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SOURCES OF SUPPLY CHAIN CONFLICTS – A FISHBONE DIAGRAM CORRELATION

Review
Article

Keywords

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Fishbone diagram*

JEL Classification

J74, L14

Abstract

Identifying the sources of conflict in a supply chain is the starting point of managing conflicts along chain and initiating the proper actions for lasting outcomes. An extended review of literature on sources of supply chain conflict was concluded with an ample list of various causes. The conflicts sources were classified in 8 categories: commercial, financial, logistics, management, quality, relationship along the chain, inter-personal communication and business environment. The main identified category of conflict sources was relationship along the chain, but commercial, financial, management and logistics were also important categories of conflict cause. The overall analysis emphasizes a fishbone diagram of supply chain conflict causes, having the 8 identified categories as branches and being highly developed with the related sources. This general diagram could be a good lead-off for a deeper analysis of conflict causes in a particular supply chain.

INTRODUCTION

A significant change in modern business management approach is the orientation of companies to supply chain cooperation, abandoning the option of competing as individual entities. New relationships are emerging between companies, each of them becoming links in supply chains, on the one hand, but competing with each other to be integrated into these supply chains, on the other hand.

Handfield & Nichols defines the supply chain as an organization of linked suppliers and customers, with every customer being a supplier to the next downstream organization until a finished product reaches the ultimate end-user. (Handfield & Nichols, 2003)

The association of supply chain companies is the result of a balance between the divergence of their interests and the identification of common working objectives. In this context, the existence of conflicts is natural.

Starting from Wall and Calister's opinion (Wall & Callister, 1995), we define the *conflict in the supply chain* as a state of tension between two entities when one perceives the other as interfering in reaching its goal. Moreover, we sustain the opinion that conflict is a common event in interactions among people, companies and supply chains and it is important for the success of companies and their relationships with the suppliers. (Barutçu et al., 2010)

EFFECTS OF CONFLICTS IN SUPPLY CHAIN

There are many classifications of conflicts in supply chain. Bradford et al. consider two dimensions, or types, of conflict: inter-personal conflict - also called emotional or affective conflict, and task conflict - also referred as cognitive conflict. (Bradford, Stringfellow, Weitz, 2004).

We sustain the larger classification of Chen et al. Thus, the conflicts in supply chain are classified based on the impact as constructive and destructive, based on the content as goal conflict, cognitive conflict, emotional conflict and procedures conflict, respectively based on the scope as enterprise internal conflicts and between enterprises in the supply chain. (Chen et al., 2014).

The classification based on impact reveals two types of effects of supply chain conflicts: constructive effects and destructive effects. There are more and more scholars that argue that the conflicts have not only negative effects on the companies' relationships, but they have a positive side.

The literature emphasises a balance between the impacts. On one hand, there are destructive effects:

- Anger, frustration, decreased satisfaction, behavioural dysfunction (Frazier, Gill & Kale 1989; Gaski 1984; Hibbard, Kumar & Stern 2001)
 - Refuse to exchange knowledge and resources, avoid the other party, restrict communication, even sabotage (Jaworski & Kohli 1993; Wall & Callister 1995)
 - Decreasing flexibility and decreasing availability to exchange useful information for the other party (Jaworski & Kohli 1993; Koza & Dant 2007)
 - Decreased co-operation, increased hostility, reduced availability to work together (Skinner, Gassenheimer & Kelley 1992)
 - Conflict may degrade system performance (Blackhurst et al., 2008)
 - Discontent, distrust, damage to engagement and relationship (Rahim, 2001)
- On the other hand, there are many constructive effects, and we selected the most relevant for supply chain, from the literature:
- 'The absence of conflict is not harmony, it's apathy' (Eisenhardt et al., 1997)
 - Conflict helps define the true essence of the relationship (Bradford et al., 2003; Hagel & Brown, 2005)
 - Conflict stimulates innovation and creativity, better decision-making (Rahim, 2001)
 - Conflict generates opportunities to express dissatisfaction, critically reviews previous activities, introduces different perspectives that can lead to innovative solutions (Coughlan et al. 2001; Pondy 1967)

SOURCES OF CONFLICTS IN SUPPLY CHAIN

Kumar & van Dissel perceived the identifying the sources of conflict as the starting point of managing conflict and then to deploy proper interventions to produce functional outcomes. (Kumar & van Dissel, 1996) We consider that as the main reason of an extended review of literature on sources of supply chain conflict.

There are many researches on conflicts on supply chain, but only a few proposed studies on the causes of these conflicts. We selected eight papers that studies or refers the sources of conflicts on supply chain and our review was concluded with an ample list of various causes.

We can represent the interactions between the companies from a supply chain as a multi-layer structure. The interaction at the level of each layer could generate specific conflicts. Therefore, we classified the conflicts sources in 8 categories: commercial, financial, logistics, management, quality, relationship in the supply chain, inter-personal communication and business environment. Each category corresponds to a layer of this

interaction. A global list of these sources specified by the literature is presented in the Table no. 1.

The main identified category of conflict sources was relationship in supply chain, but commercial, financial, management and logistics were also important categories of conflict cause, as presented in the Table no. 2.

The focus on the relationship in supply chain category of conflict causes, in most of the reviewed papers, proves the importance of this layer of interaction, which implies both a human and an organizational side.

CONCLUSIONS

The overall analysis emphasizes a correlation between the causes from the same category. Many of them could be associated, and it can be identified relations cause-effect among many correlated sources of conflict.

This complex multi-level associations can be arranged as a perfect structure of a fishbone diagram of the supply chain conflict causes, having the 8 identified categories as branches and being highly developed with the identified sources, as seen in Figure no. 1.

This general diagram could be a good lead-off for a deeper analysis of conflict causes in a particular supply chain. The diagram contains only the causes of conflict already mentioned on the reviewed literature, but the following research could add new branches to the fishbone diagram, by a deeper analyse, or even rearrange the branches based on new identified correlations.

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ANNEXES

Table no.1 *Causes of supply chain conflicts, based on the literature review*

Category	Identified cause	Reference
commercial	price	8
commercial	changes in price	2
commercial	changes in volume	2
commercial	damages to the market	20
commercial	manage day to day dynamics of demand and supply	20
commercial	smoothen demand and supply	20
commercial	forecasting seasonal demand	20
commercial	forecasting annual demand	20
commercial	less sales	20
commercial	lost opportunity	20
commercial	lower sales	20
commercial	order cancellations	2, 24
financial	operational and financial implications	20
financial	lower financial objectives	20
financial	poor financial performance	20
financial	delayed payment	2, 24
financial	ultimate ruin	20
financial	asset specificity	14
financial	intellectual property	24
logistics	consequences of inventory policy	20
logistics	inappropriate inventory holding	20
logistics	poor forecast	20
logistics	lower inventory	20
logistics	high inventory	20
logistics	delivery	24
logistics	faster delivery	2
logistics	cost of logistics/transportation	2
logistics	too many regional transfers	20
management	goal asymmetry inside supply chain	24
management	value and goal differences	1, 2
management	satisfaction of broader range of needs for survival, identity and meaning	17
management	desire to reduce costs (risk reduction)	17
management	desire to increasing rewards (profit maximization)	17
management	setting business objectives	20
management	inefficient system structure	1
management	changes at the last minute	2
relationship in supply chain	lack/scarcity of trust among the partners	1
relationship in supply chain	lack /scarcity of collaboration and cooperation within the organization and among the supply chain partners	1, 2
relationship in supply chain	eroded credibility	20
relationship in supply chain	partner's reputation	14
relationship in supply chain	behavioural uncertainty	14

relationship in supply chain	imbalance of power	23
relationship in supply chain	power and strategies by chain members	1
relationship in supply chain	business dependency	23
relationship in supply chain	technology dependency	23
relationship in supply chain	presence on the chain of companies that belong and control technology, information and standards	23
relationship in supply chain	control in vertical integration	23
relationship in supply chain	win-lose mentality	1
relationship in supply chain	use of coercive	1
relationship in supply chain	information asymmetry inside supply chain	24
relationship in supply chain	information sharing	14
relationship in supply chain	poor communication channels	2
relationship in supply chain	perception on conflict	14
relationship in supply chain	perceived satisfaction	14
inter-personal communication	personality clashes	2
inter-personal communication	friction between managers/owners	2
quality	quality	24
quality	noncompliance policies	2
quality	compliance to clients technical requirements	23
quality	substandard performance	2
quality	financial penalties for non-performance	24
business environment	competition	23
business environment	slippery and arduous global business environment	1

Table no.2 *Occurrence of causes of supply chain conflicts in the reviewed literature, by categories*

Category of conflict	Number of causes mentioned by the reviewed literature
relationship in supply chain	18
commercial	12
logistics	9
management	8
financial	7
quality	5
business environment	2
inter-personal communication	2

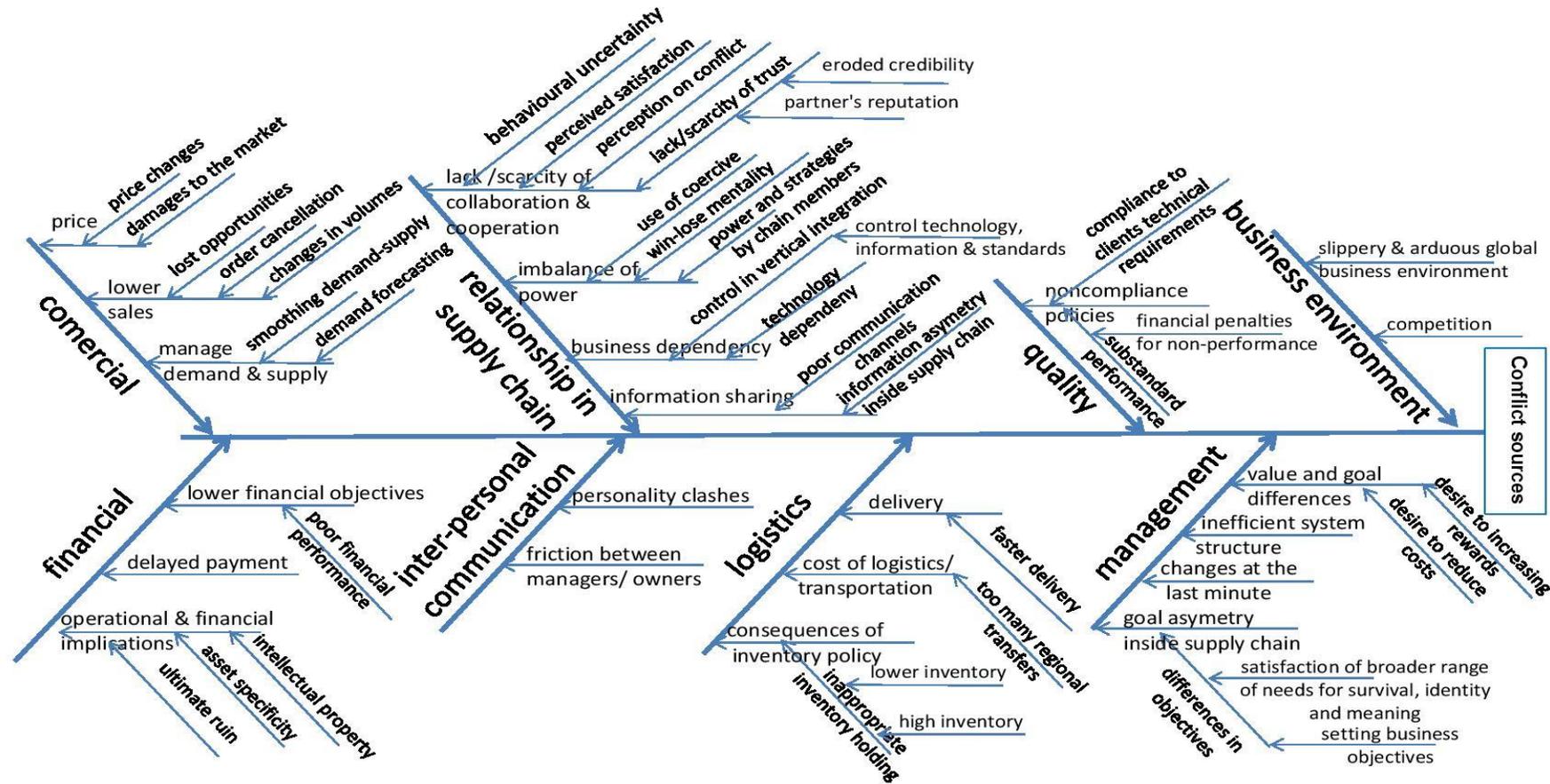


Figure no.1 The correlations between causes of supply chain conflict, structured as a fishbone diagram