

Collaboration In Supply Chain Management According To Trust Approach.

التعاون في إدارة الإمداد حسب منظور الثقة

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Abstract:

Partners collaboration became a big challenge in the new vision of industry of the future. Managers need to develop new collaborations to face several economic constraints. it is necessary for a manger to built working relationship based on trust for making profits. This paper presents the results of an empirical study on the impact of trust in working relationships within supply chain. The results suggest that the relationship based on trust and mutual respect is more successful than a relationship that is built without the confidence factor. Therefore, there is a need for honesty, fairness and the absence of opportunistic behaviour among partners to improve supply chain performance and profit.

Keywords: supply chain management, trust, partners.

الملخص:

أصبح التعاون بين الشركاء تحديا كبيرا في الرؤية الجديدة للصناعة المستقبلية. حيث يحتاج المديرون إلى تطوير علاقات تعاون جديدة لمواجهة العديد من القيود الاقتصادية، فمن الضروري للمسير أن يبنى علاقة عمل مبنية على الثقة لتحقيق الأرباح. تقدم هذه الورقة البحثية نتائج دراسة ميدانية حول أثر الثقة على العلاقات العملية في تحقيق الأداء بين الشريكين في سلسلة الإمداد.

كما تشير النتائج إلى أن العلاقة القائمة على الثقة والاحترام المتبادل هي أكثر نجاحًا من علاقة التي تبنى بدون عامل الثقة. ولذلك، هناك حاجة إلى الصدق و الإنصاف وغياب السلوك الانتهازي بين الشركاء لتحسين أداء سلسلة الإمداد و تحقيق الأرباح..

الكلمات الافتتاحية: إدارة الإمداد، الثقة، الشركاء.

Introduction:

The global economic crisis seems to have created a sudden surge of articles and thoughts about trust and transparency in business management, particularly in supply chain management. Supply chains encompass a large number of members from both the B2B and B2C relationships in up and down streams of the chains and therefore trust is seen as an important subject in supply chain partners' relationships. However, in business practice, firms have frequently made deliberate attempts to establish stronger relationships with suppliers and customers. As a way of reducing costs, increasing efficiency, improving quality and technology, and enhancing competitive advantage, many firms are moving away from traditional "arms length" business relationships and are forging closer and more collaborative ties with supply chain partners. Spekman (1988) argues that "competition from offshore producers, technological innovations, and shortened product life cycles have changed buyer-seller relationships.

Traditional arms length contractual relationships no longer suffice, but closer collaborative approaches are needed. Anderson and Weitz (1989) argue that the development of inter-organisational relationships is an approach that combines the advantages of vertically integrated distribution systems (control, coordination and information processing) with the advantages of systems utilising independent chain participants (flexibility, scale economies, efficiency and low overheads). However, inter-organisational relationships come with associated costs and risks. Some partners in supply chain seem to be dependent and vulnerable in their working relationships because of significant resource inequalities, opportunism (Williamson, 1985). The use of contracts to govern transactions between supply chain partners limits the behaviour of the parties substantially, by reducing their flexibility and not allowing them

to benefit from market changes. This study proposes that, the development of relational exchange between supply chain participants. These can be created by social control mechanisms like trust and cooperation. The purpose of this paper is to investigate the role of trust in the performance of food industry supply chain in Algeria. We have formulated two hypotheses:

H1: Trust is regarded as an important asset in an exchange relationship between partners in supply chain.

H2: Trust in relationships is linked to economic benefits in supply chain.

In this paper a supply chain is conceptualised as a series of connected activities in food industry.

The remainder of this paper is organized as follows. Section 1 provides the theoretical and conceptual framework by reviewing the literature on supply chain management and trust. Section 2 presents the empirical study by focusing on the study method and the discussion of results obtained . Lastly, Section 3 provides the conclusions and managerial implications drawn from this study.

I. LITERATURE REVIEW:

1) SUPPLY CHAIN MANAGEMENT

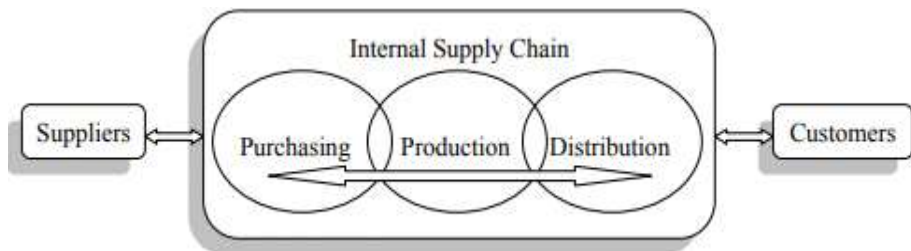
The concept of “supply chain” is well established in the literature and is generally referred to as the alignment of firms that bring products or services to market (Lambert, Stock and Ellram, 1998).The supply chain includes manufacturer, suppliers, transporters, warehouses, wholesalers, retailers, other intermediaries and even customers themselves. Any product traded on the consumer goods market, in its evolution from raw

material to finished products, undergoes a series of successive transactions on the business to business market.

Supply chain management can be also defined as the process of planning, implementing and monitoring the everyday operations of a supply chain. Supply chain management is an all encompassing process as it undertakes the management of availability of raw materials, their processing into finished goods and the distributions of these goods to final customers. The aim of all this is to provide the highest level of satisfaction to the customer, thus increasing the business of the company.

Chen and Paul raj (2004) stated that a typical supply chain is a network of materials, information, and services processing links with the characteristics of supply, transformation and demand, as you can see in the figure below:

Figure 1. An illustration of a company's supply chain



Source: Chen and Paul raj, 2004, towards a theory of supply chain management: the constructs and measurements. *Journal of Operations Management*, 22 (2), pp. 119-150.

However, with the increasing complexity of the supply chain, supply chain management has also become about coordinating and collaborating with the different trade partners now involved in the supply chain. Under this strategic point-of-view, Cooper and Ellram (1993) compare supply chain management to a well-balanced and well-

practiced relay team. Such a team is more competitive when each player knows how to be positioned for the hand-off. The relationships are the strongest between players who directly pass the baton, but the entire team needs to make a coordinated effort to win the race.

Supply chain management decisions can be classified into three broad categories: strategic, tactical and operational. As the term implies, strategic decisions are typically made over a longer time horizon. These are closely linked to the corporate strategy and guide supply chain policies from a design perspective. Among these decisions, we notice the number, location and size of the warehouses, of the distribution centers and of the facilities. Strategic decisions may also include the decisions related to Information and Technology infrastructure that support the supply chain operations, and to strategic partnership. Tactical (or midterm) decisions include planning decisions aiming at balancing charge and capacity. Such decisions include the production (contracting, locations, scheduling and planning process definition), the inventory (quantity, location and quantity of inventory), the sourcing contracts and other purchasing decisions. Finally, the operational decision level is divided in two sub-levels. The

so-called «flow management" level is relative to short time decisions, such as the decisions of launching the production, order in grand transportation orders. These second sub-level, called "scheduling," is relative to very short-term decisions including the decisions of scheduling the different tasks inside a workshop. The effort in the tactical and operational levels is to effectively and efficiently manage the product flow in the "strategically" planned supply chain.

2) **TRUST:**

Trust is considered to exist if one party believes that the other party is honest or benevolent (Doney and Cannon, 1997). It is the expectation that attenuates the suspicion that one party in the transaction will behave opportunistically (Gulati, 1995; Bradach and Eccles, 1989). Thus, if trust exists in a relational contract, the contracting parties will be convinced that they will not be victims of behaviour, such as adverse selection, moral risk, hold-up or any type of contractual hazard. Sako (1998) identified three types of trust. These include contractual trust, competence trust and goodwill trust. Contractual trust rests on a shared moral norm of honesty and promise keeping, while competence trust requires a shared understanding of professional conduct, technical and managerial standards. Goodwill trust can exist when there is consensus on the principle of fairness. She argues that there is a hierarchy of trust whereby fulfilling a minimum set of obligations constitute contractual trust, while honouring a broader set constitute goodwill trust. Therefore, a movement from contractual trust to goodwill trust involves a gradual expansion in the congruence of beliefs about what is acceptable behaviour. Other types of trust are described by Faulkner, 1995; Gulati, 1995 and Medina-Munoz and Medina-Munoz, 2002.

Trust is considered to be of economic value when it is based on non-contractual, rather than contractual mechanisms. Non-contractual trust such as goodwill eliminates the need for formal contracts, which are costly to write, monitor, and enforce (1994; Dyer, 1997) and thus it reduces transaction costs. For example, in conditions of high trust, transactions spend less time and resources on ex-ante contracting because they trust that pay-off will be divided fairly. Thus, there is no

need for future contingencies (Dyer, 1997). Trusting parties spend less time and resources on monitoring to see if the other party is not shirking or is fulfilling the spirit of the agreement. This is because parties have confidence that each party will not take advantage of the other even when there is a chance to do so. In addition to reducing transaction costs, trust also enable participants in an exchange relationship to share important confidential information and encourage them to make relationship, specific investments, which in turn enhance productivity in the exchange relationship without fear of opportunism (Parkhe, 1993; Dyer, 1997).

3) **TRUST WITHIN SUPPLY CHAIN MANAGEMENT:**

A variety of different underlying dimensions of trust appear to exist. The study of trust began in economics and sociology, which have approached the institutional environment and inter-firm arrangements from different perspectives. Both areas of knowledge have some common interests that influence the way that supply chain management has been studied. However, sociology and economics view the issue from different perspectives. Institutional economics assumes opportunistic behaviour as the norm. To the contrary, sociology pays special attention to the emergence and diffusion of trust in relationships (personal and institutional). A number of scholars using a sociology basis have suggested that a variety of macro-level structures, including networks and governance, enhance the emergence and diffusion of trust. Trust involves at least two agents: the trustor (organization, product, institution) and the trustee (Lane & Bachmann, 1998; Nooteboom, 2002; Zucker, 1986). We considered in this paper that trust is “the extent to

which one believes that others will not act to exploit one's vulnerabilities" (Morrow, Hansen & Pearson, 2004). Thus, both partners are simultaneously trustor and trustee.

Morrow, Hansen and Pearson (2004) highlight the challenge of studying inter-organizational trust as only individuals, and not organizations as a whole, are capable of trust. Batt (2000) asks, for example, who is able to develop trust, the salesperson or the sales organization? Organizations and individuals may pursue their self-interests by forming relationships with others to economize on transaction costs (Batt, 2000; Lindgreen, 2003; Morrow et al., 2004; Sako, 1992). Examples are the sharing of information on bad payers, reducing the need to inspect quality or the need to organize payment at the time of delivery. Besides reducing transaction costs, the reduction of uncertainty and information asymmetry is an important consequence of a trusting relationship (Dyer & Chu, 2003). There has been some criticism regarding the use of transaction cost, as it focuses on dyadic relationships and cannot really identify interdependence across chains. It also fails to analyze the institutional complexity, change and power existent in business relationships (Cox, Lonsdale, Sanderson, & Watson, 2004; Dubois, Hulthén, & Pedersen, 2004). Trust is a key factor for the development of partnerships among the different agents of a supply chain, distinguished between interpersonal and inter-firm trust (Johnston, Mccutcheon, Stuart, & Kerwood, 2004). The creation of trust in inter-firm relationships can be considered related to a country's cultural context (Dyer & Chu, 2003; Sako, 1992; Zaheer & Zaheer, 2006). In this sense, Dyer and Chu (2000), in their study, found significant levels of supplier trust in the US, Japan and Korea. These

differences are related to the institutional environment. These authors suggest that supplier trust depends on frequency and long-term interactions (which they called process based trust). However, they also admit that the automaker buyers studied incur additional costs while developing this kind of relationship.

II. EMPIRICAL STUDY:

1) METHODOLOGY:

The most important criterion in selecting a sample is to increase the validity of the collected data (Carmines and Zeller, 1988). In this study the data selection criterion was designed to increase validity, rather than to ensure that the sample was representative of the given population.

This study is concerned with the relationship of retailers and the wholesalers in the food industry supply chain in Algeria. It attempts to identify and analyze the importance of relational factors in the performance of supply chains. The study focus on the role of trust on the performance of the exchange relationship between them in the whole supply chain. (see Appendix for items used to measure trust). The study employed a mail survey sent to purchasing managers, the data focused on the working relationship and its correlation with trust. The total mails sent are 150. The collecting data was analyzed with ETHNOS.

2) **RESULTS AND DISCUSSION:**

Trust is regarded as an important asset in an exchange relationship between partners. Its importance is rooted in the belief that it leads to desirable attitudes of commitment and that it reduces transaction costs associated with monitoring and providing safeguards in an exchange relationship. Table 1 compares the perceptions of the respondents who trust their partners and those who do not trust them. The results indicate that almost all respondents who trust their partners (98.6%) and those who do not trust (98.1%) their partners are certain about their relationship. Almost all respondents (96.2%) who do not trust the partners and all those who trust the partners indicated their commitment to their relationship with this one. The perception by suppliers of lack of cooperation by the wholesalers is evident in both suppliers who trust as well as those who do not trust the partners. More than three-quarters (84.9%) of them who do not trust the partner and about two-thirds (62.0%) of those who trust their partners expressed a perceived lack of cooperation in their relationship with partner. Both respondents who trust and those who do not trust partners perceived dependence on him. More than half (56.6%) of the respondents without trust and more than three-quarters (77.5%) of those who trust perceive that purchasing managers are dependent on the wholesalers. The results also suggest that more than three quarters (88.7%) of respondents who do not trust the partners and 77.5% of those who trust partners feel that they are influenced by them. About ninety percent (90.6%) of those respondents, who do not trust wholesalers and 59.2% of those who trust them, perceive that wholesalers exercise opportunistic behavior towards them. The majority of those who trust (91.5%) and those who do not trust

(64.2%) are satisfied in their relationship with the partners. Collectively, the results suggest that more of those respondents who trust partners than those who do not trust are certain of their relationship with them, are committed to the relationship, are dependent on the wholesalers and are satisfied with their relationship with them. On the other hand, more of those purchasing managers who do not trust wholesalers than those who trust them perceive that there is no cooperation in their cooperation. The results show the importance of trust in an exchange relationship. These results are shown in the following table:

Table1:respondents trust a nd their perceptions of their relationship

Item	Respondents without trust (N=53)	Respondents with trust (N=71)	Total respondents (N=124)
Uncertain	1(1.9)	1 (1.4)	2 (1.6)
Certain	52 (98.1)	70 (98.6)	122 (98.4)
No commitment	2 (3.8)	0 (0)	2 (1.6)
There is commitment	51 (96.2)	71 (100)	122 (98.4)
No cooperation	45 (84.9)	44 (62.0)	89 (71.8)
There is cooperation	8 (15.1)	27 (38.0)	35 (28.2)
No relative dependence	23 (43.4)	16 (22.5)	39 (31.5)
There is relative dependence	30 (56.6)	55 (77.5)	85 (68.5)
No Influence	6 (11.3)	16 (22.5)	22 (17.7)
There is influence	47 (88.7)	55 (77.5)	102 (82.3)
No opportunistic behaviour	5 (9.4)	28 (39.4)	33 (26.6)
There is opportunistic behaviour	48 (90.6)	42 (59.2)	90 (72.6)
No Satisfaction	19 (35.8)	6 (8.5)	25 (20.2)
Satisfaction	34 (64.2)	65 (91.5)	99 (79.8)

Source: Realized using ETHNOS.

It is a common phenomenon that the element of trust in relationships is linked to economic benefits. In most cases people who realize economic benefits in their relationship are likely to have developed trust in that relationship. Table 2 presents the results of the respondents who trust partners and those who do not trust partners with their perceptions on

profit. The results show that nearly all the respondents (94.2%) who trust the partners have indicated that they make a profit. About three quarters (72.3%) of those who do not trust the partners also indicated that they make a profit. The results suggest that both respondents who trust and those who do not trust the partners realize economic benefits from their working relationship. This indicates the importance of trust in enhancing economic benefits. The following table shows this result:

Table2: trust and profit making

Item	Respondents without trust (N=47)	Respondents with trust (N=69)	Total respondents (N=116)
Not making profit	13 (27.7)	4 (5.8)	17 (14.7)
Making profit	34 (72.3)	65 (94.2)	99 (85.3)

Source: Realized using ETHNOS.

III. CONCLUSION:

Results of our empirical analysis suggest that trust plays an important role in the inter-enterprise collaboration within supply chain. so, it may be argued that organisations establish more straightforward, lasting and confidential relationships if they have constructed formal institutionalised procedures to further their cooperation. However, it is important to note that a contract works on compliance, while relational exchange requires trust and commitment. A relationship founded on trust, mutual respect is more likely to succeed than a relationship of convenience supported by legal contingencies. Therefore, relationships characterised by trust between partners is more important for mutual benefit and good quality relationship. The results in this study support previous studies, which advocate for relational contracting in food supply chains. This study has shown that trust is important in enhancing the performance of members of a supply chain, and hence the whole supply chain. Both partners need to understand that trust cannot be created easily. It is not a simple factor that can be regarded as separate from other preconditions of an exchange. Therefore, there is a need for (1) directness (openness, honest and effective communication and providing explanations and justifications for actions), (2) continuity (frequency of communication, taking time to explain and investing time in the relationship), (3) multiplexity (understanding each party, their roles and responsibilities), (4) parity (fairness, impartiality, not acting opportunistically, integrity, good intentions and honouring promises), and (5) common interests and diversity (shared values, purpose and vision, setting expectations, successful handling of problems, reconciliation).

We could say that trust plays a crucial role in facilitating the implementation of relationship management within supply chain. Trust is a major component in building a cooperative relationship between partners. It creates an increase in openness between parties. Trust is perceived as a result of effective collaborative relationships and leading to higher levels of partner/customer satisfaction.

We could say according to our research that trust is considered as a precondition of cooperation because partners need some assurance that the other parties will not defect. Thus, trust is an essential element of employing relationship management approaches in supply chain management.

Overall, partners in supply chain need to practice fairness ensure effective communication; have commitment and shared purpose or values which are realistic to their situations.

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APPENDIX

TRUST WITHIN RELATIONSHIP:

- | | |
|-------------------------------------|-----------------------|
| certain | <input type="radio"/> |
| uncertain | <input type="radio"/> |
| with commitment | <input type="radio"/> |
| no commitment | <input type="radio"/> |
| no cooperation | <input type="radio"/> |
| with cooperation | <input type="radio"/> |
| with relative <u>dependance</u> | <input type="radio"/> |
| no relative <u>dependance</u> | <input type="radio"/> |
| with influence of partner | <input type="radio"/> |
| no influence of partner | <input type="radio"/> |
| with opportunistic <u>behaviour</u> | <input type="radio"/> |
| no opportunistic <u>behaviour</u> | <input type="radio"/> |
| satisfied | <input type="radio"/> |
| not satisfied | <input type="radio"/> |

TRUST AND PROFIT MAKING

- | | |
|------------------|-----------------------|
| making profit | <input type="radio"/> |
| no making profit | <input type="radio"/> |