

Chapter 8

Supply Chain Dispute Resolution: A Delphi Study

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ABSTRACT

This paper examines how supply chain conflicts across domestic and international jurisdictions arise and become resolved given that conventional conflict resolution tribunals cannot effectively settle fast enough to serve the needs of supply chain partners. Observations from the field should guide practitioners, and in combination with information technology, may lead to best practice rules in dispute resolution. For this study, the Delphi Method was selected, in which a panel of 14 experts participated in three rounds of successive surveys over a one-year period. Survey data was collected by mail as well as via telephone conversations and interviews, while under the Delphi method, the content of the second questionnaire was derived from the responses of the first questionnaire. All participants were supply chain experts in the United States from eight different industrial sectors, and none of the participants interacted with one another. End results show that supply chain's relationships are very private trade arrangements and that disputes arise, predictably, from common performance criteria such as quality, timely delivery and payment issues.

INTRODUCTION

For over a decade supply chain management has emerged as the concept for squeezing greater efficiencies out of a delivery system for products and services. The evolving body of supply chain management knowledge is akin to the biological

model of business, in which one seeks to survive and prosper through cooperation. The goal of this study is to add to that body of knowledge by discovering dispute resolution practices in a cross section of industrial US sectors, and to encourage future study in dispute prevention. In particular, we aim to understand the degree of central control over disputes along supply chain tiers, the nature of disputes, and supply chain design changes in

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times of economic contraction. Certain terms used in the context of supply chain studies are listed in Appendix II at the end of the paper.

Frequently mentioned in the literature are the mechanics of achieving coordination, and most discussions focus on the Internet, enterprise software and the integration of disparate systems among supply chain partners. A void in the discussion, however, is how to deal with conflict that is bound to arise across global supply chains relative to cultural differences, jurisdiction, and economic stress etc., without destroying the trust among supply chain partners. Supply chains can and do fail. An example is reported by Lunsford (2007) in a case for the Boeing 787 Dream Liner aircraft. Management's main concern at the time was the making of large aircraft sections out of carbon fiber plastics. What they did not count on were shortages of titanium bolts to keep the carbon fiber plastic sections together. The fasteners capacity shrank due to consolidations in the fastener industry. Inasmuch as Boeing had contingency plans, this is actually a good example of supply chain management. Dispute resolution processes themselves can fail also, which was the case in an international arbitration between Turkish and US business partners, when a judge disallowed the panel's finding because of an undisclosed conflict of interest by the arbitration panel's chairman, Tait (2006).

LITERATURE REVIEW

Given the recent phenomenon of Supply Chain Management as a field of study, a considerable body of literature has accumulated on the subject. However, very little has been written about supply chain disputes, and even less about methods of supply chain dispute resolution. On that basis the literature review is focused mainly on the period after the year 2000. Dispute settlements can occur formally in a court of competent jurisdiction, or less formally in another forum such as the

American Arbitration Association, AAA (2001), or informally through negotiation. There may be several reasons for this gap in the literature, one being the novelty of the subject, another, is conflict experience is not what supply chain managers wish to publicize. In the current literature the terms "conflict" and "risk" are often used interchangeably. One such reference is Chopra et al. (2004), in which he discusses risks in terms of disruptions, delays, systems, forecasts, intellectual property, procurement, receivables, inventory, and capacity risks. For each of these, there is a comprehensive discussion of remedies and risk avoidance without touching on the subject of dispute resolution conventions. Given the link between risk and dispute, risk avoidance is of course preferable to dispute resolution. The drivers for supply chain disruptions, for example, are natural disasters, labor strikes, supplier bankruptcies, war and terrorism, and a single source dependency. A mitigating strategy for disruptions in supply chains consists of carrying larger inventories and developing supplier redundancies. For each of the other risk categories, mitigating strategies are offered by the authors. Lee (2008) addresses one risk that Chopra (2004) does not address, namely the risk of having too many supply chain partners, which issue arose among this Delphi Study's respondents. The author approaches the subject by suggesting a model to compute the optimum number of supply chain partners by a mean-value approach with deterministic failure cost. Denning (2008) approaches the subject of shortening supply chains from the practical side, observing that bottlenecks in ports, roads, and rail networks have increased cost greatly.

Li, Du, and Wong (2005) define supply chains in terms of closer integration among partners through planning, design, development and services through information integration. The higher the integration, the lower is the risk of a bullwhip effect. Access control conflicts occur when two people work on a shared project; one has access to data while the other has not. Access control poli-

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