THE FORMS AND CONDITIONS OF SUCCESSFUL CONFLICT MANAGEMENT IN THE METAL AND MACHINERY SUPPLY CHAINS

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Abstract

According to a basic theory of sociology conflict belongs to life so it belongs to business life as well. If we face this view logically the next step is how companies avoid the unnecessary conflicts and how they handle inevitable conflicts. Our empirical paper suggests several successful conflict management methods which were identified through qualitative methodology. In depth interviews managers from the metal industry and machinery supply chains explain their experiences and failures regarding conflict management. We found that business actors do their best to avoid legal procedure as conflict resolution. They prefer different informal tactics for managing conflict such as better communication or personal discussion. However formal solutions are becoming increasingly important. For example nowadays a used complex enterprise resource planning (ERP) software heavily determines actions and timing of actions upon deviation from normal or agreed business processes which leaves little room for human words and reflection. We suggest some proven methods for successful conflict management. Based on our results and experiences a larger scale, quantitative survey could give more general results.

Key words: conflict management, supply chain management, metal and machine manufacturing supply chain

1. INTRODUCTION

The efficiency of any transaction in the supply chain depends to a large extent on a trust-based business relationship (Wu et al., 2012). Finding a strategic supplier on a business-to-business basis is crucial to business success, as it reduces transaction costs, but not only cost savings are a key factor, but rather an increase in ownership and stakeholder value. Supply chain integration is a strategic tool as it attempts to minimize operational costs and thereby add value to customers and shareholders (Kwon & Suh, 2005; Lee, Kwon & Servance, 2007). In the relationship between suppliers and customers, the source of the conflict can put the companies concerned on the opposite side. Each actor only sees part of the image and ignores global or network-level optimization. In such circumstances, it would be difficult for global or

even any competition to maintain the growth path. Because each party only seeks local optimization long-term success will not be fulfilled.

The conflict is a visible struggle, with a minimum of two, somewhat interdependent parties, with incompatible goals, little reward (Hocker & Wilmot, 1985). Practically "conflict is a way of life in relationships that can be explicitly and implicitly expressed, but it is the way in which we handle or manage these conflicts that determines the quality of our relationships" (Tatum & Eberlin, 2006).

Dyadic business relationships involve countless disagreements and conflicts, additionally all of which appear generally in business networks and in supply chains. However, supply chains are growing, developing and even surviving various difficulties, but even crises. This suggests that they are able to handle different problems and disagreements flexibly. It seems that actors of supply chains apply consciously or instinctively various successful and effective conflict management techniques.

Supply chains, by their nature, tend to show sectoral differences, so we have narrowed our research into a sector, which is metal and machine manufacturing. In our qualitative survey what we want to know are the followings:

a) how practitioners handle their problematic business partners;
b) what kinds of conflict management tools or other techniques seem to be successful;
c) if they terminate any of their most cumbersome, problematic business ties.

Before introducing our empirical findings we show a short theoretical background.

2. LITERATURE REVIEW

Social Exchange Theory comes from sociology (Blau, 2009; Emerson, 1976) and from social psychology (Thibault & Kelley, 1959) and describes the functions of interpersonal relationships. The essence of the Social Exchange Theory is that people consider social interactions based on their social and / or economic benefits. Comparison of all the parties makes it possible to examine the benefits of possible relationship alternatives and thus to assess the relationship dependence. If after a while the balance of the economic and social development of the relationship is considered positive, trust between the parties begins to grow, and it is in the interest of all stakeholders to maintain the relationship in the long term (Lambert et al., 2001). As a result of his research at the micro level, Peter Blau raised the theory to the macro level and concluded that Social Exchange theory pervades the social world, forming an endless series of exchanges (Blau, 2009).

Business relations are economic, legal, technical, technological, social, and administrative ties. According to the relationship marketing, the concerned parties share their common interests and form a community. Relationships in general are not concentrated on one contract but the processes are influenced by the constant change and adaptation (Elo, 2003). In a business relationship – and generally in a supply chain as well – organizational goals are completely convergent. Different views that can evolve in unexpected situations during a relationship can lead to disputes that can turn

into misunderstanding or conflict. According to several authors, cooperation is the counterpoint to conflict. However there are several and various conflicts between business partners emerging due to constant political, legal, economic and social changes. On the other hand, the changes have been becoming integrated, so business integration is not just new opportunities, but also unexpected conflict situations. It may happen that a company has to work with a former competitor in a new network (Hagberg-Andersson & Tidström, 2008). Gadde and Håkansson (1993) claim that cooperation, conflict and competition can coexist. According to them on one network suppliers compete, but may cooperate in another situation. If we wish to understand this situation, we should investigate this not only from the perspective of a central company within the network but also from non-central relationships between suppliers. Piricz (2018) empirically find that actors of supply chains already see their network as a natural condition however this view is rather passive and based on acceptance. They still clearly prefer to manage their dyadic relationships even if they realize certain network-level problems.

Therefore it is important and useful to manage customer relationships accordingly for the following reasons (Ford, Gadde, Hakansson & Snehota, 2006):

- Reduces or resets the cost of searching for new customers or suppliers.
- Enables employees of the organization to understand customer problems and also to learn about their own skills in order to get develop a better offer for them.
- Reduces adaptation costs once you have reached your relationships initial investment.
- Reduces the cost of interaction, such as buying and selling time spent on checking.
- Enables employees to focus on important customer resources.

In a situation where trust is high, the parties share their doubts much more easily, thus reducing the risk of conflict (Jap and Ganesan, 2000). By contrast, however, it is logically assumed that trust can increase the incidence of conflict. Indeed, in a situation where there is trust between the parties, but their motivations are different and there are no effective governance structures, conflicts can be predicted. However, a study points out that a long-term relationship that is able to survive these conflicts tends to create fewer new conflicts because of the experiences accumulated in the vascular treasures (Zaheer et al., 1998).

According to the definition of Hunger and Stern (1976), conflict is an "opposite-cantered episode," or a series of episodes which are based on directions, goals, or values. Hagberg-Andersson & Tidström (2008) see that, conflict situations are usually short and other researchers point out that the quality of the relationship is fundamentally conflict management (Tatum & Eberlin, 2006). Conflict often means a certain process that is at different stages (Thomas, 1992; Pondy, 1967).

Power plays a decisive factor during behavioural perceptions (French & Raven, 1959), and has impact on reaction as well (Wilkinson, 1996; Kähkönen, & Lintukangas, 2011). A business relationship determines the position of the parties involved and these positions will, by their nature, affect companies' relationships with others, both directly and indirectly (Johanson & Mattsson, 1992). Blois (2008) adds despite the fact that a business relationship is asymmetric and even conflicting, it can work successfully for decades.

Bahlmann, Schulze & Spiller (2007) collect those dimensions which are considered to have negative effects on trust between business actors; opportunism, power asymmetries and structural bonds. However conflict usually misses from these negative lists.

If we accept the general view of sociology that conflict is a natural part of life, we should concentrate on preventing or solving conflicts. To see clearly we should define conflict management, which is opposed to resolution of conflict. According to Robbins (1978) and Boulding (1968) the difference is more than semantic. "Conflict resolution implies reduction, elimination, or termination of conflict" (Rahim, 2001:75). Conflict management however is boarder term and means more active approach. It involves design of proper efficient strategy, taking relevant steps within a process of organizational learning and increasing efficiency of company (Rahim 2001).

The conflict management process includes (Rahim, 2001): 1) Diagnosis: The involved actors recognize and identify the problem. This first step is vital while this determinates the other future decisions and actions as well. Some scholars suggest certain formal and informal techniques for this (for example Brown, 1979; DuBrin, 1972). 2) Intervention: They decide if intervention is necessary, and if so, what from. 3) Process: This part is little similar to Intervention but this is a bit broader and basically include a few relevant organizational learning and acquiring some new skills at company level. This stage could support company resilience however after a concrete fire-fighting specific conflict solution, system-level problem management is often missing. In summary, conflict management should be fulfilled first at individual, then group and company level as well.

Some experts suggest turning to a third, neutral actor or a mediator (Jameson, 1999) or using a proper communication concept (Magrath & Hardy 1989).

Kemp and Ghauri (1999) claims that trust and norms that are long-term development results which reduce the potential for conflict. This view is confirmed by Hausman (2001) who found fewer constraints and fewer conflicts in case of longer-term relationship. Other researchers have experienced an increase in sales under similar circumstances (Woodburn et al., 2004).

Figure 1. An Overview of the Thomas-Kilmann Conflict Mode Instrument

Source: [available at: https://www.kilmanndiagnostics.com/overview-thomas-kilmann-conflict-mode-instrument-tki access May 7, 2019]

The Thomas-Kilmann Conflict Mode Instrument (TKI) focuses on personal conflict management by using two dimensions in their model which are assertiveness and cooperativeness as it can be seen in Figure 1. In this system they identify five methods of dealing with conflict: Competing – "simply trying to win"; Collaborating – "competing for resources, or confronting and trying to find a creative solution"; Compromising – "the objective is to find an expedient, mutually acceptable solution that partially satisfies both parties"; Avoiding – the person "does not address the conflict" but rather withdraws; and finally Accommodating – a "form of selfless generosity or charity, obeying another person's order" (Thomas and Kilmann, 2008:3). While this Conflict Mode Instrument is one of the most cited conflict management models we analyse our results with the help of the methods above.

3. OUR EMPIRICAL RESEARCH

As a short methodology explanation this survey is the Hungarian pillar of a Finnish scientific project. The methodology of the research – in which companies in Hungary, operating in the supply chains of metal and machinery industry – are surveyed for business ethics and more connecting topics – was developed at the University of Turku. The in-depth interviews are semi-structured, so we did it on the basis of relatively detailed sketch points, and sometimes we did not touch all the points during the conversation (Malhotra, 2007). The pilot survey was conducted in Finland. Finally ten depth interviews could be fulfilled in 2015-2016 in Hungary whereby in 3 cases the interviewees are experts and in the other cases we talked to different levels of leaders in companies – such as commercial director, quality senior manager, CEO – operating in metal and machinery supply chains. The companies represented by the managers are different in terms of both size and market orientation but the respondents are mainly small and medium-sized and multinational companies that are either exporting or are essentially on the domestic market. In spite of this, our research is not representative therefore our conclusions must be treated with this restriction.

We turn our focus on metal and machinery industry due to the following reasons. According to statistics in Hungary this sector has attracted the most of FDI (half of total inflow has focused there). For example in mechanical engineering foreign ownership represents 78 %. Almost three forth of industrial investments are fulfilled by foreign companies (Karsai, 1999). Inzelt and Szerb (2006) state that the social impact of FDI may contribute to Hungarian citizens' fear of losing national identity meanwhile Farkas (2002) calls the increasing number of foreign companies and their business relationships as 'technological economic dualism'. However this sector contributes heavily to the dynamic growth in Hungarian industry.

In this paper we introduce our results concerning conflict management which are summarized in Table 1. Here we structure the main characteristics of applied conflict management methods by our respondents. Based on this we create 4 categories (Formalized solution processes, Better communication, Informal resolution and Legal process) and investigate if these groups fit the Thomas-Kilmann Conflict Management Model. While the building elements of this Model are broad we can integrate our results in this well-known model.

Generally we can say that basically the methods and approaches in cases of conflicts depend on situations, e.g. volume and nature of risks, importance and size of business partner, type of relationship (e.g. strategic partner) and market situation (e.g. existence of substitute product/ supplier). Below we describe the conflict management methods and characteristics of each category.

Formalized solution processes. The large companies usually prefer formalized solutions. According to their logic: Point 1: Immediately solve the problem, Point 2: See who caused the problem. In another case complain-resolution is fulfilled in 8 steps in a huge multinational company while there is no quality control of in-coming stocks (it is the task of the supplier). These steps are fixed in their supplier's handbook and each of their suppliers has to accept this handbook too. In quality management the "technique" of self-accusation is well-known which means that a company recognizes its own fault or mistake and inform the involved partners immediately and does not wait if the others notice this or not. These kinds of processes may give little freedom for personalized, flexible solutions but can be beneficial because of their automatic and visible nature.

One of the experts emphasizes that traditional – operative – communication is vital here due to more reasons: a) the scheduled delivery constraint, b) constantly working technology in the metal sector as well, c) the blast furnace cannot be stopped (just a little restraint). Another expert complains about the routines, which are heavily determined by the applied ERP software (e.g. SAP).That's why they exclude flexible, informal solutions and prevent any compromises (e.g. reminding or warning messages go out automatically in case of payment delay). In these solution forms we cannot recognize cooperativeness but rather assertiveness that's why we think this category belongs to Competing in Thomas-Kilmann Model.

Better communication. Honesty was always the subject of strong debate, especially in business. One of our respondents thinks that sincerity is thin ice but adds it is the best in long term! As a researcher of this survey I note that each of our interviewee represented successful companies and these firms have been operating for more than 15 years. These practitioners from metal,- or machinery supply chains highlight the importance of understanding of mutual interest and correct communications however they often explain unethical or even illegal behaviour in their practice. But it seems they have a strong belief that sooner or later, unethical and unprofessional actors will be revealed, and the market will slowly clearer and clearer. Generally these approaches show an unambiguous wish and will for Compromising.

Informal resolution has long traditions in business and naturally it is a frequently used set of tools between coequal parties. But we found that personal arrangement plus flexibility were actively applied also in metal and manufacturing sector in case of high tech product packages, more concretely among actors of very different sizes in alternative energy branch. Therefore we have the view that these resolutions include both Compromising ("moderate in both assertiveness and cooperativeness") and Collaborating which "involves an attempt to work with others to find some solution that fully satisfies their concerns" of Thomas-Kilmann Conflict Mode Instrument.

Legal process, lawsuit. None of respondents has finished a business relationship due to conflicts but every time they try to find solution. A CEO says: "If we go to court, it will result liquidation" (for either or both parties). He adds that here prices

start at millions, which is taken seriously by both parties; supplier sees price, and buyer considers value. If the dispute is not resolved in a short time, they will have to resolve it over a longer period of time. "If the two sides understand the needs of the other, it is very easy to get to the vineyard. There may be fierce debates, but we can agree and everyone is happy."

Table 1. The forms of successful conflict management among companies comparing with the elements of Thomas-Kilmann Conflict Mode Instrument

Thomas-Kilmann Conflict Mode Instrument	Categories of our survey	Main features of our survey
Competing	Formalized solution processes	based on internal policy
		scenarios of (multinational) supplier's handbook
		heavily determined by the applied ERP software (e.g. SAP)
		self-accusation (often in quality management)
Compromising	Better communication	being sincere – best in long-term
		understanding of mutual interest
Compromising, Collaborating	Informal resolution	discussion between coequal parties
		personal arrangement
Accommodating	Legal process, lawsuit	actually almost never

Source: Own study based on empirical results and the Thomas-Kilmann Conflict Mode Instrument

A sample and condition of relationship-termination: "a business connection had to be interrupted because the buyer wanted a technological or manufacturing process that we could not satisfy; or because on the spot – for example in Romania – they can produce it cheaper."

Briefly we can say business actors do their best to avoid lawsuit and prefer informal solutions. In this way this category theoretically belongs to Accommodating as its consequences ("unassertive", "obeying another person's order when you would prefer not to, or yielding to another's point of view.").

4. CONCLUSION

We have the view that the conflict approaches of Thomas and Kilmann can be identified in our survey as well. Due to technological development, globalisation and

growth of company-sizes and the supply chains, the formalized solution processes are likely to strengthen which can create obstacles to flexible and formal relationship management solutions within supply chains as well. In parallel, various formal solutions and conflict-handling modes are also available (where these are not yet regulated by the used ERP system). Perhaps it is not surprising that companies do not like to sue (because of their risky and costly nature), but the fact that they remain in contact with a cumbersome, troubled business partner is, in fact, more limited in terms and conditions (for example regular prepayment). While the metal and machinery industry is traditionally capital, and technology intensive sector written communication is extremely important, which limits, often determines the ways and modalities of conflict management in these supply chains.

Qualitative methodology provides an excellent opportunity to present conflict situations, solutions in the network. However this methodology has natural limitations. The analyses of information received is difficult and complicating process. Besides small number of respondents there might be a possibility of misinterpretation which are limitations of such research.

On the basis of our results, we propose further research on the practice of managing the supply chain conflicts by sector. On the other hand, it would also be useful to learn about network-level good practices as they can contribute to increasing the stability and resilience of supply chains.

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