall retailers dispose over all power sources and are exerting them. However, significant differences in the intensity of the usage can be concluded.

Regarding wine coops as suppliers of retailers we assume that they do not dispose over high coercive power since they lack reputation or other unique selling propositions. Often this is a result of coop characteristics such as member orientation or financial restraints. Thus, the mere source of coercive power is to withhold

[2] Hanf and Kühl (2005b) have shown for supply chain networks that most often it is more likely that coops are acting as suppliers than as focal companies. Hence, we stick to the case that coops are not the focal companies in SCN.

deliverances; however this seems to be rather of short term usage. In the course of modern supply chain management category management is being introduced giving power to suppliers with high levels of expertise. However, to our knowledge rather wineries (particularly the ones from the 'new world') than German wine coops are being chosen as category captains. Again the above mentioned coop characteristics might be the reason why. Being 'simple suppliers' we assume that by definition neither reward, legitimate nor referent are power sources of wine coops. Even though as suppliers wine coops do not have equal power as the focal companies wine coop are able to exert some power. However, in the moment some of the Raiffeisen principals hinder them to increase their power position.

### 4.2 Secondary coops – primary coops - members

Having discussed power in the context of retailers and coops now we want to address power in the context of coops and their members.[3] As shown the changes in buying behaviour have facilitated the nation-wide distribution of wine and hence central coops have undergone a rise in importance. Thus, we first will address power between secondary and primary coops. Because large quantities of wine are demanded by retailers only secondary (and a few large primary) coops are able to deliver them. Resulting from this fact these coops are gaining in position power. Because retailers have high demands on the IT-infrastructure secondary coops are also able to acquire some special knowledge over which primary coops often do not dispose. Thus, due to the increasing demand of special knowledge secondary coops are able to build up expert power. Because the owners of a secondary coop are primary coops we assume that they identify themselves with the secondary coop providing a source of referent power to the secondary coop. As shown before in the wine context member identification with the end product is high so that this might lead to a higher identification with the distributor – the secondary coop. Furthermore, due to the double principle agent problematic of coops we assume that secondary coops dispose over a higher degree of reward power and a lesser degree of coercive power. The management will easily be able to implement a reward system but will have hard time to implement a monitoring or sanction system addressing the processes connected with their owners – the primary coops.

As the legal owners of the secondary coop – thereby due to their position power - primary coops dispose over coercive power over the secondary coop. However, since the main business aim of (secondary) coops is to nurture their members

[3]First of all we want to mention that due to their positions as non-focal companies in the SCN we assume that compared with the chain captain their power 'to' do is of limited nature. Thus, in the following we rather address the power 'over'.

(primary coops) it is unlikely that primary coops possess reward power. However, being involved of the actual wine processing wet-(primary) coops dispose over production knowledge that can be used as expert power. Because dry-coops do not dispose over specific knowledge they also do not dispose over expert power. Due to the multitude of primary coops delivering wine and grapes to the secondary coop we rather do not assume that they dispose over referent power. In conclusion we think that the shift towards verticalisation / building of supply chain networks is shifting power from the primary to the secondary coops.

Discussing power in the context of primary coops (focussing on wet coops) and their members some of the argumentations used before can be applied. Thus, the management of primary is able to exert more easily reward power than coercive power.

Regarding the payout system for the delivered grapes, this statement is empirically proofed for the wine-sector. Hanf and Schweickert (2007) are showing with a survey among all coops in the wine business, that the coop management fears to implement coercive instruments for bad grapes, the so called 'negative grape selection'. The coop management prefers positive bonuses and other monetary rewards instead significantly. So after one year of hard work in the vineyard no wine grower has the problem being rejected from delivering his grapes. Using coercive power 'negative grape selection' the bad grapes would have to be devastated, using reward power, the bad grapes are only rated very low in the grape-rating system.

Due to rising demands on quality today it is not any longer enough that the quality is produced in the vinification process but also in the vineyard while the grapes are growing. Hanf and Schweickert (2007) have shown that for higher quality wines - due to the demands of retailers - today the oenologist of the primary coop has to be in charge of the treatments in the vineyard leading to an increase of expert power. Because the wine growers as members are simultaneously the owners of the primary coop we assume that they should identify themselves with their coop so that primary coops have referent power. Moreover, because in many communities the (primary) wine coops are common institutions with a social impact like a local government or a religious community (Hoffmann, 2000) particularly for wine coops members are 'feeling even stronger an oneness' so that primary coops dispose over high referent power. Being positioned as a gatekeeper to the buyers (end consumers / retailers / secondary coops) primary coops have also some position power. Because dry coops are solely collecting grapes and delivering them to secondary coops we do not thing that they have only very limited power at all.

Being the owner of the primary coop therefore possessing legitimate power the wine growers as members dispose over coercive power. Furthermore this power is enhanced since the wine growers possess the vineyards and therefore the fundamentals of the wine production [4]. As argued above members do not have reward power. As long as the wine growers still have particular knowledge and skills of wine growing they still have some expert power. However, as described above due to increases of wine quality members have lost significant parts of their power to the primary coops. But if this structural change happens very fast, also a countermovement can be noticed in the recent past: members taking over the operative management control again by substituting the CEO with an executive member board (Albert, 2008). In conclusion one can say as long as they are members they always have some power over their primary coop. However, due to the recent developments there is a shift of power towards the primary coops.

## 5 Summary and managerial implications

World wide in the agri-food business it is observable that strictly vertical coordinated supply systems emerge. Often such chain systems consist of independent but collaborating firms. In that case they are called supply chain networks. Such networks are strategic networks that possess a pyramidal-hierarchical structure. This means that there is a chain captain managing this system i.e. power is not distributed equally. Thus, power has to be considered as a main instrument for chain management. However, what is really power? In this paper answered this question showing that we have to differ between 'power over' and 'power to'. Furthermore, in our literature review we were able to identify five different power sources. These findings have been used to clarify the power distribution within a supply chain network.

We have applied our theoretical findings on the German wine sector. It is characterised by high competition on all stages of the chain. Furthermore it is characterised by an increasing importance of retailers, the existence of secondary and primary coops, and a multitude of (small) farmers that work full time or part time in the agriculture. Thus, the findings can be easily transferred to other countries and sectors.

We were able to show that the recent developments such as an increased demand of quality and efficiency is leading to a shift from power to upwards the wine chain. However, being able to discuss the construct power more in death we were also able to show that on all stages and in all relations all parties possess some power.

For managerial implication this means that the actors gaining power from other parties must know that these actors still have some power that can be used

[4] Due to legal constraints the area on which wine can be grown cannot be expanded.

opportunistically. Thus, knowing these sources can help to work out strategies how to deal with this behaviour. Furthermore, using power does not always imply that coercive actions have to be taken. Instead knowing that power also esteems from the ability to give rewards might lead to a change in behaviour enhancing cooperation. This is particular valuable because chain management is both the alignment of actions (coordination) but also the one of interests (cooperation) (Gulati et al., 2005).

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