DISTRIBUTION CHANNEL CONFLICT:

IMPLICATIONS FOR CHANNEL GOVERNANCE, AND

PERFORMANCE

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IMPLICATIONS FOR CHANNEL GOVERNANCE, AND PERFORMANCE

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Lay Abstract

In this dissertation, my focus is on understanding distribution channel conflict, its relationship with efficient channel governance and its impact on channel performance. Channel conflict is an endemic phenomenon. The advent of new technologies (such as Internet-of-Things enabled monitoring systems) and the emergence of the Internet as a primary medium of business transactions have brought big changes to channel management. Use of multiple channels to reach consumers and exchange value with business partners have become much more common with these changes. While channel conflict has always been an important business concern, these have rekindled the interest and attention of researchers and managers to the phenomena.

In this dissertation, I investigate the phenomenon of channel conflict and its effect on channel governance and business performance by conducting several independent studies spanning different research methods. The research findings will address gaps in the extant research literature as well as offer both theoretical and practical insights for researchers and practitioners interested in distribution channels strategy and management.

Abstract

In this dissertation, my focus is on understanding distribution channel conflict, its relationship with efficient channel governance and its impact on channel performance. In particular, I will study (1) how the channel conflict can be defined and interpreted, (2) how channel conflict can affect channel governance, (3) what would be the performance outcomes of channel conflict, and (4) how channel conflict can be managed. My theoretical frameworks borrow mainly from transaction cost economics theory (TCE), and strategic marketing.

On the empirical side, I employ several methods including meta-analysis (Two-Stage SEM) as well as different econometrics techniques such as Conditional Mixed-Process (CMP) regression estimation. My data comes from diverse sources and are mainly hand collected and created from archival sources. For the meta-analysis study, I extract empirical results of more than 100 studies on channel conflict since the 1960s. For the other empirical efforts, the data comes from various sources. The major data collection undertakings include extracting and integrating data from: (1) Franchise Disclosure Document (FDD) of more than 1000 franchise firms, (2) firms records, and (3) specific franchise rankings such as Entrepreneur and Franchise Times' rankings spanning from 2004 to 2015.

The dissertation comprises following broad inter-related chapters (excluding Introduction and Conclusion chapters): (1) Managing Channel Conflict: Insights from the Current Literature, (2) Conflict and Performance in Channels: A Meta-Analysis, (3) Channel Conflict: Bad for Business?, (4) Adapting to Channel Conflict: An Empirical Study?, and (5) Two Views on Channel Conflict.

Chapter 1 is a compendium on channel conflict that not only provides a comprehensive literature review on channel conflict (since the 1960s) but also identifies gaps and provides some managerial perspectives on channel conflict.

One of the identified gaps in Chapter 1 revolves around the role of channel conflict and its relationship with other inter-firm constructs. In Chapter 2, I build on this identified gap by conducting a comprehensive meta-analysis study using Two-Stage SEM (TSSEM) method to aggregate the previous findings on channel conflict and its relationship with other inter-firm constructs particularly channel performance. I also investigate the potential moderators of the conflict-performance link.

Chapters 1 and 2 set the stage for the next empirical work. One of the enduring debates in the channel domain is about the functionality and dysfunctionality of channel conflict. In Chapter 3, I address this directly by

exploring the non-linear (inverted U-shaped) relationship between channel conflict and performance.

While Chapter 3 explores the empirical relation between conflict and performance, another understudied but important research question is about how firms react to channel conflict. Such reactions can span the range from relying on relational norms to more explicit adjustment in channel governance. In Chapter 4, I address this by examining the effect of manifest channel conflict on channel governance, controlling for relational norms. In particular, I study how firms adapt their channel governance following litigation.

Finally, Chapter 5 is a reflection on the body of knowledge that I have investigated above. This chapter will provide two views on channel conflict by comparing two different channel conflict conceptualizations. I illustrate the differences between these two views by comparing them based on firms' objectives, conflict characteristics, and managerial approaches toward channel conflict, providing real-world examples of how firms approach and manage channel conflict.

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1. INTRODUCTION

A distribution channel is a set of interdependent organizations through which product or service is made available to the end-user. A distribution channel is thus a marketing arrangement that encompasses value creation, communication, and exchange (Coughlan et al. 2001; Stern and El-Ansary 1988; Walters 1977). With increasing globalization, distribution channels have an oversized impact on our economy and thus on the overall prosperity of the global citizen. Channel conflict is an endemic phenomenon in such business arrangements and involves myriad businesses in our daily lives – conflicts between manufacturers and wholesalers, suppliers and resellers, franchisors and franchisees – the list could go on. Channel conflict refers to a situation where a member of the distribution channel perceives another member to be engaged in behavior (activity) that negatively impacts the attainment of its goals (Etgar 1979).

The conflicts range from simple disagreements on business scheduling to more complex clashes on profit sharing as well as litigation. Such conflict depletes efficiency in the short-term and can have a long-term negative impact on organizational performances. The advent of new technologies (such as Internet-of-Things enabled monitoring systems) and the emergence of the Internet as a primary medium of business transactions have brought big changes to channel and inter-organizational governance. Using multiple channels to reach consumers and exchange value with other organizations, have also become much more common with these changes. While channel conflict has always been an important business concern, these have rekindled the interest and attention of researchers and managers to the phenomena. A literature search shows that conflict construct has been used in more than 100 studies (empirical and experimental) since 1960. This amount of academic works on conflict indicates that conflict is an important phenomenon in inter-

firm relationships. However, there are still several significant gaps in studying channel conflict that require a great deal of attention from researchers.

The first significant gap about conflict is rooted in the definition and operationalization of the concept of conflict. We do not observe a unique and consistent operationalization of conflict across studies over the time. The next gap in studying the channel conflict is about the role of conflict in theoretical frameworks. In some studies, it is used as an outcome of a dyadic relationship (Geyskens, Steenkamp, and Kumar 1999; Palmatier, Dant, and Grewal 2007) while in other studies, it is viewed as a mediator in inter-firm relationships research frameworks (Lengers, Dant, and Meiseberg 2015; Rosenberg and Stern 1971; Runyan, Sternquist, and Chung 2010). Apart from the problems with the conflict construct, there is a problem and ambiguity about the relationship of conflict with other constructs particularly channel performance. Some studies report positive relationship between conflict and performance (Assael 1969; Brown, Lusch and Mueheling 1983) while others report negative relationship between these two constructs (Kumar, Stern and Achrol 1992, Kumar, Scheer and Steenkamp 1995; Jap and Ganesan 2000; Ross, Anderson and Weitz 1997; Webb and Hogan 2002). To resolve these inconsistencies, Rosenbloom (1973) proposes that the relationship between conflict and performance follows an Inverted-U shape relationship. Brown (1980) builds on this proposition and asserts that this inverted U-shaped relationship is preceded by an upright U-shaped curve. None of these propositions found empirical support or have not been tested appropriately in the literature. Finally, we do not know how firms view channel conflict and how they attempt to manage and resolve conflict inside their channels.

The interdependence that characterizes channel relationships implies conflict is often directly the result of the way the channel relationships are organized. Therefore, efforts to address conflict often bring up questions around channel governance itself. Generally, we can think of three

ways that firms can address channel conflict using governance as a lens: prevention by design, resolution by action/adaptation, and mitigation by cooperation. The first approach is to avoid or prevent conflict. In this line of thinking, firms attempt to prevent conflict by ex-ante channel governance design. The second approach is to resolve conflict by mediation, arbitration, or litigation and adjustment to the channel governance and contract details as a follow-up. The third approach is to rely on relational norms and relationship building and try to increase the level of trust and commitment among channel members. However, we do not know how conflict causes changes in channel governance. In other words, there is no study on firms' post-adaptation to conflict. Structural and governance change will be an important factor in resolving conflict. Yet, despite the seeming importance of structural and governance change in responding to channel conflict, there is very little scholarly research in the area. In fact, to what extent the changes in governance mode are prompted by channel conflict, is still an open empirical question.

I address the important mentioned gaps in five chapters using different methods in my Ph.D. thesis. I focus on the channel conflict conceptualization, and its relationship with other channel constructs in the first chapter of this thesis by conducting an in-depth literature review. Chapter 1 is a compendium on channel conflict that not only provides a comprehensive literature review on channel conflict (since the 1960s) but also identifies gaps and provides some managerial perspectives on channel conflict. In Chapter 2, I explore the relationship of channel conflict with other channel constructs such as channel performance, satisfaction, and trust by embarking on a comprehensive meta-analysis study. One of the identified gaps in Chapter 1 revolves around the role of channel conflict and its relationship with other inter-firm constructs. So, I build on this identified gap by conducting a comprehensive meta-analysis study using Two-Stage SEM (TSSEM) method to aggregate the previous findings on channel conflict and its relationship with

other inter-firm constructs particularly channel performance. I also investigate the potential moderators of conflict-performance link to understand how contextual factors and channel characteristics could affect this link.

Chapters 1 and 2 set the stage for the next empirical work. One of the enduring debates in the channel domain is about the functionality and dysfunctionality of channel conflict. In Chapter 3, I address this directly by exploring the non-linear (inverted U-shaped) relationship between channel conflict and performance. I want to show that some conflict may actually be good for the firms concerned. I study these using recent advances in econometric methods and several unique archival datasets that I created from published results, litigation records, and publicly reported company details including financial data.

While Chapter 3 explores the empirical relationship between conflict and performance, another understudied but important research question is about how firms react to channel conflict. Such reactions can span the range from relying on relational norms to more explicit adjustment in channel governance. In Chapter 4, I address this by examining the effect of manifest channel conflict on channel governance, controlling for relational norms. In particular, I study how firms adapt their channel governance following the intense conflict, litigation.

Finally, Chapter 5 is a reflection on the body of knowledge that I have investigated above. This chapter provides two views on channel conflict by comparing two different channel conflict conceptualizations. I illustrate the differences between these two views by comparing them based on firms' objectives, conflict characteristics, and managerial approaches toward channel conflict, providing real-world examples of how firms approach and manage channel conflict. These studies together could help us to understand the nature of channel conflict, its relationship with other constructs, and how this phenomenon affects channel governance and channel performance.

2. Managing Channel Conflict: Insights from the Current Literature[1]

2.1. Abstract

We survey the existing research literature to develop a managerially oriented perspective on channel conflict. We show how such conflict is not a unitary phenomenon that is only manifest in actions, attitudes or perceptions; but that it can also be seen as a process with distinct phases each of which requires unique managerial considerations. We also show how channel conflict can be seen as an inevitable part of the business ecosystem and discuss the impact such interpretation has on efforts at managing it. The underlying causes of channel conflict are shown to have both attitudinal and structural drivers. We illustrate how identifying the manifestations of such conflict and efforts to measure the same, require very careful consideration at different levels of granularity. We then summarize the conflict resolution approaches that can be effectively used by managers. We conclude by identifying some key understudied areas in the channel conflict literature.

Keywords: Channel Conflict, Conflict Management, Conflict Resolution, Channel Performance.

[1] This chapter is accepted for publication as a chapter (chapter 7) in the "Handbook of Research on Distribution Channels". Editors: James Brown, Rajiv Dant, and Charles Ingene.

2.2. Introduction

As any manager tasked with managing distribution channel partners will vouch for, channel conflict is an inevitable part of doing business. The vexations engendered in such interactions take up significant managerial resources, in terms of attention, time and money. Indeed, avoiding channel conflict can often become the raison d'être of choosing a particular channel design (e.g., proportion of independent versus company-owned sales force). Nevertheless, very often such conflict remains poorly understood, improperly calibrated, wrongly attributed and subject to well-meaning interventions pre-destined for failure. In fact, the consequences of channel conflict itself present a moving target, making the manager's job of assessing the relevant resource commitment a huge challenge.

In an attempt to address the above need we survey the existing marketing, management, and economics literatures to develop a managerially-themed view of Channel Conflict. In the process, we consider more than two hundred published papers over more than fifty years starting in 1960.

We begin by offering a general definition of distribution channel and channel conflict. We then articulate the broader construct of "Conflict" in organizations. Then we draw upon the current research literature to develop a managerially-oriented taxonomy of channel conflict. Following this, we identify and elaborate upon a set of five key considerations for managing channel conflict -- calibration, causes, manifestations, resolutions, and consequences; in particular, we highlight some key conflict resolution mechanisms that are discussed in the literature.

2.3. Distribution channels and conflict

We define a distribution channel in the conventional sense, that is, a set of interdependent organizations through which product or service is made available to the end-user. A distribution channel is thus a marketing arrangement that encompasses value creation, communication, and exchange. This definition is similar to definitions offered by several other authors (Coughlan et al. 2001; Stern and El-Ansary 1988; Walters 1977). Examples of distribution channels span a wide spectrum of businesses. The average consumer would be familiar with examples like dealers (auto manufacturers-dealers), franchises (Tim Hortons' corporation - franchisee stores), aftermarket auto parts (manufacturer - distributor –wholesalers/retailers like NAPA, Canadian Tire), etc.

The key characteristic of a distribution channel for our purposes is the interdependency of channel members with respect to their business performance. In other words, activities of any member in the channel may have consequences for other members and impact their business outcomes negatively or positively. Thus, this interdependency imposes incentives to coordinate activities. Since a channel can and often does include independent firms, significant coordination costs could be incurred in any channel management in the process of such coordination. Channel conflict arises as a direct result of this interdependency and can be considered a key part of this coordination cost.

Channel conflict refers to a situation where a member of the distribution channel perceives another member to be engaged in behavior that negatively impacts the attainment of its goals. For example, action by franchisees that negatively impacts the perceived quality of the franchisor brand; or lack of support by the franchisor that negatively impacts the franchisee's business performance.

The putative definition notwithstanding, there are significant nuances to understanding channel conflict. We start in the following section, by providing a perspective of the broader domain of organizational conflict, of which channel conflict is a subset.

2.4. The general view of organizational conflict

"A serious disagreement or argument, typically a protracted one" – this is how the Oxford dictionary defines the word conflict. As a socio-economic phenomenon, conflict is presumed to exist in different social systems when a component of the social system perceives the behavior of another component of the system to be impeding the attainment of its goals or effective performance. Thus, conflict represents a state of frustration on the part of the restricted component. Conflict in an organizational context builds on this general understanding by focusing on conflict that is "based on scarcity of power, resources or social positions, and differing value structures" (Robbins 1974, p. 23).

Not surprisingly, organizational conflict tends to be a rather complex construct. Much of this complexity is rooted in the multiplicity of perspectives that is drawn upon to describe it. While manifest actions by the relevant parties often leave little doubt about the nature and scope of organizational conflict, it is not always the case that conflicts manifest only in overt actions. Perceptions play a big role. Incidents, otherwise considered unremarkable, like not immediately agreeing on terms of vendor payments, can be colored by the weight of perceptions. Such perceptions may result in more serious conflict-laden exchanges as parties hunker down to protect against the other's perceived opportunism. On the other hand, it can also be perceived as an impediment to joint value creation, motivating efforts to design a win-win mode of exchange that will reduce future conflict. That said, perspectives also differ on whether removing conflict is even a reasonable organizational goal. While scholars across the disciplinary spectrum in economics,

political science, psychology, and management do not always converge on a commonly shared understanding of the different dimensions of conflict, many do agree that conflict is a ubiquitous phenomenon in organizations that cannot be completely eliminated. This line of thought has naturally led to questions about the desirability of organizational conflict to be seen as unitary incidents or as part of a more dynamic process that needs to be managed. Indeed, since the 1960s many researchers have conceptualized conflict as a process, with distinct antecedents and consequences at the frontlines of any consideration of different conflict episodes. Following a survey of extensive research literature across various disciplines that use different lenses to view organizational conflict, we categorize the views on organizational conflict into the following four types (See Figure 2-1):

(1) Conflict as rooted in perceptions

(2) Conflict that manifests in overt actions and attitudes

(3) Conflict as part of the ecosystem

(4) Conflict as a managed process

These different categories are best seen as complimentary as opposed to competing perspectives. In that sense, they are meant to inform the manager's interpretation of any given business situation. In the rest of this section, we discuss these different categories.

2.4.1. Conflict as Rooted in Perceptions

A key characteristic of conflict is the opposition or antagonistic interaction between two or more parties. Robbins (1974) elaborates upon this and suggests perception plays a key role. Conflict must be perceived by the involved parties for it to exist. In other words, if the parties fail to perceive it, then arguably, it does not exist. Similarly, if a conflict is perceived, it exists whether

or not that perception is accurate. Organizations need to be mindful of these nuances, for conflict can be willfully ignored and allowed to fester. On the other hand, misperceptions may be costly as they could lead to significant waste of resources devoted to conflict management. Such perceptions derive from four key sources – behavioral expectations, resource scarcity, socio-economic objectives and simple misunderstandings.

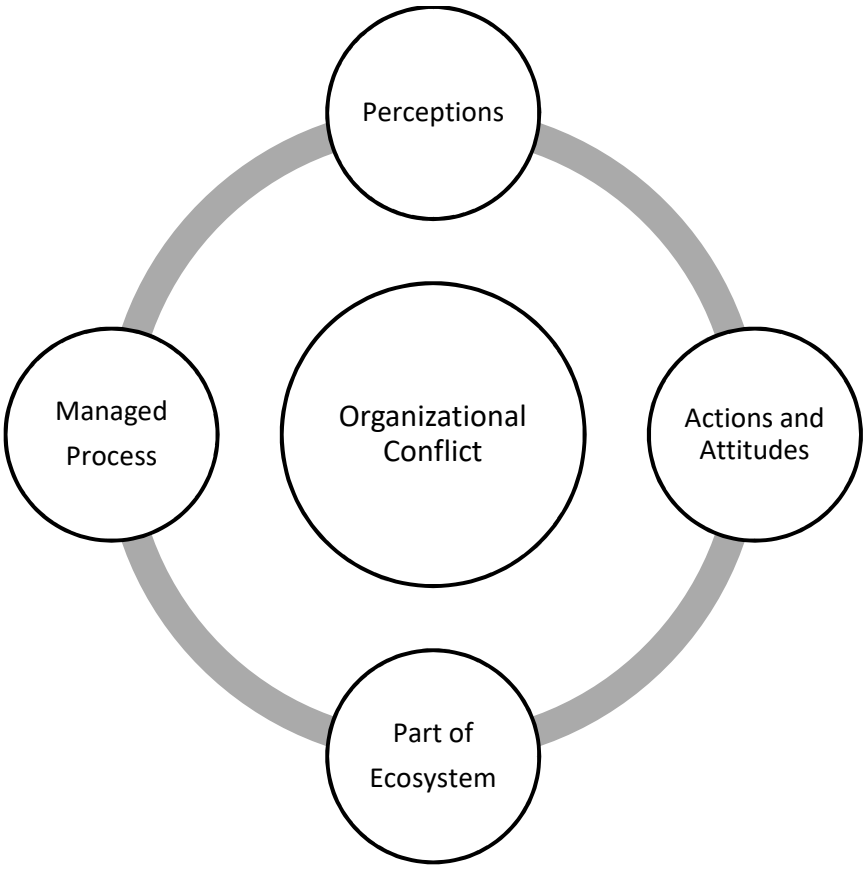


Figure 2. 1: A managerially-oriented categorization of how organizational conflict can be viewed.

A deviation from behavioral expectations is behind much of the perceptions of conflict. This is reflected in Raven and Kruglanski (1970), who view conflict as "tension between two or more social entities (individuals, groups, or larger organizations) which arises from incompatibility

of actual or desired responses" (p. 70). In this case, the nature and scope of conflict are driven by perceived social power differences that frame the incompatibility in responses.

Both competition for scarce resources, as well as mismatched socio-economic objectives in parties' drive for autonomy and divergence of goals, can drive perceptions of conflict in organizations. In fact, even simple misunderstanding of the other party's positions can be a key driver of such perceptions (Vaaland and Hakansson 2003). Examples abound in the business spectrum around us. Servicing of a manufacturer's equipment is often hobbled by limited service capability of the original equipment manufacturer (OEM). As it tries to optimize its service deliveries across several customers with this limited resource, the OEM may not be able to avoid perceptions of conflict in its channel as some of its customers feel cheated that despite their agreement, the OEM is not following through on its service commitments. Often channel members compete for the same pool of the principal's cooperative advertising budget. Allocation of this budget can engender perceptions of conflict all through the channel. Many franchisees end up resenting the perceived heavy-handed interventions of the franchisor in business matters – interventions that seemingly run counter to the franchisees' desire for autonomous decision making, and even if the interventions are merely to ensure uniformity across the franchise.

Notice that in all of the cases above, there seems to be a potential or latent cause for conflict. Yet, it is not inevitable that in the presence of such latent causes, the parties will invariably perceive conflict. Pondy (1967) points to two important mechanisms that actually restrict such perceptions of conflict: suppression mechanism and attention-focus mechanism.

Suppression mechanisms are cognitive processes that block latent conflict from developing. These are more applicable to the interpersonal situation. On the other hand, the attention-focus mechanism allows for active consideration of latent conflict and has broader applications. In

particular, this is relevant in organizational settings because organizations face many types of conflict and often, the main challenge is to identify and focus on the most consequential ones.

Nevertheless, perceptions of conflict can also serve the organization well. Such perceptions serve as signals that something is wrong in the organizational relationships. In certain situations, the party (e.g., the channel leader) perceiving the conflict could be motivated to seek greater understanding of the drivers of the perception and initiate appropriate curing actions; thus, preventing an escalation of the conflict. This could lead to a greater mutual understanding of the parties' true positions, convergence of organizational goals and enhance the overall quality of the business interactions (Bower 1965; Deutsch 1971; Litterer 1966).

2.4.2. Conflict that Manifests in Overt Actions and Attitudes

The difference made between actual and desired responses is indicative of the common taxonomic practice of separating conflict into two or more categories of phenomena, usually representing a behavioral and an attitudinal dimension (Gaski 1984). Raven and Kruglanski (1970), for instance, talk about "manifest" and "underlying" conflict (p. 71), "with manifest conflict meaning overt actions and underlying conflict meaning that which involves interpersonal attractions, interests, and desires" (Gaski 1984, p. 11).

Walters (1977) further expands this to consider conflict as a dichotomy between active or passive conflict. When a firm openly takes direct action to gain its goal at the expense of the opposition, we have active conflict. On the other hand, passive conflict involves hidden actions that avoid a direct confrontation. Not surprisingly, it is very difficult to counter passive conflict because the other party may not even be aware of the problem (Walters 1977).

More directly, conflict is also viewed as rooted in disruption and usurpation. This view is perhaps most in tune with our putative definition of the beginning of this chapter. For example,

Deutsch (1973) defines conflict as a state when "incompatible activities occur ... an action that is incompatible with another action prevents, obstructs, interferes, injuries, or in some way makes the latter less likely or less effective" (p. 10). In the same vein, Goldman (1966) defines conflict as "… a social relationship between two or more parties (persons, groups, or empirically distinguishable entities) in which at least one of the parties perceives the other as an adversary engaging in behaviors designed to destroy, injure, thwart, or gain scarce resources at the expense of the perceiver".

2.4.3. Conflict as Part of the Ecosystem

Competition and cooperation for access to resources are essential parts of the ecosystem of commerce. Not surprisingly, conflict forms an inevitable part of this spectrum. Nevertheless, there are nuances that are important.

2.4.3.1. Competition

Conflict and competition are related but are not the same. When two or more groups or channel members have the same objective, they may be in competition for limited resources but not necessarily in conflict. For example, private labels and national brands may compete for limited shelf space in a grocery store. Two franchisees can compete for market share in a specific geographic region. In either case, success for one may come at the cost of the other. However, there is still the possibility that the joint outcome will be higher and both parties will benefit even if the competitive framing makes the interactions appear zero-sum. So, despite the competition, the organization relationship may not be characterized by conflict.

Nevertheless, intense competition could lead to conflict, especially when the scarcity of the resource in question is significant (Robbins 1974). In the example of two franchisees when they compete for local customers in a region with no market growth, a competitive win or loss has

important and long-term business implications. Here there is a high probability of manifest conflict. However, when markets are expanding such conflict is less likely to happen because while one may gain disproportionately, no one is worse off. Robbins (1974) highlights the difference between direct competition between the parties as they vie for scarce resources, versus the indirect or "in effect" competition. The former is more likely to lead to conflict.

2.4.3.2. Cooperation

For many practitioners, cooperation is often seen as the other end of a conflict continuum. This is often so because interdependence is the common antecedent to both (Ross and Lusch 1982). This view is also reflected in the work of some researchers. For example, Pearson (1972) considers conflict and cooperation as the opposite ends of a single scale – thus elimination of conflict leads to cooperation. However, others like Robbins (1974), Mallen (1964) and Stern and Heskett (1969) avoid linking elimination of conflict to achieving cooperation. For example, Robbins' (1974) definition of cooperation as "working together toward mutual goals," does not mention conflict.

We adopt the perspective, that in practice, conflict and cooperation exist independent of each other as separate dichotomies -- the opposite of conflict is no conflict, and that of cooperation is no cooperation. This, of course, suggests that conflict and cooperation can co-exist. We incorporate this possibility and elaborate upon what it means for the way we view organizational conflict.

Figure 2-2 illustrates the different overlaps in the conflict and cooperation dichotomies in a 2 x 2 framework. Quadrant 1 is the no conflict - no cooperation quadrant. Lack of conflict here could be seen as a positive organizational situation when we view conflict as a disruptive force. Nevertheless, the status quo for the organization's performance in this state is unlikely to be affected because in the absence of cooperation (say, between channel members), it is not clear that

positive outcomes will be easy to achieve. As a matter of fact, this quadrant is almost unsustainable because of uncertainty in the business environment. As the environment changes (e.g., a big downturn in demand), the organization may not have sufficiently developed capabilities to deal with any resultant conflict. We call this the "unsustainable" quadrant.

Quadrant 2 is the conflict – no cooperation quadrant. This is a "hostile" quadrant because a high level of conflict and lack of cooperation leads to antagonistic and litigious behavior (Gaade and Hakansson 1993; Vaaland and Hakansson 2003). This is a coordinate where organizations often get mired in snowballing conflict situations which can only be addressed with more cooperation among the relevant parties.

Quadrant 3 is the no conflict – cooperation quadrant. While this appears as a "stable" coordinate for organizations, a potential drawback of this situation is that in the absence of conflict, parties (e.g., channel members) may not see any potential threats to efficiency or effectiveness in the ongoing business relationships. This may deter innovation and risk-taking.

Quadrant 4 is the conflict – cooperation quadrant. Arguably, this can lead to innovation and out of the box thinking in organizations, for the usual constraints of conflict are compensated by organizational processes that encourage cooperative problem-solving. Gadde and Hakansson (1993) characterize this as a "well-developed" coordinate, reflecting the possibility that with a high degree of cooperation, conflict could lead to better outcomes for all organizational members. We label this as the "transformative" quadrant. In our view, this coexistence of conflict and cooperation is a desirable situation for organizations.

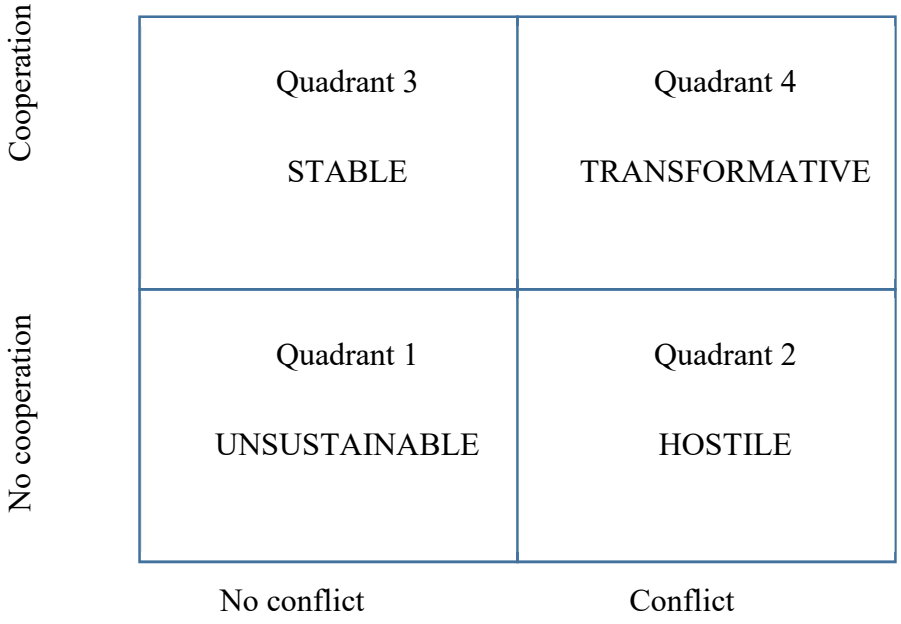


Figure 2. 2: Conflict-Cooperation relationship.

2.4.4. Conflict as a Managed Process

When conflict is seen as inevitable in business situations, much of the organizational focus turns to managing such conflict. The managerial task then is to identify the nature and scope of conflict and intervene with appropriate mechanisms. Pondy (1967) greatly facilitated the managerial discourse on inter-organizational conflict by viewing conflict as a process comprising a series of interlocking episodes. He characterized these episodes of conflict as five stages: latent, perceived, felt, manifest conflict, and conflict aftermath (See Figure 2-3). We borrow from his work and expand on these stages in the following paragraphs.

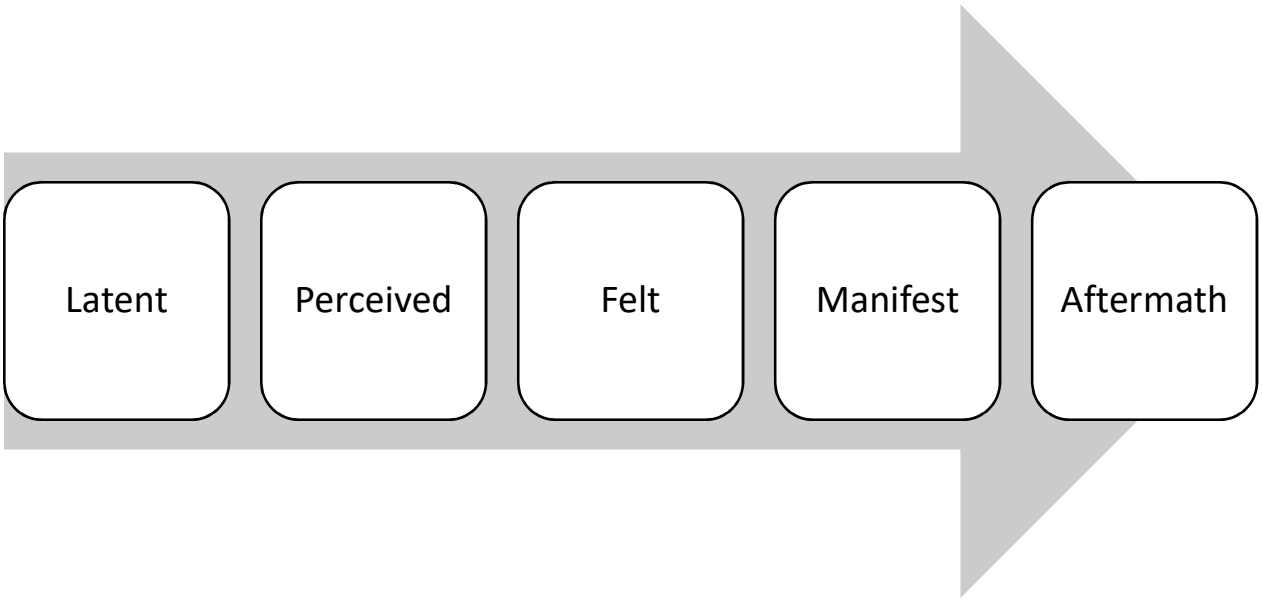


Figure 2. 3: Conflict as a Process - Different episodes in the Conflict Process.

2.4.4.1. Latent conflict

The first stage of the process identifies the conditions that engender the potential for conflict. According to Pondy (1967), such latent conditions can be categorized into three groups. (1) Competition for scarce resources, illustrated by both vertical and horizontal conflict between two franchisees or franchisor and franchisee over the market and territory. (2) Drive for autonomy, where one member (e.g., the retailer or franchisee) seeks to protect itself from being monitored by the other (e.g., franchisor or manufacturer). (3) Goal incompatibility or divergence of goals. Consider for example the conflict between Coca-Cola Company and its bottlers that can result from disagreements on the desired amount of inventory stocking level between the two entities. Pondy (1967) also adds role conflict to this list to provide a comprehensive list of antecedents and sources of conflict.

2.4.4.2. Perceived conflict

In the second stage of the process, one or more parties become aware of the conflict. Such perceived conflict may, or may not, be the outcome of the latent conflict conditions identified in the first stage. If it does not stem from those conditions, it results from miscommunication between involved parties, typically because of selective perception and misunderstandings. A good example of this is the promotional plan of a manufacturer that is not coordinated with its reseller. This is quite common, for manufacturers often do not disclose new promotional plans till the final approval of promotion (McVey 1960). As a result, the retailer may suddenly face the prospect of simultaneous promotions with other national brands or even its own private label brand, resulting in greater in-store price competition and lower gross margins. Not surprisingly, communication is often the most preferred solution for perceived conflict.

2.4.4.3. Felt conflict

In the third stage of the process, conflict arouses emotive responses such as anger and frustration. It is largely a personalization of conflict, and which may arise from sources independent from the ones discussed earlier. This is surprisingly common in business-to-business relations where the firms' managers and service providers may personally internalize the conflict in the form of emotive reactions. For example, if a serious tension exists between the franchisor and its franchisee, managers of the franchisee may personalize the disagreement and feel angry, frustrated and hostile. This may cause significant stress and pressure for the individuals, further increasing the risk of personalizing the conflict.

2.4.4.4. Manifest conflict

As the name implies, in the fourth stage, conflict is reflected in overt behavior which can range from conspicuous apathy to outright violence. The most useful definition seems to be that of

behavior by the agent in question, that frustrates the goals of at least some of the other participants (Vaaland and Håkansson 2003). However, the interpretations can be nuanced. Consider the example given by Pondy (1967). Suppose A unconsciously frustrates goals of B. That per se is not conflict behavior. Suppose then B informs A that he perceives A's behavior to be that of a conflict. If A admits his behavior and continues unchanged, that would be manifest conflict.

Various administrative and legal resolution processes are useful to manage this kind of conflict. Stern and El-Ansary (1977) suggest diplomacy, joint membership, exchange of persons, co-optation, mediation, arbitration and adopting super-ordinate goals as possible ways to resolve these types of conflict. Given the overt nature of conflict here, it is not surprising that sometimes conflict resolution can lead to legal action and court decisions.

2.4.4.5. Conflict aftermath

In the fifth and last stage of the process, comes the conflict resolution and addressing the bases for future conflict. A multifaceted combination of the effects of past episodes and the environment determines how this stage develops (Pondy 1967; Vaaland and Håkansson 2003). Two possible outcomes are predictable: (1) previous episodes of conflict lead to more conflict, and (2) response to previous episodes of conflict will lead to resolution of conflict or lead to the disintegration of the system (end of a relationship). In 1984 when Porsche AG attempted to reshape its distribution channel, a notorious example of channel conflict occurred. Porsche wanted to establish a more flexible structure, improve customer satisfaction and increase profit opportunities but ignored its dealers. The plan backfired because Porsche underestimated the power of its existing dealers in implementing its plan. National Automobile Dealers Association (NADA) and 40 independent Porsche dealers pursued litigation after the announcement of the Porsche plan. Within

a month, lawsuits on behalf of Porsche dealers reached more than $3 billion. Finally, Porsche announced the withdrawal of its plan and returned to its previous franchise system (Tinnin 1984).

Clearly, it is not necessary that all conflicts will span the entire process. Some conflicts would not graduate from the latent stage, while others might be felt but not manifest themselves. The number of episodes any given conflict situation will span is naturally a function of the ability, effectiveness, and incentives of the parties to address the episodes with appropriate conflict resolution efforts.

2.5. A managerial taxonomy of Channel Conflict

We will now focus on a more specific type of organizational conflict – channel conflict. By "channel" we mean the distribution channel, which is the set of independent organizations through which products and services are made available to the end user. The conflict we refer to here is between these different organizations in the channel, e.g., conflict between the wholesaler and retailer, OEM and distributor, etc. Channel conflict is part of the broader organizational conflict. So, the general literature on organizational conflict is relevant here. In an attempt to generate a managerially-oriented perspective, in this subsection, we group the relevant definitional literature under three categories: perception of channel conflict, expression of channel conflict, and locus of channel conflict.

2.5.1. Perception of Channel Conflict

This literature on perceptions of channel conflict considers two aspects of perceptions: (a) a focus on the differences in the perceptions of the parties, and (b) a focus on the perception of the behavior of the parties. While seemingly nuanced, these different ways of interpreting perceptions of channel conflict lead to very different conceptualizations of conflict and consequently different

managerial approaches and resource allocations in the channel. We discuss both aspects of channel conflict perception below.

Gaski and Nevin (1985) focused their discussions of perceived conflict on perceived differences between channel members on issues that impede or prevent goal alignment and goal achievement. Similarly, Dant, Brown, and Bagozzi (2006) focused on differences in perceived experiences which impact psychological states within the relationship. This way of interpreting the conflict naturally sharpens managerial attention towards providing some training and favourable conditions for assimilation to help channel members mitigating the negative psychological impacts of channel conflict. For example, firms invite suppliers' reps to join their board of directors to create a forum where both channel partners can participate in crafting policies and setting channel goals.

Others such as Etgar (1979) and Stern and Gorman (1969) focus on the perception of manifest conflict behavior per se. For example, Etgar (1979) explains channel conflict as "… (the situation) when a component (channel member) perceives the behavior of another component to be impeding the attainment of its goals or the effective performance of its instrumental behavior patterns" (p. 61). Notice that this way of interpreting the perceptions naturally lead the managerial focus to hone in on reducing the potential negative impact of conflict on channel performance by providing incentives to channel members to make them align their goals and behavior. For example, firms use different profit-sharing schemes and incentives such as royalty rates, quantity discount, two-part tariffs to align goals and behavior of channel members and reduce the negative effect of conflict (Agrawal and Lal 1995; Ingene and Parry 1995).

2.5.2. Expression of Channel Conflict

Channel conflict is expressed in several ways spanning both attitudes and behavior. Walters (1977) poses channel conflict as an "action by one channel member which is inconsistent with the goals of some other member or members at a different channel level" (p. 61). On a similar note, Stern and Brown (1969) pose channel conflict as "the opposition to goals, ideas, or performance behavior that occurs among the managements of institutions that make up the marketing channel" (p. 155). Taking a more formalized route, Lusch (1976a) defines conflict in a channel as verbal or written exchanges of disagreements between channel members. Schmidt and Kochan (1972) offer a similar perspective on channel conflict "as overt behavior rising out of a process in which one unit seeks the advancement of its own interests in its relationship with the others" (p. 363).

Pondy's (1967) process-oriented view also informs our understanding of how channel conflict is expressed. He refers to channel conflict in terms of four different stages of conflict: affective conflict, latent conflict, manifest conflict and perceived conflict (Lusch 1976a). Affective conflict is a feeling of stress, tension, or hostility of one channel member toward another. Latent conflict is the antecedent condition of behavioral conflict. Manifest conflict is actual conflict behavior and the last, as the name suggests, is the perception of conflict level.

2.5.3. Locus of Channel Conflict

There are two distinct ways the literature has looked at the locus of conflict. On the one hand, there is an effort to fix the identities of the involved channel members. On the other hand, there is an effort to fix the different stages of conflict over the spectrum of channel member interactions.

As part of the first approach, Walters (1977) categorized channel conflict into two groups: Horizontal and Vertical conflict. According to Michman (1974), horizontal conflict occurs between

middlemen of the same type at the same stage in the marketing channel. Horizontal conflict may be based on either competitive or non-competitive factors. Horizontal competitive conflict follows the standard economic concept of competition. It involves two or more firms that fight over the same, or similar markets. In horizontal non-competitive conflict, companies disagree over goals, policy, rules, division of revenue, personal treatment, etc. A good example of horizontal non-competitive conflict is a situation where two franchised appliance dealers squabble over territorial rights to sell in a given area.

Vertical conflict occurs between channel members at different levels in the same channel of distribution. It occurs across the market when the wishes of one or more channel members at one level are in opposition to those at another level. We can also categorize vertical conflict into competitive or non-competitive factors. Vertical competitive conflict occurs when institutions at different levels in the channel compete for the same market. For example, a manufacturer (e.g., Gillette) that previously only sold its products using a retailer, starts selling directly through its website to the same group of customers. When a franchisor (e.g., McDonald's) opens a new company-owned outlet close to the current location of one of its franchisees, it triggers a vertical competitive conflict. On the other hand, vertical non-competitive conflict revolves around organizational and operational activities that place different channel levels in opposition. For example, a retailer (e.g., Wal-Mart) receives delivery of a product shipment from a manufacturer (e.g., Procter & Gamble) later than scheduled. A dispute might flare between these two parties concerning on-time shipment. In another example, a franchisor (e.g., McDonald's) may ask its franchisees to add some items to their menu. If the franchisees are reluctant to accept that change, for say, the huge costs imposed on them, they begin to resist this decision. These types of disagreement could trigger vertical non-competitive conflict.

The second perspective hinges on Pondy's approach of viewing conflict as a process. So, any given channel may be characterized by a distribution of the different stages of conflict across the different business relationships within the channel. While some channels may be characterized by lower levels of emotive reactions (felt conflict), others may be higher on those counts. It may also be the case that the most significant channel relations (e.g., between the auto manufacturer and its largest dealers) are characterized by high levels of manifest conflict (the fourth stage), while the less significant ones (the smaller dealers) have little manifest conflict but high levels of felt conflict.

Naturally, this focus on different stages of conflict invariably leads to questions around managing them within the channel. Indeed, Rosenberg and Stern (1971) address this by drawing upon Pondy's framework to conceptualize the process of managing channel conflict in four stages: understanding the structural and attitudinal factors that lead to channel conflict, calibrating the scale and scope of conflict between the channel members, assessing the conflict outcomes in the form of firm performances, and attempting to address conflict by different conflict resolution approaches, where necessary. In the next section, we build upon their work to provide a framework to manage channel conflict.

2.6. Managing channel conflict

It should be clear to the readers by now that conflict is often subtle, based on perception, yet significant in the potential to impact business outcomes. It should also not come as a surprise that the conflict generating processes are often fuzzy and not obvious. So, for managers tasked with addressing channel conflict, there are multiple challenges. The managerial task is necessarily underlined by the need for resources as it would require, time, attention and often money, to address these issues. Accordingly, we outline the task of managing channel conflict to comprise of the following five considerations (see Figure 2-4): (1) Calibrating the level of conflict; (2)

Understanding the underlying causes of channel conflict; (3) Identifying the different manifestation of channel conflict; (4) Resolving the conflict; and (5) Understanding the consequences of channel conflict. We discuss each of these below.

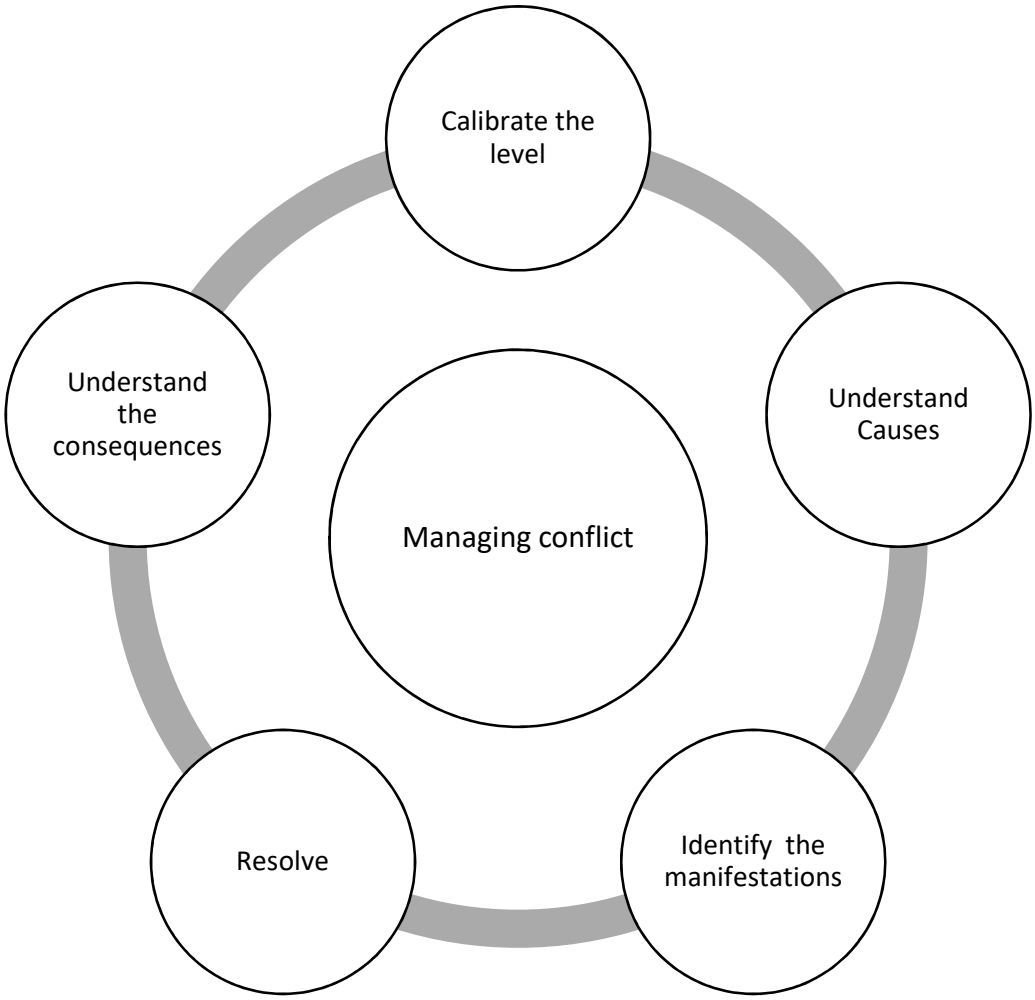


Figure 2. 4: Managing conflict

2.6.1. Calibrating the Level of Conflict

How significant is the level of channel conflict? As intuitive the question is, the answer is surprisingly complex. On the one hand, there is the rather clear approach like that of Lusch (1976a), who operationalized conflict in the channel as verbal or written exchanges of disagreements

between channel members. So a straight count would suffice. Antia, Zheng, and Frazier (2013), for example, used number of litigations as a measure of conflict in a franchise context. On the other hand, there is the more involved measure espoused by Coughlan et al. (2001) which incorporates not only the instances of conflict but also their significance and severity. In general, the literature considers three dimensions: intensity, frequency, and importance, when discussing the level of channel conflict.

2.6.1.1. Intensity

Intensity of conflict has been investigated in depth (*cf.* Arndt and Ogaard 1986; Assael 1968; Brown and Day 1981; Dilts and Lusch 1985; Eliashberg and Michie 1984; Etgar 1979; Hunger and Stern 1976; Moore 1990; Katsikeas 1992; Pearson 1973; Price 1993; Pruden 1969; Rosenberg and Stern 1971; Stern, Sternthal and Craig 1973). Intensity of conflict is defined as the level of concerns of channel members about the bases that characterize the conflict. Most of these studies first identified the bases of conflict. Then, they include intensity of conflict or disagreement by measuring it on a Likert (5-point or 7-point) scale. As an illustration, intensity of conflict could be seen to go up as one channel member removes a manufacturer brand from its portfolio following disagreement on the level of promotional support. It will also go up if one starts litigation against the other party. Eliashberg and Michie (1984) include intensity of conflict as part of their measurement of perceived conflict. For this, they identified 20 conflictual issues between franchisees and regional sales managers. Then they measured the intensity on a 5-point scale from both sides of the dyadic relationship.

2.6.1.2. Frequency

Frequency of conflict has also been examined in several studies (Brown 1977; Brown and Day 1981; Etgar 1979; Foster and Shuptrine 1974; Kelly and Peters 1977; Lee 2001; Lusch 1976a;

Schul, Lamb and Little 1981). Frequency is defined as how often channel members are involved in a disagreement over business interactions in the channel. In most of these studies, conflict was measured by the number of actual rivalry or dispute events. For example, Etgar (1979) measured the frequency of conflict incidence from dealers on three common practices: (1) when dealers stop selling the manufacturer's products; (2) when dealers start litigation against the manufacturer; and (3) when dealers involve trade association or third party on their behalf to arbitrate with manufacturers. Brown and Day (1981) also include frequency of occurrence of disagreement between dealer and manufacturer as part of their effort to measure manifest conflict. They identify 15 issues that could lead to disagreement between dealers and manufacturers. Then, they sum over all 15 issues to measure the final score for frequency of conflict.

2.6.1.3. Importance

Cadotte and Stern (1979) suggest conflict cannot be calibrated in an appropriate manner unless we include how important the conflict situation is, for channel members. Unimportant issues are less likely to make the parties feel the impact of conflict. While this significance has been widely acknowledged in the channel conflict literature, relatively fewer studies explicitly include importance of conflict as a key dimension. Some that do include it are studies by Arndt and Ogaard (1986), Brown (1977), Brown and Day (1981), Brown and Fraizer (1978), Cronin and Baker (1993), and Ganesan (1993).

In some studies, importance is measured on a 5-point or 7-point scale (from "not important at all" to "very important") across respondents (Brown and Day 1981). Ganesan (1993) measured importance of a given conflictual issue for each respondent separately on a 7-point scale; calculating the average importance of each issue across the respondents. Then he compared the importance score of each respondent with the average of importance for all respondents. If the

respondent score for the issue is less than average, it is coded as an unimportant issue; if the score is above the average, it is coded as an important one.

Operationally, Coughlan et al. (2001) propose using the following four kinds of information to calibrate the level of conflict in a channel.

1. *Counting up the issues*. First, we should list the major relevant issues between two channel members (e.g., franchisor and franchisee). We should also consider issues that are not in dispute at the moment.
2. *Importance*. For each extracted issue, we should evaluate how important it is to the channel member concerned. For example, franchisees can rate the importance of the issue on a scale of zero to ten.
3. *Frequency of disagreement*. For all of the issues, we should assess and gather data on how often the channel members have a disagreement over the issues.
4. *Intensity of disagreement*. For each listed issue, we should evaluate and gather data on how much the concerned channel members consider the issue an intense conflict.

The combination of importance, frequency, and intensity of the issues gives an index to measure the level of channel conflict.

2.6.2. Understanding the Causes of Channel Conflict

The literature categorizes causes of conflict in different ways. One of the earliest efforts is by Stern and Heskett (1969), who built upon the idea that conflict is caused by channel members' motivations and objectives being at odds with each other. Accordingly, they categorized sources of conflict into three broad groups: goal incompatibility, domain dissensus and differing perceptions of reality.

Stern and Gorman (1971), expanded on the same theme to more explicitly include roles, perceptions, and communications. In their conceptual paper, they propose seven causes of channel conflict: (1) roles, (2) issues, (3) perceptions, (4) expectations, (5) decisions, (6) goals, and (7) communications among the members in the channel. In a very similar vein, Rosenberg and Stern (1971) categorized causes of conflict into four groups: goals, domains, perceptions, and miscellaneous.

Etgar (1979) builds upon the earlier work and borrows from the social psychology literature, to identify some key structural and attitudinal factors underlying channel conflict. He identifies three sets of structural causes: goal incompatibility, drive for autonomy and control over scarce resources. He also identifies several attitudinal sources of conflict which are: roles, expectations, perceptions and channel communications.

The structural causes of conflict identified by Etgar reflect in the perspectives espoused by the economic theories, especially the new institutional theories like Transaction Cost Economics and Agency Theory. A central theme in these theories is that of conflict caused in the process of sharing economic rents that result from the joint action of the channel members. There is a large and growing literature in the distribution channels literature that draws upon these ideas (*cf.* Bergen, Dutta, and Walker 1992; Dutta et al. 1995; John and Weitz 1988; Klein and Murphy 1988; Ray, Bergen and John 2016; Rindfleisch and Heide 1997).

We now collate the different sources of conflict into the following eight sub-categories under the structural and attitudinal origins: Structural – (a) Goal incompatibility, (b) Domain dissensus; (c) Control over scarce resources; (d) Rent-sharing dissensus, and Attitudinal – (a) Roles; (b) Expectations; (c) Perceptions, and (d) Channel communications (See Figure 2-5). These are discussed next.

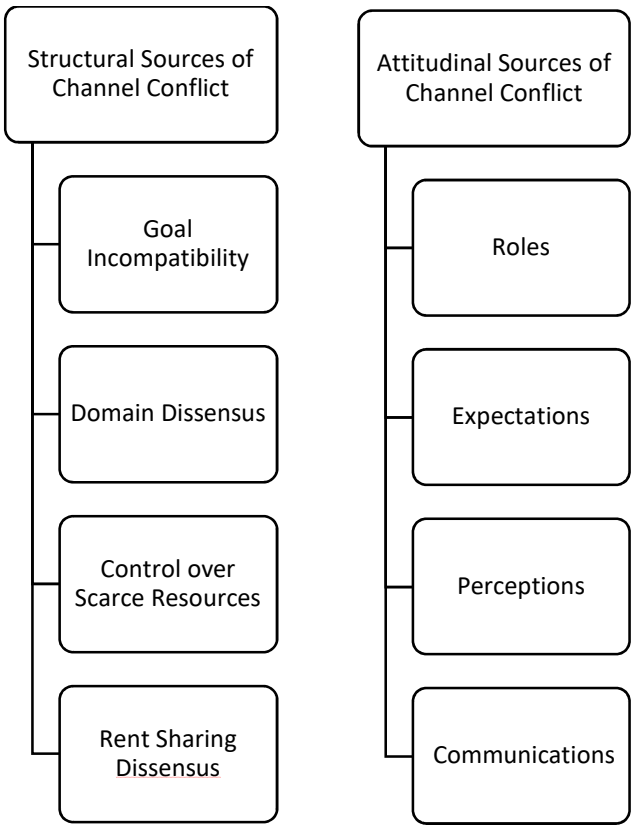


Figure 2. 5: Different sources of conflict

2.6.2.1. Structural sources of conflict

(a) *Goal Incompatibility*: Channel members are in an interdependent vertical relationship, and joint action is necessary to serve their own customers better and maximize their own profits (Stern and Gorman 1971). Nevertheless, the goals of channel members are not often compatible (Stern and Gorman 1971; Stern and Heskett 1969). Goal divergence or incompatibility can be the source of conflict, especially when the parties attempt to pursue different paths. According to Etgar (1979), goal divergence occurs "… when two parties who cooperate on some joint activity are unable to reach a consensus on a concerted action and when they attempt to pursue different, if not opposite, goals" (p. 65). As an example, retail franchisors can aspire to a higher level of customer service at the point of sale. On the other hand, the franchisee might be coming up against cost constraints, thus limiting its options on providing more costly customer service. Coordinating such

relationships within franchises is often a major problem and a primary cause of channel conflict between franchisors and franchisees. As another example consider the case of dual distribution. Dual distribution occurs when a manufacturer with independent retailer channels also adds a direct sales channel. When both channels target the same market, conflict between the manufacturer and retailer is often the result.

(b) *Domain Dissensus*: Disagreement on the boundaries of the domain of autonomy is at the root of this type of conflict. Pondy's (1967, p. 297) explanation is relevant here - "Autonomy needs form the basis of a conflict when one party either seeks to exercise control over some activity that another party regards as his own province or seeks to insulate itself from such control." While Etgar (1979) characterized this source of conflict as *drive for autonomy*, others such as Hunt and Nevin (1974) characterize this as related to *power*.

Stern and El-Ansary (1992) identify four important domains which are relevant in this context: (1) population to be served, (2) the territory to be covered, (3) the functions or tasks to be performed, and (4) the technology to be employed.

Domain dissensus often arises when one member of the channel perceives that other channel members do not do their jobs properly within their defined domain (Coughlan et al. 2001). Such disagreement is fairly common in channels. For example, Goldkuhl (2007) refers to a conflict between Scandinavian Airlines (SAS) and its travel agents about who should serve the corporate customers. A similar disagreement is quite common between automobile manufacturers and their dealers. Car dealers want to have freedom to make decisions about different aspects of their business such as local advertising, retail pricing and hours of operation. However, often the manufacturer retains control of such decisions.

Another type of domain dissensus could be unauthorized resale by an authorized member of the channel. For example, a retailer may sell its products purchased at a discount from a manufacturer to an unauthorized reseller. Not surprisingly, these actions by a channel member (often called gray market sales) are sources of channel conflict (*cf.* Antia et al. 2006).

(c) *Competition for Scarce Resource*: Scarcity of resources, i.e., when the demand for resources in the channel exceeds the available supply, is often at the root of many channel conflicts. When the scarcity of resources is common knowledge, channel members are expected to internalize the information and design the appropriate mode of channel interactions. Often this means reaching an agreement on the distribution of the scarce goods or even working with reduced expectations. For example, when resellers are aware of the limited distribution ability of their suppliers, they may simply work with longer lead times to delivery.

However, much of the channel conflict related to scarcity of resources results out of a new or changed business circumstance. For example, when manufacturers develop new markets (e.g., an auto manufacturer, attempting to develop its dealer network in an underserved part of the country), its current downstream channel members (dealers) may vie for exclusive rights. This may lead to channel conflict as the competing claims are being resolved (Etgar 1979).

Sometimes, the change is in the form of a unilateral revision in its business goals and objectives, by a channel member. This unilateral revision may easily become a bone of contention in the channel. For example, a value-added reseller (VAR) in the automobile paint refinish industry may decide to devote much of its limited sales staff to promoting high-margin generic paint components to its large fleet customers. This could, in turn, lead to conflict with its national brand suppliers who would want the VAR sales staff to push its own components to the customer. Such dissatisfaction with a sudden reallocation of resources, leading to conflict, is common in channels.

(d) Rent-Sharing Dissensus: These types of conflicts are endemic in channels and are considered subsumed in the ongoing costs of transacting, whether they are disputes, arbitration or even litigation. The key question here is the residual rights to any economic rent generated by the channel. As an example, consider a high-end car dealership who is expected to provide excellent service apropos of the high-value brand. There may be both ex-ante and ex-post disagreements on profit sharing arrangements.

Ex-ante, the manufacturer might want the car dealership to commit a significant amount of money as surety for its service efforts once the agreements are signed. The dealer may only agree to do that provided the profit-sharing agreements justify the added expenses it is being asked to make. Ex-post disagreements on profit sharing are also common if, for example, the dealership were to feel that the manufacturer did not invest appropriately in the national advertising campaigns. Alternately, the manufacturer might blame the dealership's falling service for softer sales and damages to the brand name. Renegotiations on rent-sharing agreements in these situations almost always are clouded by the two problems of observability (actions or the lack of it are difficult to observe) and measurability (e.g., the degree to which the service standards fell and whether that affected sales at all, are both difficult to measure).

These rent sharing challenges also crop up in channels where the reseller actions directly cut into manufacturer profits. Consider, for example, channels where resellers substitute one manufacturer's components with another. There is evidence for example that some auto paint resellers mix different paint component brands by strategically replacing specific branded products. Since this directly affects the manufacturer bottom line, conflict results – often around the profit-sharing arrangements in place (*cf.* Ray, Bergen, and John 2016).

2.6.3. Attitudinal sources of conflict

(a) Roles: A role is a "set of prescriptions defining what the behavior of a channel member should be" (Thomas and Biddle 1966, p.29). In other words, role is the behavior that is described for a certain job in an organization or relationship (Etgar 1979). Role deviance is likely to be a major cause of channel conflict because roles are a means of integration and coordination. Intra-channel conflicts can, therefore, emerge when (1) channel members deviate from their established roles and (2) channel roles are not well defined for all channel participants.

(b) Perceptions: Stern and Gorman (1971) defined perception "as the process by which an individual selects and interprets environmental stimuli" (p. 159). The interpretation of channel members may not be congruent with reality. Expectations of channel members can be different from each other because they have access to different information and their information processing capacities are different (Etgar 1979). Previous experience, attitudes, and predispositions lead to such differences. Thus, parties in a channel may perceive the same phenomenon in opposing perspectives. According to Rosenberg and Stern's (1971) classification of sources of conflict, different perceptions of reality is not a cause of conflict; in fact, it is an issue that derives from miscommunication or inadequate communication. So, this source of conflict should be addressed by communication.

(c) Expectations: While perceptions talk about present reality, expectations concern future behavior. The difference in information availability, information processing capacities, expected rewards, policies, and experience may generate different expectations among channel members and can lead to channel conflict (Walters 1977).

(*d) Communication*: Much like roles, communications can coordinate the behavior of channel members. Miscommunication can lead to behavior which is likely to cause conflict (Stern

and Gorman 1971). Ineffective communications often lead to misunderstandings, selective perceptions, incorrect strategies, and mutual feelings of frustration. For example, a late announcement about new products or promotional campaigns are causes of conflict in the distribution channel. Thus, effective communications are essential to managing channels.

2.6.4. Identifying Manifestation of Channel Conflict

Manifestations of channel conflict can be categorized into three broad groups: (1) the exercise of power, (2) intra-organizational change, and (3) cascades of escalating intensity. Further, such manifestations can be functional (leads to resolution) or dysfunctional.

2.6.4.1. The exercise of power

Stern and Gorman (1971) suggest that when a channel member feels frustration, it attempts to change the behavior of other members by exercising power. They suggested three methods of applying power in channel relationship: Threats, coalition, and symbols. See Figure 2-6.

Threats: Threat is not a functional behavior since the most likely reaction to threat will be a counter-threat. Therefore, it will result in a higher level of conflict. For example, if a wholesaler or manufacturer wants its retailer to buy deeper assortments of its merchandise, it may impose additional charges for small purchases. In retaliation, the retailer may threaten to put the wholesaler or manufacturer merchandise in a less attractive shelf location in the store. In this case, the exercising of power leads to in-kind behavior.

Coalition: To enhance their potential effectiveness and to increase their bargaining power in a conflict situation, the channel members involved in a conflictual relationship may create coalitions with other members who have the same problem. Palamountain (1968), in his book titled "the politics of distribution", provided a good example. He referred to the formation of the National

Automobile Dealers Association (NADA) as a reaction of automobile dealers to manufacturers' policies, which tended to decrease the dealers' profits.

Symbols: According to Stern and Gorman (1971, p.162), symbols "represent values commonly shared by group members and those who potentially could exert some control over the outcome of the intra-system or intra-channel conflict relationship." The exercise of power in reaction to conflict can take the form of increasing the flow of symbols. For example, a small dealer in conflict with its larger supplier may use its dealers' association as a symbol in advertising. This method of exercising power is less forceful than the other two methods.

2.6.4.2. Intra-organizational change

Arguably, survival is one of the key objectives of an organization. As the business environment changes, survival requires the organization to change as well (Robbins 1974). The exercise of power discussed earlier can be seen as one party's efforts to change other parties' behavior in order to deal with channel conflict resulting from such changes. Nevertheless, exercise of power is neither inevitable nor always desirable. Excessive exercise of power could be dysfunctional and lead to the end of a relationship, calling the organization's very survival in question. Therefore, sometimes channel members may find it better to adapt to new situations, by changing themselves. Often the motivations for such change are in the dissatisfaction, desire for improvement, and survival that result in the conflict in the first place. This change is meant to improve the situation, and so if that does happen, it imbues the conflict with a functional hue.

Some of the intra-organizational changes happen at a high level such as changing the goals of involved parties in conflict. In other cases, the changes happen at more operational levels, such as the change in the specific actions that led to conflict by channel members. In yet other cases, change happens automatically by the spontaneous reaction of channel members to conflict. In sum,

intra-organizational change falls into three categories: goals, instrumental behavior, and spontaneous changes (Stern and Gorman 1971). See Figure 2-6.

Goals: The channel members involved in conflict may be forced to re-evaluate their goals in accordance with the goals of other channel members. For example, in a conflict about return on investment, the franchisor may find out setting goal of 20 percent return on investment is not reasonable and reduces it to 15 percent. Stern and Gorman (1971) assert that this kind of change is the last attempt to eliminate the source of conflict, and it does not occur frequently.

Instrumental behavior: While goal incompatibility can lead to conflict, goals per se are rarely the source of conflict. Rather, the behavior of channel member in pursuing their goals is at issue. Therefore, altering the behavior which caused frustration in the channel can reduce the degree of conflict. An example would be service quality-shaving by a franchisee in an effort to meet ROI goals. As it reduces costs by cutting service quality, a conflict with the franchisor might develop. This might lead to more explicit and frequent monitoring by the franchisor, closer integration of hiring and training programs, even locating corporate service managers at site.

Spontaneous change: Intra-organizational change can also be spontaneous as a reaction to conflict, and can happen even without the channel members being aware of the change. As the time interval increases between the original conflict in the channel and a future moment of recall and information processing (i.e., a similar conflict situation), the details of the earlier conflict, may not be recalled accurately. In such cases, the agent may adopt a behavioral response related to the original conflict, independent of the outcome of any conflict resolution efforts. For example, a franchisee, may recall an instance when he was not offered a bonus available to others, and which required him to escalate matters before it was addressed. On a dysfunctional note, he may forget the consultative service that was performed specifically for him in the original instance to resolve

the matter. This selective recall can perpetuate conflict because he may then become predisposed to consider the franchisor as one that withholds bonus, and thus, end up routinely escalating the conflict. On a more functional note, the consultative support he received may lead him to routinely make a strong case for bonus right before the end of the last financial quarter and thus avoid the aggravation of another conflict, completely.

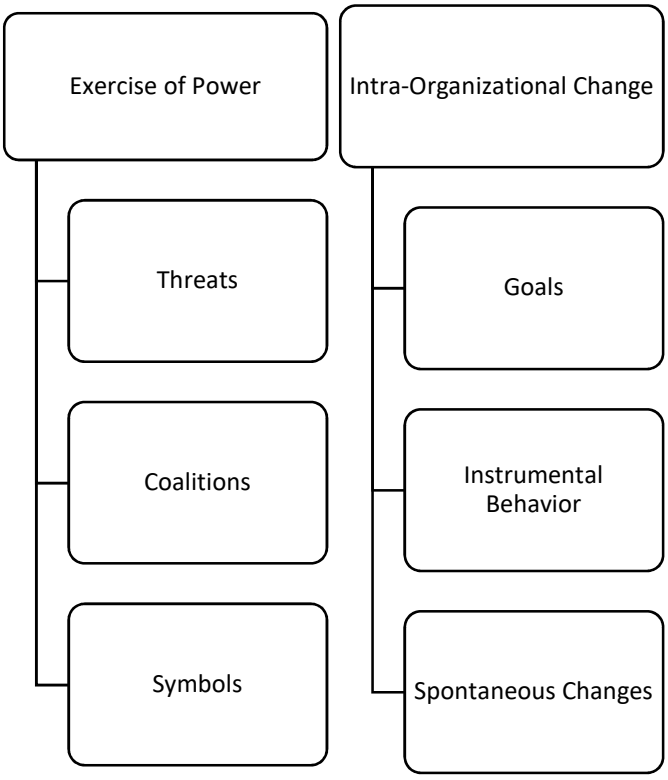


Figure 2. 6: Identifying manifestations of conflict

2.6.4.3. Cascades of escalating intensity

In addition to categories of manifest channel conflict proposed by Stern and Gorman (1971), Sarat (1984) provides an alternative framework to interpret the manifestation of conflict between two parties. He employed the metaphor of a dispute pyramid with different intensity of conflict at different levels. In the first stage, parties identify or recognize that there are problematic issues in the channel and the resulting outcome is not desirable for at least one of the parties. In the

second stage, they begin discussing the problems to find a solution (grievance). In the third stage, they may refer to their contract or agreements and start blaming each other for the current problems. Yet, the possibility of resorting litigation may not be a compelling proposition at this stage given the costs and uncertainties. So, they start to confront the adversary without initiating legal proceedings with the hope that they may be able to resolve the dispute bilaterally. The fourth stage manifests itself in the form of sanction, such as delay or withholding of payments. At the last stage, the intensity of dispute increases to the highest and both parties may decide to follow a wide range of alternative actions such as bilateral negotiation, arbitration, third party mediation, and ultimately adjudication and formal litigation (Sarat and Grossman 1975). Figure 2-7 shows the conflict (dispute) pyramid proposed by Sarat (1984).

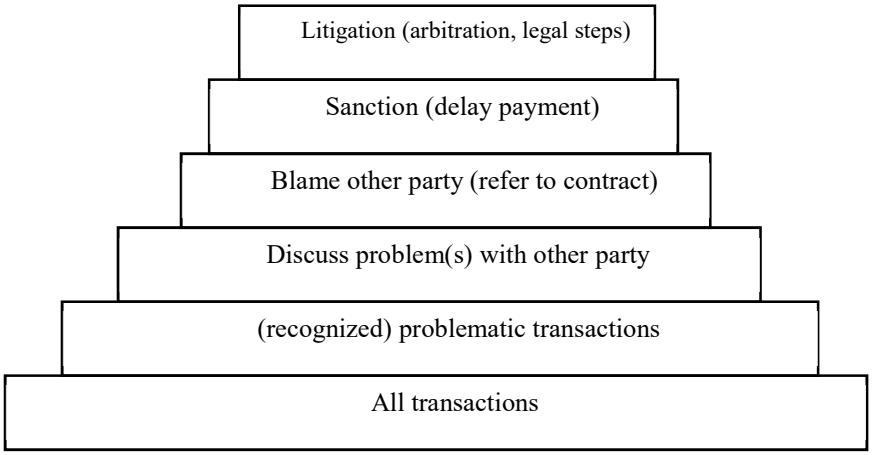


Figure 2. 7: The dispute pyramid (Sarat 1984)

2.6.5. Resolving Channel Conflict

A system holds its components together in a viable network only when the subsystems are willing to remain in the system. This applies to marketing channels as well. As efforts are made to resolve conflicts, the important thing to remember is the importance of achieving an inducements-contributions balance in the channel (Stern and Gorman 1971). This begins with the acknowledgment that every channel member should contribute to the performance of the system. In turn, this drives the expectation that each should receive a just reward for this participation and effort. This would, of course, mean that there may be winners and losers in the attempt to divide rewards. Therefore, resolution procedures normally contain a combination of the use of power and intra-organizational change. However, the question is how should this be implemented?

Dant and Schul (1992) identified two broad categories of conflict resolution in the marketing channels. The first category revolves around *institutionalized mechanisms* which are implemented by channel leaders in a systematic way and in an on-going manner. These mechanisms include executive exchange, joint membership in trade organizations, arbitrations, and programs such as cooptations (Assael 1968).

The second category includes *specific actions and processes* adopted by the channel leaders and members, within the institutionalized mechanisms identified in the first category. Dant and Schul (1992) builds upon March and Simon (1958), to propose the following four organizational processes to resolve conflict: problem-solving, persuasion, bargaining, and politics.

Other authors also propose different combinations of these mechanisms and processes as effective conflict resolution strategies. For example, Stern and El-Ansary (1977) propose seven different kinds of conflict resolution strategies: diplomacy, joint membership, exchange programs, cooptation, mediation, super-ordinate goals, and conflict management programs.

After reviewing the literature, we highlight five key mechanisms and processes that are employed by channel members in resolving channel conflict: Bargaining, Implicit Mediation, Cooptation, Self-encapsulation and Structural Change (see Figure 2-8).

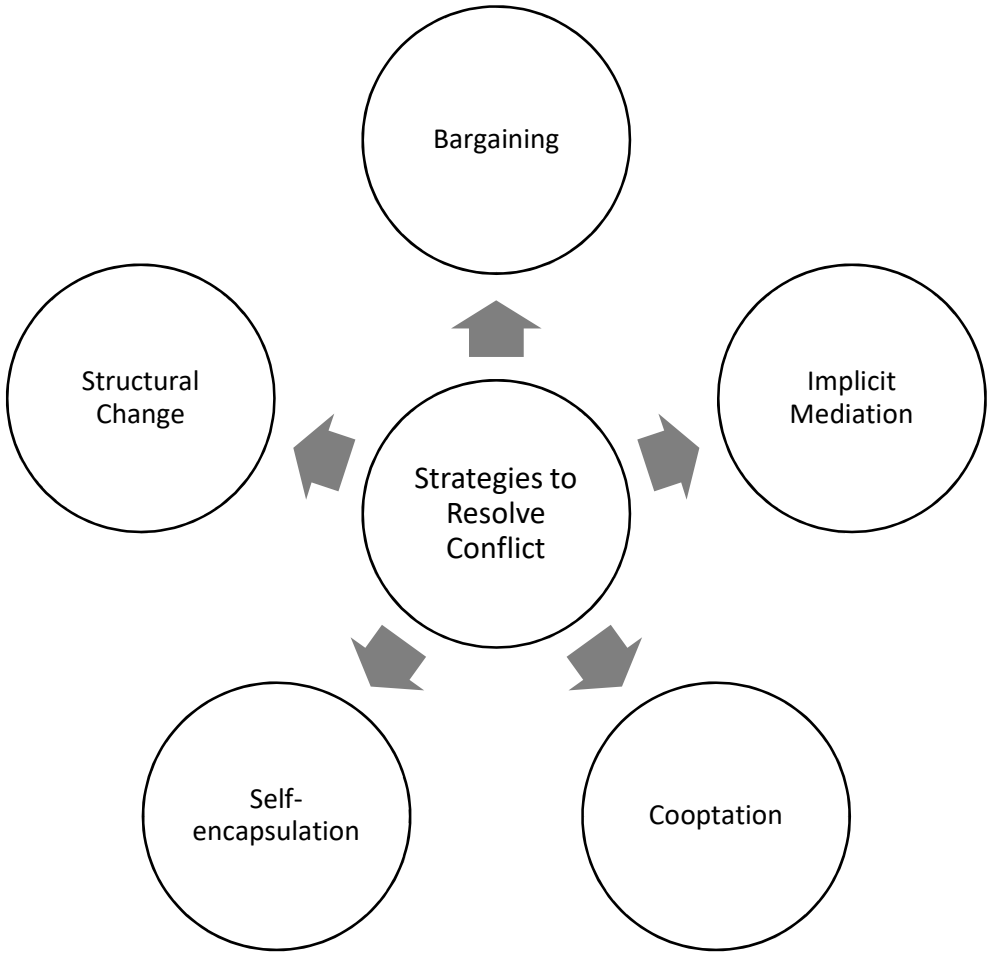


Figure 2. 8 Strategies to resolve conflict

2.6.5.1. Bargaining

In the bargaining process, channel members simultaneously use the exercise of power and organizational change in a conflict situation. An important issue in the bargaining process is trust. In other words, the power of bargaining in resolving conflict largely depends on the trust of channel members (Dant and Schul 1992). For example, if a manufacturer wants to introduce a new brand of cereal and sell it through its major retail stores, it may require the retailers to decrease the shelf

space for other brands. Given the uncertainty of new products sales, there is an obvious role for bargaining here. However, much of that bargaining is often hinged on the manufacturer promises to support the retailer in case the latter were to remove a competing brand and claims of test market success of the new product. Trust and relationships play important roles in these situations. Without these, the bargaining could easily spin out of control and result in a war like situation.

2.6.5.2. Implicit mediation

Sometimes, mediation by a third party can resolve the conflict in the marketing channel. However, such mediation does not always have to be direct. Often channel conflict can be managed by public policy. A case in point is the Robinson-Patman Act that outlaws producer price discrimination between its resellers. Without such a law there is a potential for channel conflict.

Superordinate goals, which are goals accepted by all members of the channel, can also act as implicit mediators in a conflict situation (Hunger and Stern 1976). These are defined as "goals which are highly appealing to members of two or more groups in conflict, but which cannot be attained by the resources and energies of the groups separately" (Sherif 1958, pp. 349-350). Since such goals have priority over individual goals, these can be invoked to resolve a conflict situation. Consider for example a fast food franchise that has adopted freshness and cleanliness as part of the brand's appeal. Individual franchisees might find it harder to deviate from maintaining the desired cleanliness for it now affects the brand's promise and thus of importance to all franchisees in the network. Similarly, the franchisor may also find it harder to deviate from the promise of delivering fresh supplies to its franchisees.

2.6.5.3. Cooptation

Thompson and McEwen (1958) define cooptation as "the process of absorbing new elements into the leadership or policy-determining structure of an organization as a means of

averting threats to its stability or existence" (p. 84). This is often used as a mechanism to reduce conflict in organizational settings. For example, inviting suppliers' reps to join the wholesaler's board of directors creates a forum where both channel partners can participate in crafting policies that can cure existing conflicts or avoid future ones. This kind of incorporation helps a supplier to be informed about the problems of wholesaler and through that understanding, reduce the degree of conflict between them. Franchisor advisory councils serve much the same purposes, by incorporating franchisee representatives in crafting policies that impact the whole franchise system. Cooptation should increase an organization's chances of survival within its environment through the accommodation of the divergent incentives of the different stakeholders that lead to different kinds of conflict.

2.6.5.4. Self-Encapsulation

Encapsulation refers to the act of enclosing the parties within an agreement or entity. Contracts are the most common types of self-encapsulation tools deployed. The franchise contract agreed between a franchisor and its franchisee is a good example of self-encapsulation. Such contracts clarify the roles and responsibilities of the channel members, guide their behaviors, specify procedures and policies to be followed when unforeseen contingencies arise and safeguard against opportunistic actions that can lead to conflict (Wuyts and Geyskens 2005).

Yet, for all their presumptive benefits in reducing conflicts, those very contracts can also engender potential for conflict, thus defeating their effectiveness. On the one hand, contracts provide conditions for channel members to achieve better coordination and reduce conflict by clarifying their mutual expectations and lowering the probability of misunderstandings (Malhotra and Lumineau 2011). On the other hand, they may undermine trust and reduce relational interactions among channel members, which may lead to lesser cooperation, increase the

probability of conflict and adversely affect conflict resolution efforts in the future (Jap and Ganesan 2000; McEvily, Perrone, and Zaheer 2003). In fact, Lumineau and Malhotra (2011) show that the level of contractual details impacts conflict resolution by influencing the effectiveness of different conflict resolution strategies.

Another consideration here is that highly contractual relationships are often associated with both greater costs of writing the contract, as well as, greater contract monitoring and enforcing costs. Therefore, in general, the effectiveness of such contracts are more likely to be realized in relatively stable environments (Williamson 1985). High levels of environmental uncertainty make less contractually delimited governance more effective. In such situations, contracts do not provide clear guidance on appropriate behavior, and channel members have to rely more on relational norms to build trust and working relations (Macaulay 1963). The literature is generally thin on the relationship between channel conflict and contract details, and it is an area where further research will be useful.

2.6.5.5. Structural Change

The interdependence that characterizes channel relationships implies channel conflict is often directly the result of the way the channel relationships are organized. Therefore, efforts to address conflict often bring up questions around channel governance itself. Generally, we can think of three ways that firm can address channel conflict using channel governance as a lens: prevention by design, resolution by action/adaptation, and mitigation by cooperation.

The first approach is to avoid or prevent conflict. In this line of thinking, firms attempt to prevent conflict by ex-ante channel governance design. This takes the form of deciding to own the retail channel or have independent resellers, deciding the proportion of commissioned sales representatives versus salaried sales force, deciding the proportion of corporate-owned versus

independent franchisee outlets, degree of oversight exercised on dealers, etc. The original Transaction Cost Economics (TCE) and Agency theories offer normative tools and frameworks to think through these. The second approach is to resolve conflict by mediation, arbitration, or litigation (Antia, Zheng, and Frazier 2013) and adjustment to the channel structure and contract details as a follow-up. The third approach is to rely on relational norms and relationship building and try to increase the level of trust and commitment among channel members (Morgan and Hunt, 1994). Bilateral trust and commitment, as well as relational norms such as information exchange, can help to mitigate the negative effect of channel conflict (Heide and John 1992).

That structural change will be an important factor in resolving channel conflict is assumed in our earlier discussions of how intra-organizational change is one of the ways that channel conflict manifests itself. The key idea was that channel conflict forces changes in the internal organization.

Yet, despite the seeming importance of structural change in resolving channel conflict, there is very little scholarly research in the area. In fact, with a few notable exceptions, channel conflict is rarely used to explain why we observe changes in channel structure and governance mode. Among these, Crocker and Reynolds (1993) find that a history of conflict leads firms to choose a more detailed contract. Another paper by Vinhas and Anderson (2005) finds that firms explicitly design their channel structure to prevent conflict. This leaves a large part of our channel interactions understudied. For example, franchisors often reorganize their vertical relations – either by changing the proportion of corporate-owned stores or by renegotiating contractual terms with their franchisees. Similarly, independent retailers and dealerships are often bought out by their suppliers or manufacturers. To what extent these vertical integration decisions are prompted by channel conflict, are still somewhat open empirical questions.

2.7. Channel Conflict and Performance

How does channel conflict affect channel performance? There are two lenses with which one can address this. On the one hand, a structural lens could be used to categorize the outcomes into two basic types: disintegration and unification (Stern and Gorman 1971). On the other hand, an organizational lens will look at the outcomes in terms of institutional metrics including both financial performance and attitudinal ones such as channel member satisfaction (Brown, Lusch, and Smith 1991).

2.7.1. Structural Metrics

Disintegration: Often the magnitude of conflict reaches a point where the resources required in resolving the conflict may not be justified by the benefits associated with the resolution. Ending channel relations may sometimes be seen as a failure in many cases, but in such extreme circumstances could be the desired outcome. It allows the erstwhile channel members, e.g., a franchisor and franchisee, to seek and explore other alternatives

Unification: Often conflict may unify the warring parties together as the conflict is resolved. For example, in a conflict over service levels between a car dealership and the manufacturer, a satisfactory resolution might require the manufacturer to take a more active role in training and rewarding the dealer's employees. In this manner, the two warring entities are brought together by closer integration of their business processes. However, such unification is often a mixed bag since the degree of unification is on a continuum incorporating different states of conflict resolution. As an example, elimination of conflict could be associated with a lingering sense of frustration and dissatisfaction or lead to the re-establishment of channel stability and elimination of frustration.

2.7.2. Institutional Metrics

Stability of the channel (as opposed to disintegration) is often a desired state and goal of channel management. However, at what cost and what would that mean for channel member outcomes? Not surprisingly, this focus on stability runs up against the common conjecture in the literature that channel conflict impacts the performance of channel members (Brown and Day 1981). As such, a focus on stability cannot be independent of the channel and member outcomes.

However, what are the constructs of performance in a marketing channel? Different measures have been used to assess channel member performance. These include economic measures such as return on asset, asset turnover, sales, sales growth, profits, market share as well as attitudinal measures such as satisfaction (*cf.* Anderson and Narus 1984; Brown, Lusch and Smith 1991; Duarte and Davies 2003; Frazier, Gill and Kale 1989; Gaski and Nevin 1985; Heide and John 1988; Lusch 1976b). Nevertheless, the literature is somewhat fragmented in both the conceptualization of the measures and their appropriateness as proxies for measuring performance.

2.7.2.1. Conceptual multiplicity

There are some differences in the literature on how the link between channel conflict and performance is interpreted and conceptualized. For example, while some papers like Kumar, Scheer, and Steenkamp (1995; 1998) and Morgan and Hunt (1994) conceptualize conflict as a (negative) outcome concurrent with that of performance, others such as Pondy (1967) and Rosenberg and Stern (1970; 1971), deploy conflict as a mediator leading to performance. As another example of the conceptual fragmentation, consider the case of satisfaction. Rosson and Ford (1980) used satisfaction as a dimension of performance measure while Cronin and Baker (1993) and Goldkuhl (2007) used it as a separate outcome of the conflict.

The conceptual multiplicity also impacts how different researchers frame the role of conflict. While most seem to see conflict as an antecedent of performance, others see performance as an antecedent of conflict. For example, Anderson and Narus (1984; 1990) show how past relationship performance impacts the level of channel conflict. Similarly, Schul, Lamb, and Little (1981) show how channel members' perception of previous performance impacts channel conflict.

While these conceptual multiplicities are not often at odds with each other, the differences do contribute to some incompleteness in interpreting the aggregate research results that exist.

2.7.2.2. Ambiguity of impact

The time and effort spent on conflict management demand resources, and thus managers need to compute the cost-benefit tradeoffs. So, a key aspect of the research interest in channel conflict has been the link between conflict and performance, especially financial business performance. Researchers have used various financial measures such as return on asset, sales, sales growth, and profit to assess performance in the context of inter-firm relations (Duarte and Davies 2003; Frazier et al. 1989; Lusch 1976b). While these studies have yielded a rich set of empirical results, there exist significant inconsistencies about the relationship between conflict and performance.

Some studies show that conflict reduces performance (*cf.* Kelly and Peters 1977; Kumar et al. 1995; Ross, Anderson, and Weitz 1997; Webb and Hogan 2002). This derives from the common view that conflict is efficiency depleting. However, this result is not uniform, and other studies call these results into question, finding that conflict does not negatively affect performance (*cf.* Assael 1969; Brown, Lusch, and Koenig 1984). Some studies actually show a positive effect. For example, Assael (1969) shows that conflict can enhance channel efficiency in the presence of equitable political and economic power among channel members.

Lusch (1976b) investigated the impact of channel conflict on retailer operating performance. According to him, three kinds of outcome are possible: positive effect, negative effect and threshold effect. While the results of his study showed that channel conflict did not always reduce channel performance in terms of return on asset and asset turnover, he did find instances where conflict reduced performance. He explained the negative results as a perpetuating effect - "franchisees who have low operating performance may feel frustrated and attempt to blame their low performance on the franchisor, with resulting frequent disagreements (conflict) between them" (Lusch 1976b, p. 12).

Before Lusch, others such as Walker and Pearson also conducted studies on the impacts of channel conflict on channel performance. The first study was conducted by Walker (1970) in a laboratory setting. The findings showed that the effect of channel conflict on performance is highly influenced by the distribution of power in the channel. However, Pearson's (1972) study does not find support for his hypothesis that operational results associated with channel cooperation are greater than the operational results associated with channel conflict.

What might be driving this confusing array of relationships between channel conflict and performance? Some, like Goldkuhl (2007) point to the fact that scholars have employed very different, and sometimes, perhaps unsuitable metrics of performance, making comparison across studies difficult. Others have approached this theoretically. As part of this latter approach, Rosenbloom (1973) contends that the relationship between these two constructs follows an inverted U-curve, where conflict is functional at moderate levels and destructive at very low or high levels. Brown (1980) complements the work of Rosenbloom by asserting that there is an upright U-shaped curve that is followed by the inverse U-shaped curve.

These inconsistencies and ambiguities about the conflict-performance link require more attention from marketing channel researchers to find out under what conditions conflict could have a positive effect on channel performance.

2.8. Conclusion

In this manuscript, we have attempted to develop a perspective on Channel Conflict from a detailed survey of the relevant marketing, management, and economics literature. Our study reveals that Channel Conflict is a complex construct. We show how conflict is not a unitary phenomenon and can be seen as a process with distinct phases each of which requires unique considerations. We offer insights into how the managerial narratives of channel conflict can be important tools for interpreting the nature of conflict. We offer tips from the literature on how to measure conflict. The underlying causes of conflict are shown to have both attitudinal and structural drivers. We illustrate how identifying the manifestations of conflict require very careful consideration at different levels of granularity. We then summarize the conflict resolution approaches that can be effectively used by managers.

We find different, often conflicting, conceptual frameworks are deployed to study the relation between channel conflict and channel performance. A surprising conclusion is that the evidence on the consequences of channel conflict for firm performance is ambiguous. We also find that despite its importance, empirical evidence of the impact of channel conflict on structural change in channels is sparse. These ambiguities and gaps constrain our ability to identify the appropriate level of resources firms should commit to conflict resolution. To that end, we call for more focused and rigorous research to investigate the conflict-performance and conflict-structure links.

3. Conflict and Performance in Channels: A Meta-Analysis

3.1. ABSTRACT

Channel conflict is a critical business concern and has long been of great interest to researchers. Yet, the literature is characterized by different conceptual frameworks and ambiguities in its links with business outcomes in the channel. These ambiguities, in turn, cloud critical decisions in practice, especially those related to the nature and scale of resources to be deployed to manage conflict. In this paper, we estimate and document some key evidence based generalizations in the domain, in an effort to provide greater clarity for such decisions. For this, we conduct a comprehensive meta-analysis of the empirical literature spread over more than five decades between 1960 to 2016. We find, in the aggregate, the channel's business performance is negatively related to channel conflict, and that this result is true for both individual and joint channel outcomes. We find models with channel conflict as a mediator exhibit a better fit than models where it is an outcome; however, channel conflict is negatively related to the relational constructs – satisfaction, trust, and commitment, regardless of the framework. The negative conflict – performance link is moderated by several measurements, sampling and channel characteristics. Among other effects, we find subjective measures of performance exhibit stronger links compared to objective ones; and that channels with greater interdependency exhibit stronger links than less interdependent ones. We base our conclusions on correlational analyses, two-stage meta-analytic structural equation modeling (TSSEM), and meta-analytic regression analyses (MARA). We conclude by identifying several areas of future research.

Keywords: Distribution Channels; Channel Conflict, Channel Performance; Meta-analysis

3.2. INTRODUCTION

Conflict and cooperation are linchpins of any business relationships and are often seen as key pillars of business performance. While this might be largely intuitive to most practitioners and readers interested in business to business marketing, the underlying processes are for the most part highly complex, defying any straightforward interpretations. Thus, several marketing scholars over the years called for a deeper understanding of the ecology of channel conflict, especially the role of conflict in determining business outcomes in distribution channels (Antia, Zheng, and Frazier 2013; Gilliland, Bello, and Gundlach 2010; Rosenbloom 2007). In this paper, we attempt to extend this understanding by conducting a comprehensive meta-analysis of existing research, with "channel conflict" as the focal construct and investigating the manner in which channel conflict is seen as affecting business outcomes. To this end, (a) we estimate the aggregate evidence of the relationship between such conflict and business performance; (b) we estimate the aggregate relationships between channel conflict and a number of relational constructs such as satisfaction, trust, commitment, and interdependence; (c) we investigate whether the impact of channel conflict is localized to individual firm outcomes as opposed to joint outcomes of the channel; (d) we assess the relative fit of frameworks where channel conflict is modeled as an outcome versus as a mediator to business performance; and (e) check if the empirical conflict – performance results are moderated by contextual study factors like the nature of measurement scales deployed, research sampling, and type of channel studied.

We define channel "conflict" as a consequential divergence of business incentives between one or more members of the marketing channel. Substantively, this is similar to the definitions used in the extant literature (*cf.* Stern and Brown 1969, p. 155; Walters 1977, p. 61). However, despite the common etymological roots, there are significant differences in how the construct is

interpreted across different papers. So, while a survey of the literature revealed over one hundred empirical papers since the 1960s that included channel conflict, it also revealed differences around the conceptualization of the construct, and ambiguities in the robustness of some of its reported relations with business performance and several relational variables (Johnsen and Lacoste 2016; Lumineau et al. 2015; Watson et al. 2015).

In some studies, conflict is positioned as an outcome concurrent with performance (Kumar et al. 1995, 1998; Morgan and Hunt 1994; Palmatier et al. 2007). In other studies, conflict is viewed as a mediator, explicitly dissociating it from a concurrent impact on performance (Etgar 1979; Frazier and Rody 1991; Pondy 1967; Rosenberg and Stern 1970, 1971). Conflict as a process is also seen as being comprised of different episodes, the final impact on performance being contingent on how conflict is managed through these chain of episodes (Hunt 1996). Yet other scholars prefer to conceptualize conflict as an antecedent to relationship marketing constructs such as satisfaction, trust, commitment, and cooperation (Leonidou et al. 2014; Palmatier et al. 2006). However, the research results are often inconsistent across the studies, limiting decisive conclusions about the relationships between conflict and other constructs.

The limitations are particularly notable for the relationship between channel conflict and business performance. While several studies report that conflict decreases performance (Jap and Ganesan 2000; Kumar et al. 1992, 1995; Ross et al. 1997); several others claim that conflict could actually increase performance (Assael 1969; Brown et al. 1983). Rosenbloom (1973), for example, conceptualizes the relationship between performance and conflict as an inverted U-shaped curve. Brown (1980) expands Rosenbloom's work by proposing an additional layer of non-linearity with a U-shaped curve preceding the inverted U one.

The uncertainties of channel conflict are not limited only to the *type* of impact. The literature is quite equivocal when it comes to the *target* of the impact – specifically whether the

impact is realized in individual firm outcomes or manifests only in joint channel outcomes. While some papers (*cf.* Cronin and Morris 1989) focus on individual, others (*cf.* Chang and Gotcher 2010; Webb and Hogan 2002) consider only joint channel outcomes. The uncertainty is compounded by the absence of any specific theory to sort between these two outcomes.

Thus, not only is there some ambiguity on the valence one could ascribe to the conflict – performance link, but there is ambiguity also about the nature of the relationship itself. Yet, while several papers focus on studying the relationships, a very few focuses on investigating the inconsistencies in the findings (*cf.* Assael 1969; Leckie et al. 2017).

Thus, a key purpose of our paper is to estimate and record the aggregate evidence of the conflict – performance relationship and then identify factors that might moderate the results. In estimating the conflict – performance relationship, we pay particular attention to the broad nomological frameworks within which channel conflict is conceptualized: impacting only individual firm performance in some studies, joint channel performance in others; as an outcome in some, or as a mediator in others. While these differences may reflect researcher preferences of, and diversity in, research questions, such variation has important implications for how we assess the results. For researchers, it impacts future study design and choice of variables; while at a more practical level, it impacts how the empirical results are to be interpreted and factored in for decision making. A broader meta-analysis would allow us to not only assess the aggregate evidence of the conflict – performance link but also allow us to sort between the aggregate evidence of the different conceptualizations. In the process, it will also allow us to check if the variation impacts relationships of conflict with other constructs.

In identifying the key moderating variables for the estimated conflict – performance results, we focus on three contextual factors that have traditionally played significant roles in channels research. The first is measurement type, specifically whether performance is measured objectively

or subjectively. There are two reasons why this is important. One, much of channels research is often alleged to suffer some common method variation (CMV), for information is often sought from a single key respondent using subjective scales. Objective measures, often from independent archival sources, would likely avoid or lessen such CMV (Kang et al. 2018). Thus, controlling for these different measures would also control for some of the variations due to CMV across different studies. Two, business performance is a complex and multi-dimensional construct. As such, the use of different measures by different researchers might tap into different processes that generate the data. The moderating impact of such measurement differences will not be observable in a single study; but if it exists, we expect to capture the variation in the context of a broader meta-analysis.

The second contextual factor we look at is methodological, specifically sampling. This includes whether the study-sample consisted of multiple industries, the year of study, whether the study sample was North American, and whether the study sample anchored around a focal firm with multiple channel members. The reasoning behind choosing these is rooted in the idea that there are unobserved sources of variation linked to these sampling choices that may not be apparent in a single study but which may only be manifested in a broader meta-analysis.

The third contextual factor we look at is channel type, specifically, whether the product is mainly for resale or final use, whether the channel is international in its operations, and whether the channel is characterized by strong agency relationship. Strong agency relationships here refer to institutional arrangements with clear separation between the channel principal and agent. Variation in such arrangements might foretell channel management practices that determine how conflict impacts business performance. Again, this is a variation that will not be captured within a single study but which will, if it exists, manifest itself in the context of a broader meta-analysis.

In our meta-analysis, we adopt a multi-framework approach. Specifically, we adopt the Trust-Commitment (T-C) and Interdependence (INT) models as our baseline theoretical frameworks (Kim and Hsieh 2003; Kumar et al. 1995, 1998; Morgan and Hunt 1994). We then draw upon Rosenberg and Stern's (1971) Intra-Channel Conflict (ICC) model to synthesize the available empirical evidence in customized models combining ICC with T-C (ICC-TC) and ICC with INT (ICC-INT). Adopting these multiple frameworks has two advantages. One, it allows us to go beyond bivariate correlations and estimate the inter-construct relationships within different nomological frameworks. Two, the multiple frameworks also serve as robustness checks of our key results.

To summarize, this study contributes to the marketing channels literature in multiple ways. To the best of our knowledge, ours is not only the most current but also the first meta-analysis focused on channel conflict and performance.[2] We find that the aggregate empirical evidence broadly supports a negative conflict-performance link. This is an important empirical generalization for the field. We find this result is invariant to individual or joint channel performance measures. Further, in the context of the models studied, both conceptualizations of conflict – as an outcome and as a mediator, return significant results, with the latter showing stronger fit. However, there is significant variation in the results depending on the contextual factors of measurement, sampling, and channel characteristics. We find that conflict performance relationship is moderated by, (a) whether the performance measure is objective or subjective, (b) whether the study sample comprises multiple industries, (c) the recency of the study, (d) whether the study sample comprises North American firms, (e) whether the study sample comprises one

[2] Geyskens et al.`s (1999) meta analysis of channel relationships is the closest in spirit to our work. However, unlike us they do not focus explicitly on channel conflict and performance, thereby limiting the conclusions they could draw in the domain.

focal firm, (f) whether the channel is international, and (g) whether the channel is characterized by a strong agency relationship. Thus, these results identify some key boundary conditions for the empirical results, offering a roadmap for future investigations on the topic.

The rest of the paper proceeds as follows: We begin by identifying some gaps in the literature. Then we present the research design, especially how we synthesize different conceptualizations of channel conflict and its relationship with performance. Then, we present the data, research method, analyses, and results. We conclude with a discussion of the results, identifying future research avenues and limitations.

3.3. GAPS IN THE CHANNEL CONFLICT LITERATURE

We define channel conflict as a consequential divergence of business incentives between one or more members of the marketing channel. The consequential nature of the divergence of business incentives derives from interdependency among channel members. Interdependency ties individual channel members' economic well-being to each other and is thus a fundamental reason for conflict in any channel. Of course, any conflict would only matter to channel members if it significantly impacts business performance. So, we first elaborate upon certain inconsistencies in the channel conflict-performance link. Now, there are important gaps in the literature and differences in how channel conflict has been conceptualized and studied in different inter-firm theoretical frameworks. These could be contributing to the inconsistencies. To get a better understanding of some bases of this variation, we next discuss the different ways conflict has been incorporated in key channel models. Then, we discuss potential moderators that could explain the variation in the aggregate results.

3.3.1. Inconsistent Results Pertaining to the Conflict-Performance Link

The potential link between conflict and business performance has driven much of the research interest in channel conflict. Performance here is primarily defined in financial terms and has been measured with various indicators such as return on asset, sales, sales success, sales growth, and profit (Frazier et al. 1989; Fürst, Leimbach, and Prigge 2017; Lusch 1976b; Zhang, Watson, Palmatier, and Dant 2016). While these studies have yielded a rich set of empirical results, significant inconsistencies exist about the channel conflict – performance link.

Some studies show that conflict reduces performance (*cf.* Kumar et al. 1995; Ross et al. 1997; Webb and Hogan 2002). This derives from the common view that conflict is efficiency depleting. However, other studies call these results into question, finding that conflict does not negatively affect performance (*cf.* Brown et al. 1983). Yet other studies actually show a positive effect. For example, Assael (1969) shows that conflict can enhance channel efficiency in the presence of equitable political and economic power among channel members.

In an attempt to explain the confusing array of relationships between channel conflict and performance, Rosenbloom (1973) contends that the relationship between these two constructs follows an inverted U-shaped curve, where conflict is functional at moderate levels and destructive at very low or high levels. Brown (1980) complements the work of Rosenbloom by asserting an S shape with an upright U-shape followed by an inverted U-shaped curve. Table 3-1a lists some examples of studies on the different channel conflict – performance links.

3.3.2. Impact of Channel Conflict on Individual vs. Joint Outcomes

The business outcomes in a distribution channel span both individual firm performance as well as joint channel performance. However, the conceptual link between these two is not well developed in the literature which is quite equivocal when it comes to identifying whether the impact

of conflict is realized in individual firm outcomes or manifests only in joint channel outcomes. While some papers (*cf.* Cronin and Morris 1989) focus on individual firm outcomes, others (*cf.* Chang and Gotcher 2010; Webb and Hogan 2002) explicitly consider only joint channel outcomes (see Table 3-1b). The uncertainty is compounded by the absence of any specific theory to sort between individual and joint outcomes and very few empirical studies (*cf.* Benton and Maloni 2005) that study both individual and joint performance in the same model. To the best of our knowledge, there is no empirical research that studies the possible differential impact of conflict on individual vs. joint performance. In the absence of any specific theory to sort between these outcomes, this lack of empirical evidence compounds the uncertainty around whether some individual firm outcomes can come at the cost of the joint outcome or vice versa, possibilities which would impact the assessment of appropriate conflict – performance relationships.

3.3.3. Channel Conflict: Outcome vs. Mediator

In some research frameworks, channel conflict is seen as a negative outcome synchronous with channel performance. For example, in Trust-Commitment (T-C), Interdependence (INT), and Transaction Cost Economics (TCE) frameworks, conflict has been modeled as an outcome (Palmatier et al. 2007). On the other hand, another stream of research takes a process-centric view. Elaborating on the process view, Pondy (1967) proposes a dynamic interpretation of conflict with five distinct episodes: latent conflict, felt conflict, perceived conflict, manifest conflict, and the conflict aftermath. In this model channel conflict is a mediator whose impact on channel performance is contingent and could be either positive or negative (Pondy 1967; Vaaland and Hakanson 2003). For example, in Rosenberg and Stern's (1971) Intra-Channel Conflict (ICC) framework, conflict is a mediator whose impact on performance would be determined based on the type of conflict, level of conflict, and how conflict is managed (Hunt 1996). Thus, these

frameworks allow more room for conflict being functional than the first group (see Table 3-1c). These different conceptualizations of conflict have shaped how the conflict – performance link has been investigated.

Table 3. 1: Example of studies on conflict

(a) Examples of studies on conflict-performance link

Conflict -performance link	Negative	Duarte and Davies 2003; Leckie, Widing, and Whitewell 2017; Lusch 1976; Pearson and Monoky 1976.
	Positive	Assael 1969; Stern 1971; Walker 1970.
	Non-linear	Brown 1980; Duarte and Davies 2003; Lusch 1976b; Rosenbloom 1973.

(b) Examples of studies of individual vs. joint channel performance

Individual or Joint Channel Performance	Study focuses on individual firm performance.	Cronin and Morris, 1989; Lusch, 1976; Vosgerau, Anderson and Ross, 2008.
	Study focuses on joint channel performance.	Chang and Gotcher, 2010; Duarte and Davies, 2003; Webb & Hogan, 2002.

(c) Examples of studies on different roles of conflict

Different Channel Conflict Roles	Conflict is viewed mostly as an outcome, not a dynamic process.	Geyskens, Steenkamp, and Kumar 1999; Palmatier, Dant, and Grewal 2007.
	Conflict is viewed mostly as a process and mediator.	Dwyer, Schurr, and Oh 1987; Lengers, Dant, and Meiseberg 2015; Pondy 1967; Rosenberg and Stern 1971; Runyan, Sternquist and Chung 2010.

3.3.4. Moderators of Channel Conflict-Performance Link

Most empirical marketing strategy research, especially channel studies have deep contextual anchors. There is always a possibility there may be systematic differences in the research settings that impact the estimated conflict-performance relationships. In addition, choice of research methodologies such as measurement and sampling may also have a significant impact on the findings. However, these have not been investigated thus far. These moderating influences

will not be observable in a single study; but if they exist, they can only be captured in a broader meta-analyses studying the aggregate relations (Kang et al. 2018; Karna et al. 2016).

A particularly important research consideration would be the type of measurement. Many empirical papers in the domain of channel conflict deploy key informant surveys. Collecting both dependent variables and independent variables from the same respondent could lead to common method variation (CMV), which is more prevalent when subjective measures of performance as an outcome variable are used (Kang et al. 2018). This systematic method variance can bias (inflate or deflate) parameter estimates of the relationship between two different constructs (Bagozzi 1984; Baumgartner and Steenkamp 2001; MacKenzie and Podsakoff 2012). Objective measures, which are often collected from independent archival sources can significantly alleviate concerns with CMV. Thus, accounting for different measures of performance would control for some of the variations due to CMV across different studies. Moreover, business performance is a complex and multi-dimensional construct. As such, these different measures might also tap into other unobserved processes that generate the data.

As another methodological factor, variation in sample properties of the research studies would map to variation in unobserved variables. These would also portend variation in the associated inter construct relationships. For example, sample characteristics like multi-industry sample (*cf.* Crosno and Dahlstrom 2008), the year when study was conducted, geographical setting, etc. could impact the estimated relationships.

Yet another significant factor would be the heterogeneity in channel structures. There are broad differences among different channels that impact their governance modes and practices. Some channels are international; others are primarily domestic; some are characterized by more defined vertical interdependence, others are less so (*cf.* Scheer et al. 2015; Palmatier et al. 2006). These differences impact governance and as such are also likely to have an impact on related

constructs like conflict. To the best of our knowledge, these potential sources of variation remain unexplored in the context of channel conflict-performance relations.

3.3.5. RESEARCH DESIGN: SYNTHESIZING DIFFERENT FRAMEWORKS

To robustly assess the empirical evidence of the channel conflict – performance link, we need to pin down the research results of the vast and fragmented literature. Additionally, for our purposes, we need to find a design that enables us to consider the mediation and outcome roles of channel conflict within established theoretical frameworks. A baseline condition is to identify a sufficiently large number of empirical papers that have used channel conflict as part of their empirical design. However, that by itself is not enough. There must be enough overlap in the network of relationships connecting conflict to other constructs, particularly channel performance, to investigate the conflict-performance link controlling for other factors. In fact, conflict is widely used with other inter-firm constructs such as trust, commitment, interdependence, cooperation, and satisfaction.

A comprehensive review of the extant literature leads us to the identification of three theoretical frameworks that incorporate these constructs and therefore, we can draw upon them. The first two theoretical frameworks are Trust-Commitment (T-C) and Interdependence (INT) which incorporate conflict as an outcome (Kumar et al. 1995; Morgan and Hunt 1994; Palmatier et al. 2007).[3] T-C proposes that relationship performance in a channel is determined by the level of the buyer's trust in and/or commitment to a seller (Morgan and Hunt 1994). Conflict is seen as one of the key outcomes of the inter-firm interactions. INT proposes that interdependence provides motives for both cooperation and conflict in a channel (Kim and Hsieh 2003; Stern et al. 1996;

[3] There are other theoretical frameworks such as Transaction Costs and Relational Norms that incorporate channel conflict as an outcome. However, there is not enough numbers of studies with relevant variables for our purpose.

Kumar et al. 1995; 1998; Van De Ven and Walker 1984). The third framework is Rosenberg and Stern's (1970, 1971) Intra-Channel Conflict (ICC) which draws inspiration from the classic Pondy (1967) paper that has motivated several papers in the domain. The ICC framework presents a counterpoint to the above two by conceptualizing conflict as a mediator and as a process with three elements: sources, conflict level, and outcomes of conflict.

The several overlapping constructs across these three frameworks allow us to test the relationship between channel conflict and performance controlling for several of these constructs, thereby providing nomological validity to our study. We can also test whether shifting the role of conflict from an outcome to a mediator would change the direction or magnitude of the effect of the other key constructs.

We proceed in two stages. In the first stage, we identify the overlapping common constructs in the empirical studies that predominantly employ the T-C or INT with conflict as an outcome. In the second stage, we "customize" the two models by modeling conflict as a mediator to performance, matching Rosenberg and Stern's (1971) ICC framework. So, there are two pairs of comparisons: (a) T-C versus the customized T-C model (ICC-IC); (b) INT versus the customized ICC model (ICC-INT). The customized frameworks allow us to investigate the conflict-performance link while each comparison between original and customized models allows us to test which models (conflict as an outcome or mediator) offer a better fit for the aggregate empirical results. In the process, we can also test whether the change in the role of conflict would affect other key variables such as trust and interdependence. Note here that we do not need both the T-C and the INT models for our purpose; any one would do. However, using both serves as a robustness check of our results. See Figures 3-1 and 3-2 for the different frameworks.[4]

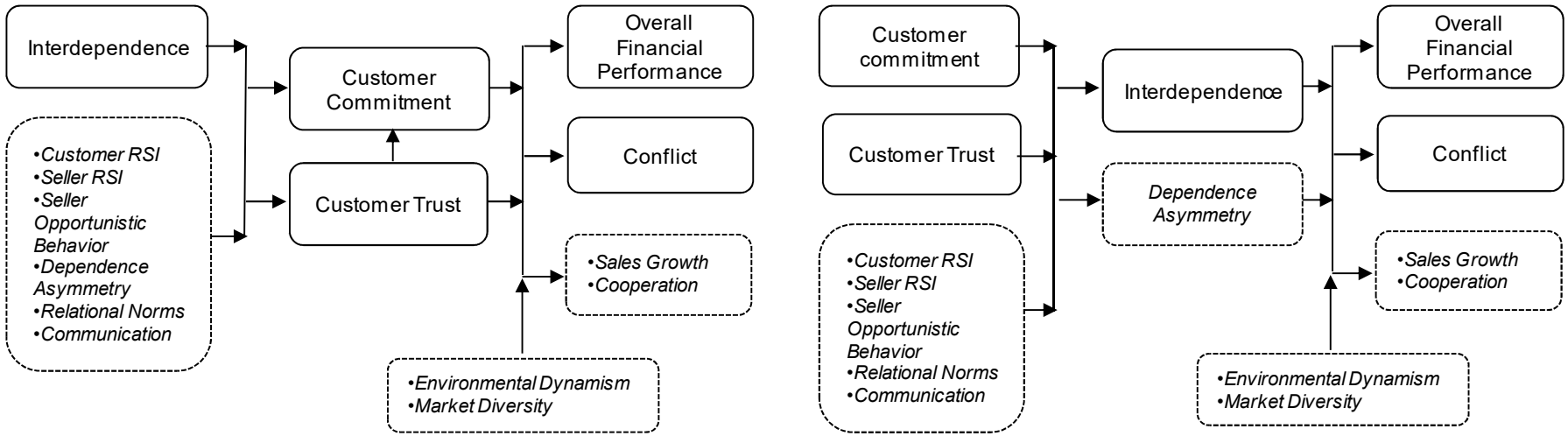
[4] We provide a more detailed summary of the T-C, INT and ICC perspectives in the Appendix A.

3.4. DATA

The first step in our data collection effort is to locate and identify the primary studies in which channel conflict is used. For this, we conduct a detailed bibliographic search of all empirical studies appearing in the marketing and management literature that reported relationships between channel conflict and other channel constructs. We searched for studies by using terms such as conflict, dispute, or any similar words that convey conflict. Then we selected papers where conflict was studied in the context of vertical marketing channels. The typical examples of such contexts will be Dealerships, Retailing, Franchise, Distribution, etc. We did not select contexts where conflict was discussed in terms of horizontal arrangements, e.g., product development joint ventures, etc.

3.4.1. Data Sources

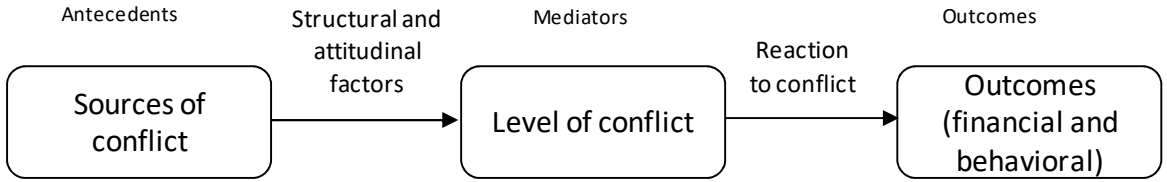
The literature search covers the 1960-2016 period. The following resources were searched for this purpose: *ABI/INFORM*, *Google Scholar, and Social Sciences Citation Index,* and issue-by-issue searches of important marketing and management journals such as the *Academy of Management Journal*, *Journal of Marketing*, *Journal of Marketing Research*, *Journal of Academy of Marketing Science*, *Journal of Retailing*, *Management Science*, *Marketing Science*, *Organization Science*, *Strategic Management Journal*, and *the Proceedings of the Academy of Management* and *American Marketing Association*.



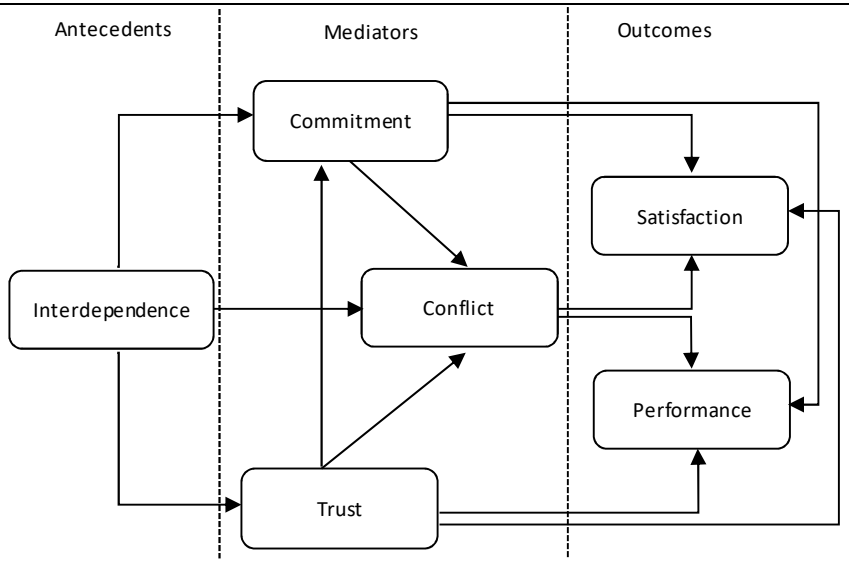
(a) Original Trust-Commitment perspective *(b) Original Interdependence perspective*

Figure 3. 1– Trust-Commitment and Interdependence perspectives

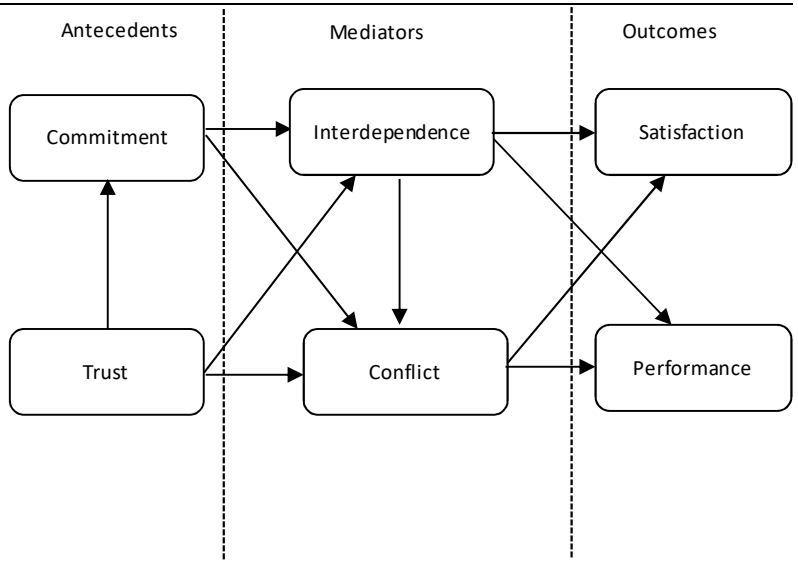
(Notes: Dashed constructs are deleted from the model because of lack of enough data; RSI = Relationship-Specific Investments)



(a) The Intra-Channel Conflict Process (Rosenberg and Stern 1971, p. 438)



(b) Customized model – synthesizing Trust-Commitment perspective into the Intra-Channel perspective



(c) Customized model – synthesizing Interdependence perspective into the Intra-Channel perspective

Figure 3. 2: Channel Conflict – the original Intra-Channel and the estimated customized models

One of the challenges of meta-analysis is there is no foolproof way to ensure that all relevant studies have been covered. So, to generate a high degree of confidence in our coverage, we undertook detailed additional efforts going beyond using multiple search engines and academic databases. We carefully checked the cited papers in each study to find more related papers. To prevent the "file drawer problem" that is inherent in meta-analysis (Rosenthal 1979), we searched doctoral dissertations that are indexed in *UMI Dissertation Abstract.*[5] We contacted several authors with requests for correlation tables and other statistics not reported in their published studies. In particular, we contacted 35 authors, and of the 27 responses received, 23 provided the required information. We also sought unpublished and forthcoming papers by posting a request on *ELMAR*, a listserv dedicated to marketing scholars.

3.4.2. Sample

Accounting for multiple samples in a single paper, our search generated 101 samples from 74 empirical papers. We then meticulously recorded the data for 25 channel and inter-firm constructs including conflict. This yielded a total of 235 correlations with a total aggregate *N* of 19,003. However, we had to further pare the sample for purposes of robustness. For a construct to be included in a meta-analysis using structural equation modeling, we need that construct to be related to every other construct in the model (Brown and Peterson 1993). Specifically, we need *at least three* correlation coefficients for each pair of constructs for our structural equation modeling (see Palmatier et al. 2006; Scheer et al. 2015). So, we excluded constructs (e.g., cooperation, interdependence asymmetry, etc.) with less than three correlations with other remaining constructs.[6] This resulted in retaining 152 out of the 235 correlation coefficients collected.

[5] The "file drawer problem" refers to the bias induced in any meta-analyses due to over reliance on published studies. In general, papers where the key null hypotheses are not rejected; rarely get published.

[6] Four studies were also excluded because the corresponding correlation matrices were not positive-definite.

3.4.3. Variables

Following Geyskens et al. (1999), we cumulate similar constructs into combined ones to generate the variables for the meta-analysis. The final sample included six constructs: conflict, trust, commitment, interdependence, performance, and satisfaction that were usable for our meta-analysis. In addition to these, we create several other variables that are used for robustness checks and moderation analysis.[7]

We separated performance into individual firm and joint channel performance and categorized the performance measures into objective (coded 1) and subjective (coded 0) measures. The subjective measures of performance include any perceptual measurement of performance (e.g., any measurement of performance using survey data on scales similar to Likert). The objective measures of performance include accounting-based and capital market-related ones such as the percentage of profit, sales growth, and return on asset. Overall, we have 53 samples for subjective measures and 26 objective measures for the conflict-performance link. Unfortunately, since we did not have enough correlations of the objective measure of performance with other constructs, we are not able to use it for the causal model.

We code several sample characteristics. (1) Whether the study is in a single or multi-industry context (Multi-Industry - 1 if multiple industries, 0 otherwise); (2) Year when study published – a continuous variable ranging from 1971 to 2016; (3) Era (1 if study conducted after 2000; 0 otherwise) to control for the time before and after e-commerce; (4) North America (1 if study context is USA or Canada, 0 otherwise); (5) Focal, i.e. whether the study involves channel members of one focal firm or not (1 if study has a focal firm, 0 otherwise). In some studies, the

[7] The full list of papers and details of the measures used in this study is reported in the Web Appendices A and B.

dealers, resellers, customers, or buyers of one focal, often a sponsoring firm, comprises the study sample. In others, multiple independent firms are involved.

We also code several channel characteristics. (1) Reseller (1 if the product is sold to another party for reselling, 0 if the product is sold to final user); (2) International (1 if the channel is international, e.g., export-import; 0 otherwise, i.e., domestic). We also code a variable to indicate that in many channels such as franchising, resellers, and dealers, there exists a conspicuous dependent relation that is absent in other channels. The level of dependency in the first group is very high (the agents – franchisees, dealers, resellers, etc. often cannot make decisions independently from the principal), compared to other channels where the level of dependency is less stark (e.g., industrial buyers and customers). We call this Agency (1 if there is a clear principal-agent dependency between channel members; 0 otherwise).

3.5. METHOD

Our key methodological tools for this study are pair-wise correlation analyses, Two-Stage Meta-Analytic Structural Equation Modeling (TSSEM), and Meta-Analytic Regression Analysis (MARA), a specific type of weighted least squares regression technique. The TSSEM technique (Cheung and Chan 2005) combines traditional meta-analysis with structural equation modeling (SEM) techniques and allows us to compare different frameworks. One of the more popular such combined methods is the Meta-Analytic SEM (MASEM) method of Viswesvaran and Ones (1995). Our choice of Cheung and Chan's (2005; 2009) TSSEM method for the analyses is largely motivated by their discussions of the advantages of TSSEM over MASEM[8]. We use a mixed effect MARA (Lipsey and Wilson 2001) to conduct our moderation analyses.

[8] As Landis (2013) points out, combining meta-analysis and SEM has the limitations and advantages of both methods. For the interested reader, we provide a more detailed account of the method in the Appendix D.

3.6. ANALYSES AND RESULTS

The main objective of the analyses is to pin down the empirical relationships between the key constructs. We start by recording the sample sizes and calculating the correlation coefficients and reliability of constructs in the studies. However, meta-analyses come with myriad data challenges, especially that of incompleteness, heterogeneity, and measurement precisions. We address these next, outlining the key considerations, with more details in Appendix A.

3.6.1. Data Integrity

Publication Bias: Despite our significant efforts to identify and collect all relevant studies, it is possible that we might still have missed some, possibly biasing our results toward published papers with significant results. Therefore, to check the robustness of our results we used several tests. These included both the "failsafe *N*" tests proposed by Rosenthal (1979) and Orwin (1983), as well as the "funnel plot" test of Rothstein, Sutton, & Borenstein (2006). The results of these tests failed to reject the null hypothesis of no bias. We report the failsafe *N*-s of Rosenthal (1979) in Table 3-2 while we discuss details and results of the other methods (Orwin's failsafe *N* and sample of funnel plot) in Appendix A.

Missing and Incomplete Data: Not all papers report correlations of the variables. Whenever we could not extract correlation coefficients from the papers directly, we approached the authors requesting that information. Of the 23 responses received, 13 had the relevant, usable information (correlation tables and reliabilities). Notwithstanding, we do not use all recorded correlations. For purposes of rigor, construct pairs are only analyzed when the sample includes at least three raw correlations for that pair (Scheer et al. 2015). For studies without reported correlations, where it was possible, we converted Student's *t* and *F* ratios to correlation coefficients using the formulas provided by Hunter and Schmidt (1990). In two papers we were able to impute correlations by

converting standardized regression coefficients using the method suggested by Peterson and Brown (2005). In this manner, across 74 studies comprising 101 samples, we were able to generate 232 correlations for our analyses.

3.6.2. Study Precisions

Measurement Errors: The different studies force us to contend with comparing different error regimes. We corrected the raw effect sizes for the associated measurement errors by dividing the correlations by the product of the square root of the reliabilities of the two constructs (Hunter and Schmidt 1990). When reliability data was missing, and for single item measures, we use the mean reliability for that construct across all other studies (Geyskens et al. 1998; Scheer et al. 2015).

However, this corrected correlation does not account for differences in study precisions (Rosenthal 1994). For this, we converted the corrected correlations into Fisher's *Z* scores, which were then averaged and weighted by the inverse of their variance to give greater weight to more precise estimates. The overall average can be converted back into correlation coefficient with the inverse *Z* transformation (Hedges and Olkin 2014). The "transformed-back correlation r," is needed to conduct other tests such as *Q* homogeneity test and power analysis. All of the standardized pairwise correlation coefficients are observed to be significant at $p<.01$.

It is also important to test whether the transformed-back correlations, *r* are significantly different from zero (Hedges and Pigott 2001). For this, we conducted a power analysis based on the procedure proposed by Cohen (1988, p. 75-95). We analyzed the power for the 15 effect size estimates in our study. Power analysis results show that all power values are higher than the threshold (.80) for all the *r* values in our study and thus, are significantly different from zero.

Q statistic indicates whether the assumption that all of the correlations are estimating the same population mean is a reasonable assumption (i.e., examining statistical heterogeneity). *Q* is

distributed as Chi-Square, and if rejected, the distribution of effect sizes is assumed to be heterogeneous. The obtained *Q* statistic is significant for each pairwise relationship, indicating substantial variation (heterogeneity) in effect sizes across studies, which may be explained by other constructs that are absent from study. All the relevant statistics are reported in Table 3-2.

Independence of Studies: It is normal to have multiple study samples used in the same paper. These samples are treated as separate observations for our meta-analysis purposes. A natural concern here is sample independence. A check using Wood's (2008) method failed to reject the null of sample independence in all but only two relationships. We then used the sample-adjusted meta-analytic deviancy statistic (SAMD) to identify outliers among studies. The SAMD statistic identifies studies that do not appear to fit with other studies in a meta-analysis (Hunter and Schmidt 1990; Huffcutt and Arthur 1995). We do not observe any specific outliers.

Study Specific Effect Sizes: One of the concerns in meta-analyses is whether the correlations vary systematically across the studies. The typical way to account for this is to model this variation as either a fixed-effects (FE) or a random-effects (RE) parameter. Both models allow controlling for study-specific effect sizes. However, the FE model assumes a common effect across the studies while the RE model assumes that the observed effect sizes are drawn from a distribution of multiple realizations of the studies. It is impractical to argue for a common fixed effect across the sample of our studies. These studies involve different samples, different contexts, different temporal periods, and often different frameworks. As such, RE seems to be more appropriate. Regardless, in order to also have an empirical basis to select one model over the other, we explore which offers the better fit for the data (Cheung 2013). The results of the first stage analysis (confirmatory factor

analysis) show that the RE model (TLI=.208, CFI=.215, RSMEA=.180) is a better fit over the FE model thus vindicating the theoretical rationale.[9]

Study Specific Variation in Effect Sizes: We also calculated the I^2 heterogeneity index which indicates what proportion of total variation in the pooled effect sizes is due to heterogeneity among primary studies (Higgins and Thompson 2002). The index is neutral to the number of studies and as such is expected to be a more accurate measure of the impact of study heterogeneity on effect size and variation estimates, compared to the traditional Q-statistic. We report the I^2 values for all correlations in Appendix A. Furthermore because we use the random-effects model in conducting our meta-analytic SEM, we considered the effect of the asymptotic covariance matrix, which captures heterogeneity that exists in the pooled correlation matrix based on the variance among effect sizes (Cheung and Chan 2005).

3.7. RESULTS

We present the results in three parts. First, we present the central results relating conflict to performance and other relational constructs. We combine both individual and joint performance and use the subjective measure of performance for this part. Subsequently, we separate individual and joint performance to check the robustness of the results. This is followed by comparing models of conflict as an outcome or mediator. Last, we conduct the moderation analyses, collating both subjective and objective measures of performance.

3.7.1. Correlation Analysis

Table 3-2 reports the different types of observed and calculated correlations, along with the relevant meta-analytic statistics. The inferences here are drawn from the significance and sign of

[9] The null of homogeneous effect sizes across studies is rejected when Tucker-Lewis index (TLI) and Comparative fit index (CFI) is ≤0.9, and the root mean square error of approximation (RMSEA) is ≥0.08 (Meyers et al., 2006).

the correlations. The correlation between conflict and performance is significantly *negative*. The correlations of conflict and other relational constructs – satisfaction, interdependence, trust, and commitment are also significantly *negative*. While we use subjective measures of performance for the bulk of our analyses, to check the robustness of the results we created an overarching measure of performance combining available objective measures (Performance(c)). We find this overarching measure is also significantly *negatively* correlated with conflict.

3.7.2. Two-Stage SEM (TSSEM)

The pairwise correlation analysis reveals the statistical relationship between constructs in our model, but it does not allow us to infer how these constructs are related within a nomological network. Therefore, we used the TSSEM procedure as applied in Cheung (2013, 2014) to analyze the associations in more detail. The first stage of this analysis draws upon the data integrity checks (in particular, determining whether to use an RE or FE model) to estimate an asymptotic covariance matrix (ACM) from the pooled correlation matrix (Cheung & Chan, 2005). The second stage uses this ACM and the aggregated sample size of all studies to conduct the SEM analysis. While our primary motivation is to assess the conflict-performance relation, the SEM analysis allows us to compute path coefficients for the other inter-construct relationships as well.

Table 3. 2: Analyses - Descriptive statistics and results of pairwise analyses, Correlational

Construct 1	Construct 2	Simple average *r*	Average *r* adjusted for reliability	*Z*	Sample weighted *Z* adjusted for reliability	Transformed back *r*	95% CI LB	95% CI UB	Total number of raw effects	Total *N*	File drawer *N* (two-tailed)	*Q*-statistic of homogeneity (df)
Conflict	Performance(s) [1]	-.146	-.169	-.197	-.403**	-.382	-.425	-.380	53	10,297	757	3,229.731(52)**
Conflict	Performance(c)[2]	-.108	-.123	-.142	-.267**	-.260	-.248	-.286	79	13,813	740	3,221.594(78)**
Conflict	Satisfaction	-.367	-.442	-.539	-.694**	-.613	-.718	-.670	54	9,897	1,445	1,479.294(53)**
Conflict	Interdependence	-.089	-.101	-.107	-.114**	-.113	-.144	-.083	13	5,856	46	97.911(12)**
Conflict	Trust	-.369	-.446	-.562	-.558**	-.506	-.587	-.529	22	6,132	469	1259.886(21)**
Conflict	Commitment	-.239	-.310	-.365	-.267**	-.261	-.306	-.227	13	3,795	126	739.730(12)**
Performance	Satisfaction	.318	.380	.541	1.190**	.831	1.150	1.231	15	3,508	699	2,264.412(14)**
Performance	Interdependence	.172	.199	.213	.202**	.199	.168	.236	9	4,628	64	218.513(8)**
Performance	Trust	.387	.473	.534	.432**	.407	.376	.487	8	1,752	130	68.909(7)**
Performance	Commitment	.292	.353	.523	.651**	.573	.597	.706	6	1,766	150	736.823(5)**
Satisfaction	Interdependence	.254	.296	.318	.338**	.326	.271	.406	4	1,283	48	40.495(3)**
Satisfaction	Trust	.583	.704	.865	.940**	.735	.898	.981	11	3,191	402	182.182(10)**
Satisfaction	Commitment	.372	.522	.613	.640**	.565	.569	.711	6	1,472	148	41.317(5)**
Interdependence	Trust	.119	.143	.147	.191**	.189	.140	.243	7	2,136	46	23.975(6)**
Interdependence	Commitment	.194	.206	.212	.200**	.198	.151	.249	5	1,895	35	13.658(4)**
Trust	Commitment	.605	.730	.976	.945**	.738	.904	.986	9	3,207	285	163.480(8)**

** Sig at $p < .05$

[1] This row provides information on the correlation between channel conflict and subjective measures of performance.

[2] This row provides information on the correlation between channel conflict and combined measurement of performance (subjective + objective).

In the following, we first report model fit statistics, and then the detailed findings relevant to the relationships of conflict with performance and other relational constructs. Note that we use only subjective measures of performance since we did not have enough observed relationships for the objective measure. In assessing the empirical results, note that we are agnostic to any specific directional hypotheses. Nevertheless, for comparison and robustness checks, we draw upon the different theoretical perspectives and report the canonical directional hypotheses in Table 3-3.

Model Fit: There are five key models we estimate, all reported in Table 3-3. The first (Model 1) and the third (Model 3) are the original Trust Commitment (T-C) and Interdependence (INT) models respectively. The other three models (Models, 2, 4 and 5) are the customized Intra-Channel Conflict (ICC) frameworks that are key to our analyses for this section. Model 2 is the customized ICC- Trust Commitment model (ICC-TC). Model 4 is the customized ICC-Interdependence model (ICC-INT) with full mediation. Model 5 is the customized ICC-Interdependence model (ICC-INT) with *partial* mediation. We compute the goodness-of-fit indices (TLI, CFI, and RMSEA) and the path coefficients using Cheung's (2014) recommended procedure. TLI measures parsimony of the model; CFI measures relative fit; RMSEA measures absolute fit. Models with RMSEA values less than 0.05 and CFI and TLI of at least 0.90 indicate a very good fit with the data (Hu & Bentler, 1998; 1999). For model estimation, we use the Weighted Least Squares (WLS) method.

The fit indices of all the three models (2,4,5) exhibit very good fit to the related meta-analytic data (Model 2, ICC-TC: TLI =.899; CFI =.980; RMSEA = .007; Model 4, ICC-INT, full mediation: TLI = .820; CFI = .928; RMSEA = .009; Model 5, ICC-INT, partial mediation: TLI = .877; CFI = .959; RMSEA = .007). While the TLI and CFI fit indices of Model 2 (ICC-TC) are higher than those of Models 4 and 5 (ICC-INT), the RMSEA of the three models are very close to each other. For completeness, note that goodness-of-fit indices (e.g., TLI) for SEM methods such

as WLS tend to be lower than SEM methods such as maximum likelihood (Cheung & Chan, 2005). We use the OpenMx and metaSEM packages of R (version 3.1.3) for the SEM analyses (see Cheung, 2013; 2014).[10]

3.7.3. Conflict and Performance

Our key observation is that conflict and performance are *negatively* related, just as in the correlational analysis. From Table 3-3, in Model 2 (ICC-TC), the conflict-performance coefficient is negative and significant (β = -.101, p <.05). The result is robust to alternate model specifications since in both Models 4 and 5 (ICC-INT, full and partial mediation) the relevant coefficients are significantly negative (β = -.108 and β = -.110 respectively, p <.05).

3.8. Conflict and other Relational Constructs

As in the correlational analysis, we find conflict is *negatively* related to the key relational variables of satisfaction, trust, and commitment. These relations are robust across both Model 2 (ICC-TC) and Models 4 and 5 (ICC-INT) in Table 3-3. Moreover, the coefficient signs are consistent with the canonical hypotheses. For example, the conflict-satisfaction coefficient is negative for Model 2 (ICC-TC) (β = -.202, p <.05) as well as for both Models 4 and 5 (ICC-INT, Full and Partial) (β = -.215, p <.05 for both).

3.8.1. Other Interrelationships:

The results for the other interrelationships are mixed. Consistent with the canonical hypotheses, trust and commitment are positively related in all the three models being compared here (Models 2, 4, 5 -- β = -.061, p <.05). Other coefficients are not significant.

[10] We provide details about the method in the Appendix D for the interested reader.

Table 3.3: Construct inter-relationships: Path coefficients, TSSEM

Construct 1 → Construct2	Canonical Hypotheses[#] T-C.	INT.	ICC	Model 1 (T-C)	Model 2 (ICC-TC) Full mediation	Model 3 (INT) Part mediation	Model 4 (ICC-INT) Full mediation	Model 5 (ICC-INT) Part mediation
Conflict → Performance			-/+	-	-0.101**	-	-.108**	-.110**
Conflict → Satisfaction			-	-	-0.202**	-	-.215**	-.215**
Interdependence → Conflict		-/+	-	-	-0.018	-0.011	-0.018	-0.009
Trust → Conflict	-		-	-.068**	-0.067**	-	-.091**	-.091**
Commitment → Conflict	-		-	-.037**	-0.037**	-	-.045**	-.045**
Interdependence → Performance		+		-	-	0.016	-	0.015
Trust → Performance	+			.026**	0.018	-	-	-
Commitment → Performance	+		+	0.014	0.01	-	-	-
Interdependence → Satisfaction		+		-	-	0.017	-	0.014
Trust → Satisfaction	+			.053**	0.038	-	-	-
Commitment → Satisfaction	+	+	+	0.016	0.008	-	-	-
Interdependence → Trust or Trust → Interdependence	+	+		0.011	0.009	0.008	0.007	0.008
Interdependence → Commitment or Commitment → Interdependence	+	+		0.008	0.007	0.008	0.007	0.007
Trust → Commitment	+	+		.061**	.061**	.061**	.061**	.061**

[#] Note that some relationships are not hypothesized, often because of their indirect relations. We identify only the direct hypotheses reported in the literature.

** Sig at $p < .05$

3.8.2. Impact on Individual vs. Joint Performance

In the preceding correlational and TSSEM analyses, we had pooled both individual and joint performances together. So, after meticulously separating individual from joint performance in our sample, we ran the gamut of the analyses separately for each measure. Note that we are not able to have the exact same specification for comparison across the models since we lose some variables and degrees of freedom in the process of parsing individual and joint performance.

The results of the pairwise correlational analyses are in Table 3-4. Conflict is significantly *negatively* correlated with both individual and joint performance. Correlations of Satisfaction, Interdependence, and Trust are all significantly *positive* with both individual and joint performance. Commitment is significantly *positively* correlated to individual performance only - (we were unable to estimate its correlation with joint performance due to lack of data). Overall the correlation analysis mirrors the results obtained earlier, thus attesting to their robustness.

Following the correlational analyses, we run the TSSEM estimations separately for individual and joint performances. While we lose some variables (e.g., we had to drop commitment for the models with joint performance) in the process, all models exhibit a very good level of fit in meta-analytic context (see Table 3-5; the fit statistics are in Appendix C).

As Table 3-5 panel (a) shows, the path coefficients for conflict- individual performance are negative and significant for Model 2, ICC-TC (β = -.060, p <.05), Model 4, ICC-INT, Full mediation (β = -.064, p <.05), and Model 5, ICC-INT, Partial mediation (β = -.063, p <.05). Similarly, the corresponding path coefficients for conflict- "joint" performance in Table 3-5 panel (b) are all negative and significant (β = -.055, -.052, and -.059, p <.05). So, we find the negative conflict – performance result is robust to consideration of individual versus joint performance as

well. With minor changes and omissions due to missing data, the directional results relating the different relational variables also remain largely unchanged in this new analyses parsing out the individual and joint performance models.

The relative invariance of the results between individual and joint performances suggest the aggregate relationships observed in empirical studies is robust to consideration of these two types of performance. In particular, the negative association between conflict and performance is robust to the distinction between individual versus joint performance. Moreover, the relative invariance of the results between the Trust-commitment and the Interdependence models even under this more granular test, suggests further robustness of our key empirical results.

3.8.3. Channel Conflict as Mediator vs. Outcome

To compare the two different roles of conflict – as a mediator vs. as an outcome, we use the TSSEM results in Table 3-3. There are two key comparisons: (a) between the original Trust-Commitment model where conflicts is an outcome (T-C, Model 1) vs. the customized Trust-Commitment model where conflict is a mediator (ICC-TC, Model 2), and (b) between the original Interdependence model where conflict is an outcome (INT, Model 3) vs. the customized Interdependence model where conflict is a mediator (ICC-INT – Full and Partial mediation, Models 4 and 5). Further, we compare the models first with a combined performance measure and then check the robustness of the results by conducting the comparisons separately for individual and joint performance. In addition to TLI, CFI and RMSEA statistics, we used the Akaike Information Criterion (AIC) for our comparisons. A lower value of AIC indicates a higher level of parsimony and fit.

Table 3. 4: Descriptive statistics and results of pairwise analyses for own performance [a] and joint performance [b] measures

Construct 1	Construct 2	Simple average r	Average r adjusted for reliability	Z	Sample weighted Z adjusted for reliability	Transformed back r	95% CI LB	95% CI UB	Total number of raw effects	Total N	File drawer N (two-tailed)	Q-statistic of homogeneity (df)
Conflict	Own Perform	-.257	-.303	-.379	-.600**	-.537	-.571	-.629	18	6,221	369	1,927,09(17)**
Conflict	Joint Perform	-.120	-.134	-.130	-.234**	-.230	-.271	-.198	35	4,076	279	259.597(34)**
Own Perform	Satisfaction	.416	.505	.908	1.669**	.931	1.617	1.721	4	2,137	145	1221.807(3)**
Joint Perform	Satisfaction	.283	.335	.409	.459**	.430	.395	.524	11	1,371	178	219.695(10)**
Own Perform	Interdependence	.183	.218	.222	.255**	.250	.215	.296	4	3,309	36	14.890(3)**
Joint Perform	Interdependence	.164	.183	.203	.068**	.068	.008	.128	5	1,319	9	180.796(4)**
Own Perform	Trust	.377	.422	.467	.343**	.330	.278	.408	5	1,118	61	31.457(4)**
Joint Perform	Trust	.404	.530	.02	.636**	.562	.532	.739	3	634	64	8.512(2)**
Own Perform [c]	Commitment	.292	.353	.523	.651**	.573	.597	.706	6	1,766	150	736.823(5)**

** Sig at $p < .05$

[a] Own performance refers to the performance of focal channel members when they evaluate their own performance in a channel relationship.

[b] Joint performance refers to the performance of overall channel or members of the channel when channel members evaluate joint channel performance or contribution of channel members to whole channel performance.

[c] All commitment constructs are used with only own performance in current study. Therefore, we do not have any row for joint performance-commitment relationship. Commitment was not used in SEM for joint performance model.

Table 3. 5: Construct inter-relationships: Path coefficients for new sub-models using individual and joint performance, TSSEM

	(a) Individual Performance					(b) Joint Performance				
Construct 1 → Construct2	**Model 1 (T-C)**	**Model 2 (ICC-TC)**	**Model 3 (INT)**	**Model 4 (ICC-INT) Full med**	**Model 5 (ICC-INT) Part med**	**Model 1 (T-C)**	**Model 2 (ICC-TC)**	**Model 3 (INT)**	**Model 4 (ICC-INT) Full med**	**Model 5 (ICC-INT) Part med**
Conflict → Perform	-	-.060**	-	-.064**	-.063**	-	-.055**	-	-.052**	-.059**
Conflict → Satis	-	-.241**	-	-.249**	-.249**	-	-.225**	-	-.234**	-.236**
Interdep→ Conflict	-	-.013	-.024**	-.013	-.011	-	-.018	-.011	-.018	-.010
Trust → Conflict	-.086**	-.085**	-	-.089**	-.089**	-.080**	-.078**	-	-.102**	-.101**
Commit→ Conflict	-.047**	-.045**	-	-.046**	-.046**	-	-	-	-	-
Interdep → Perform	-	-	.011	-	.008	-	-	.010	-	.009
Trust → Perform	.021**	.010	-	-	-	·015	0.010	-	-	-
Commit → Perform	.020	.015	-	-	-	-	-	-	-	-
Interdep → Satis	-	-	.028**	-	.018	-	-	.019	-	.016
Trust → Satis	.065**	.044**	-	-	-	.061**	.042	-	-	-
Commit → Satis	.019	.007	-	-	-	-	-	-	-	-
Interdep → Trust Or Trust → Interdep	.012	.011	.012	.009	.010	.012	.010	.010	.009	.009
Interdep→ Commit Or Commit→ Interdep	.010	.009	.010	.009	.009	-	-	-	-	-
Trust → Commit	.077**	.077**	.077**	.077**	.077**	-	-	-	-	-

[#] Note that due to lack of enough observations Commitment is not included in the joint performance sample.
** Sig at p <.05

(a) Conflict as a mediator in Trust Commitment Models: Comparing Model 2 (ICC-TC) fit statistics with Model 1 (T-C): TLI 0.899>0.722, CFI 0.980>0.926 and RMSEA 0.007<0.011. Thus Model 2 exhibits better fit. Model 2 is also better in terms of the balance between fit and parsimony relative to Model 1 (AIC 0.061<4.790). Thus, we conclude models with conflict as a mediator exhibits better fit than when it is an outcome, in this comparison.

(b) Conflict as a mediator in Interdependence Models: While we find poor fit for the INT model (Model 3) with TLI = -.436; CFI = .138; RMSEA = .024; both Model 4 (ICC-INT, Full mediation) and Model 5 (ICC-INT, Partial mediation), show better fit. The fit indices of Model 4 are: TLI = .820; CFI = .928; RMSEA = .009; while that of Model 5 are: TLI = .877; CFI = .959; RMSEA = .007. The greater values of CFI and TLI and lower values of RMSEA indicate that both customized models outperform the INT model. Furthermore, AIC values (-.130, a smaller number) show that Model 5 is a better model than Model 4 (AIC = 2.543) in terms of the balance between fit and parsimony. The Chi-Square difference test result also supports a better fit of Model 5 compared to Model 4 ($\Delta\chi^2 = 5.71$, Δ df = 2, p = .06). Thus, a model where conflict partially mediates the effects of interdependence on performance fits the data better than a model where conflict is an outcome or where it fully mediates the impact on performance.

(c) Robustness of results to Individual vs. Joint Performance: We repeat the above analyses separately for individual and joint performance measures by reestimating the TSSEM models. In all the comparisons, models with conflict as a mediator (ICC-TC and ICC-INT) exhibit a better fit than the corresponding original (T-C and INT) models. Thus, the results suggesting a mediating role of conflict are robust to the consideration of the difference between individual and joint performances.

3.8.4. Moderation Analyses

In this section, we investigate whether the estimated conflict – performance link is moderated by certain measurement sampling, and channel type characteristics of the primary studies in our sample. For this, we use the mixed effect meta-analytic regression analysis (MARA), a specific type of weighted least squares regression technique (Lipsey and Wilson 2001). We use two different measures for performance – the subjective measure, and an overarching measure combining both subjective and objective measures. In Table 2 note the significant Q statistics for both the conflict – subjective performance link ($Q = 3229.731$, df = 52) as well as the conflict – overarching performance link ($Q = 3229.731$, df = 52), suggesting heterogeneity in the estimated links and attesting to the appropriateness of moderation analyses.

The results of our moderation analysis are in Table 3-6. We begin by running MARA for the benchmark, constant only models separately for overarching and subjective performance (Models A1 and A5). We then enter measurement type via the variable Objective (1 if performance measure is objective, 0 if subjective) in Model A2. Finally, we enter the sampling and channel characteristics in two sets of models separately for both overarching and subjective performance measures (Models A3, A4, A6, and A7)[11]. The sample characteristics are: Multi-industry, Year, Era, North America and Focal. The channel characteristics studied are: Reseller, International, and Agency. A positive (negative) coefficient of the moderating variables suggests weakening (strengthening) of the estimated negative conflict – performance link. See Table 3-6 for the results.

Performance Measurement: A key moderator of interest is the type of performance measurement. Performance is measured both subjectively (perceptual) and objectively (archival)

[11] Models A3, A6 include Year, a continuous variable; A4 and A7 include the binary Era for pre and post 2000.

in our sample. The positive coefficients of this variable (Table 3-6 – Model A2: β = 0.143; Model A3: β = 0.18; Model A4 β = 0.20) suggest that studies using objective measures of performance show significantly weaker correlation between conflict and performance than those using subjective ones. In a very general sense, this might reflect the distinct possibility that different measures tap into different processes that generate the business performance metrics. More specifically, it also might reflect that subjective measures often are based on data collected from the same respondent (surveys). Common method variation (CMV) bias in such cases can lead to an inflated negative association between conflict and performance. Objective measures based on archival data would be less prone to such bias. The results would be consistent with this explanation.

Sampling: The results show that sampling characteristics such as whether the study-sample consisted of multiple industries, the year of study, whether the study sample was north American, and whether the study sample comprised multiple channel members of a focal firm, significantly moderate the conflict performance relationship. The positive and significant coefficients of Multi-industry and Focal (Table 3-6 – Model A3: β = 0.26 and β = 0.26; Model A4: β = 0.25 and β = 0.22), suggest these weaken the strength of the negative relationship between conflict and performance. With multiple industries in the study sample, there is greater heterogeneity, possibly diluting the strength of the relationship between conflict and performance. On the other hand, the relative homogeneity of conflict management practices in a sample comprising a focal firm may accentuate the effectiveness of these practices in the estimated results, weakening the conflict – performance link, compared to a heterogeneous sample of independent channel members. The negative and significant coefficients of Year and North America (Model A3: β = -0.008 and β = -

0.22) suggest the conflict – performance link is more strongly negative for more recent studies and studies based on US / Canadian samples.

Channel Type: The moderating role of channel type returns mixed results. While the coefficients for Reseller is not significant, those of International and Agency are. Significantly negative coefficients for International (Model A3: β = -0.19 and A4: β = -0.21) suggest channel with international transactions such as export-import exhibit stronger negative relationship between conflict and performance compared to domestic operations. International operations come with greater governance challenges. So, this result is consistent with the idea that conflict exaggerates transaction costs, thereby depressing performance. The significantly negative coefficient of Agency (Model A3: β = -0.26; A4: β = -0.23) suggest channels with a clear dependent relationship such as franchisor-franchisee exhibit a stronger negative relationship between conflict and performance compared to channels where the agency relationship is not as strong. This result is consistent with the idea that conflict is more damaging when such dependence is high in the channel (Palmatier et al. 2006).

Robustness of Moderation Results: The above results were estimated for an overarching measure of performance that combined the objective and subjective measures. For the sake of robustness, we repeat the analyses for only the subjective measures. With the exception of International for which we do not find any significance, all other results are similar (see Table 3-6).

Table 3. 6: Results of Moderation Analysis, MARA

	Combined measure of performance models				Subjective measure of performance models		
	Model A1	**Model A2**	**Model A3**	**Model A4**	**Model A5**	**Model A6**	**Model A7**
Moderators	**β (std err)**	**β (std err)**	**β (std err)**	**β (std err)**	**β (std err)**	**β (std err)**	**β (std err)**
Intercept (α)	-.126 ***(.040)	-.174 ***(.048)	16.06*** (5.94)	.05 (.17)	-.173*** (.051)	15.43* (8.18)	.05 (.19)
Objective		.143 * (.084)	.18** (.09)	.20** (.09)			
Multi industry			.26** (.10)	.25** (.10)		.23* (.12)	.21* (.12)
Year of study			-.008*** (.003)			-.008* (.004)	
Era				-.11 (.08)			-.08 (.10)
North America			-.22** (.11)	-.18 (.11)		-.25** (.12)	-.24* (.12)
Reseller			-.04 (.11)	-.02 (.12)		-.02 (.13)	-.04 (.14)
Multi-national			-.19* (.10)	-.21* (.11)		-.21 (.13)	-.19 (.14)
Focal			.26*** (.09)	.22** (.09)		.27* (.15)	.34** (.15)
Agency			-.26*** (.09)	-.23** (.09)		-.22* (.11)	-.24** (.12)
R-Squared [1]	0.00	.028	.271	.218	0.00	.216	.179
Tau [2]	.124	.120	.090	.097	.135	.105	.111
I-Squared_res [3]	99.99%	99.99%	99.98%	99.98%	99.99%	99.99%	99.98%
N	79	79	79	79	53	53	53

* $p<.1$, ** $p<.05$, and *** $p<.01$ (two-tailed). α is random effect intercept while β is random effect coefficient meta-regression.
[1] Proportion of between-study variance explained
[2] Estimate of between-study variance
[3] % residual variation due to heterogeneity

To conclude this section on results, we find the aggregate conflict-performance relationship is *negative*; and that this result is robust to different analyses, model specifications and measures of performance. We also find that conflict is *negatively* related to the relational variables of trust, commitment, and satisfaction – results that are robust across different analyses and model specifications. We find these relations are consistent between individual and joint performances. We observe models with conflict as a mediator fit the data better than models with conflict as an outcome. We also find that the conflict performance relationship is moderated by – (a) whether the performance measure is objective or subjective, (b) whether the study sample comprises multiple industries, (c) the recency of the study, (d) whether the study sample is North American, (e) whether the study sample comprises channel members of one focal firm, (f) whether the channel is international, and (g) whether the channel is characterized by strong agency dependency.

3.9. DISCUSSION

Channel conflict is one of the most consequential business concerns. Not surprisingly, in the course of this research, we found more than 100 studies since 1960 that use the construct. Yet, the literature is also characterized by differences around conceptualizations of the construct, and ambiguities surrounding its relationships with business performance and other key relational variables. In this study, we address

these in a comprehensive meta-analysis of existing empirical results both published and unpublished, over more than five decades between 1960 and 2016.

Our key results suggest that the channel conflict - performance link is negative. We find this result is robust to the consideration of individual or joint performance in channels. The robustness of the result is further evidenced in its invariance across multiple conceptual frameworks. While we find models with channel conflict as a mediator (ICC-TC, ICC-INT) exhibit a greater fit with the data than models with channel conflict as an outcome (T-C, INT), the results linking channel conflict to other relational variables are robust to the different models. In particular, channel conflict is negatively related to the key relational variables – satisfaction, trust, and commitment.

We also find several key moderators of the conflict – performance relationship that are not reported in the literature. We find the negative conflict – performance link is stronger for subjective measures of performance, compared to objective measures. This is consistent with potential common method variation (CMV) bias in data used for estimating such relationships. We also find the reported relationships between conflict and performance are weaker for studies that use data from multiple industries – possibly as a consequence of the heterogeneity that dilutes strong results (Geyskens et al. 1998). Studies that have a focal firm with multiple channel members exhibit a weaker negative link between conflict and performance, compared to a sample with unrelated channel members – possibly an outcome of the shared conflict management

practices. More recent studies exhibit a stronger negative relationship between conflict and performance. It is unclear why that is the case. However, the post-2000 emergence of the e-commerce ecosystem has fostered myriad multi-channel formats where sellers more easily disintermediate their resellers by going direct. We speculate that the results suggest the potential channel conflict this portends, comes at a cost. We also find the conflict - performance link is more strongly negative for North American samples, suggesting business outcomes in North America are more tightly hinged to intra-channel conflict. International channels exhibit a stronger negative relationship than domestic channels – probably an indication of the higher transaction costs inflating the impact on performance attrition. Last but not least, channels characterized by stronger dependency exhibit a stronger negative relation – a reminder of the consequential impact of such dependency.

3.9.1. Implications and Future Research

Managing channel conflict is a challenging task for several reasons. The robust evidence that conflict impacts channel performance negatively, imply conflict management efforts can have a clear economic impact. However, what should such efforts entail? Any efforts at managing such conflicts involve allocation of significant managerial and monetary resources that need to be justified from an efficiency perspective. This requires careful attention to the conceptualization, measurement, and calibration of conflict. To this end, we find both models of conflict – as an outcome versus as a mediator, fit the data well, with the latter exhibiting a better fit. Thus,

identifying the key variables that impact conflict is an important task, but which may not always be intuitive. While we find behavioral outcomes like satisfaction, trust and commitment have a significantly negative relationship with conflict, it is not clear how their impact is to be interpreted when conflict itself can be a moving target between potential for conflict to explicit manifestation. Similarly, while we find that our results are invariant to whether we consider individual versus joint channel performance, it is unclear how these results will hold up when we look at conflict as a spectrum. The challenge is exacerbated because we find much of the conflict - performance link can be contextual. Our evidence suggests that the measured impact of conflict depends on how conflict is measured, the sampling context and indeed the nature of the channel itself. These are not trivial findings and point to future research areas for the discipline and practice. We point to some of these below.

Episodic Nature of Conflict: Despite a large part of the literature drawing upon conflict as a process and its dynamism, there has been very little empirical work devoted to the episodic nature of conflict proposed by Pondy (1967). In this view, inter-organizational conflict comprises interlocking episodes: latent, perceived, felt, manifest conflict, and conflict aftermath. Unfortunately, the literature on this is not very well developed and is ripe for more insights. In one of the rarely related studies Lengers, Dant, and Meiseberg (2015) investigate how different governance mechanisms such as formal and relational, affect the transition between different

episodes of conflict. We call for more such studies to elaborate on the channel conflict – performance relationship.

Individual and Joint Performance: One of our key results is that the impact of channel conflict is invariant across individual or joint channel performance. However, that masks a potentially big gap in the literature. While some researchers use joint channel performance measures (e.g., Chang and Gotcher 2010; Webb and Hogan 2002), and others use measures based on only one of the channel members (Cronin and Morris 1989), very few empirical studies use both individual and joint performance in the same model (see Benton and Maloni 2005 as an exception). Thus, not only the theory but even the empirical bases of the link between individual and joint performance is largely underdeveloped. We feel this is an important area of study for the channels literature at large.

Metrics for Channel Performance: One of the clear takeaways from this research is that the metric makes a difference. We find objective measures such as return on asset, sales success, level of sales, sales growth, and profits exhibit different relationship strength than subjective and perceptual measures such as level of satisfaction with performance and, expected performance. However, there are several other variations that remain unaccounted for. For example, the difference between long-term measures (e.g., firm survival) and short-term impacts (e.g., return on investment). Some researchers explore measures customized to the research question and dataset in consideration (*cf.* Spriggs 1994). Kumar et al. (1992) for example,

conceptualize three different categories of channel performance based on research operationalization. In some studies, performance is a unidimensional construct (e.g., Heide and John 1988; Winsor et al. 2012); while in others, it is multi-dimensional, with each dimension investigated individually (Cronin and Morris 1989; Frazier 1983; Zhang et al. 2016). In yet other studies, multi-dimensional constructs are incorporated in weighted or unweighted composite scales (e.g., Frazier et al. 1989). We do not yet know what are the marginal differences in the impact of these measures on performance. We feel these will continue to be important and fruitful areas of study.

Channel Conflict as a Functional Phenomenon: While our key focus has been on the conflict – performance link, and the aggregate evidence suggests conflict is dysfunctional, we are keenly aware that much work remains to fully understand the potential functional role of conflict. Such a functional role would reflect in the link being positive. Several researchers have called for more research investigating this (see Koza and Dant 2007). Hunt (1996) explained that the effect of conflict on performance would be determined based on the type of conflict, level of conflict, and the conflict resolution technique. Dant and Schul (1992) investigated different conflict resolution techniques based on the type of conflict and level of dependency in the channel. Mohr and Spekman (1994) attempt to link the conflict resolution technique to channel performance. Yet most studies in the domain are one-shot cross-sectional in design, that are unsuited for the purpose (Frazier 1999). Thus we call for more longitudinal designs to study channel conflict.

3.10. CONCLUSIONS

To summarize, this study contributes to the marketing channels literature in multiple ways. To the best of our knowledge, ours is the most current and also the first meta-analysis focused on channel conflict and performance. We establish a key empirical generalization – that channel conflict and performance are negatively linked. We find this result is invariant to individual or joint channel performance. Models with conflict as a mediator show a better fit than models where it is an outcome. We find conflict is negatively related to the relational constructs satisfaction, trust, and commitment, the results being robust to different conceptual frameworks. We also identify some key boundary conditions for the existing empirical results by finding the contextual factors of measurement, sampling, and channel characteristics significantly moderate the conflict – performance link. In particular, the relationship is moderated by whether the performance measure is objective or subjective, the study sample comprises multiple industries, how recent the study is, whether the study sample comprises North American firms, whether the study sample comprises one focal firm, if the channel is international, and whether the channel is characterized by strong agency relationship. We then identify several areas of future research.

As with any study, ours has limitations. Our efforts at rigor come at the cost of some completeness. We may have been able to capture more nuances in our results with the benefit of more data. However, the number of constructs that are included in our model is limited because we could not find enough correlation coefficients for

important inter-firm constructs such as opportunism and interdependence asymmetry. We could not include firm-level constructs such as goal incompatibility, drive for autonomy, and miscommunication in our model for the same lack of enough correlations. We are also limited by our inability to make strong inferences of causality since the relationships we investigate are cross-sectional rather than longitudinal in design. These limitations are not unique to our paper and based on the multiple tests, we have confidence that our results are robust. We humbly hope our effort will serve to motivate other researchers to contribute more to this important area in marketing.

4. Channel Conflict: Bad for Business?

4.1. Abstract

The marketing channel literature abounds with results linking channel conflict negatively to business performance. However, is channel conflict really bad for business? We contend that it is not so; and that conflict's net impact on business performance is nuanced, resulting from a tension between the learning forced upon business partners as well as the transaction costs of dealing with the feud. We test this using a longitudinal secondary dataset comprising information on litigation, franchise contract terms, and revenue, extracted from Franchise Disclosure Documents (FDD), Entrepreneur Magazine and Franchise Times rankings, of 419 franchise firms over six years (2010-2015). Our results show that while conflict does negatively impact business performance; this is only true above a threshold level of conflict. Below such a threshold, conflict actually drives improved business performance. We also show how, consistent with the learning - transaction costs trade-off, the age and size of the firm moderate the conflict-performance relationship, shifting the non-linear curve to the right and flattening/steepening the slope of the curve. Our results are robust to considerations of different measures of performance, endogeneity of channel conflict and also controls for different firm and industry effects. Our econometric method incorporates recent advances in estimation of non-linear relationships, and our results are also robust to different functional forms. To the best of our knowledge, we are the first to empirically document this non-linear relation between channel conflict and business performance.

Keywords: Channel conflict, Channel performance, Inverted U-shaped relationship

"Conflict is the vital seed from which growth and success germinate" (Robbins 1974 p. 15)

4.2. Introduction

Conflict between channel members is a ubiquitous phenomenon in marketing channels. However, little is known about how such conflict affects business performance (Frazier 1999; Skarmeas 2006). Channel conflict is generally viewed as an efficiency depleting phenomenon, which affects the channel performance negatively (Bradford et al. 2004; Palmatier et al. 2006; Samaha et al. 2011). Some channel experts focus on the dark side of channel conflict, considering it dissociative and disruptive. They emphasize avoidance of channel conflict at all costs. A channel manager talks about channel conflict in this way:

*"Alternative distribution requires an enormous amount of distribution management, and channel conflict -- particularly channel cannibalization -- must be avoided at all costs" (*National Underwriter Life & Health/Financial Services Edition 1997*).*

However, others focus on the positive and bright side of channel conflict, as the opening and the following quotes suggest.

"A company with no channel conflict usually is a company with a coverage gap in its market strategy. A certain amount of conflict is essential for maintaining high performance and sustainable growth. However, as channel conflict has both positive and negative effects, managers should recognize the nature of the conflict and how that conflict can benefit their companies". -- A channel expert's view (Seung 2010).

In another case, Jean-Gabriel Henry, a senior analyst in the business-to-business marketing practice of Jupiter Research, a New York-based Internet research and consulting firm, talks about channel conflict positively:

"*Channel conflict should be a good word for brand manufacturers." "They should see it as an opportunity." He said manufacturers should not be so concerned about trying to appease different channels when they go online, especially at the expense of their own online outlet. "Who do you cut off completely? Who do you bribe to make happy? It's about making the pie bigger for everyone."* (San Jose Mercury News 2001).

These conflicting views have spawned research devoted to this issue. Both positive (bright) and negative (dark) sides of conflict have been studied. Many scholars have emphasized the ambiguity and duality of channel conflict (Johnsen and Lacoste 2016; Nordin 2006). Yet, despite substantial research in channel conflict, particularly on the dark side of it since the 1960s (Johnsen and Lacoste 2016), there are still ambiguities and many unanswered questions. For example, is there a threshold level of conflict that does not affect channel members' performance negatively? What could be an optimal level of conflict that can stimulate channel members to think out-of-the-box and collaborate to reach a higher level of joint profit? Is the relationship between channel conflict and performance monotonic? Or can the relationship change?

As it turns out, the relationship between channel conflict and business performance has been of particular interest to scholars (Duarte and Davies 2003; Lusch 1976b). Some studies report a negative relationship between channel conflict and performance (Duarte and Davies 2003; Kumar, Stern, and Achrol 1992; Jap and Ganesan 2000; Lusch 1976b; Ross, Anderson, and Weitz 1997). These comport to the common assumption that conflict is a phenomenon that negatively affects the channel performance. On the other hand, a few papers do report a positive relationship between channel conflict and performance (Assael 1969; Brown, Lusch, and Muehling 1983). Addressing this inconsistency, Rosenbloom (1973) asserts that conflict and performance relationship follows an inverted U-shaped curve – performance is low when conflict is at very low or high level, and it

is in its highest level when conflict is at the moderate level. Brown (1980) added to this complexity by claiming that inverted U-shaped relationship is preceded by an upright U-shaped relationship. While scholars have not found any empirical support for these propositions, the interest in the possibility pervades both academic and practice (Lusch 1976b; Duarte and Davies 2003).

In this study, we reopen the debate and investigate the potential non-linear relationship between channel conflict and performance. We believe limitations in research design, methodology deployed, and measurement came in the way of appropriate tests in the earlier literature. To overcome some of these, we use a secondary longitudinal dataset in the franchise context for our study. Franchising is an appropriate setting for the study because franchise relationships are characterized by conflict (Lafontaine 2014). A high potential for conflict in franchise relationships (Spinelli and Birley 1996) is likely to offer sufficient variation for our empirical models. Also, unlike several other settings, data on franchisor performance and conflict are relatively more easily available, especially over the years. To this end, we used the Franchise Disclosure Documents (FDD) to extract litigation as a measure of manifest conflict. The longitudinal nature of this data allows us to calibrate the causal impact of conflict on performance. We also collected data on different measures of performance such as revenue, and franchise sales from income statements, and Franchise Times ranking, respectively. Our empirical design avoids common method bias which has been a big limitation in earlier studies. We find strong evidence that channel conflict is not necessarily bad for business. In fact, we find conflict can spur improvements in business performance at lower levels of conflict before it can start having deleterious effects. We also show that this non-linear relationship is moderated by age and size of the firm. These two factors not only shift the non-linear curve but also they change the slope of the curve by flattening and steepening it.

In sum, we contribute to marketing channel literature in three ways. First, to the best of our knowledge, we are the first study to show that conflict is not necessarily bad for business performance and that conflict's net impact on business performance is nuanced, resulting from a tension between the learning forced upon the business partners as well as transaction costs of dealing with the feud. In the process, we show that there exists a threshold level for conflict around which the impact on performance changes. Second, to the best of our knowledge, we are the first study that investigates the non-linear (inverted U-shaped) relationship between channel conflict and performance using secondary longitudinal data. Third, to the best of our knowledge, we are the first in marketing to test the moderation effect of non-linear relationship between conflict and performance, considering the endogeneity of conflict.

In the rest of the paper, first, we provide a literature review of channel conflict and performance relationship. Then we propose our main research question. We follow with describing the data, procedure, and econometric techniques required to test the non-linear inverted U-shaped relationship. Then we discuss the results and potential research and managerial implications. We conclude the paper by elaborating on future research and limitations.

4.3. Literature Review

4.3.1. Functionality and dysfunctionality of conflict

Channel conflict refers to a situation where a channel member's actions (behaviors) negatively impact the goal attainment of the other channel members negatively (Etgar 1979). The functionality or dysfunctionality of conflict is still an important question which is not appropriately addressed in the literature. Scholars offer different explanations on when conflict could be functional or dysfunctional. Some scholars state that quality of channel interaction will be enhanced due to conflict (Bower 1965; Duetsch 1971; Litterer 1966). Moreover, others mentioned that conflict stimulates channel members to improve their performance (Assael 1969; Stern and

Heskett 1969; Rosenbloom 1973). On the other hand, another group of scholars explains when conflict would be dysfunctional. When conflict and cooperation are seen as opposite poles of a continuum, channel conflict leads to less cooperation among channel members (Alderson 1965). Moreover, channel conflict may result in a waste of resources. Finally, channel conflict makes channel members put more effort or duplicate their effort to do their regular activities (Stern and Heskett 1969; Rosenbloom 1973).

4.3.2. Point of ambiguity

The empirical studies in this domain show mixed results. Nordin (2006, p.118) states that "conflict had both good and bad sides and some conflict should be eliminated while others should not be." Some studies report positive correlation (Stern 1971; Assael 1969; Walker 1970). On the other hand, some studies report negative relationship (Dixon and Layton 1971; Leckie et al. 2017; Lusch 1976b; Pearson 1973; Brown 1980). Other studies could not find any support for the impact of conflict on performance (Brown 1977; Kelly and Peters 1977). To resolve the inconsistency, Rosenbloom (1973) asserts that channel conflict can lead to improved performance based on a threshold effect. In other words, increasing conflict leads to higher performance up to a specific point (threshold). However, after reaching that point (threshold), performance begins to fall with an increase in the level of conflict. Conflict can be functional or dysfunctional based on this threshold level. Figure 4-1 illustrates the inverted U-shaped relationship between channel conflict and performance proposed by Rosenbloom. Brown (1980) added to this complexity by asserting that the inverted U-shaped relationship is preceded by an upright U-shaped relationship. However, aggregate results gravitate toward the negative relationship between conflict and performance as the results of a recent meta-analysis (Eshghi and Ray 2018). Table 4-1 provides the list of papers that their main focus was directed toward investigating the relationship between

Table 4. 1: Previous studies on channel conflict and performance.

Study	Context	Relationship type	Longitudinal/ cross-sectional	Primary/secondary	Findings
Assael (1969)	Franchise	Linear	Conflict: CS Performance: CS	Primary: Survey	Conflict can enhance the performance of the channel in the presence of balanced power between two parties.
Walker (1970)	Laboratory	Linear	Conflict: CS (Survey) Performance: CS (Survey)	Primary: Survey	Conflict leads to non-optimum joint profits and weaker party's dissatisfaction.
Pearson (1973)	Grocery chain and supplier	Linear	Conflict: CS Performance: CS	Primary: Survey	He could not find any support for hypothesizes that operational results associated with cooperative channel are superior to those associated with channels characterized by conflict.
Lusch (1976b)	Franchise (auto dealers)	Linear and non-linear	Conflict: CS Performance: CS	Primary: Survey (conflict) Secondary: Return on assets and asset turnover	There is a significant negative relationship between conflict and performance (no support for inverted U-shaped relationship).
Pearson and Monoky (1976)	Grocery chain and supplier	Linear	Conflict: CS Performance: CS	Primary: Survey	Low performance is associated with manifest conflict while high performance is associated with cooperation.
Kelly and Peters (1977)	Franchise	Linear	Conflict: CS Performance: CS	Primary: Survey	No support for negative correlation of conflict with performance.
Brown (1978)	Automobile dealers (franchise)	Linear and non-linear	Conflict: CS Performance: CS	Primary: Survey	No support for inverted U-shape relationship between conflict and eight measures of performance.
Rosson and Ford (1980)	Exporter firms	Linear	Conflict: CS Performance: CS	Primary: Survey (conflict) Primary: Survey (performance: sales)	Conflict and performance are negatively correlated.
Duarte and Davies (2003)	Financial industry	Linear and non-linear	Conflict: CS Performance: CS	Primary: Survey (conflict) Secondary: sales growth and error rate	The negative relationship between conflict and effectiveness (sales growth) exists.
Leckie, et al. (2017)	Importer-exporter relationship	Linear	Conflict: CS Performance: CS	Primary: Survey	Manifest conflict is negatively linked to performance. Customer orientation moderates this relationship.
This study	*Business format Franchise*	*Non-linear*	*Both longitudinal*	*Conflict: (number of litigation)* *Performance: (revenue of franchise operation, franchise sales*	*?*

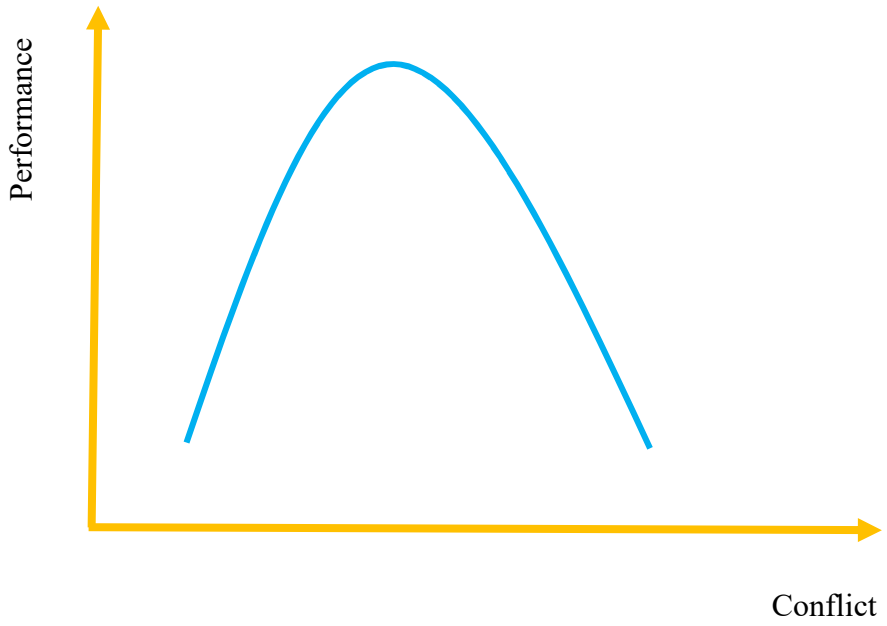


Figure 4. 1:Inverted U-shaped relationship between conflict and performance

channel conflict and performance. In a nutshell, there is no consensus regarding the impact of channel conflict on channel performance. These inconsistencies could be attributed to research design, measurement, or deployed methodologies.

Research Design. Most of the previous research is conducted in a cross-sectional manner that prevents to understand the causal relationship between channel conflict and performance (Lusch 1976b). To observe the true effect of conflict on performance, we need to measure performance at least one period after the occurrence of conflict. Conflict is not a static phenomenon, and we need longitudinal data to examine its effect on channel outcomes such as satisfaction and performance (Brown, Lusch, and Smith 1991). Therefore, it is difficult to observe the effect of conflict on channel performance in the one-time period. We should also bear in mind that sometimes low performance may lead to conflict (reverse causality).

Measurement. Scholars have used different types of measurements for conflict and performance in the previous studies. Most of the previous studies relied on cross-sectional surveys which capture the perceived, manifest or affective conflict from managers' point of view by measuring frequency, intensity or importance of conflictual issues. Moreover, conflict is a highly sensitive issue in the channel, and not all channel members are interested in responding to questions about it using surveys or interviews. In the same vein, different subjective and objective measures of performance such as return on asset, asset turnover, sales, sales growth, profits, satisfaction, effectiveness, and efficiency have been used in the previous studies (Anderson and Narus 1984; Duarte and Davies 2003; Gaski and Nevin 1985). Many of these performance types are measured perceptually (subjectively) using survey. The financial performance measure could be more accurate with archived data rather than subjective perceptual measure (Kang et al. 2018). The correlation between channel conflict and performance would be closer to the true effect when

channel performance is measured in an objective manner. However, channel conflict and performance are measured using subjective data in the previous empirical studies. This consistency of measurement of conflict and performance may inflate the observed effect of conflict on performance due to common methods bias (Kang et al. 2018). Thus, we cannot make sure that the observed effect of conflict on performance in the previous studies is not the artifact of measurement and common methods bias.

Methodology. The last but not least important issue is the use of appropriate procedure to test inverted U-shaped relationship (Lind and Mehlum 2010). In the previous studies, they test the existence of inverted U-shaped relationship based on the significant positive coefficient of conflict and significant negative coefficient of the square of conflict. They did not report the extremum point that should be in the data range. They usually did not provide the graphical relationship between conflict and performance. Moreover, they did not test positive slope and the negative slope of the inverted U-shaped graph with splitting dataset based on extremum point. On more technical notes, previous studies have not addressed the endogeneity of channel conflict (Haans, Pieters, and He 2016). In all previous studies, channel conflict is treated as an exogenous variable (e.g., Lusch 1976b; Duarte and Davies 2003).

In sum, without appropriate testing and addressing the limitations mentioned above, we cannot comment on true nature of the relationship between conflict and performance. We, first, focus on causal argumentation on channel conflict and performance. Then, we provide details on testing the inverted U-shaped relationship between channel conflict and performance.

4.4. Theory

An inverted U-shaped relationship between channel conflict and performance exists if the performance (dependent variable) first increases with the conflict (independent variable) at a decreasing rate to reach a maximum (threshold), after which the performance (dependent variable)

decreases at an increasing rate. This inverted U-shaped relationship could be conceptualized as two latent forces (functions) unitedly forming the inverted U-shaped (Haans et al. 2016). While these two countervailing forces are usually unobservable, they could be combined either additively or multiplicatively to explain how we have U-shaped or inverted U-shaped relationship between X and Y variables. In our case, we have an additive argument behind the inverted U-shaped relationship between channel conflict and performance. We argue that the two latent forces, which make up the inverted U-shaped relationship are (organizational) learning and transaction costs. Organizational learning is defined as a process of improving and correcting actions by acquiring greater knowledge and understanding (Fiol and Lyles 1985). Based on Lukas, Hult, and Ferrell's (1996) framework for learning in marketing channels, firms learn from their past behaviors and correct their behavior based on the repository of knowledge and understanding that they acquired.

Firms learn how to contract and adjust their governance gradually (Mayer and Argyres 2004). Not all changes in contract and governance are the result of preventing conflict and disputes or mitigating its negative effect, but a considerable part of changes in contracts are related to dispute resolution, process, and provisions. Based on the findings of Mayer and Argyres (2004), early disputes do not stimulate firms to put at least serious efforts to deal with resultant incentive misalignment or future contingencies, or we can argue that the firm does not consider the incidences of conflict too high to act on that. However, after observing a sufficient number of disputes, they will try to add contract terms for better incentive alignment, dispute resolution, and dispute prevention to address these issues in the channel. When a firm experiences a few incidences of conflict, the firm could learn from these mistakes and problems in its channel structure, contracts, routines, and procedures, and they make major attempts to address it in the next contracts (Mayer and Argyres 2004). Therefore, we observe an increase in the level of

performance (positive slope). Based on the behavioral theory of the firm, social systems such as marketing channels demonstrate adaptive behavior over time (Cyert and March 1963; Nelson and Winter 1982). Cyert and March (1963) talk about "problemistic search" in which learning is stimulated by the search for a solution to current problems rather than by planning for long-term needs. Sitkin (1992) shows that moderate levels of failure could draw attention to potential problems. If we consider the disputes and conflict as the failure of the firm in organizing the relationship and crafting a contract, then we can claim that firms would apply these failures (conflict and disputes) to learn and adapt themselves. Based on this line of reasoning, conflict can produce a learning readiness which includes the corrective action. In sum, the benefits to the channel conflict are linearly increasing (could be concave or logarithmic).

We learned how firms could benefit from conflict through the learning from failures and mistake, but we know that conflict (intense and frequent ones) also manifests itself as transaction costs. When firm experiences many incidences of conflict, the transaction costs due to the incidence of conflict affect the performance negatively in different forms such as higher monitoring, enforcing, adaptation costs, court-related costs or more efforts to safeguard specific investments (Williamson 1979). All these types of costs result in a decrease in the level of performance. Commons (1932, p.4) linked the conflict and transactions by suggesting that the unit of analysis, the transaction, exhibits three conditions "mutuality, conflict and order". Williamson (2000, p. 599) explains the purpose of designing efficient forms of governance mechanisms are "to craft order, thereby to mitigate conflict and realize the mutual gains." TCE mostly views conflict as a negative phenomenon because it leads to increased cost of governance due to the requirement to mitigate the opportunism. The costs of channel conflict tend to escalate rapidly, resulting in a convex (or exponential) cost curve.

Therefore, the basic relationship between conflict (x), and performance (y) can be modeled as net of benefits from learning, L(x) and the transaction costs, T(x). That is, y(x) = L(x) – T(x). Conflicts lead to discovering underlying tensions between channel members, thereby presenting opportunities to make things better. More conflicts present more learning opportunities and presumably, greater benefits from such learning. Nevertheless, the law of diminishing returns suggests that the marginal benefits of learning L(x) start dwindling as incidents of conflict keep increasing.

However, just conflict per se is not enough to reap the benefits of learning since agents must put an effort to understand and resolve such conflicts (Chang and Gotcher 2010). Thus, more conflicts also accumulate greater transaction costs even as the agent attempts to learn. These costs multiply with more incidents of conflict as resources quickly get tied up leaving lesser valuable resources to address the marginal incident of conflict. Unresolved conflict manifests in high levels of transaction costs T(x) as disagreements, renegotiations, court-based activities and associated transactional difficulties balloon (Williamson 1979).

Thus, the net benefit y(x) peaks at a threshold level of conflict x* such that at x<x* the marginal benefits of learning ($\partial L/\partial x$) outstrips the marginal cost of transaction ($\partial T/\partial x$) as x increases. This results in ($\frac{\partial y}{\partial x} = \frac{\partial L}{\partial x} - \frac{\partial T}{\partial x} > 0$). However, as x increases, this benefit is progressively depleted by more rapidly increasing transaction costs, and at x>x* the marginal benefit of learning is overwhelmed by the marginal costs of transaction, resulting in ($\frac{\partial y}{\partial x} = \frac{\partial L}{\partial x} - \frac{\partial T}{\partial x} < 0$).

In simpler terms, when the frequency of conflict and disputes passes the level that benefits of learning from conflict do not outweigh the transaction costs in forms of contract adjustment, contract enforcing, and monitoring costs, the dark side of conflict becomes salient. On the other

hand, when the frequency of conflict and disputes is at the level that benefits of learning from past and previous conflict outweigh the transaction costs, we will see the bright side of conflict. In sum, the positive side of conflict mostly attributed to learning effect while the negative and dark side of conflict is attributed to transaction costs. There exists a threshold level for conflict (x*) in the channel, and this threshold may vary in different types of channel. These two latent forces (benefits from learning and costs of transaction) shaped an inverted U-shaped curve, where threshold level of conflict is an extremum point. Therefore, we propose:

H1: There exists an inverted U-shaped relationship between the channel conflict and channel performance.

The learning from channel conflict and its associated cost depend on many organizational factors such as age and size. These two factors could affect the threshold effect of conflict by relocating the threshold level of conflict or by flattening or steepening the benefits (learning slope) and costs function (transaction cost slope). We should bear in mind that relocating the threshold level and flattening or steepening are two different moderation effects that should be tested independently. Overall, firm age and size have long been recognized as crucial factors in prior work on channel performance (Brush and Chaganti 1999; Majumdar 1997). Firms with varying age and size are characterized by substantially different learning procedures and routines and cognitive resources (Cyert and March 1963; Nelson and Winter 1982). Therefore, we expect that both firm age and size to importantly affect the benefits of learning from conflict and its associated (transaction) costs. In sum, these two factors shift the inflection point (threshold point) of conflict and/or change the slopes of benefit and cost curves.

As an example, consider $y(x) = L(x) - T(x) = \alpha_0 x + \alpha_1 x^2$, where the channel performance, y, is a concave function of the channel conflict x. A typical test of the inverted U-shaped relationship

would be a test of sign and significance of these two coefficients: $\alpha_0>0$ and $\alpha_1<0$. The "inflection" point can be estimated as – $(-\alpha_0/2\ \alpha_1)$. To understand how a moderating factor Z affects this, consider the moderated equation: $y'(x) = y(x) + \alpha' y(x)Z = \alpha_0 x + \alpha_1 x^2 + \alpha_2 xZ + \alpha_3 x^2 Z$. To show the moderation effect, we follow the approach that is proposed by Haans et al. (2016). The threshold or inflection point of the inverted U-shaped curve occurs at $x^* = \frac{\alpha_0 + \alpha_2 Z}{2\times(\alpha_1+\alpha_3 Z)}$. The inflection point depends on the moderator, Z. To show how the inflection point changes as Z changes, we should take the derivative of the above equation with respect to Z: $\frac{\delta X^*}{\delta Z} = \frac{\alpha_1\alpha_2-\alpha_0\alpha_3}{2(\alpha_1+\alpha_3 Z)^2}$.

As the denominator is strictly greater than zero, the direction of the shift depends on the sign of the numerator. If $\alpha_1\alpha_2 - \alpha_0\alpha_3$ is positive, the inflection point will shift to the right as Z increases. If $\alpha_1\alpha_2 - \alpha_0\alpha_3$ is negative, the inflection point will shift to the left as Z increases. Overall, the values of α_1, α_2, α_3, and α_4 determine the direction of the shift.

The second type of moderator occurs when the rate of increase or decline of main independent variable to dependent variable changes based on the value of the moderator. This will result in the steepening or flattening of the curve before and/or after the threshold (inflection) point. To test this type of moderation effect, we only need to test the significance and sign of the coefficient of the interaction of squared term of (main independent variable) conflict with the moderator of the interest. When the coefficient is positive, a flattening occurs for inverted U-shaped relationship. Conversely, when the coefficient is negative, a steepening occurs for inverted U-shaped relationship.

In order to test how learning and transaction costs shape inverted U-curve relationship between conflict and performance, we now consider the moderating effects of Age and Size of the firm.

4.4.1. Age of the firm as moderator

Firm age is one of the most important factors that has a huge effect on firm performance and learning (Hoisl, Gruber, and Conti 2017; Sorensen and Stuart 2000). Our basic premise with respect to the firm's age is that the net benefit operates in different ways for newer and older firms. While both firm types learn from conflict (Cohen and Levinthal 1990; Hoisl et al. 2017), both also get exposed to higher transaction costs with rising conflicts, which deplete the benefits of learning. Much of these costs result from what Williamson (1985) called the "fundamental transformation" of a business transaction over time. As explained by Wilson (1995), this fundamental transformation results as erstwhile arm-length transactions tend to build up non re-deployable assets over time as the business partners look for transactional economies in scale and scope.

While the older firms naturally generate greater levels of such specific assets than newer firms, they are also more likely to develop greater safeguards over time to protect these assets. For newer firms, without the benefit of similar safeguards, the transactional challenges of these increasing specific assets pile up fast. As such, relative to the older firms, the newer firms see the benefits of learning from conflict being progressively depleted by transaction costs at lower conflict levels. This suggests that age of the firm shifts the x* (inflection point) to the right ($\alpha_1\alpha_2 - \alpha_0\alpha_3$ could be positive). Thus, we propose:

H2: Firm age moderates the inverted U-shaped relationship between channel conflict and performance in such a way that the inflection point of the inverted U-shaped curve will occur at higher number of conflict incidence for old firms in comparison to the young firms.

Moreover, firm age and experience also affect the rate of increase in benefit of learning and costs associated with transaction from managing conflict. The age of the firm also affects both the rate of learning as well as the ability to keep transaction costs manageable. With greater

experience, the older firm is able to quickly learn and address smaller conflict levels without incurring significant transaction costs. In fact, they have required accumulation of knowledge and experience as well as the embedded procedures to learn faster and manage conflict at lower transaction costs. This results in a higher marginal net benefit compared to newer firms which are not only unable to leverage learning as much from similar levels of conflict but also are unable to control their transaction costs with as much efficiency. However, as the number of conflicts grows, the older firms have far greater transactional challenges due to much greater levels of specific assets build up due to the fundamental transformation referred to earlier. This results in progressively greater depletion of the benefits of learning with increasing conflicts, relative to the newer firms. These two effects result in a steeper slope of y(x) for older firms compared to the newer firms. Therefore, we expect that firm age steepens the inverted U-shaped relationship between conflict and performance.

H3: Firm age negatively moderates the inverted U-shaped relationship between conflict and performance. Specifically, the rate of performance increase associated with learning from conflict is steeper for older firms, and the rate of decline in performance due to transaction costs of conflict is steeper for older firm in comparison to younger firms.

4.4.2. Size of the firm as moderator

Size of the firm is another important factor that has a huge effect on firm performance and learning (Damanpor 1996). Greater size leads to greater economies of scale for the case of learning. When a firm such as a franchise company, is larger, it means that it has a large network of franchise outlets. Therefore, it is very likely that the firm experiences a high number of incidences of conflict relationship with the franchisees. Johnson, Sohi, and Grewal (2014) found that firms that have prior relevant knowledge (on conflict) are better able to acquire and assimilate new knowledge (on

conflict). Thus, the benefits of learning for larger firms occur at lower numbers of conflict with current franchisees. Larger firms have more opportunities to have access to outside knowledge because of increased number of interactions to more franchisees and other entities (Hoisl et al. 2017). Johnson et al. (2014) categorized inter-firm relationship knowledge into interactional knowledge stores, functional knowledge stores, and environmental knowledge stores. Interactional knowledge stores consist of knowledge about issues related to interactions with other channel members (Johnson et al. 2014). Here interactional knowledge store plays a crucial role. Interactional knowledge includes aspects such as communication, negotiation, conflict management, and development and management of cooperative programs (Johnson et al. 2014). Larger firms have more interactions with channel members (economies of scale). Thus, they may have higher level of interactional knowledge due to larger networks of franchisees. In sum, the knowledge acquired in one relationship can be extended to other interactional issues in conflict management. For example, if a franchisor has an issue over exclusive territory with one franchisee, the knowledge learned from this conflict can be extended to other relationships which are related to exclusive territory.

However, greater size also leads to greater bureaucratic costs. In fact, firm size may also magnify the potential cost of transactions because large firms are characterized by high level of bureaucracy and hesitation in responding to changes. Moreover, as firm size increases, the transfer of knowledge across firms may become slower due to a hierarchical structure. These bureaucratic costs deplete the benefits of learning faster at higher levels of conflicts. Some scholars argue that learning occurs when a firm has efficient system and procedures for sharing and re-checking acquired information (Calantone, Cavusgil, and Zhao 2002; Moorman and Miner 1998). The larger the firm, there is more likely that firm has these well-developed systems and procedures. However,

the better economies of scale afforded by greater size of the firm imply that the larger firms can sustain greater levels of conflicts before the bureaucratic costs kick in. This suggests that size of the firm shifts the x* (inflection point) to the right ($\alpha_1\alpha_2 - \alpha_0\alpha_3$ could be positive). Therefore, we propose:

H4: Firm size moderates the inverted U-shaped relationship between channel conflict and performance in such way that the inflection point of the inverted U-shaped curve will occur at higher number of conflict incidence for large firms in comparison to the small firms.

Firm size could also affect the rate of increase in benefit of learning from conflict and costs associated with transaction from managing conflict. While scale economies allow learning over greater ranges of conflict for larger firms, the rate at which firms reap the benefits of learning and incur bureaucratic costs are different for large and small firms. While smaller firms are able to derive the benefits of learning without the weight of bureaucratic costs at lower levels of conflict, these benefits get very quickly depleted at higher levels of conflict when their lack of scale economies imply their bureaucratic costs acquire greater salience. This is as opposed to larger firms, whose advantage in scale economies are closely tracked by their higher bureaucratic costs at both low and high levels of conflicts. This suggests smaller firms will have a steeper curve compared to larger firms. Therefore, we expect that firm size flattens the inverted U-shaped relationship between conflict and performance.

H5: Firm size positively moderates the inverted U-shaped relationship between conflict and performance. Specifically, the rate of performance increase associated with learning from conflict is steeper for smaller firms, and the rate of decline in performance due to transaction costs of conflict is steeper for smaller firm in comparison to larger firms.

4.5. Methodology and Data

In this study, we investigate the non-linear relationship between channel conflict and performance and its potential moderators using the secondary longitudinal dataset in the business format franchise context. The use of longitudinal secondary dataset in the franchise context assists us to address the potential issues in the previous channel conflict-performance link.

4.5.1. Data

For our empirical test, we choose business-format franchise setting. Franchise setting is appropriate for our purpose because (1) the data on channel conflict, performance and other contract related variables are publicly available for North American franchisors and (2) franchise relationships are characterized by conflict (Lafontaine 2014).

Our unit of data analysis is firm. We aggregate all collected data at the firm level. Our longitudinal investigation of channel conflict and performance requires us to collect data about each franchisor from various sources. To obtain data on litigated (manifest) conflict, we collect Franchise Disclosure Documents (FDD) for a sample of 419 franchise firms from electronic filings in one of the registration law states in the United States. Registration law states require all franchisors to register their FDDs to states' authorities. We extract the litigated conflict and other contract terms from 23 required items that must be included in FDD. The FDDs from 2011 to 2015 are used in this study. Each FDD includes the previous ten years' information on litigated conflict (item 3), which enables us to have information on the litigated conflict from 2001 to 2015.

We also obtain performance-related (overall revenue, and revenue from franchise operation) data from both FDDs appendices (2011-2015) and Franchise Times ranking (2004-2015). All FDDs are accompanied with income statements and balance sheets of the franchisors. We use the Franchise Time ranking' data as a validity check for the first source. We also use Entrepreneur's franchise ranking list to obtain information on some general franchise data such as number of

franchise and company-owned outlets, and initial investment. Overall, we did not have information on performance (sales) prior to 2011, and we end up using data from 2011 to 2015.

Overall, we collected data on how many litigations firm have had from 2011 to 2015. We only chose litigated conflicts that are related to the franchise relationship (such as trademark infringements, default in payments, quality and responsibility shirking, etc.).

4.5.2. Main Measures

The list of all variables, their measurement and source are provided in Table 4-2. We also report the correlation and descriptive statistics in Table 4-3.

Dependent variable: Performance. We used revenue (dollar amount) of the franchise firm and its revenue from franchise operation as measures of performance in franchise context. We extracted the dollar amount of overall revenue from income statements as the main measure of performance. We also extracted part of the revenue which is attributed to only franchise operation: royalty fee, franchise fee, and the sum of royalty fee and franchise fee. We used sales level from Franchise Times' ranking and other mentioned sales measures to check for validity of results.

Main Independent variable: Conflict. Conflict is measured as a number of litigations that a franchise firm experienced[12].

Firm age: firm age is measured as the number of years that firm operates since establishment in the specific business sector.

Firm size: firm size is measured as the number of outlets that firm has in that year.

[12] The initiator of litigation could be franchisor and franchisee. There is no need to separate them out because most of claims by franchisor or franchisee are followed by counter claim by the other party (Michael, 2000).

Other variables (control). The list of all control variables, their measurement and source are provided in Table 4-2. We also control for industry (sectors) that franchise firms operate and year effect using dummy variables.

4.5.3. Econometrics method

Traditional test of an inverted U-shaped relationship. Researchers usually test the existence of an inverted U-shaped relationship by regressing the dependent variable on the independent variable and its square term.

$$Y = \beta_0 + \beta_1 \times X_1 + \beta_2 \times X_1^2 \quad (4\text{-}1)$$

Traditionally, a significant positive β_1 and a negative and significant β_2 are sufficient to interpret an inverted U-shaped relationship. Though necessary, these conditions are not sufficient to infer such relationship. Lind and Mehlum (2010) propose a three-step procedure to test the quadratic relationships. The first step is to have a negative and significant β_2. The second step revolves around the steepness of both ends (positive and negative). The slopes at both ends should be sufficiently steep (significant) within the data range. In other words, the slope at the lower end should be positive and significant while the slope at the higher end should be negative and significant. If only one of the slopes is significant, we may have other types of functions such as logarithmic or exponential forms. Finally, the turning point (threshold) needs to be located well within the data range (Lind and Mehlum 2010; Haans et al. 2016). The confidence interval of the turning point should be estimated, and it must be within the data range to have a true inverted U-shaped curve. We will discuss the details of testing non-linear relationship (a true inverted U-shaped curve) and other technical issues in the analysis section.

Table 4. 2- list of variables used in this study

Variable	Label	Description	Source
Conflict	Conf	The incidence of litigation is the proxy of channel conflict.	Franchise Disclosure Document (item 3)
Performance	Perf_Rev Perf_FT Perf_Roy Perf_FF Perf_FR	Natural logarithm of overall revenue (in dollars) Natural logarithm of revenue from franchise operation (in dollars) Natural logarithm of revenue from franchise operation: royalty fee, franchise fee, and their sum (in dollars)	Revenue from income statement (FDD's attachment) and sales from Franchise Times's ranking
Number of Trademarks	Ltrad	Natural logarithm of the number of trademarks registered by franchisor (specific to franchise relationship)	FDDs (item 13)
Relationship state law	Rel_st	It is 1 if the headquarter is is the relationship law state otherwise 0	Entrepreneur Magazine from + FDDs
Mediation clause	Mediat	It is 1 if there is mediation option in the contract otherwise 0.	FDDs (item 17)
Arbitration clause	Arbit	It is 1 if there is arbitration option in the contract otherwise 0.	FDDs (item 17)
Growth in past three years	Grth3	The average growth of the franchisor in past three years	Entrepreneur Magazine + FDDs
Franchise experience	Fexp	Natural logarithm franchise experience based number of years since the firm begins franchising	Entrepreneur Magazine + FDDs
Number of franchise outlets	Lfran	Natural logarithm of number of franchise units	Entrepreneur Magazine + FDDs
Size	Ltoatl	Natural logarithm of total number of outlets in the franchise system	Entrepreneur Magazine + FDDs
Transaction specific investment	Lavest	Log of initial franchise investment (dollar value)	Entrepreneur Magazine + FDDs
Conflict square	Conf_sq	The square of number of conflict	FDDs
Advertising intensity	Adv	The advertising expense which is normalized by the number of total outlets.	FDDs
Firm age	Cexpr	The number of years firm operates in the sector since establishment.	Entrepreneur Magazine + FDDs

Table 4. 3- Descriptive and pairwise correlations among the main variables

	Mean (SD)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
(1) Conf	8.07 (28.43)	1																	
(2) Perf (rev)	16.42 (1.79)	.58***	1																
(3) Perf (FT)	4.96 (1.55)	.20***	.75***	1															
(4) Size	5.38 (1.25)	.07	.64***	.85***	1														
(5) Adv	35.24 (192.66)	.64***	.37***	-.01	-.12*	1													
(6) Lavest	12.66 (1.14)	.55***	.52***	.38***	.05	.42***	1												
(7) Age	7.93 (12.95)	.30***	.12*	.13*	.01	.20***	.24***	1											
(8) Lfran	5.27 (1.25)	.09	.65***	.79***	.97***	-.11+	.02	-.10+	1										
(9) Ltrad	1.70 (.79)	.12*	.37***	.40***	.33***	-.02	.26***	-.05	.35***	1									
(10) Fexp	2.68 (.79)	.41***	.63***	.55***	.50***	.26***	.36***	-.09	.52***	.20***	1								
(11) Grth3	41.07 (75.51)	.03	.32***	.39***	.62***	-.06	-.14*	.09	.60***	.15*	.07	1							
(12) Rel_st	.36 (.48)	-.19**	-.02	-.04	.07	-.13*	-.32***	-.23***	.10+	-.06	-.04	.15**	1						
(13) Mediat	.45 (.50)	-.24***	-.21**	.00	.03	-.15**	-.08	.01	-.03	.15*	-.23***	-.02	-.09	1					
(14) Arbit	.69 (.46)	.17**	.16**	.002	.03	.11+	.04	-.15*	.04	-.02	-.001	.11+	.06	-.08	1				
(15) Conf_sq	870.64 (3427.76)	.99***	.56***	.18**	.05	.64***	.53***	.30***	.07	.11+	.40***	.01	-.19**	-.23***	.17**	1			
(16) Perf_Roy	15.74 (1.87)	.52***	.93***	.77***	.65***	.33***	.50***	-.01	.66***	.42***	.68***	.27***	.05	-.19***	.18**	.49***	1		
(17) Perf_FF	13.77 (1.49)	.49***	.71***	.48***	.47***	.31***	.41***	.10+	.49***	.32***	.24***	.29***	-.01	-.11+	.25***	.47***	.68***	1	
(18) Perf_FR	29.51 (3.08)	.55***	.90***	.70***	.62***	.35***	.50***	.04	.64***	.40***	.53***	.30***	.03	-.17*	.23***	.94***	.94***	.90***	1

*** p<.001, ** p<.01, * p<.05, + p<.1

N = 296 based on listwise correlation

4.5.4. Endogeneity

An important issue in investigating the effect of conflict on performance is unobserved factors that may be correlated with conflict and performance. Previous research on the effect of conflict and performance consider conflict as an exogenous variable. The occurrence of conflict (litigation) is not a random incidence. The number of conflictual incidences (litigation) could be a function of years of franchising, number of franchise units, financial resources, the number of trademarks at risk, and other contract-related factors. Here, channel conflict is a potentially endogenous variable. Therefore, we correct for endogeneity issue before testing for a quadratic relationship. We consider not only the conflict as an endogenous variable, but also we consider the square term of conflict as an endogenous variable (Angrist and Pischke 2009; Wooldridge 2002).

To address endogeneity, we first run the Wu-Hausman test to check if we can reject the null hypothesis of conflict and its square terms being exogenous (Hausman 1978; Wu 1974). The results ($F(2,1342) = 96.143$, $p < 0.001$) reject such a null, suggesting conflict is endogenous in our data. We then adopt a 3SLS, instrumental variable (IV) procedure to address this.

Channel conflict correlates with unobserved factors in the error term. Therefore, we estimate conflict by regressing conflict on years of franchising (franchising experience), number of franchise units, number of trademarks at risk, relationship law state, last three years growth of franchise, and other contract-related factors such as provisions of mediation and arbitration which are correlated with conflict, but are uncorrelated with error terms (see equation 2). When we have an endogenous variable, and we want to test the quadratic relationship, we consider the endogeneity of square term too (Wooldridge 2002; Haans et al. 2016). We follow the method recommended by Ebbes, Papies and van Heerde (2016) and Wooldridge (2002) and to address the

endogeneity of squared term of conflict by regressing the square term of conflict on instruments and their squared terms (see equation 3).

We also test the validity and strength of instruments using the method proposed by Angrist and Pischke (2009). This method is appropriate when we have more than one endogenous variable. Here, we have two endogenous variables: conflict and square of conflict. Other tests for validity and weakness of instruments such as Cragg-Donald test the identification of the equation as a whole, while Angrist and Pischke' method (first-stage F statistic) test whether one of the endogenous regressors is under- or weakly identified. The F-statistics (7.68) which is greater than the critical value of 3.64 and we can reject the null hypothesis at p-value (.1) that the instruments are weak.

4.5.5. Test of non-linear relationship between conflict and performance

To test the effect of conflict on performance (H1), we regress performance on conflict and conflict square. We also control for the number of total outlets, advertising intensity, franchise initial investment, firm experience, and year and industry fixed-effects (please see equation 4-4). We estimate the following three equations using 3SLS regression estimate methods. This method enables us to account for the endogeneity of conflict and its square term.

$$Conf_{it} = \beta_{10} + \beta_{11}\, Ltrad_{i,t-1} + \beta_{12} Fexp_{i,t} + \beta_{13} Lfran_{i,t-1} + \beta_{14}\, Rel\_st_{i,t-1} + \beta_{15}\, Arbit_{i,t-1} + \beta_{16}\, Mediat_{i,t-1} + \beta_{17}\, Grth3 + \omega_{1i} \quad (4\text{-}2)$$

$$Conf\_Sq_{it} = \beta_{20} + \beta_{21}\, Ltrad_{i,t-1} + \beta_{22}\, Ltrad_{\_sqi,t-1} + \beta_{23} Fexp_{i,t} + \beta_{24} Fexp\_sq_{i,t} + \beta_{25} Lfran_{i,t-1} + \beta_{26}\, Lfran\_sq_{i,t-1} + \beta_{27}\, Rel\_st_{i,t-1} + \beta_{28}\, Arbit_{i,t-1} + \beta_{29}\, Mediat_{i,t-1} + + \beta_{210}\, Grth3 + \omega_{2i} \quad (4\text{-}3)$$

$$Perf_{it} = \beta_{30} + \beta_{31}.\, Conf_{i,t-1} + \beta_{32}.\, Conf\_sq_{i,t-1} + \beta_{33}.\, Ltotal_{i,t} + \beta_{34}.\, Lavest_{i,t} + \beta_{35}.\, Adv_{i,t} + \beta_{36}.\, Cexpr_{i,t} + \sum_{j=201}^{2015} \tau_j + \sum_{c=1}^{25} sector_c + \omega_{3i} \quad (4\text{-}4)$$

4.5.6. Moderation test

We have two potential moderators with two different types of moderation. We investigate the effects of each moderator separately. The important issue in testing the moderation in non-linear relationship is not limited to the complexity of interpretation of the results, but also we have endogeneity issue again. When we have an endogenous variable, and we want to test the interaction effect, we consider the endogeneity of interaction term too (Wooldridge 2002; Haans et al. 2016). We again follow the method recommended by Ebbes et al. (2016) and Wooldridge (2002) to address the endogeneity of interaction term of conflict by regressing the interaction term of conflict and moderator on instruments and their interactions with moderators. We mean-centered the moderator and main independent variable that is used in the interaction to mitigate the effect of multi-collinearity. To test the H2, H3, H4, and H5, we test the moderation effect of firm age and size, respectively. To test the moderation effect of the shift in the inflection point (H2 and H4), we check the sign and significance of the numerator of this equation as we explained earlier: $\frac{\delta X^*}{\delta Z} = \frac{\alpha_1\alpha_2 - \alpha_0\alpha_3}{2(\alpha_1+\alpha_3 Z)^2}$. To test the second type of moderation (steepening or flattening effect in H3 and H5), we check only the sign and significance of interaction of the squared term of conflict with moderator.

4.6. Results

4.6.1. Results of inverted U-shaped test

Table 4-4 shows the results of 3SLS for all three regression equations with overall revenue from income statement as the dependent variable. The effects of number franchise outlet, relationship state law, and three-year growth on conflict are positive and significant. It means that firms with a greater number of franchise outlets, and higher growth rate are more likely to experience conflict. The square term of number of franchise outlets has a negative and significant

effect on the square term of incidence of conflict while number of franchise outlets, relationship law state, and three-year growth have positive and significant effects on square term of conflict. Most importantly, conflict and conflict square have significant positive and negative effect on performance, respectively. These results provide the necessary condition for having an inverted u-shaped relationship. The number of total outlets, investment level, firm experience, and advertising intensity have positive and significant on performance. We re-estimate our equations using sales from Franchise Times' ranking. Table 4-5 shows the result of re-estimation using the alternative dependent variable. Conflict and conflict square have significant positive and negative effect on performance, respectively. These results are consistent with using revenue from income statement as the dependent variable.

As we explained earlier, the significance and sign of the conflict and conflict-square terms are not enough to assure that we have a true inverted U-shaped relationship. To test the sufficient conditions for having inverted U-shaped, we follow Lind and Mehlum (2010). We calculate the extremum point using written Stata command – *utest*- by Lind and Mehlum (2010). The calculated value is 19.26. We test the slope of the curve before and after the extreme point. The slope for the first part of the curve is positive and significant (slope =.28, t-value = 5.88, p<001). The slope of the second part of the curve is negative and significant (slope -11.74, t-value = -4.19; p<.001). Finally, the t-value for an overall test of the presence of inverted U-shaped has a t-value of 4.19 (p-value<.001), which indicates that we can reject the null that there is monotone or U-shaped relationship between channel conflict and performance (alternative hypothesis is that there is an inverted U-shaped relationship). The Fieller interval for the extremum point is [15.082; 27.84], which is located in the data range.

Table 4. 4: Regression results of performance (overall revenue) as main dependent variable

3SLS	Dependent variables		
	Conf Coef (std err)	Conf_sq Coef (std err)	Perf Coef (std err)
$Conf_{(t-1)}$			.276 (.047) ***
$Conf\_sq_{(t-1)}$			-.007 (.002) ***
$Ltrad_{(t-1)}$	-.014 (.055)	-.166 (1.17)	
$Ltrad\_sq_{(t-1)}$		-.075 (.286)	
$Fexp_{(t-1)}$	.001 (0.064)	-1.204 (1.467)	
$Fexp\_sq_{(t-1)}$		.228 (.265)	
$Lfran_{(t-1)}$	.296 (.043) ***	3.708 (.987) ***	
$Lfran\_sq_{(t-1)}$		-.199 (.097) *	
$Arbit_{(t-1)}$	-.126 (.097)	-.990 (1.25)	
$Grth3_{(t)}$	.002 (.001) **	.035 (.009) ***	
$Mediat_{(t-1)}$	-.034 (.096)	-.107 (1.24)	
$Rel\_st_{(t)}$	.221 (.094) *	2.585 (1.251) **	
$Size_{(t)}$			.001(.000) ***
$Lavest_{(t-1)}$			.650 (.065) ***
$Age_{(t)}$			.016 (.004) ***
$Adv_{(t)}$			.00002 (.000) ***
Year dummies			included
Category dummies			included
Constant	-.846 (.194) ***	-8.91 (2.946) **	7.27 (1.48) ***
Number of observations	1,264	1,264	1,264
R-sq	.1134	.0468	.4170
Chi2	179.15***	81.47***	931.02***

*** p<.001, ** p<.01, * p<.05, + p<.1

Table 4. 5: Regression results of performance (FTsales) as main dependent variable

3SLS	Dependent variables		
	Conf Coef (std err)	Conf_sq Coef (std err)	Perf Coef (std err)
Conf $_{(t-1)}$			.152 (.031) ***
Conf_sq $_{(t-1)}$			-.004 (.001) ***
Ltrad$_{(t-1)}$	-.086 (.092)	-1.132 (2.087)	
Ltrad_sq $_{(t-1)}$		-.062 (.465)	
Fexp$_{(t-1)}$	.031 (0.127)	-1.285 (3.68)	
Fexp_sq$_{(t-1)}$		.427 (.645)	
Lfran$_{(t-1)}$	.465 (.083) ***	5.447 (2.40) *	
Lfran_sq$_{(t-1)}$		-.202 (.205)	
Arbit$_{(t-1)}$	-.287 (.161) +	-2.001 (2.02)	
Grth3$_{(t)}$	.001 (.001)	.02 (.012) +	
Mediat$_{(t-1)}$	.225 (.164)	3.77 (2.06)+	
Rel_st$_{(t)}$	.152 (.160)	1.267 (2.001)	
Size$_{(t)}$			.001(.000) ***
Lavest$_{(t-1)}$			.732 (.054) ***
Age$_{(t)}$			.007(.003)*
Adv$_{(t)}$			.000 (.000)
Year dummies			included
Category dummies			included
Constant	-1.731 (.394) ***	-18.99 (6.86) **	-1.907 (.612) **
Number of observations	562	562	562
R-sq	.1219	.0642	.6837
Chi2	99.48***	51.51***	1250.57***

*** p<.001, ** p<.01, * p<.05, + p<.1

Fieller method (Fieller 1954) calculates the confidence interval for extremum point in a way that enables us to account for finite sample bias and correct for bias by departure from normality.

4.6.2. Robustness checks

Other forms of non-linear relationship. We added the cubic term of conflict to our equations. If the addition of square term of conflict increased (R^2) significantly, we might have an S-curve relationship instead of an inverted U-shaped relationship. Upon addition of the cubic term, the sign and significance of conflict and conflict square terms did not change. Adding the cubic term of conflict to the performance equation increased (R^2) by less than .01 percent and this increase is

not significant (*p*-value = .27). The addition of conflict and its square term increase (R^2) significantly (p<001). We also graph the relationship between conflict and performance within the data range to make sure that we have a true inverted U-shaped relationship (see Figure 4-2).

No endogeneity. We repeat the main analyses without considering the endogeneity of conflict and conflict square. The coefficient of conflict was positive and significant, and the coefficient of conflict square is negative and significant. The additional tests of inverted U-shaped provide the support for our main analyses. It means that our results are not the artifact of our specification for conflict and conflict square term (endogeneity).

Alternative measures of performance. We investigate the effect of conflict on performance using other measures of performance: (1) revenue from royalty fee, (2) revenue from franchise fee, and (3) revenue from the sum of royalty and franchise fees by estimating 3SLS regression method. The results are consistent with the main analysis.[13]

Winsorising. We winsorize the data at (1%, 99%) to make sure that the outliers do not drive our results and the inverted U-shaped relationship between channel conflict and performance. The results are consistent with the main analysis.[13]

Alternative estimation method. We also used Conditional Mixed Process (CMP) to estimate the effect of conflict on performance. The advantage of CMP is that it works with unbalanced panel data and estimate each equation with its available data (Roodman 2011). The effects of conflict and its square term on performance are the same as main analysis using 3SLS estimation method. The results are consistent with the main analysis.[13]

[13] We do report results in the Appendix E.

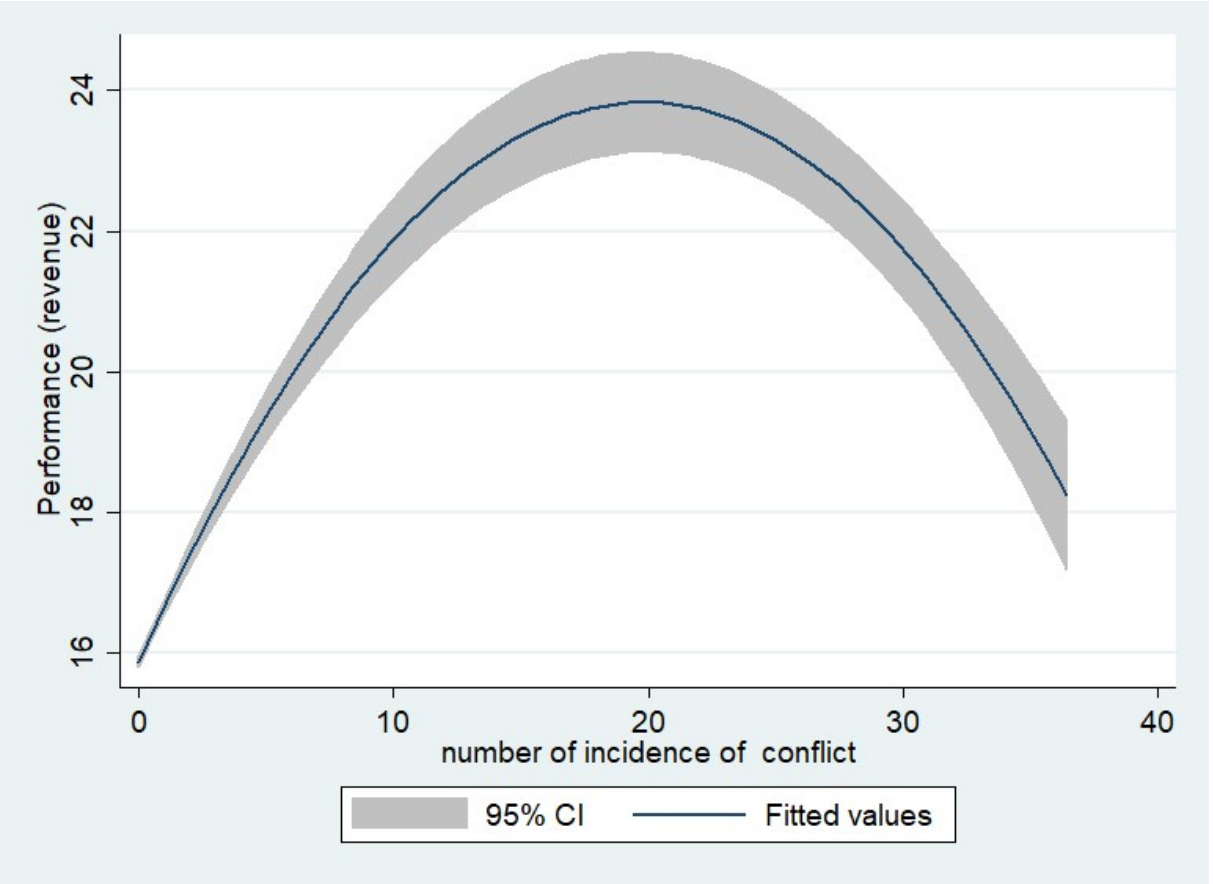


Figure 4. 2: Conflict and performance relationship- (Inverted U-shaped relationship based on the data)

4.6.3. Results of Moderation tests

To test the H2 and H4, we test the moderation effect of firm age and size, respectively. To test the moderation effect of shift in the inflection point, we check the sign and significance of the numerator of this equation as we explained earlier: $\frac{\delta X^*}{\delta Z} = \frac{\alpha_1\alpha_2 - \alpha_0\alpha_3}{2(\alpha_1 + \alpha_3 Z)^2}$. Because the denominator is positive, we should focus on the sign and significance of the numerator. We extract the coefficients from the main regression analysis and used *nlcom* command in Stata to test whether the numerator is significantly different from zero. The value of equation depends on the coefficients of conflict, conflict square, and their interactions with moderator as well the value of moderator itself. Therefore, we have to check the sign and significance of this equation for specific and meaningful value.

We, first, did the analysis for the moderation effect of firm age. We insert the value of moderator for 25 percentiles and 75 percentiles to test whether we have a shift in inverted U-shaped curve. The direction of shift depends on the sign of the numerator which is positive. Moreover, the equation values (.55 and .09) are positive and significant ($p<.05$ and $p<.001$) for both 25 and 75 percentiles. The results provide support for H2 since we observe right shift in curve. Despite the minuscule value, we have a significant moderation effect. As firm ages, the threshold effect (inflection point) of conflict increases.

We did the same analyses for the moderation effect of the size of the firm. We insert the value of moderator for 25 percentiles and 75 percentiles to test whether we have a shift in inverted U-shaped curve. The direction of shift depends on the sign of the numerator which is positive. Moreover, the equation values (.001 and .001) are positive and significant ($p<.001$ and $p<.001$) for both 25 and 75 percentiles. The results provide support for H4 since we observe right shift in curve. Despite the minuscule value, we have a significant moderation effect. As firm becomes larger, the threshold effect (inflection point) of conflict increases.

To test the second type of moderation (steepening or flattening effect in H3 and H5), we check only the sign and significance of interaction of the squared term of conflict with moderator. The sign of the interaction conflict square with firm age is negative and significant (-.0007, $p<.05$). It means that as firm ages, the rate of increase in benefit of learning from conflict is higher for older firms. In fact, the rate of performance associated with learning from conflict is steeper for older firms, and the rate of decline in performance due to transaction costs of conflict is steeper for older firms in comparison to younger firms. Thus, we have support for H3.

The sign of the interaction conflict square with firm size is positive and significant (.000332, $p<.001$). It means that as firm becomes larger, the rate of increase in benefit of learning from conflict is higher for smaller firms than larger form. In fact, the rate of performance associated with learning from conflict is flatter for larger firms, and

the rate of decline in performance due to transaction costs of conflict is flatter for larger firms in comparison to smaller firms. In fact, our finding is consistent with H5. Smaller firms may learn at a higher rate in comparison to larger firms.

4.6.3.1. Robustness check for moderation test

In the main moderation tests, we consider the interaction terms of conflict and conflict square as endogenous variables. We repeat the moderation analyses without considering the endogeneity of interaction terms. We obtain the same results for both types of moderations and different moderators (results in Appendix E).

4.7. Discussion

Our primary goal in this study is to investigate the relationship between channel conflict and performance. To this end, we test this less investigated non-linear relationship using secondary longitudinal data in the franchise context. Based on the results, there is a threshold effect for channel conflict and performance relationship for marketing channel. This study provides the first empirical support for the inverted U-shaped relationship between conflict and performance that is proposed by Rosenbloom (1973). To the best of our knowledge, no other paper shows this inverted U-shaped relationship between channel conflict and performance using secondary data.

In this study, we address an important marketing channel construct – conflict, which has not attracted sufficient attention from researchers in the past recent years in comparison to 1980s (Watson et al. 2015). We attempt to show and explain both bright and dark sides of conflict using organizational learning and transaction cost economic

theories. Channel conflict is not inherently bright nor dark, but instead it depends on its outcomes and how channel members learn from it, modify and correct their behavior to create and enhance value in the marketing channel (Abosag, Yen, and Barnes 2016). We show that how learning and transaction costs form the inverted U-shaped relationship between channel conflict and performance. To the best of our knowledge, no other papers explain the formation of this non-linear relationship by using learning and transaction cost economic theories. Most of the previous studies on U-shaped or inverted U-shaped relationship do not explain the forces that shaped this relationship beyond "too small or too much of something is bad or good".

Empirically, to the best of our knowledge, we are the first to investigate the relationship between channel conflict and performance using secondary longitudinal data in the franchise context. Most of the previous studies on this important relationship have been conducted using cross-sectional research design and perceptual measures of conflict and performance (Lusch 1976b; Duarte and Davies 2003). These studies could not find any support for this inverted U-shaped relationship. Besides the type of the data that we employed in this study, we also examine the curve-linear effect of channel conflict on performance using the appropriate procedures that are proposed by Lind and Mehlum (2010) and Haans et al. (2016). Our results are robust to use of alternative dataset, estimation methods, measurements, and endogeneity.

We also introduce the age and size of the firm as important moderators that shift or change the slope of the relationship between conflict and performance. We show

that both age and size of the firm increase the threshold effect of conflict. It means that the older and larger firm have higher level of threshold for conflict. Moreover, we find that older firms can learn faster than young firms from conflict while smaller firms can learn faster than larger firms from conflict. These results show that the firm experience and size of the firm affect both the benefits from learning and various transaction costs associated with conflict.

In sum, we contribute to marketing channel literature in three ways. First, to the best of our knowledge, we are the first study to show that conflict is not necessarily bad for business performance and that conflict's net impact on business performance is nuanced, resulting from a tension between the learning forced upon the business partners as well as transaction costs of dealing with the feud. In the process, we show that there exists a threshold level for conflict around which the impact on performance changes. Second, to the best of our knowledge, we are the first study that investigates the non-linear (inverted U-shaped) relationship between channel conflict and performance using secondary longitudinal data. Third, to the best of our knowledge, we are the first in marketing to test the moderation effect of non-linear relationship between conflict and performance, considering the endogeneity of conflict.

4.8. Managerial Implications

In fact, the successful franchise firms are not those firms that do not experience any manifest conflict. Conflict may show the problematic issues about channel structure, channel management, contract items and provisions. The change in channel

governance and/or contract details are probable outcomes of conflict incidence Vinhas and Anderson 2005; Crocker and Reynolds 1993). Therefore, conflict helps firms to identify the loopholes in the franchise systems including channel structure, management, and contract items. Our thorough investigation on FDDs of hundreds of franchise firms in the past few years show that how firms learn, correct their behavior, and respond to conflict and other environmental changes by changing their contracts. For example, some firms include encroachment fee in their contracts. Aussie Pet Mobile and Dippin' Dots include specific items in their contract to prevent conflict. They have encroachment fee for the franchisees who encroach the territory of another channel member (a typical example of channel conflict in the franchise setting). The franchisee should not only pay the penalty but also should reimburse the other channel members for the lost revenue. These ex-ante governance modes are chosen and designed deliberately to avoid and prevent conflict. Similarly, some firms remove or modify exclusive territory agreement from their contract due to abundant litigation cases caused by granting exclusive territory provision. All these examples show that there is a threshold effect for the incidence of conflict that could lead to changes in the contract and channel governance of the firms as far as there exist processes and systems for learning.

4.9. Limitations and Future Research

There exist some limitations that provide the opportunity for further research. First, in the franchise context, the franchisee is dependent on the franchisor firm, and

we do not have power balance between two parties. The relationship between conflict and performance should be tested in other types of the channel using a longitudinal research design.

Second, we did not measure conflict using dyadic data, whereas channel conflict by its nature is a dyadic construct where both parties may have different perceptions about the conflict incidence. One way to get at this could be through key informants from both sides of the dyad who might rate the incidence of conflict based on importance and intensity. In contrast, our measure of conflict, the number of litigations, is measured at the level of the franchisor. There are three reasons why this limitation may not significantly impact our results. (a) Even if aggregated at the franchisor level, each litigation involves other franchisees; so, they are still dyadic in essence. (b) The aggregation really captures the level of conflict within the franchisor's franchise network. This ensures that the essence of learning and transaction costs operate for the franchisor, as conceptualized in the framework. (c) Our focus on franchisor performance, which is a firm level construct, makes such a firm level measure of conflict more appealing since it captures the aggregate firm level learning and transactions costs.

Third, the sales level of franchise firm is not the only measure of performance. The return on investment or net income could be more appropriate measures to calibrate channel performance.

Fourth, it would be more appropriate to measure manifest conflict by incorporating intensity and importance dimensions of conflict to the frequency to create a composite index which captures every aspect of channel conflict.

Fifth, a simple count of incidence of conflict may seem as a limitation for observing the performance effect due to conflict, since different types of conflict could reasonably be expected to lead to different types of learning and transaction costs. Our neutrality to different types of conflict may not be a significant limitation given that (a) our conceptual framework focuses on the net of learning and transaction costs, and (b) much of the variation is aggregated over different types of conflict within a franchise network. That said, it would be great for future work to delve deeper into the interaction of learning and transaction costs and investigate if different types of conflict could have different performance effects.

Finally, there exist other factors such as the type of channel structure, type of contract and its provision in dispute resolution, and relational norm constructs that could moderate the relationship between channel conflict and performance. These factors could flatten and/or steepen or shift the turning point (extremum) point to the left or right (changing the threshold point). It is interesting how the inverted U-shaped relationship between channel conflict and performance would be affected by considering these additional factors.

5. Adapting to Channel Conflict: An Empirical Study

5.1. Abstract

Channel conflict is endemic in marketing channels. Such conflict depletes efficiency in the short term and can have long-term negative impact on firm performance. So, how do firms respond to such conflict? While the relationship marketing literature focuses on relational mechanisms to address such conflict, Transaction Cost Economics (TCE) suggests adaptations in governance structures when transaction specific assets are at stake. In general, TCE points to two key adaptations to safeguarding specific assets in response to manifest conflict and its consequent negative outcomes: a structural adaptation towards vertical integration and a bilateral adaptation by contractual changes. However, the empirical literature on this is sparse. So, in this paper, we draw upon the TCE literature to investigate how channels adapt their channel structure and bilateral governance to channel conflict. To control for relational mechanisms, we choose a channel context where the relational approach has evidently failed – that of formal litigations between franchisors and franchisees. Litigation results from intense conflict and where the informal or formal relational efforts have not succeeded, leaving only governance changes as residual options if the firm wants to adapt.

Our analyses use a unique unbalanced panel dataset manually created from publicly available sources (Franchise Disclosure Documents and franchise rankings). This dataset has information on 277 franchisors over 12 years and includes data on litigated conflict, contract items, channel structure, and other firm characteristics. The analyses control for the dynamic nature of the panel data, endogeneity and the constraints of limited dependent variables. In particular, we use the conditional Mixed-Process (CMP) regression as our key estimation model. Our results show that following litigation, firms tend to make contractual changes (adding ore items to contract) over moving toward more structural vertical integration. Our key empirical contribution is to document how firms adapt to conflict and thus we build upon the literature on efficient governance through ex-post adaptations.

Keywords: Channel conflict, channel structure, contractual changes.

5.2. Introduction

In this paper, we investigate how firms respond to their distribution channel conflict by making changes to the governance modes guiding channel interactions. Firms adopt different forms of governance for organizing similar transactions. Firms in same industry design their channel structure and contract details differently while they experience the same amount of environmental uncertainty and other exchange attributes. In the PC industry, we observe different ways of channel structures while all firms experience the same level of exchange attributes (high level of environmental uncertainty). For example, Gateway does not use forward vertical integration while some other PC manufacturers such as Lenovo and Toshiba distribute their products using various types of retailers and resellers. There are also other PC manufacturers such as Apple and Sony that use dual distribution. After more than 40 years with more than 500 published papers (Joskow 2008), scholars are still striving to find an answer to classic question of make or buy: why do some companies prefer market-based contract (buy) while some prefer hybrid (dual sourcing or distribution) and others prefer vertical integration (hierarchy or make)?

Despite the fact that there is a prodigious number of studies in economics and marketing on channel structure and governance (Norton 1988), there is a gap in the literature on the effect of channel conflict on channel structure and governance. Channel conflict refers to a situation where a member of the distribution channel observes another member to be engaged in behavior that negatively impacts the

attainment of its goals (Etgar 1979). Such conflict is endemic in marketing channels (Brown and Day 1981). Much of the research literature finds these conflicts to be deadweight losses and hence non-avoidable (Friedman and Furey 1999). So, how do firms react to such conflicts? There are three main ways to think about it. The first is to try and avoid or mitigate channel conflict altogether by ex-ante governance design. The second way is to resolve conflict by resorting to third party mediator, arbitrator, or court (Antia, Zheng, and Frazier 2013) and complement it by alteration of channel structure or contract details. The last approach is to use relational norms (Heide and John 1992) by increasing trust and commitment level among channel members (Morgan and Hunt 1994). This could assist in mitigating the negative effects of conflict.

Unfortunately, the research literature that deals with firm reactions and adaptation to channel conflict is sparse. Specifically, with the exception of Crocker and Reynolds (1993), and Vinhas and Anderson (2005), channel conflict is almost never used as an explanation for *changes* in channel structure – which is at the heart of the second approach that discussed above. While Vinhas and Anderson (2005) show that potential for conflict is considered in designing channel structure, Crocker and Reynolds (1993) find that history of conflict leads companies to choose a more detailed contract. Finally, there is no study that considers the negative effect of conflict on specific asset of the firm. Specific asset is considered as "big locomotive" of TCE theory (Williamson 1985, p. 56). The specific assets (or production factors) have a

few alternatives uses out of the relationship between transacting parties. Based on Williamson (1991), we have six types of specific assets: (1) site specificity, (2) physical asset specificity, (3) human asset specificity, (4) brand name capital, (5) dedicated assets, and (6) temporal specificity. Asset specificity – particularly in the first four types creates bilateral dependency and create contractual hazards and firms want to safeguard them against opportunistic behavior (ex-post quasi-rent expropriation of contracting partners) (Minkler and Park 1994; Williamson 1991). Vertical integration sometimes is the least costly option to these contractual hazards but is not always a viable one. Among the mentioned specific assets brand-name capital is the least used specific asset in many TCE studies while it is the most relevant and important one in the context of franchising. Leiblein (2003) defines brand name capital as a specific asset based on the investment in the reputation of the company. Therefore, we focus on this specific asset in this study. Table 5-1 shows the representative studies on channel conflict and governance (contractual changes). As we can observe, there is no study that incorporates channel conflict and specific asset (i.e., brand name capital) in one study. Moreover, there is no study that incorporates both vertical integration and contractual changes in one place as two reactions two safeguarding the specific asset against conflict.

Table 5. 1- Representative literature on channel conflict, forward vertical integration, and contractual changes

Study	Context	Channel Conflict	Channel Structure (forward vertical integration)	Contract changes	Brand as specific asset	Type of data
Anderson (1985)	Electronic component industry	No	Yes (direct sales force)	No	No	Cross-sectional survey
John and Weitz (1988)	Industrial firms	No	Yes (percentage of direct sales)	No	No	Cross-sectional survey
Crocker and Reynolds (1993)	Air Force engine contracts	Yes (History of disputes)	No	Yes	No	Panel
Klein, Frazier, and Roth (1990)	Canadian export firms	No	Yes	No	No	Cross-sectional survey
Minkler and Park (1994)	Franchising	No	Yes	No	Yes (Intangible asset)	Panel
Majumdar and Ramaswamy (1995)	PIMS database	No	Yes (reliance on direct channel)	No	No	Cross-sectional survey
Aulakh and Kotabe (1997)	Fortune 500 firms	No	Yes (degree of channel integration)	No	No	Cross-sectional survey
Weiss, Anderson, and MacInnis (1999)	Electronic component industry	No	Yes (intention to vertically integrate)	No	Yes (reputation)	Cross-sectional survey
Michael (2000)	Franchising	Litigation (Dependent variable)	Yes (Company-owned or tapered integration)	No	No	Panel
Lafontaine and Shaw (2005)	Franchising	No	Yes (Company-owned outlets)	No	Yes (media expenditure and other proxies)	Panel
Vinhas and Anderson (2005)	Manufacturers in diverse industries	Yes (factors for potential channel conflict)	Yes (degree of integration)	No	No	Cross-sectional survey
This study	Franchising	Yes	Yes	Yes	Yes	Panel

In fact, we do not know how firms react to channel conflict, and how channel conflict affects channel structure and overall governance. This study is an empirical attempt to respond to this question: how do companies adjust and adapt their channel structure (transition)[14] and governance (contractual changes) due to channel conflict? Scholars have tried to respond to this question in the past decades, but the literature on this issue is quite limited. For example, Vinhas and Anderson (2005) show that potential for conflict is considered in designing channel structure. Moreover, Crocker and Reynolds (1993) find that history of disputes (conflict) leads companies to change the contract. However, no study investigates the effect of litigated conflict on channel structure (transition) and governance mode (contractual changes) simultaneously. In other words, we do not know what the reaction of firms will be to the litigated conflict. Do they move toward forward vertical integration (increase their direct presence at distribution level) or/and make contractual changes and less susceptible to the negative effect of conflict? Amazingly, while there is an extensive empirical literature on different aspects of contractual form such as duration of contract, and contract complexity in terms of transaction costs, the choice between contract and (forward) vertical integration has received little attention. To the best of our knowledge, there is no study that empirically responds to these questions. We believe that these two issues

[14] Moving toward vertical integration or vice versa.

are essential in advancing our knowledge on TCE, (forward) vertical integration and contractual changes.

Much of the challenge in undertaking research in this domain stems from the facts that not only would one need *longitudinal* data to address these questions, but many key variables are also simply not observed readily. For sure many *changes* in channel governance are observable. Consider the following -- Netflix and Amazon have started producing original programming such as House of Cards and Mozart in the Jungle, respectively (Wired 2016). Delta Air Lines acquired a refinery in 2012 to reduce its dependency on other refineries (New York Times 2012). Rona, a large Canadian hardware store, bought back all its remaining 20 independent franchisees in 2015. Benetton entered the United States market with franchises and then moved toward vertical integration gradually, presumably to safeguard its brand image (BCG 2005). Pepsi Co and Coca-Cola purchased some of their largest bottlers, presumably to have better control over their distribution (Wall Street Journal 2010). However, these do not cover the spectrum. *Contractual changes* like changes in royalty rates or hiring and vendor oversights are *not* observed readily. We certainly do not readily observe changes in *relational arrangements* and even less, *channel conflict*. All of these limits the research possibilities significantly, much more so for researchers looking at secondary data.

We start addressing this gap by creating a unique dataset comprising manually collected franchise contracts of 277 franchise firms over a 12-year period (2004-2015) from two archival sources – Franchise Disclosure Documents (FDDs) and Entrepreneur Magazines' franchise rankings. We extract conflict incidences (litigations), firm characteristics and required contract items from the former while we use the latter to collect data on channel structure and other remaining contract-related items. We also use the latter for validity check. For our empirical test, we use franchise setting because (1) there is a heterogeneity among franchisors on how they design their channel structure, (2) there is a variation in franchise contracts despite the fact that they should follow state and federal law in design of their contracts, (3) the data on conflict, structure, and contract items are publicly available for franchisors, (4) franchise relationships are characterized by conflict (Lafontaine 2014), and (5) franchising is an ideal and unique context to empirically test TCE theory's prescription on both vertical integration and contracting because both vertical integration (i.e., company-owned outlet) and contracting (franchise outlets) are used for delivery of product and services (Minkler and Park 1994). Using a large unbalanced secondary panel data set of franchise contracts between 2004 and 2015 of 277[15] franchise companies in different industries, we model the extent of forward vertical integration

[15] The franchise contract items and FDDs for 1279 franchisor were checked. 1244 of 1279 franchisor' contract items are usable. The dataset was unbalanced and many firms were dropped because we do not have information on all required variables such as adverting expense and other contract items. In data analysis section, we used data on at least 277 franchisors in each model specification.

and contractual changes as a function of channel conflict. We limit our research questions to investigating how manifest conflict, in the form of litigation, impacts changes to channel governance – specifically either a move towards more structural vertical integration or making contractual changes.

To the best of our knowledge, we will be the first to study the effect of litigated conflict on channel structure and governance in one study. This builds on past research that has looked at many different explanations for variations in channel governance but has largely missed elaborating upon the role of channel conflict. Different explanations that proposed for variations in channel governance include supply and demand's risks, environmental uncertainty (Williamson 1975), resolving double marginalization (McGuire and Staelin 1983), information asymmetry, economies of scale and scope (John and Weitz 1988), greater control over operation and difficulty in performance evaluation (Srinivasan 2006), brand-name capital (specific asset) safeguarding (Nickerson and Silverman 2003), strategic considerations (Harrigan 1986), resources (Carney and Gedajlovic 1991), and conflict (Williamson 1975).

In this study, we draw on TCE framework to respond to our main research questions (how firms adapt to channel conflict). Based on TCE prescription, transaction parties try to safeguard their specific asset (e.g., brand) at risk by forward vertical integration and/or contractual changes. Our empirical results show that firms prefer changing their contracts over moving toward more structural vertical integration, following litigation, which is the manifestation of intense channel conflict.

We contribute to channel and governance literature in marketing in two ways. First, to the best of our knowledge, we are among the first studies to empirically investigate the effect of channel conflict (litigated conflict) on channel structure (vertical integration) and contracting. Second, we are among the first papers to incorporate the simultaneous decisions on channel structure (vertical integration) and contracting in one study. In fact, we show that how firms adapt and adjust their channel structure and contract, accounting for simultaneity of these two choices. Finally, to the best of our knowledge, we are the first study to propose the channel conflict as one of drivers of ex-post adaptation in channel governance.

In the rest of the paper, first, we summarize the literature on channel structure, governance, and channel conflict. Then, we present our testable hypotheses. We also describe data collection process and data analyses, which is followed by a discussion of the results and research implications. We conclude the paper by elaborating on future research and limitations.

5.3. Channel structure and conflict

In the past four decades, scholars tried to explain the dual distribution and forward vertical integration using various theories such as transaction cost economics (TCE) and agency theory (AT). They enumerated different factors, including technological diversity, financial motivations, benchmarking, the credibility of termination, and learning as the most important explanations for this phenomenon

(Menard 2013). Over the past 40 years, scholars have tried to explain the variation in the choice of channel and governance mode with efficient contracting (TCE framework) (Williamson 1985). Based on TCE, firms choose the channel structure and governance mode that help them to minimize transaction costs (safeguarding, monitoring, and adaptation costs) (Mahoney 1992). On the other hand, some scholars have found that efficient contracting theories such as TCE and AT explain only a small portion of the variances in firms' channel structure and governance mode (Combs and Ketchens 2003). When the mentioned theories could not explain major variations in governance forms, researchers employ other theories, including resource-based view (RBV), strategic consideration, and governance value analysis (GVA) to explain why companies design their governance and distribution channel structure in different ways under different circumstances (Ghosh and John 2012). Perhaps because theories such as TCE and AT do not take into account the dynamism inside and outside the firm. The dynamic processes such as conflict inside and outside the firm may affect the nature of governance mode and shape channel structure. Firms' interactions over time and resultant outcomes such as disputes with their channel members could have an impact on their decision regarding governance structure. Channel conflict as one of the important factors that is considered in the design of governance and could also affect the governance is rarely used in explaining why firms use different channel structure and governance (exception, see Crocker and Reynolds 1993; Vinhas and Anderson 2005). Channel conflict refers to a situation where a member of the distribution channel

observes another member to be engaged in a behavior that negatively impacts the attainment of its goals (Etgar 1979; Gaski and Nevin 1985).

Although vertical integration (forward and backward) is used by many companies to mitigate the potential negative effect of conflict and safeguard the relationship-specific assets at risk, there exist many firms still focus on using dual sourcing and/or distribution such as franchising (Bradach and Eccles 1989). These companies try to mitigate the negative effect of contractual hazards either using plural forms (use of mix of company-owned outlets and franchise outlets) or by changing the contract (add or remove items) that enables them to safeguard their specific investment in that relationship. In other words, vertical integration and contract-like arrangements coexist (Affuso 2002). We can observe the most common structure in dual distribution is franchise agreement as mentioned by Bradach and Eccles (1989). Some firms (franchisors) own a significant proportion of their outlets, while others rely more on franchisees to operate the outlets. In fact, there is a continuum between the pure franchise and pure forward vertical integration. Historically, however, channel conflict is positively related to use of dual distribution or sourcing (Vinhas and Anderson 2005; Mols 2000). Franchising is used by many firms to expand their market and continue growing. In fact, franchising provides more rapid growth than directly-own store opening, but it can put the brand and reputation of the firm in danger if it is not managed the way it should be (BCG 2005).

5.3.1. Research model

While there is prodigious number of studies in economics and marketing on governance and channel structure (Jeuland and Shugan 2008; Kashyap, Antia, and Frazier 2012; Kim et al. 2011; Bhargava 2012; Pick and Eisend 2014), Watson et al. (2015) called for more research to explain the current trends towards vertical integration and how firms choose their channel structure in different industries. One of the theories which is embraced by scholars to investigate channel structure and forward vertical integration is transaction cost analysis (TCE) (Anderson 1985, John and Weitz 1988; Klein, Frazier, and Roth 1990). Williamson (1979, 1985) views vertical integrations as a response of the firms to the market failure. In other words, when the arm-length market does not work to govern an exchange efficiently under some circumstances, firms prefer to use vertical integration even when there are high-level bureaucratic costs because these costs will be offset by bilateral adaptive gains (Willimson 1985). These conditions revolve around main TCE variables: asset specificity, uncertainty (environmental and behavioral), and frequency of exchange. The TCE framework has been empirically tested and supported in different types of marketing channel settings since 1975. Channel conflict can be enumerated as one of the factors that lead to excessive costs and market failure but has not been explicitly used as a construct in TCE framework. When there is an excessive cost in using market (contract), vertical integration could be a feasible and least costly option for many firms (Anderson and Coughlan 2002; Minkler and Park 1994; Rindflisch and Heide

1997). Using vertical integration into distribution, firms may minimize occurring transaction costs and reduce the probability of opportunistic behavior by distributors and franchisees (Williamson 1975). Vertical integration not only can safeguard specific assets (such as brand name capital) at risk in a relationship (Nickerson and Silverman 2003) but also can lessen some agency glitches to some extent. In other words, it provides more control over main value chain activities and responsibilities such as production and distribution and it also decreases information asymmetry at both ends of value chain (Dutta, Heide, and Bergen 1999). On the other hand, there are many reasons for a firm to employ independent retailers or franchisees to sell and distribute its products. Among the important ones, we can enumerate, financial constraints (Caves and Murphy 1976; Kaufmann and Dant 1996; Oxenfeldt and Thompson 1968), managerial constraints (Kaufmann and Dant 1996; Minkler 1992; Norton 1988; Shane 1998), monitoring costs (Brickley and Dark 1987; Brickley, Dark, and Weisbach 1991; Carney and Gedajlovic 1991; Combs and Ketchen 1999; Rubin 1978;), focusing on core competencies, lack of local market knowledge, and economies of scale and scope (Combs and Ketchen 1999; Srinivasan 2006).

Franchising has received lots of attention from TCE and AT scholars. In a franchise setting, the franchisor's brand, trademark, reputation and system know-how are high-valued intangible assets at risk (Klein and Leffler 1981, Norton 1988). Franchise agreements allow the franchisor to use these assets to attract and retain franchisees to the system and utilize the resultant benefits from market-based channel

structure (Brickley and Dark 1987; Combs and Ketchen 1999). These benefits are not attainable under forward vertical integration. There exists extensive literature on explaining how franchisors design and choose contract items such as royalty and franchise fee, obligation and responsibilities, and contingencies based on TCE and AT predictions (Bercovitz 1999; Dnes 1996; Lafontaine 1992; Lafontaine and Slade 1997; Lafontaine and Raynaud 2002). Still, scholars focus on resolving one major conundrum: coexistence of franchised and company-owned outlets with the same brand and more interestingly, the variation in this structure between brands (Klein 2008).

We can conclude that there is no consensus on factors that lead some firms to prefer pure market (franchise) governance form over hierarchy (forward vertical integration) or some hybrid or dual distribution models. The primary drivers of choosing governance form are market conditions, competition (strategy), and profit-maximization incentives. Channel members -- franchisors and franchisees – create value from their interactions with each other based on their contract items and their relational exchange (Davies et al. 2011). Sometimes, these interactions lead to conflictual outcomes. For example, many companies (franchisors) explicitly explain what actions should be done when there is a problem in the channel. The contract usually includes such items, which explain how disputes should be addressed, or who should act in the case of an issue. Anything that could lead to deviation from this idealized structure (transaction attributes) may increase the transaction costs. Any type

of conflictual issue which is not predicted beforehand may provide the situation for at least one of the parties to be inclined to act opportunistically. Some firms try to resolve the problems informally and internally while some firms use third party-oriented procedures such as arbitration and mediation to resolve the problem. Moreover, some companies only consider the court order (litigation) as the final solution. In sum, we can observe that the channel-flared dispute can disrupt the equilibrium in the channel structure by exposing relationship-specific investment at risk.

Notwithstanding strategies formulated to prevent or react to conflict, opportunistic behavior and conflict persist (Jap 2001, Jap and Anderson 2003). As far as there is a specific asset at risk, there will be room for both parties to act opportunistically. The resultant manifest conflict could be costly for the channel members. Probable costly resolution techniques (litigation), the potential negative effect on channel performance, and damaged brand image and reputation are among the unfavorable outcomes of channel conflict. Safeguarding the specific assets involved in such a relationship is the main concern of channel members, particularly for the franchisors who invested in their brand-name capital (in terms of number of registered trademarks, advertising, promotion, positive word of mouth, and public and specific industry reputation) to attract more franchisees and customers. Brand-name capital refers to "specific assets that provide useful information to customers and generally indicate that sellers' prices are justified by the product's quality level" (Norton 1988, p.108). Litigated (manifest) conflict and its negative effects on brand

and reputation could lead to a decrease in the number of potential franchisees and increase the level of concerns of current franchisees.

Here, we focus on how firms adapt to conflict by changing their channel structure (moving toward vertical integration and/or making contractual changes). Since we focus on manifest conflict in the form of litigation, it means that ex-ante design and relational norms might not be successful in preventing or resolving conflict before it reaches the litigation point. Therefore, we focus our attention on ex-post adaptation. In this line of thinking, conflict is inevitable in the channel setting, and it is a waste of time and resources to prevent conflict (Friedman and Furey 1999). Taking appropriate reaction to manifest conflict requires changes in the structure of channel and details of the contract. Frequent and diverse changes require frequent adjustments which are costly for the channel. Wernerfelt (1997) proposes that when firms require making frequent and diverse adjustments, they move toward vertical integration. Vertical integration not only helps firms to minimize the cost of adjustment due to conflict but also helps the firm to safeguard their specific asset (e.g., brand-name capital). Brand of the franchisor is the most important factor that affects the decision of entrepreneurs to join a franchise firm (Peterson and Dant 1990). A high-value brand is a signal to prospective franchisees (Shane et al. 2006) and brings in the customer to the store. Therefore, franchisors who are affected by costly litigation and conflict incidences gradually change their governance form by different means such as making

changes to contract and/or buy backing franchise outlets and/or open more company-outlet to safeguard their specific asset in danger, brand.

Based above explanations, we propose that conflict increase transaction (governance) costs. If we model the governance cost based on the model proposed by Masten, Mehan, and Snyder (1991):

$$GC_V = a(X) + e \quad (5\text{-}1)$$
$$GC_M = b(Y) + u \quad (5\text{-}2)$$
$$GC_H = c(Z) + v \quad (5\text{-}3)$$

Where GC_V, GC_M, and GC_H are costs of vertical integration, market contracting, hybrid form, respectively. X, Y, and Z are vectors of transactional attributes such as specific asset, environmental uncertainty and other factors such as conflict that could affect the cost of governance. The coefficients (a, *b*, and *c*) measure the marginal effect of the transaction and other factors on governance costs. Finally, *e*, *u*, and *v* are random disturbances. X, Y, and Z can have common transactional attributes or not. Moreover, *e*, *u*, and *v* could be correlated or not.

If we consider the governance costs according to the above model, transaction parties will choose the governance form based on relative cost. Transaction parties will choose vertical integration over market contracting and hybrid, and choose a hybrid over market contracting if our $GC_V < GC_H < GC_M$. Therefore, we can say that the probability of choosing vertical integration depends on the likelihood that the costs of vertical integration are less than the costs of two other governance forms. If we reduce our model to two types of governance: vertical integration and hybrid, we can say that

Probability of choosing vertical integration = Pr ($GC_V < GC_H$)= Pr(e-$v < cZ - aX$) (5-4)

Usually, we do not have data or measures on the cost of vertical integration or other forms of governance. Therefore, we cannot estimate the parameters of structural equations (1), (2), and (3) directly. Researchers usually based their analyses on the variation of transactional and other factors on the choice of governance form instead of the direct cost of governance. For example, changes in elements of X, Y, and Z are correlated with the probability of choosing vertical integration, market-based contract, or hybrid form, respectively. The dependent variable will be limited to the combination of 0 and 1, or 0, 1, and 2, based on the number of governance forms that we have in the model. If we consider the effect of conflict and specific asset in this equation, we have

Probability of choosing (moving toward) vertical integration = Pr (a × conflict + a' × specific asset + e < c × conflict + c' × specific asset + v) (5-5)

There are other factors except for asset specificity in TCE framework, uncertainty, and frequency. These two attributes interact with relationship specific asset to determine the effect of contractual hazards. In this paper, we focus mostly on asset specificity as Williamson (1985) called "main locomotive" of TCE. Gonzalez-Diaz, Arrunada, and Fernandez (2000) show that asset specificity explains most of the variations in the make or buy decision-making.

Based on TCE framework (Williamson 1971), we can assert that market-based contracts are the least costly form of governance for the low levels of asset specificity

while hierarchy or vertical integration is the least costly form of governance for high levels of asset specificity. Finally, hybrid (dual distribution) will be the least costly when we have a moderate level of asset specificity (refer to Figure 5a).

When conflict happens, based on TCE prescription, it increases transaction costs. Handling conflict such as litigated conflict imposes high costs on transaction parties. Based on TCE prescription, "…when conflicts develop, the firm possesses a comparatively efficient conflict resolution machinery . . . fiat is frequently a more efficient way to settle minor conflicts (say differences in interpretation) than is haggling or litigations." (Williamson 1971, p. 113). When conflict incurs, the transaction (governance) costs for all types of governance increase. Gulati and Nickerson (2008) used the same rationale to show the effect of pre-existing trust and how trust decreases the cost for different forms of governance. They view trust as a positive shift parameter. We argue that conflict, which is negatively correlated with trust based on previous meta-analysis studies (Geyskens, Steenkamp, and Kumar 1999), should have the reverse effect on all types of governance costs while this effect is asymmetric. In other words, conflict shifts the governance costs curves to the left, but the amount of shift in governance cost curves is not the same for all types of governance. Figure 5-1a and Figure 5-1b shows the governance cost curves before and after conflict.

It is assumed that conflict does not have any effect on hierarchy or vertical integration. As Williamson (1971) mentioned, conflict can be easily resolved inside

the hierarchy by use of fiat, and it is more efficient than using other types of conflict resolution mechanisms such as arbitration or litigation. Therefore, conflict shifts the governance costs of vertical integration (hierarchy) curve to the left, but this increase in the cost due to the conflict is very minimal in comparison to its effect on market-based contract or hybrid form of governance costs (figures 5-1a and 5-1b). Conflict acts as a shift parameter that increases transaction costs for all modes of governance, but more for the market-based contract than for hybrid (dual distribution) and more for a hybrid than for vertical integration (hierarchy). Figure 5-1a shows the level of asset specificity, and governance cost before the incidence of conflict, and Figure 5-1b illustrates the effect of conflict on governance costs.

As Figure 5-1b shows, the changes are asymmetric (the changes in the level of critical values of asset specificity are not the same amount). We argue that this differential exists because conflict provides the conditions for opportunistic behavior and puts specific asset (in franchise context: brand and reputation) at risk. In other words, conflict creates misfit in the channel structure.

Figure 5-1a- Governance costs before conflict

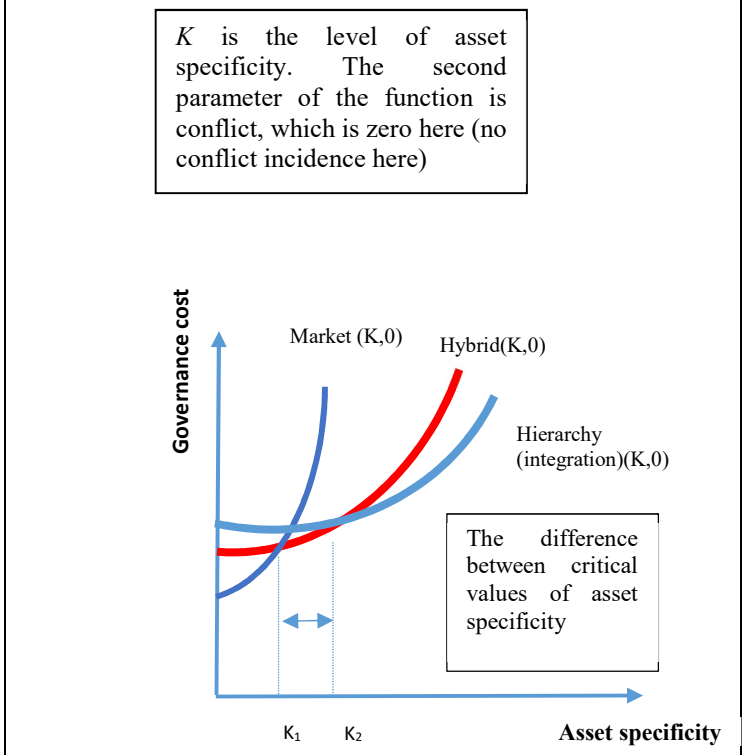


Figure 5-1b – Governance costs after conflict

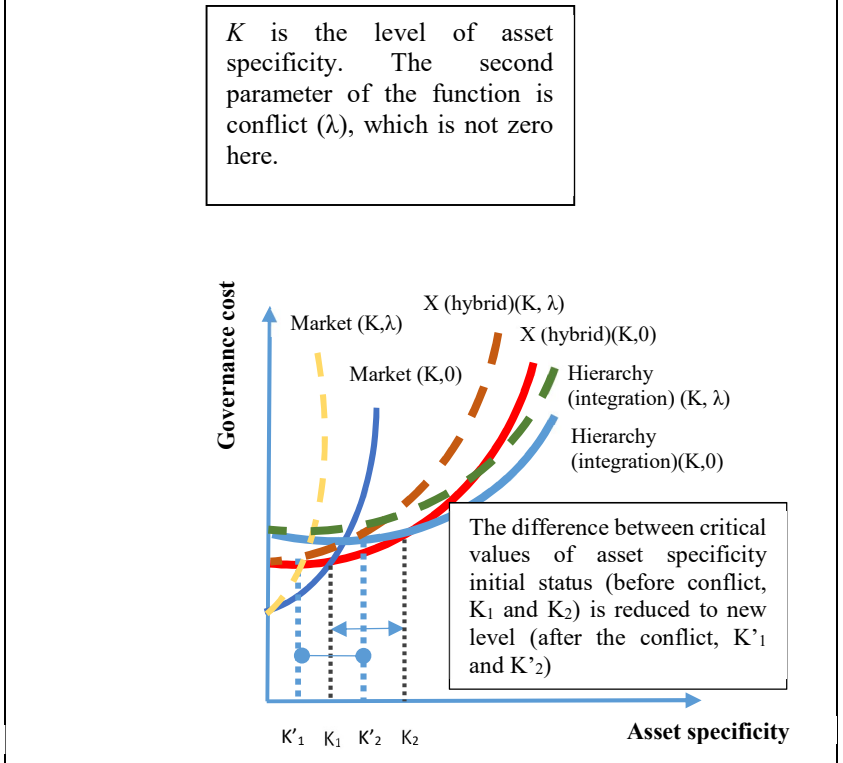


Figure 5. 1: Governance cost before and after conflict

Overall, conflict disrupts the fit and balance among governance and exchange attributes. The resultant misfit if unresolved, it will affect channel outcome and performance. In sum, the fit of exchange attributes (contractual hazards), resources and capabilities, strategy, and governance form leads to enhanced and improved performance (Ghosh and John 1999). If there is a misfit among these elements, firms try to adapt themselves to efficient co-alignment. However, it takes time to adapt and change (no immediate solution). They cannot change exchange attributes, but it is possible to change governance mode (channel structure and contractual changes). However, change in the governance forms (contract and channel structure) is not easy, and it takes time to be implemented because there exist governance inseparability, contractual commitment, and regulations, which limit freedom of firms in choosing the most efficient governance form. For example, franchisors cannot change franchise outlet to company outlet right away. There are contracts and regulations that prevent the franchisor from changing its governance mode immediately. However, they can decide on other existing outlets which their contract duration reaches renewal date, or there is a good cause for termination.

We propose that channel structure and contract detailing are shaped by dynamic interactions among channel member. The more conflict firms experienced, the more likely firms to change their governance form to fit their governance structure with exchange attributes to safeguard their main specific assets. We define contract changes as the extent to which all required terms, provisions, and obligations are added

or removed in the contract (Luo 2002). Klein (2008) states that vertical coordination can be the efficient way of safeguarding specific investment or mitigating the negative effect of potential conflict under incomplete contracting. Vertical integration could be a long-time process because there exist different constraints such as current contract and state laws. Whenever vertical integration is not possible due to mentioned factors, firms try to make the contract more detailed to minimize the cost of conflict. However, all contracts are incomplete in practice because there is a cost involved to write a complete contract, in which all contingencies are specified ex-ante. This incompleteness derived from bounded-rationality of the parties and level of environmental uncertainty (Grossman and Hart 1986; Schwartz 1992; Williamson 1985).

In sum, firms have two options to mitigate the negative effect of conflict: (1) moving toward vertical integration, and/or (2) making contractual changes (add or remove the items and provision of the contract such as fees, responsibilities, and dispute resolution for new and potential franchisees). In the next section, we propose research hypotheses based on the framework above.

5.4. Research Hypotheses

Conflict disrupts the fit and balance among governance and exchange attribute. Based on the discussion in the previous section that conflict increases the cost of the transaction, firms should react to this misfit. The resultant misfit if unresolved, it will

affect channel outcome and performance. If there is a misfit among these elements, firms try to adapt themselves to efficient co-alignment. Firms cannot change exchange attributes, but it is possible for them to change governance mode (channel structure and contractual changes). Firms try to safeguard their specific assets (brand and reputation) from conflict by moving toward vertical integration or making contractual changes. Based on our previous discussion (Figure 5), conflict increases the cost of governance for the same level of asset specificity. Therefore, the previous governance form for that level of asset specificity may not be efficient anymore. Consequently, firms should change their governance mode to the one which helps them to safeguard their specific asset. For example, Nickerson and Silverman (2003) show that when the brand-name capital of shippers is at risk because of the need for temporal coordination among hauls, they prefer to use company-owned trucks. Hence, we propose that:

H1a- *All else being equal, the more conflict the firm experienced, more likely the firm moves toward vertical integration.*

Moreover, when the possibility of change in the governance mode is not feasible due to regulation and contractual commitments, companies may prefer to change the contract. Crocker and Reynolds (1993) investigate the relationship between contractual changes and the probability of opportunistic behavior in of Air Force engine procurement context. They find that when there is a history of the dispute, firms are more likely to make contractual changes. Therefore, we propose that:

H1b- *All else being equal, the more conflict the firm experienced, more likely the firm makes contractual changes.*

Moreover, the firms which possess high-value brand-name capital are more exposed to the risk of damaged reputation due to conflict because the other party (franchisees) may be inclined to free ride and act opportunistically when the effect of free riding and opportunistic act do not damage their revenue from franchise activities. These actions may negatively affect the franchisors' brand-name capital, which is used to attract new franchisees and customers to their outlets. Thus, we propose that:

H2a- *All else being equal, the more conflict the firm experienced, more likely the firm moves toward vertical integration when firm possesses high-value specific asset (such as brand-name capital).*

It is possible that firms choose to change contract details instead of moving towards vertical integration due to many reasons such as regulation and contractual commitment. Firms may prefer to change contract by adding some items and provisions to the contract. Hence, we propose that:

H2b- *All else being equal, the more conflict the firm experienced, more likely the firm changes the contract when firm possesses high-value specific asset (such as brand-name capital).*

Based on TCE prescription, asset specificity is positively related to the level of forward vertical integration. This proposition has received some degree of empirical support. Some studies by Anderson (1985), John and Weitz (1988), Klein, Frazier, and Roth (1990), Minkler and Park (1994), and Majumdar and Ramaswamy (1995) show a positive relationship between asset specificity (measured in different ways) and level

of forward vertical integration while some studies by Aulakh and Kotabe (1997) do not show a significant relationship between asset specificity and level of forward vertical integration. Using reputation theory, Weiss, Anderson, and MacInnis (1999) show that companies with high level of reputation tend to vertically integrate their sales function because they know that high-reputable firms use their own sales reps. If we consider the reputation and brand of the focal company as a specific asset, companies with high brand value and reputation tend to move toward vertical integration more than their counterparts that do not own a very high-value brand. We do not propose any hypotheses for the relationship between specific asset (brand) and vertical integration since it has been tested.

In the same token, Solis-Rodriguez and Gonzalez-Diaz (2012) found that experienced franchisors add items to contract than less experienced franchisors. Moreover, they found that contractual hazards do not always lead to contractual changes. In a similar vein, when moving toward vertical integration is not possible, firms try to change the details of contracts such as provisions, responsibilities, obligations and dispute resolution terms for incoming franchisees and renewal of current contracts. We do not propose any hypothesis for the relationship between specific asset (brand) and contractual changes since it has been tested before, but we will test them.

5.5. Research Methodology

5.5.1. Empirical Context and Data Collection

For our empirical test, we choose business-format franchise setting. Franchise setting is appropriate for our purpose because (1) there is a heterogeneity among franchisors on how they design their channel structure, (2) there is a variation in franchise contracts despite the fact that they should follow state and federal law in design their contracts, (3) the data on channel conflict, structure, and contract items are publicly available for North American franchisors and the last but not the least, and (4) franchise relationships are characterized by conflict (Lafontaine 2014), and (5) franchising is an ideal and unique context to empirically test TCE theory's prescription on both vertical integration and contracting because both vertical integration (i.e., company-owned outlet) and contracting (franchise outlets) are used for delivery of product and services (Minkler and Park 1994). We used panel data set to overcome the problem with cross-sectional studies that they cannot control for time and unobserved firm-specific characteristics. (Joskow 2008). Our longitudinal investigation of channel conflict and governance required us to collect data about each franchisor from various sources. We gather necessary data from three sources. First, to obtain data on litigated (manifest) conflict, we collected Franchise Disclosure Documents (FDDs) for a sample of 277 franchise companies from electronic filings in one of the registration law states

in the United States.[16] Registration law states require all franchisors to register their FDDs to states' authorities. We extract the litigated conflict, governance structure, and many contract items from 23 required items that must be included in FDD. The FDDs from 2010 to 2015 are used in this study. Each FDD includes the previous ten years' information on litigated conflict (item 3), which enables us to have information on the litigated conflict from 2001 to 2015[17]. We also extracted other required variables such as franchise fee (item 5), royalty fee (item 6), initial investment amount (item 7), franchisee's obligation (item 9), franchisor's assistance and responsibilities (item 11), termination, transfer, and dispute resolution provisions (item 17), number of changes in number of openings, closing, buybacks, and transfers of outlets in past three years (item 20), financial indicators such as revenue (overall), revenue from franchise fees and royalty fees, marketing expense and advertising expense (income statements attached to FDDs), and number of registered trademarks specific to franchise relationship (item 13) from FDD.

Second, we obtained more information on franchise firms from Entrepreneur Magazine's 500 ranking (2004-2015) on items such as number of company-owned and franchise outlets, royalty fee, franchise fee, initial investment, and ranking. We also used this source for validity check. Third, we extracted sales of outlets from Franchise Times ranking (2004-2015). Combining information from various sources enables us

[16] Minnesota is among the registration law states that we used electronic filings
[17] We only used the data since 2004 in this study.

to reduce the number of missing observations as well as increase the reliability of information. Table 5-2 shows the source and time to collect and code required data.

Our unit of data analysis is firm. We collected data on how many litigations firm have had from 2004 to 2015. All collected data aggregated at firm level because we are investigating the effect channel conflict on overall governance (channel structure and contractual changes) of the firm. We only choose litigated conflicts that are related to the franchise relationship (such as trademark infringements, default in payments, quality and responsibility shirking, etc.).

5.5.2. Measures

5.5.2.1. Dependent variables

Channel Structure

Channel structure (governance) is measured as the proportion of company-owned outlet to the total number of outlets (franchise outlet + company-owned outlets). Zero means pure franchise concept and one means total vertical integration. The closer the value is to 1, the higher the likelihood of moving toward vertical integration.

Sum of Contract items

We measure the sum of contract items by counting all related items and provisions that detailed in the franchise agreement for every year. In fact, it is the sum of item 6 (all predicted fees), item 7 (all required items of initial investment, item 9 (franchisee's obligations), item 11 (franchisor's assistance and responsibilities), and item 17 (dispute resolution, renewal and termination clauses).

5.5.2.2. Independent variables

Conflict

Conflict is measured as a number of litigations that a franchisor experienced. Some franchisors have not experienced any litigation while others experienced 1 to 30 litigations in our sample.

Relationship-Specific Asset (brand)

Brand is used as a main specific asset of franchisor in the franchise relationship. Intensity of national advertising and marketing expenses, number of the registered trademarks and overall reputation of the franchisor will lead to a perception of the brand on the mind of franchisees and market (Windsperger 2002). Based on the literature and availability of data, we find different proxies to measure brand value.[18][19] For this study, we only used normalized advertising expense by total number of outlets as our proxy for brand value (asset specificity).

Control variables

In addition to main dependent and independent variables that we used in our model, we also controlled for the potential impact of several other important factors on the decision on channel conflict, channel structure, and contractual changes. We

[18] We used normalized advertising expense (adverting expense/total sales), advertising expense (in dollars), number of trademarks in the franchise relationship (item 13 of FDD), and rank of franchise firm in Entrepreneur top 500 list.

[19] We use Google Trends service to extract how many times the name of a franchise company appeared in the search results (in North America). We calculate both yearly and cumulative search trends for each available franchise firm.

used channel structure (governance) in the previous year, franchise fee, duration of the contract, royalty fee, initial investment, relationship law states (location), number of franchise outlets, franchise experience, franchise growth, and sector and year dummies. Table 5-2 shows variable operationalization and sources that we used while Table 5-3 shows descriptive statistics and pairwise correlation among variables.

5.6. Model specification

An important issue in investigating the effect of conflict on governance is unobserved factors that may be correlated with conflict and governance. For example, we do not know how franchisor and franchisee tried to resolve the conflict at the first stages of its process. Some franchisors may try to internally and amicably resolve the

Table 5. 2- List of variables

Variable	Label	Description	Source
Conflict	*Conflict*	The incidence of litigation is the proxy of channel conflict.	FDDS (item 3)
Contract changes	*Contract sum*	Sum of important contract items such as different types of fee, responsibilities, obligations, and dispute resolution procedures, etc.	FDDS (items 3, 6 ,7, 9, 11, and 17)
Governance (channel structure)	*Gov*	Proportion of company-owned outlets to total of outlets (company owned + franchise outlets)	Entrepreneur Magazine from 2004-2015 + FDDs
Specific asset (brand value)	*Adv_total*	Advertising expense/total outlets)	FDDs and annual reports of the firms (income statement and balance sheets)

Variable	Label	Description	Source
Initial investment	*Lavesta*	Natural log of Initial investment	Entrepreneur Magazine from 2004-2015 + FDDs
Franchise fee	*Lavef*	Natural log of franchise fee	Entrepreneur Magazine from 2004-2015 + FDDs
Contract duration	*Dura*	Natural log of the contract duration	FDDs (item 17)
Number of Trademarks	*Ltrad*	Natural log of number of trademarks registered by franchisor	FDDs (item 13)
Relationship state	*Rel_stat*	It is one if the headquarter is is the relationship law state otherwise zero	Entrepreneur Magazine from 2004-2015 + FDDs
Mediation Clause	*Mediate*	It is one if there is mediation option in the contract otherwise zero.	FDDs (item 17)
Arbitration clause	*Arbit*	It is one if there is arbitration option in the contract otherwise zero.	FDDs (item 17)
Growth in past three years	*Grth3*	The average growth of the franchisor in past three years	Entrepreneur Magazine from 2004-2015 + FDDs
Franchise experience	*Fexp*	Franchise experience based number of years since beginning franchising	Entrepreneur Magazine from 2004-2015 + FDDs
Number of franchise outlets	*Lfran*	Natural logarithm of number of franchise units	Entrepreneur Magazine from 2004-2015 + FDDs

conflict prior to litigation or arbitration. In other words, these actions are not observable by the researchers. Moreover, the occurrence of conflict (litigation) is not a random incidence. The number of conflictual incidence (litigation) is a function of years of franchising, number of franchise units, financial resources, number of trademarks at risk, and other contract-related factors such as termination, non-renewal,

and non-competition covenants terms. Therefore, conflict is endogenous, and it has correlation with unobserved factors in error term. The proportion of company-owned outlets to total outlets varies between 0 and 1 (including 0s and 1s). The ordinary least square estimation is inefficient and can be biased when we used proportion (fraction) as a dependent variable. Estimating models with a fractional dependent variable are complicated due to the presence of corner solutions (0s and 1s). The nature of dynamic panel data adds to the complexity of model estimation (Loudermilk 2007). We have many zeros and ones in the dependent variable. All these characteristics of the dependent variable make Two-limit Tobit model, Zero-One inflated model, and log-odds transformation seem suitable for model estimation. However, two-limit Tobit model, Zero-One inflated beta model, and log-odds transformation of the dependent variable have some drawbacks (Wooldridge 2010). Two-limit model cannot be applied until we have pileup at both zero and one and the observed data in our case are censored (values outside of [0, 1] are not feasible in proportion data). Moreover, log-odds transformation cannot be applied to corner solutions (0 and 1). Finally, Zero-one inflated models assume that corner solutions are generated by separate processes. In our case, the proportion of company-owned outlet is a strategic choice that is made by the franchisor. Therefore, using zero-one inflated models is not appropriate for model estimation. The status of governance in previous time period could affect the decision on governance in the next period. However, lagged value of governance is highly correlated with current value of governance. The main reason that we include status of

governance in previous time period is that change in governance is costly and we should control for such costs. The persistence in the proportion of company-owned outlets within chains over time is so strong that including the lag of it as an independent variable would be tantamount to a tautology - the lagged value would explain what the proportion is today almost entirely, except during the period of adjustment (i.e., the first 7 or so years in franchising), a period during which the firms are purposely changing this proportion (Lafontaine and Shaw 2005). Finally, we control for the duration of the contract. As we discussed earlier (in research model and hypotheses), sometimes firms cannot move toward vertical integration due to different reasons such as law and contractual commitments. In our specific context, franchising, firms (franchisors) cannot terminate or cease a relationship with a franchisee without a good cause, or they cannot buyback the franchisee before the end of the contract. Therefore, it is critical to control for length of the contract.

Based on the above issues, the best approach to estimate the effect of conflict on channel structure and contractual changes is to take into account the simultaneity of writing the contract items and choosing channel structure. This type of estimation would allow us to consider possible relationships between these two choices. Because of data limitation, most of the empirical studies in TCE literature have not considered this simultaneous choice of channel structure (governance) and contractual changes (Masten and Saussier 2000). Saussier (2000) called for research on this issue. Moreover, the decision on the proportion of company-owned outlet and number of

contract are probably related, requiring the specification of a correlated error structure (Greene 2003). Moreover, we must also account for clustering of individual observations (litigations) within franchisors (Hsiao 2003).

To address these issues and satisfy all these requirements, we used conditional mixed process (CMP) which enables us to estimate multiple equations with different dependent variables and independent variables simultaneously. CMP is designed to fit a large family of multi-equation and conditional mixed-process estimators. This model by Roodman (2009; 2011) accounts for endogeneity in the model and enables us to simultaneously estimate all of the equations (conflict, governance, and contract sum)[20]. We jointly estimate all three system of equations (including conflict equation) using Roodman's (2009) CMP regression procedure[21].

$$Conflict_{it} = \beta_{10} + \beta_{11}\, ltrad_{i,t-1} + \beta_{12} Fexp_{i,t} + \beta_{13} Lfran_{i,t-1} + \beta_{14}\, Arbit_{i,t-1} + \beta_{15}\, Mediat_{i,t-1} + \beta_{16}\, Rel\_stat_{i,t} + + \beta_{17}\, Grth3 + \omega_{1i} \quad (5\text{-}6)$$

$$Gov_{it} = \beta_{20} + \beta_{21}.Gov_{i,t-1} + \beta_{22}.Conflict_{i,t-1} + \beta_{23}.Lavesta_{i,t-1} + \beta_{24}.Adv\_total_{i,t-1} + \beta_{25}.Lavef_{i,t-1} + \beta_{26}.Conflict_{i,t-1} \times Adv\_total_{i,t-1} + \beta_{27}.Dura_{i,t-1} + \sum \beta\ year\ dummies + \omega_{2i} \quad (5\text{-}7)$$

[20] For additional details on the method, see Roodman (2009; 2011).

[21] CMP regression procedure is developed by David Roodman. The first version of this procedure does not have the option to estimate a fractional dependent variable. We thank David Roodman for adding this option to this procedure upon our contact.

$$Contract\ Sum_{it} = \beta_{30} + \beta_{31}.Conflict_{i,t-1} + \beta_{32}.Adv\_total_{i,t-1} +$$

$$\beta_{33}.Conflict_{i,t-1} \times Adv\_total_{i,t-1} + \sum \beta\ year\ dummies + \omega_{2i} \qquad (5\text{-}8)$$

In contrary to H1a, conflict does not have a significant effect on channel structure, but it has a positive and significant effect on contractual changes (contract sum). It means that the more conflict the firm experience, the greater the likelihood of adding more items to the contract. Thus, we find support for H1b. The initial franchise investment and franchise fee do not have significant effects on channel structure. We find a significant relationship between contract duration and channel structure. It means that the longer the duration of the contract, the greater the likelihood of moving toward vertical integration.

Table 5. 3- Descriptive and pairwise correlations among the main variables

	Mean (SD)	Conflict	Dura	Adv_tot	Contrat sum	Lfran	Lavef	Lavesta	Fexp	Ltrad	Rel_stat	Gov	Arbit	mediat	Grth3
Conflict	.539 (2.064)	1													
Dura	2.297 (.498)	.257**	1												
Adv_tot	502.618 (7153.963)	.044	-.027	1											
contract complet	90.383 (14.054)	.366**	.312**	.321**	1										
lfran	4.256 (1.769)	.037	.145	-.429**	-.453**	1									
Lavef	10.207 (.725)	.217**	.361**		.322**	-.057	1								
Lavesta	12.195 (1.411)	.253*	.599**	.302**	.576**	-.097	.299**	1							
Fexp	11.880 (34.195)	.232**	.336**	-.295**	-.208**	.615**	.094	-.016	1						
Ltrad	1.503 (.922)	-.088	.216**	-.085	.043	.244*	.210**	.212**	.306**	1					
Rel_stat	.375 (.484)	.911**	.197**	.129	.498**	-.127	.128	.294**	.126	-.054	1				
Gov	.178 (.295)	-.199**	-.065	-.096	-.264**	.133	-.119	-.135	-.073	-.203**	-.207**	1			
Arbit	.627 (.484)	-.243	-.457**	-.126	-.305**	-.054	-.056	-.448**	-.178	.052	-.333**	-.099	1		
Mediat	.397 (489)	.32-.0**	.123	.286**	.508**	-.192**	.020	.416**	-.214**	.341**	.341**	-.218**	-.040	1	
Grth3	30.730 (81.050)	.124	-.001	.286	-.358	-.045	.079	-.090	.385**	.053	-.052	.252**	-.054	-.040	1

** p≤.05, * p≤.1

To test H2a and H2b, we added interactions of conflict and brand-name capital (asset specificity). The effect of lagged of governance in the second CMP estimation (with interaction in contractual changes equation) is significant and positive. It means that the previous status of governance is a strong predictor of channel structure and governance in the next period. The advertising expense normalized by the number of total outlets as a proxy for brand-name capital has a significant effect on channel structure and contractual changes (p <01). The higher the value of brand-name capital (asset specificity), the higher the likelihood of moving toward vertical integration and adding more items to the contract. Therefore, we find that firms try to vertically integrate and make the contract more complete to safeguard the high-value brand-name capital (specific asset). These findings are in line with literature in TCE.

In contrary to H1a, conflict does not have a significant effect on channel structure, but it has a positive and significant effect on contractual changes. It means that the more conflict the firm experience, the greater the likelihood of adding more items to the contract. Thus, we find support for H1b. The initial franchise investment and franchise fee do not have significant effects on channel structure. Moreover, we find a significant relationship between contract duration and channel structure. It means that the longer the duration of the contract, the greater the likelihood of moving toward vertical integration. Finally, we could not find any support for H2b since the effect of the interaction of conflict and brand-name capital (asset specificity) on contractual changes is not significant. Table 5-5 shows the detail of the results for the model with one interaction.

Table 5. 4- CMP regression with conflict, governance, and contractual changes

CMP	Dependent variables		
	Conflict	**Gov**	**Contract Sum**
Govern$_{(t-1)}$		3.726(47.60)***	
Ltrade$_{(t-1)}$	.120 (1.91)**		
Fexp	.003 (1.63)*		
Lfran$_{(t-1)}$	.287 (6.11)***		
Arbit$_{(t-1)}$	-.489 (-3.99)***		
Grth3	.002 (1.34)		
Mediat$_{(t-1)}$	.006 (0.05)		
Rel_stat	-.007 (-.06)		
Conflict$_{(t-1)}$		-.004(-.90)	.371(3.43)***
Adv_total$_{(t-1)}$		.000002(2.74)***	.0002(3.78)***
Lavestart$_{(t-1)}$		-.00000227(-1.12)	
Laveff$_{(t-1)}$		.0000649(1.57)	
Dura$_{(t-1)}$		.116(4.59)***	
Year dummies			
Constant	-.454 (-1.95)*	-2.274(-36.33)***	75.602 (11.64)***
Number of observation	3,428		
Wald χ2 (p-value)	3271.77 (.000)		

*** p<.01, ** p<.05, * p<.1

Table 5. 5- CMP regression with conflict, governance, and contractual change (with one interaction)

CMP with one interaction	Dependent variables		
	Conflict	**Gov**	**Contract Sum**
Govern$_{(t-1)}$		3.727(47.60)***	
Ltrade$_{(t-1)}$	.121 (1.92)*		
Fexp	.003 (1.64)		
Lfran$_{(t-1)}$	.287 (6.11)***		
Arbit$_{(t-1)}$	-.489 (-3.99)***		
Grth3	.002 (1.34)		
Mediat$_{(t-1)}$	-.005 (-.04)		
Rel_state	-.007 (-.06)		
Conflict$_{(t-1)}$		-.004(-.90)	.383(3.49)***
Adv_total$_{(t-1)}$		.00201(2.72)***	.0002(2.53)**
Lavesta$_{(t-1)}$		-.00000229(-1.14)	
Lavef$_{(t-1)}$		.0000649(1.57)	
Dura$_{(t-1)}$		.116(4.59)***	
Conflict$_{(t-1)}$ × Adv_total$_{(t-1)}$			-.00002(-1.31)
Year dummies			
Constant	-.454(-1.95)*	-2.274(-36.32)***	75.602 (11.63)***
Number of observation	3,428		
Wald χ2 (p-value)	3737.28 (.000)		

*** p<.01, ** p<.05, * p<.1

In the last CMP estimation, we added interaction of conflict and brand-name capital to both equations – governance and contractual changes. The effect of lagged of governance was positive and significant as in previous models. The advertising expense normalized by number of total outlets as a proxy for brand-name capital has significant effect on channel structure and contractual changes (p <05). The higher the value of brand-name capital (asset specificity), the greater the likelihood of moving toward vertical integration and adding more items to the contract. Again, this is consistent with TCE prescription. In contrary to H1a, we again find that conflict does not have a significant effect on channel structure, but it has a positive and significant effect on contractual changes. It means that the more conflict the firm experiences, the greater the likelihood of adding more items to the contract. Thus, we find support for H1b. The initial franchise investment and franchise fee do not have significant effects on channel structure. Moreover, we find a significant relationship between contract duration and channel structure. It means that the longer the duration of the contract, the greater the likelihood of moving toward vertical integration. Finally, we could not find any support for H2b since the effect of the interaction of conflict and brand-name capital (asset specificity) on contractual changes is not significant. Consistent with H2a, we find that when firms with high brand-name value experience many incidences of conflict, they move toward vertical integration to safeguard their high-value brand from degradation. Table 5-6 shows the details of the results for adding an interaction.

5.6.1. Robustness check

We also test other specifications to investigate our empirical questions. Our results were robust to the following specifications[22]. First, we also collect data on the entropy of company-owned and franchise outlets. We could observe the effect of conflict on the openings, closures,

[22] Please refer to Appendix F for robustness check results.

transfers, termination, non-renewal, and buy-back of the franchise and company-owned outlets. Item 20 of the FDD provides this information on the number of franchised outlets opened,

Table 5. 6- CMP regression with conflict, governance, and contractual changes (with two interactions)

CMP with two interactions	**Dependent variables**		
	Conflict	**Gov**	**Contract Sum**
Govern$_{(t-1)}$		3.727(47.61)***	
Ltrade$_{(t-1)}$	.121 (1.92)*		
Fexpr	.003 (1.64)		
lfranchise$_{(t-1)}$	.287 (6.11) ***		
arbit$_{(t-1)}$	-.489 (-3.99) ***		
Grth3	.002 (1.34)		
Mediat$_{(t-1)}$	-.005 (-.04)		
Rel_stat	-.007 (-.06)		
Conflict$_{(t-1)}$		-.004(-.98)	.383(3.49) ***
Adv_total$_{(t-1)}$		.000979(2.12)**	.0002(2.53)**
Lavesta$_{(t-1)}$		-.00000224(-1.11)	
Lavef$_{(t-1)}$		.0000654(1.58)	
Dura$_{(t-1)}$		.117(4.60) ***	
Conflict$_{(t-1)}$ × Adv_total$_{(t-1)}$		.000276 (3.98) ***	-.00002(-1.31)
Year dummies			
Constant	-.455(-1.95) .051	-2.273(-36.33) ***	75.602 (11.63) ***
Number of observation	3,428		
Wald χ2 (p-value)	4329.75 (.000)		

*** p<.01, ** p<.05, * p<.1

terminated, non-renewals, reacquired by the franchisor, and ceased operation, and the number of company-owned outlets opened, outlets reacquired from the franchisee, outlets closed, and outlets sold to the franchisee. We used CMP estimation and added each of the mentioned variables as dependent variables in a new equation. In all systems of equation, the effects of conflict on contractual changes are positive and significant. It means that when we test for simultaneity of decisions, firms are more likely to add more itmes to their contract when they experience manifest conflict to safeguard their brands. Moreover, the effect of conflict on the number of terminated, ceased, and transfer outlets is significant and positive. The more conflict the firm's experience, the more likely that they terminate, cease or transfer the franchise outlets with problems. Second, we

tested the model with sub-sample of the firms with more than 7-years old and at least 15 outlets to make sure that our results are not the artifact of characteristics of groups of young and small franchise firms. Our results were robust to these new specifications.

5.7. Discussion

The aim of this study is to provide a new perspective on the nature of decision on channel structure and governance. We offer a new explanation for making a decision on channel structure and governance. Previously, Vinhas and Anderson (2005) show that potential for channel conflict drives channel structure. We extend current literature by showing that conflict is an important determinant of channel structure and contractual changes. Our work also offers new insights into the simultaneous decision on channel structure and governance (contractual changes). In this study, we show that firms consider conflict and its potential negative effect and adapt their channel structure and governance to safeguard their specific assets. In other words, we observe a transition and change in the channel structure and governance at least temporarily. We used litigation as a proxy for manifest conflict in this study. Therefore, when the intensity of conflict is high, and it leads to litigation and court ordering, firm does not ignore the conflict. Channel members (franchisors) try to evaluate its negative bandwagon effect on other channel partners (franchisees) and potential partners (franchisees). The brand and reputation of the firm will be in danger when they experience a high level of conflict because it is a negative signal to potential partners (franchisees) who are considering joining this franchise network. In a franchise setting, particularly business-format franchising the brand-name capital is the main transaction-specific investment which generates revenue and helps the franchisors to expand its network.

5.7.1. Does conflict lead to a change in channel structure and governance?

We draw on TCE framework to investigate the effect of channel conflict on channel structure and governance. Our results about contractual changes are consistent with Reynolds and Crocker's (1993) study, in which they use TCE reasoning to show that history of conflict (disputes) makes the firms to design more specific contract. Moreover, our results are in-line with Vinhas and Anderson's (2005) study. They show that firms incorporate the potential for conflict and design their channel structure based on the conflict. In other words, firms do not ignore conflict and deal with conflict whenever they have enough resources and money to mitigate the negative effect of conflict. Change and adjustment to channel structure and contract are costly for franchisors. For example, buy-backs or opening of new company-owned outlets impose costs on the franchisor. Moreover, changing the provisions and items of the contract is not easy and without cost (lawyers and many departments will be involved). However, when the transaction-specific investment (brand) is in danger, firms should safeguard their brand-name capital and reputation.

Our study investigates the effect of litigated conflict on channel structure (transition) and governance mode (contractual changes) simultaneously. We find that firms add more items to their contract over moving toward vertical integration. However, it is noteworthy to consider that (1) franchising nature is based on having franchise outlets to expedite the rate of expansion, (2) we may need longer time horizon to see this effect (more than 12 years), and (3) moving toward vertical integration requires resources and money that many young and small franchise firms do not afford to do that if they wanted to do. The market power of the focal firms should be considered when we want to investigate the effect of asset specificity on vertical integration (Shervani, Frazier, and Challagalla 2007). Therefore, the more effective reaction to channel conflict will be the change in the details of the contract. Our results show that franchisors change their overall contract over time and conflict significantly forces franchisors to add some new items to their contracts.

Lafontaine and Shaw (1999) show that royalty rates and franchise fees do not change within-firm and they found variation across firms. Our results show that we should not only focus on royalty and franchise fee as a determinant of contract (franchise agreement). Our multi-industry findings show that not only there is a variation across firms, but also there is variation within firms in the details of their contract. Even though we did not control for organizational learning, but firms will learn how to craft better contracts over time and conflict is one of the most significant predictors of this adjustment and learning.

Our results also show that there is a high likelihood that firms move toward vertical integration and make contractual changes when they possess high-value brand. This result is consistent with main TCE prescription that firms safeguard their specific asset at risk by moving toward vertical integration and adding more items to the contract (Anderson and Schmittlein 1984; Anderson 1985; Gonzalez-Diaz, Arrunada, and Fernandez 2000; John and Weitz 1988; Lafontaine and Shaw 1999).

5.8. Theoretical Implications

To the best of our knowledge, our study is the first multi-year and multi-firm investigation of two strategic choices when firms experience manifest conflict: Moving toward vertical integration, or/and make contractual changes. Our results provide strong support for the second option. In all model specifications, the effect of channel conflict on contractual changes was significant and positive. Notwithstanding their diversity, all explanations that used to respond to the question of "why firms who faced the same level of environmental uncertainty and contractual hazards in the same industry, choose different forms of governance?" could not provide comprehensive solutions. In this study, we contribute to marketing channel literature by showing that channel conflict leads to changes in the contract. The results of this study could help firms to

design their channel structure in an efficient way (considering the cost of conflict and subsequent adjustment). Brand and reputation of franchise firms are the most-valued assets in this context, and franchisors do not want to run the risk of brand damage through the subsequent negativity of conflict. This study provides insight on how firms safeguard this valuable specific asset by appropriate design or change in their governance structure. In conclusion, our study suggests that when franchisors experience manifest conflict, they change their contract details more than their overall channel structure. In other words, firms take into account the manifest conflict into the design of their channel structure and contract.

5.9. Limitations and Further Research

Our study suffers from some limitations that provide a new direction for further studies. We did not have information on all firms across 12 years, and it could be difficult to change the channel structure (moving toward vertical integration) in 12 years due to contractual commitments and state laws and regulations. Therefore, a longer time horizon may help us to better investigate the effect of channel conflict on channel structure. Second, we realize that the franchisor response to conflict would depend on the nature of conflict itself. Some types of conflict could lead to different contractual changes such as changes in specificity of contract. Here, we mostly focus on addition or removal of items in response to any type of conflict. We did not capture the changes in contract specificity due to the reason that we have different types of franchise firms (e.g., restaurants and repair services) and specificity would be different for franchise firms in different sectors. We can extend the current work by including the changes in contract specificity due to conflict in a specific sector.

Third, conflict disrupts the fit among firms' resources and capabilities, strategic positioning, governance structure, and transaction attributes, and increases transaction costs for all

forms of governance. In this study, we only focus on two elements -transaction attributes (specific asset only) and governance. Using governance value analysis (GVA) framework, we can investigate the effect of conflict on channel governance by controlling for the effect of strategic positioning, firms' capabilities and resources. The endowments and capabilities of firms such as marketing capability, absorptive capacity, and conflict resolution capabilities may assist the firm to deal with conflict without resorting to change in the governance mode. In the same vein, proclivity for different strategic positions such as cost leadership or differentiation may prevent firm from changing the governance and channel structure due to conflict. Fourth, we conducted a multi-industry analysis here. However, most of TCE studies focused on single industry. In multi-industries research, many variables of interest are labeled the same while they are incommensurable (Klein 2008). Therefore, focusing on one single industry may provide more in-depth insight while may lack enough generalizability. Finally, the performance outcome of fit between transaction attributes and governance mode (as well as strategic positions, and capabilities) is unknown. According to TCE and GVA's prescriptions, firms who have fit among all elements should outperform other firms who do not have such a fit (Ghosh and John 1999). Thus, we can provide insights on how this resultant mis(fit) from conflict among firms' endowments, strategies, governance and transaction attributes can affect the channel performance.

6. Two Views on Channel Conflict

6.1. ABSTRACT

We identify two different views of channel conflict that dominate both practice and research. These offer very different thematic interpretations of such conflict with very distinct managerial implications. Despite the significance for practice and theory, these differences have not been explicitly elucidated in the channels literature as yet. We carefully survey over one hundred papers since 1960 to explain and compare these differences. In the first view, conflict is a residual outcome of business processes that is efficiency depleting and a deadweight loss for business performance. Elimination of conflict is the firms' objective. In the second view, conflict is an inevitable part of the channel's business process and is a mediating construct whose effect on channel performance is not necessarily negative, and contingent on several factors. Here the firms focus their efforts not so much on ex-ante conflict "avoidance" as on conflict "management" and relational norms to maximize business performance. Our careful consideration of these themes highlight some under-studied but important, future research directions.

Keywords: Distribution Channels; Channel Conflict; Channel Performance; Conflict Management.

6.2. INTRODUCTION

Given the significant role conflict and cooperation are perceived to play in determining outcomes from any business partnerships, marketing scholars over the years have called for a deeper understanding of the ecology of conflict in marketing channels (*cf*. Antia et al. 2013; Gilliland et al. 2010; Lumineau et al. 2015; Rosenberg and Stern 1971; Rosenbloom 2007). In recent times, major shifts in the industry such as the emergence of new business models, technologies, non-traditional routes to the market, big data, and cloud-based solutions, and challenging economic times, have been accompanied by perceptions that conflicts within marketing channels are on the rise. For example, in a recent IT industry survey, as much as sixty percent of respondents said that channel conflict increased in the preceding two years (CompTIA 2013). News items such as these tend to generate significant managerial interest. Not only is there a secular expectation that conflict will impact channel performance; most companies also devote significant resources to conflict management, whether it be by designing systems and policies, resolving disputes, or arbitration/ litigation. Indeed, in the same survey, as much as thirty-six percent assessed channel conflict to have significantly eroded their business performance. Another industry report out of the UK assessed as much as £33 Billion annually is spent in dispute resolution between members of industrial channels (Sheffield Telegraph 2009). Therefore, it is little surprise that channel conflict has been a particularly popular topic of research in marketing. A survey of published work in marketing revealed over one hundred empirical papers since the 1960s that included the construct "channel conflict." Yet, the complexity of the topic defies straightforward interpretations and questions around the manifestations, and impact, of channel conflict, have continued to swirl (Johnsen and Lacoste 2016; Lumineau et al. 2015; Watson et al. 2015). Given the continuing interest in both research and practice, this paper is an effort to interpret some key

themes of the channel conflict literature and provide some clarity through a managerially-oriented framework.

6.3. BACKGROUND ON CHANNEL CONFLICT

We start by defining channel conflict as a consequential divergence of business incentives between one or more members of the distribution channel. Substantively, this is similar to the definitions used in the extant literature (*cf.* Stern and Brown 1969, p. 155; Walters 1977, p. 61). The "consequential" nature of the divergence is driven by interdependence between the channel members, where individual members' economic well-being is a function of not only one's own actions but also the actions of others in the channel. It is this externality that makes the potential for conflict a constant in any channels context.

However, despite the shared etymological roots, there are big differences in how the construct is interpreted and conceptualized within the literature. For example, while some papers like Kumar et al. (1995, 1998) and Morgan and Hunt (1994) appear to conceptualize conflict as an outcome concurrent with that of performance in their papers, others such as Pondy (1967) and Rosenberg and Stern (1970, 1971), explicitly decouple it from performance by considering conflict as a process, often determined by factors such as different types of power - coercive and non-coercive (Gaski 1984). This conceptual multiplicity carries over to the empirical domain, posing a further challenge to a meaningful interpretation of existing research.

Most studies simply ignore the processual conceptualization of conflict. Even studies that acknowledge conflict as a process with different stages, often focus their empirical effort only on manifest conflict (*cf*. Brown and Day 1981). This unwittingly blurs the boundaries between the different conceptualizations. In addition, very few empirical studies in channels actually employ

conflict as a focal construct. This blunts the sharpness with which the construct is addressed in many of these studies (*cf.* Lusch 1976b).

As it turns out, there is ambivalence in practice as well in terms of channel conflict. Different firms approach conflict management and associated resource investments, differently. Consider some of the following cases.

Shih (2000) quotes Gartner's research director, Andrew Rowsell-Jones on Sony: "*The Japanese giant avoided conflict with its traditional channels by targeting new markets with its Net business. Sony sold some products over the Net and other products through its traditional channels, so as to avoid dis-intermediating these channels.*" Note the focus here is on avoiding conflict through channel design. In a similar vein, when selling its Clinique line of products, Estee Lauder not only sells through its website *www.clinique.com* but allows site visitors to place orders with several national retailers linked to the site, even incorporating recommendations for complimentary products to drive traffic to these retailers.

In both cases mentioned above, two considerations hold sway. The first is that conflict is necessarily assumed dysfunctional, thus, should be avoided at all costs. The second is an *ex-ante* design, which is a deliberate and presumably, sufficient, attempt at such avoidance (Machlis 1998). This line of thought is quite common. Salesforce.com's key value proposition to its clients is the elimination of channel conflict by the proactive choice of incentives and other governance modes (Microscope 2006a). Firms such as 3Com, Dell, and IBM, all have policies and registration programs explicitly put in place to prevent channel conflict (Marsan 1990; Steele 2008). Channel conflict in all these is seen through the lens of misaligned channel structure or contractual provisions (Vaaland and Hakansson 2003).

On the other end of the spectrum is the sensitivity reflected in the quote by Frank Lynn, chief executive of Frank Lynn & Associates, a consulting firm that specializes in channel

management: "*You cannot eliminate conflict, [you can] only manage it*" (Sleeper 2002). Many companies structure their worldview on conflict on this inevitability of conflict. In this line of thought, channel conflict is a natural part of marketing channels and intertwined with how channel members solve problematic issues through ongoing interactions. Companies like Vodaphone, for example, internalizes this inevitability of conflict between its own sales force and its independent resellers, by continually emphasizing cooperative problem-solving programs (Microscope 2006b). The use of relational norms and trust as key tools in resolving conflict assumes centrality in many value-added resellers' (VAR) relationships with their vendors – even allowing for a win-win outcome following such resolutions (Campbell 2010). Thus, not only is the focus on the *ex-post* managing of channel conflict, sometimes a certain amount of conflict is even deemed essential for maintaining high performance and sustainable growth (Seung 2010).

Unfortunately, there is little systematic effort to assess these different conceptualizations of channel conflict, limiting our ability to relate research results to associated industry practice. Of particular interest to us, are the two different views of conflict that we refer to above and which dominate the literature. In the rest of the paper, we elaborate on the conceptual differences between the two views, especially the distinct managerial implications they bear. In the process we identify points of ambiguity in the literature, to serve as a bellwether for future research.

6.4. THE TWO VIEWS OF CHANNEL CONFLICT

The distinct differences in the manner in which channel conflict is viewed, derive mainly from the separation presumed between conflict and the channel's economic performance. One view finds resonance in a synchronic notion of conflict, where conflict is seen as such a huge cost in the short-term that it almost concurrently affects the bottom-line negatively. For ease of referencing, we will call this "View 1".

The other view finds resonance in a notion where conflict is seen as a process and a mediator that could be both functional and dysfunctional in its impact on business performance (Pondy 1967; Vaaland and Hakanson 2003). For ease of referencing, we will call this "View 2". These different perspectives naturally lead to different characterizations of firm objectives vis-à-vis conflict management, and different ways characteristics of conflict are conceptualized. The differences in the manner in which conflict is conceptualized, in turn, naturally lead to different types of managerial approach. To elaborate on what we see as the distinct differences between the two views of conflict, we now discuss them under the three following interrelated themes: (a) Channel Objectives, (b) Conflict Characteristics, and (c) Managerial Approach.

6.4.1. Channel Objectives

Many scholars see conflict as a consequence of two firms striving to maximize their returns from a business relationship. When this conflict is viewed as synchronous with performance, it is invariably seen as inefficient and by implication, performance-reducing. In a channel context, with interdependent outcomes, this reflects in reduced own or channel performance, reducing the size of the economic pie to be shared between the channel members (Pearson 1973; Reve and Stern 1979). This can happen, say, when a reseller shirks on customer service to save costs, against the manufacturer's wishes. Such shirking could have a negative impact on the latter's brand image and in turn negatively impact market shares of the brand. This would end up reducing the economic payoff for both channel members.

The rational objective of the channel members in such circumstances should then naturally gravitate towards ensuring their own, and in turn, channel profit is maximized by reducing conflict (Reve and Stern 1979). Nevertheless, this does not necessarily translate into efforts at joint

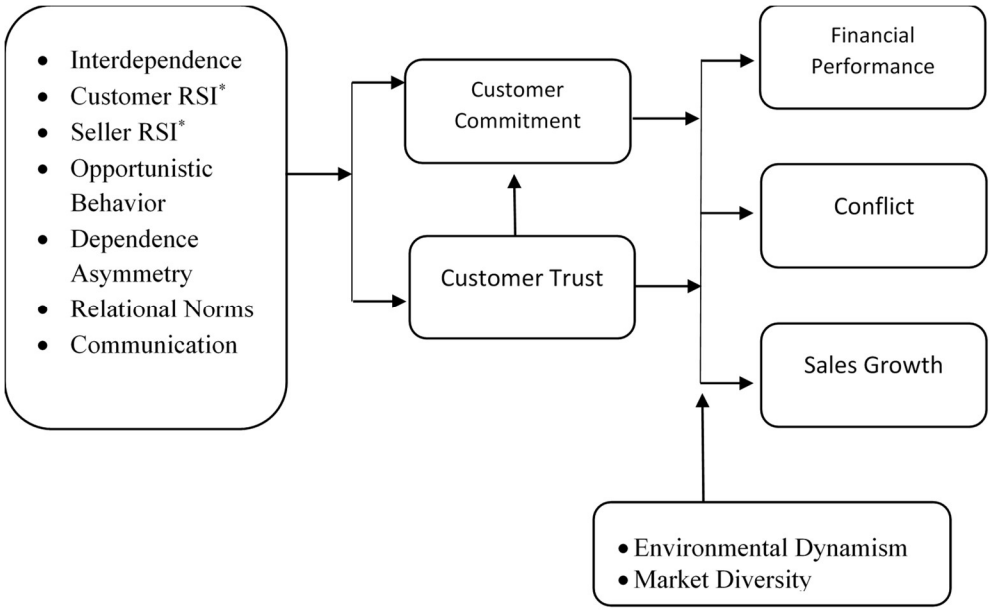
maximization. Rather, greater emphasis is placed on outcome maximization for the individual rather than for the collective (Mele 2011; Tieman 2015).

To a large extent, this view (View 1) motivates the Trust-Commitment and the Interdependence models of inter-firm relationships in the marketing and strategy literature (Anderson and Weitz 1992; Hibbard et al. 2001; Kumar et al. 1995; 1998; Moorman et al. 1992; Morgan and Hunt 1994; Stern et al. 1996; Van De Ven and Walker 1984; Zaheer et al. 1998). Figures 5-1a, and 5b present the Trust-Commitment and the Interdependence research frameworks. In spirit, this is similar to the modeling literature on channel coordination (*cf.* Choi 1991; Ingene and Parry 1995; Jeuland and Shugan 1983; Ray et al. 2016) where elimination of the divergent economic interests and maximizing channel performance can be seen as concurrent outcomes.

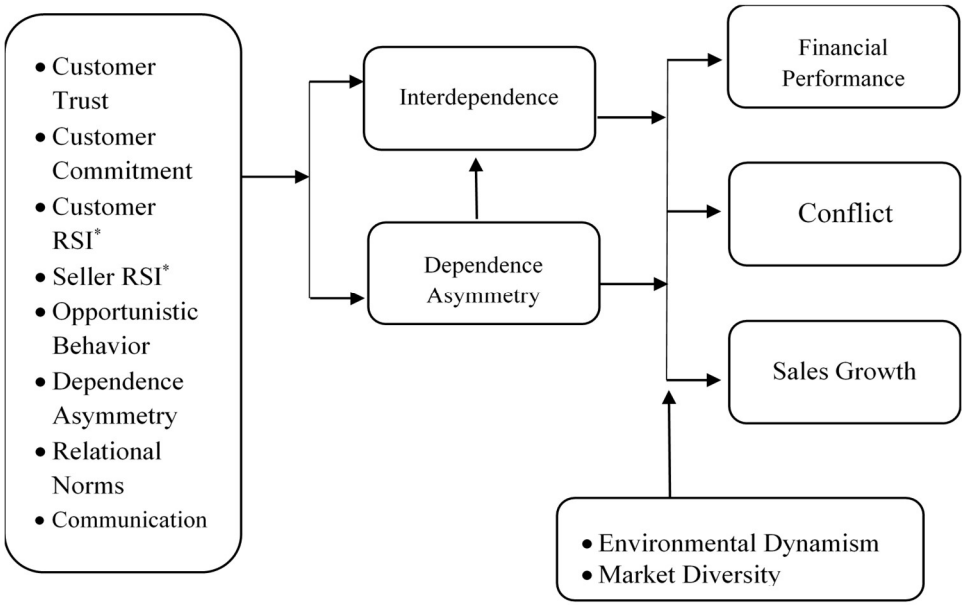
Of course, with conflict and coordination at different ends of the same continuum reduction in one means enhancing the other (Pearson and Monoky 1976). Thus, this perspective necessarily requires coordination to achieve higher performance.

However, achieving coordination is costly, and especially so if channel members are already committed to a mode of partnering. So, this first view of channel conflict largely adopts an explicit objective to design transactions to eliminate or reduce the potential for conflict (Ghosh and John 2012; Robbins et al. 1982; Vinhas and Anderson 2005). Various design options are deployed, spanning different levels of integration (*cf.* Heide and John 1988; John and Weitz 1988), profit sharing schemes and incentives (*cf.* Agrawal and Lal 1995; Bhardwaj and Balasubramanian 2005; Ingene and Parry 1995); as well as the setting of explicit superordinate goals as joint objectives (Sherif et al. 1961).

The design should, of course, fit the particular circumstances at play. In the Information Technology (IT) sector, for example, design parameters such as rules of engagement, deal registration, and hard decks are common policies and programs aimed at avoiding and reducing



(a) Conflict as an outcome – Trust-Commitment



(b) Conflict as an outcome – Interdependence

* Relationship-Specific Investment

Figure 6. 1: Some View 1 Perspectives of Channel Conflict as an outcome

(Adopted from Palmatier, Dant, and Grewal 2007)

channel conflict. The misaligned design is expected to reflect in reduced performance through conflict driven inefficiencies.

In contrast to View 1 described above, View 2 explicitly separates conflict and performance as mediator and outcome constructs, respectively. In this view, conflict and economic performance are not concurrently related; and it is not inevitable that conflict impacts channel performance. In fact, this view allows for the impact of conflict to have a broader scope including being beneficial for the parties.

Given this broader potential impact of conflict, eliminating or minimizing conflict does not necessarily indicate the creation of higher joint value anymore. Maximizing of the joint performance takes precedence over conflict reduction as a channel objective (Wernerfelt 1994). Indeed, conflict reduction may not appear as an explicit objective at all because some level of conflict between channel members may provide room for creativity and innovation (Vaaland and Hakansson 2003) and reinforce value co-creation between channel members (Mele 2011).

The works of Pondy (1967) and Rosenberg and Stern (1971), where they frame conflict as a process, are examples of this line of thought. Here, conflict takes on a mediating role in determining channel performance. With the focus on joint channel performance, members address conflict in a sense and respond manner. The channel members' efforts are directed to "managing" conflict, using resolution techniques apropos of the situation (Zajac and Olsen 1993). In this view, conflict is mostly seen as the lack of interaction and flexibility among channel members. Win-win outcomes in the long-term could be achieved when channel members rely on informal and relational governance mechanisms such as trust and information sharing to resolve the conflict (Vaaland and Hakanson 2003). Figure 6-2a illustrates the Intra-Channel Conflict model proposed by Rosenberg and Stern (1971). Rosenberg and Stern (1971) adopted this framework from Pondy's (1967) model.

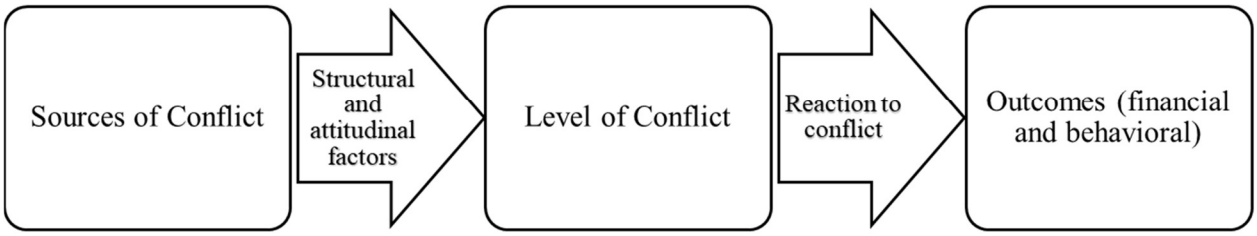
6.4.2. Conflict Characteristics

A key characteristic of conflict under View 1 is that it is detrimental to channel efficiency, and hence something to be avoided and suppressed (Pearson 1973; Reve and Stern 1979). Naturally, conflict is viewed as the antithesis of cooperation, which is the desired state of channel relations (Pearson 1971; Pearson and Monoky 1976). Reduction in conflict automatically moves the channel towards greater cooperation.

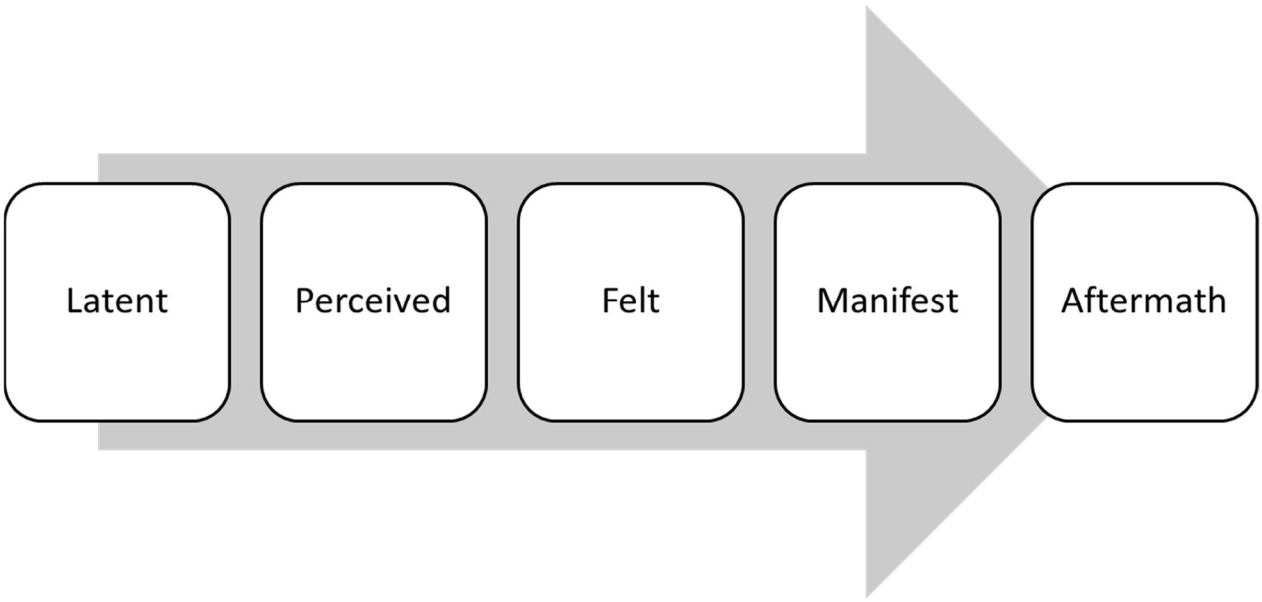
In contrast, View 2 offers a more nuanced set of characteristics for conflict. First, as opposed to View 1 where it is seen as an outcome, conflict is seen as a process that has different episodes (Etgar 1979; Gaski 1984; Pondy 1967; Thomas 1976). In particular, Pondy (1967) proposes that conflict is a dynamic process with five distinct episodes: latent conflict, felt conflict, perceived conflict, manifest conflict, and conflict aftermath. Rosenberg and Stern (1971) subsequently adopt this framework (see Figure 6-2b).

Second, in light of this expanded perspective, channel conflict can be functional and is not to be only considered dysfunctional. This is reflected in Bradford et al. (2004), who propose that conflict "… *prevents stagnation, stimulates interest and curiosity in a task, and provides a medium through which problems can be aired and solutions arrived at*." (p. 184).

Third, by expanding the impact of conflict to include both positive and negative impact on performance, View 2 decouples conflict as a separate and distinct construct from cooperation. Indeed, this allows for both conflict and cooperation to operate at the same time (Frazier 1999; Stern and Heskett 1969). Gadde and Hakansson (1993) show that conflict and collaboration are two different constructs. The interaction between conflict and collaboration as well as the level of each of them would determine functionality or dysfunctionality of conflict.



(a) Channel Conflict as a mediator – The Intra-Channel Conflict Process framework by Rosenberg and Stern (1971 p. 438).



(b) Conflict as a Process – Different episodes (Adopted from Pondy (1967))

Figure 6. 2: Some View 2 Perspectives of Channel Conflict as a process

6.4.3. Managerial Approach

The differences in the two views of conflict have important implications for how managers approach managing conflict. Perhaps the most significant difference between the two views is forward-looking versus retrospective approach to conflict management they espouse. This finds resonance in Rosenberg (1974), who proposes that there exist two broad conflict measurement strategies: anticipatory and reactive.

In View 1, the focus is on formal governance mechanisms and channel design to prevent conflict such as the use of sanction, incentives, power, and authority (Williamson 1985). The manager's task is to anticipate and organize channel governance to eliminate disturbances and conflict or at least curb its potential negative effects. For example, in the Transaction Cost Economics (TCE) perspective, conflict is viewed as an obstacle to value maximization and managers seek to eliminate it by identifying sources of conflict (Ghosh and John 2012).

In contrast, in View 2, the managers' task is to learn from the emerging conflict, for future interactions. Thus, conflict management is an evolutionary process associated with piecemeal learning (Hunt 1995). Informal governance mechanisms based on cooperative behavior and trust, are firms' managerial goals (Vaaland and Hakansson 2003). Relational norms such as shared expectations of reciprocity and information sharing (Macneil 1980) as well as win-win conflict resolution techniques are employed to manage conflict, co-create value, and achieve joint value maximization (Mele 2011; Zajac and Olsen 1993).

The different views of conflict also endow managers with varying pre-dispositions to cooperation. In View 1, managers seek efficiencies by reducing transaction costs. Some of these efficiencies could come from greater trust and commitment. However, the proactive focus on conflict reduction incorporates mechanisms such as sanction, use of coercive power and authority, which are normally associated with zero-sum outcomes (Dant and Schul 1992). Coupled with the

relatively more static view of conflict in View 1, this does not explicitly afford the managers the time and degrees of freedom to achieve the relational outcomes such as trust and flexibility. Conflict resolutions, therefore, tend to move away from private ordering towards litigation, third-party arbitration, and rights-based approach (Lumineau and Malhotra 2011; Weigand and Wasson 1974; Winsor et al. 2012).

In contrast, in View 2, managers are explicitly seen as working on maximizing joint performance, and value co-creation by collaboration over conflictual issues to reach win-win outcomes (Koza and Dant 2007; Lumineau and Malhotra 2011; Mele 2011). It is in an incremental and evolutionary sense and respond manner that managers are expected to focus on integrative conflict management approaches such as joint problem solving to increase channel efficiency (Dant and Schul 1992; Johnson and Sohi 2016). On the face of it, this approach leaves more room for focusing on the relational channel outcomes compared to View 1.

Last but not least, the two views are different from each other in terms of the implied timeline of interventions to manage conflict. In the strictest sense, under View 1, conflict resolution does not happen in real-time since the assumption is that the governance structure will suffice to prevent the occurrence of conflict, making real-time intervention largely moot. In contrast, in View 2, conflict resolution can happen in real time because the inevitability of conflict engenders explicit organizational processes to co-opt and co-exist with different levels and types of conflict. For example, Robbins et al. (1982) find that when there are defined roles for managers who are empowered to intervene and manage conflict at each episode of conflict, it can result in enhanced channel performance. We summarize the two views, their corresponding characteristics, and related studies in Table 6-1.

Table 6. 1: A Comparison of the Two Views of Channel Conflict

View 1	**Channel Objectives**	Minimizing and eliminating conflict.	Reve and Stern 1979; Stern, Sternthal, and Craig 1973; Thompson 1960.
		Maximization of own performance via conflict reduction.	Jeuland and Shugan 1983.
	Conflict Characteristics	Negative phenomenon; Dysfunctional.	Brown and Frazier 1978; Dixon and Layton 1971; Geyskens, Steenkamp, and Kumar 1999; Mohr, Fisher, and Nevin 1996; Vosgerau, Anderson, and Ross 2008.
		Conflict is a lack of coordination.	Jeuland and Shugan 1983; Pearson, 1972; Pearson and Monoky 1976.
		Conflict is viewed mostly as an outcome, not a dynamic process.	Geyskens, Steenkamp, and Kumar 1999; Palmatier, Dant, and Grewal 2007.
	Managerial Approach	Governance- and design-oriented.	Ghosh and John 2012; Levy and Grant 1980; Robbins, Speh, and Meyer 1982; Schul, Pride, and Little 1983; Thompson 1960.
		Forward-looking orientation; No real-time intervention.	Kaufmann and Rangan 1990; Schul, Pride, and Little 1983.
		Dominated by legal ordering approaches to conflict resolution such as litigation and arbitration; Mostly focused on hierarchical governance.	Weigand and Wasson 1974; Winsor et al. 2012.
View 2	**Channel Objectives**	Maximizing joint performance; Mutual satisfying results.	Anderson and Narus 1990; Haitao Cui, Raju and Zhang 2007; Dommermuth 1976; Frazier, Gill and Kale 1989; Litterer 1966; Mallen 1967; Rosenberg 1974.
		A win-win outcome is the focus.	Dommermuth 1976; Rose and Shoham 2004; Rosenberg 1974.
	Conflict Characteristics	Positive or negative phenomenon; Functional and dysfunctional.	Cadotte and Stern 1979; Dommermuth 1976; Eliashberg and Mitchie 1984; Etgar 1979; Koza and Dant 2007; Lucas and Gresham 1985; Menon, Bharadwaj, and Howell 1996; Rosenbloom 1973; Van der Maelen, Breugelmans, and Cleeren 2016.
		Conflict and cooperation are distinct constructs.	Alter 1990; Etgar 1979; Frazier 1999; Skinner, Gassenheimer, and Kelley 1992; Stern and Heskett 1969.
		Conflict is viewed mostly as a process and mediator.	Dwyer, Schurr, and Oh 1987; Lengers, Dant, and Meiseberg 2015; Pondy 1967; Rosenberg and Stern 1971; Runyan, Sternquist and Chung 2010; Thomas, 1976.
	Managerial Approach	Sense and respond; Based on learning and evolution.	Chang and Gotcher 2010; Hunt 1995.
		Retrospective oriented; Real-time intervention is allowed.	Hunt 1995; Rosenberg 1974.
		Use of bilaterally oriented conflict resolution strategies such as problem-solving and negotiation; Mostly focused on relational governance.	Angelmar and Stern 1978; Chang and Gotcher 2010; Ganesan 1993; Mohr and Spekman 1994; Roering 1977; Rosenberg 1974; Walker 1971.

6.5. DISCUSSION

Channel conflict is one of the most consequential business concerns and by extension, one of the popular constructs studied in business marketing literature. We found more than 100 studies in the published marketing literature since 1960 when we searched for the construct "channel conflict." Our attempt in this paper is to organize this literature and draw attention to the two dominant views that exist to conceptualize and interpret this literature, especially in as much as it relates to the conflict – performance link. In one (View 1), conflict has a necessarily negative impact on performance, but is presumably avoidable. In the other (View 2), it is an inevitable mediator with both negative and potentially positive impact on performance. Our efforts at understanding and defining these broad gradients of the literature indicate areas of research that are either under-represented or which will benefit from greater examination. We address some of the key ones below.

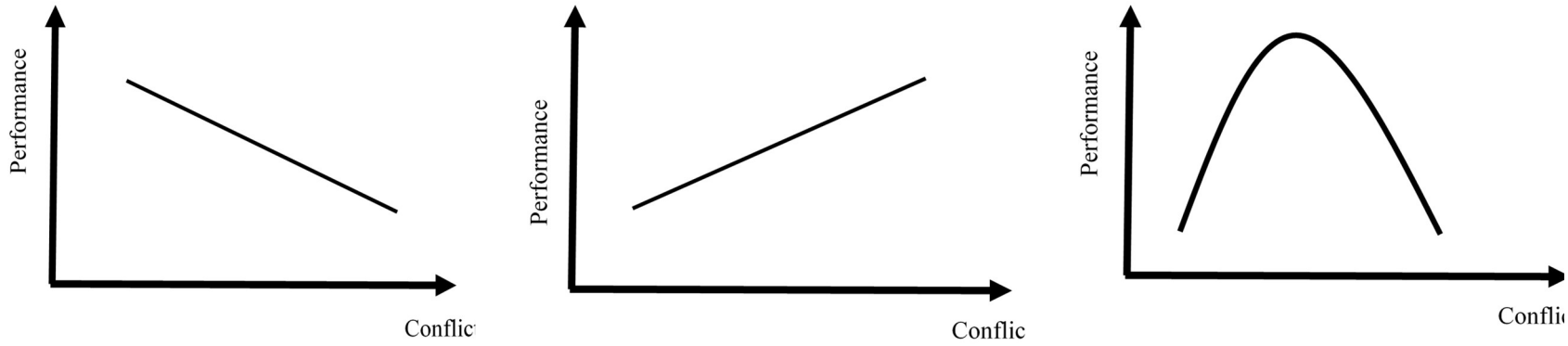
6.5.1. Ambivalence in Conceptualization

While we attempt to offer an overarching and clear base of the distinction between the two dominant views, this distinction is not invariably reflected in all studies of channel conflict. Since very few empirical studies in channels actually employ channel conflict as the *focal* construct, this problem of ambivalence can often be traced to the lack of sharpness with which the construct is addressed in many of these studies. One of the areas where this ambivalence exists across the conceptual as well as the empirical spectrums is the matter of conflict as a process versus an outcome. For example, conflict is considered as both an outcome of the exchange processes as well as a process in itself in Cordell (1989). On the other hand, Brown and Day (1981), Lusch (1976b) and Lee (2001) are clearer about conflict as a process. Yet, they only focus on manifest

conflict in their measurement, blurring the distinctions between the different conceptualizations. Thus, we call for the reader to exercise greater care in interpreting the research findings as they relate to the two views, for there are likely important implications for follow-up work. Relatedly, we also call for greater elucidation of the construct of channel conflict especially the impact on channel business performance.

6.5.2. The Conflict – Performance Link

One of the key limitations of the literature we uncover while examining the differences between the two views pertains to assessing the relationship between channel conflict and channel performance. Some studies show that conflict reduces performance (Kumar et al. 1992, 1995; Jap and Ganesan 2000; Ross et al. 1997; Webb and Hogan 2002). However, several other studies counter that result (Assael 1969; Brown et al. 1983). Scholars such as Rosenbloom (1973) contend that the relationship between these two constructs follows an inverted U-shaped curve, where conflict is functional at moderate levels and destructive at very low or high levels. Others such as Brown (1980) build on Rosenbloom's work by asserting an additional layer of non-linearity where an upright U-shaped curve is followed by the inverse U-shaped curve. Figures 6-3a-c present the three different relationships between conflict and performance. Although several papers consider the non-linear relationship, very few studies have been devoted to investigating the potential factors (moderators) that could explain inconsistencies in the findings (*cf*. Assael 1969; Leckie et al. 2017). We believe this is an important area of future research with significant potential impact.



(a) Negative relationship between channel conflict and performance

(b) Positive relationship between channel conflict and performance

(c) Inverted U-shaped relationship between conflict and performance

Figure 6. 3: Postulated Conflict – Performance relationships

6.5.3. Own versus Joint Performance

One of the clearest research gaps that comes up in our study is, the current literature lacks clarity in identifying the role of conflict for own versus joint performance. The lack of clarity spans both conceptual and empirical domains. While the channel modeling literature has addressed this theoretically as a matter of channel coordination (Ingene and Parry 1995); and the relational norms (RN) literature is clear about joint outcome being the focus (Macneil 1980; Samaha et al. 2011), the other literature including transaction cost economics (TCE) and agency theory (AT) are mostly ambivalent. In fact, TCE takes an ex-ante design approach to conflict minimization, and self-interest seeking is at the core of the paradigmatic theory (apropos of View 1 – see John and Weitz 1988). Similarly, in its paradigmatic form, AT lets the Principal set the contract design for the Agent (as a take or leave offer), knowing that any deviation from an incentive compatible design would necessarily reduce its own payoffs (Bannerjee et al. 2012). In both of these cases, the focus is on own profit, but neither rules out an increase in joint outcomes. In more nuanced elaboration of these theories, the notion of higher joint outcomes is part of mechanism design thinking (Anderson and Weitz 1992; Heide and John 1992). While these partly address the own and joint outcome issue, the fragmented insights are reflective of a sparse empirical field. Thus, we call for further empirical research in the domain.

6.5.4. Short versus Long-term Orientation

On similar notes as above, the empirical literature has much room to further investigate the role of a short-term versus long-term orientation on the conflict-performance link. Since channel partners facing conflicts would naturally be expected to take a short or long-term view on its impact on performance, differences in the orientations would naturally lead to different managerial approaches apropos of Views 1 and 2. Since channel governance design are expected to be

relatively stable, it points to a more long-term orientation for the channel partners when these are the primary conflict management tools (as in View 1). Here, conflicts seen as having an only short-term impact, would not attract managerial attention because ultimately governance design will be expected to even out the divergent business incentives causing the conflicts.

On the other hand, several researchers focus only on the long-run because the functional side of conflict in terms of higher joint profit and win-win outcomes (as in View 2) are only realized in the long-run (Johnsen and Lacoste 2016; Vaaland and Hakansson 2003). Yet, even in this line of thinking, it is not clear if the dominant perspectives imply ignoring conflicts with short-term impact. In fact, researchers in the domain of relational norms emphasize active involvement in managing channel conflict (Ganesan 1993; Mohr and Spekman 1994). Thus, we call for greater clarity in addressing these issues empirically. Such clarity will help channel partners invest in building the appropriate conflict management capabilities.

6.5.5. Conflict Management Capability

Our examination of the literature shows that despite the significant volume of research we are yet to map a significant part of the conditions under which conflict impacts efficiency or performance, be it negatively or positively. In particular, we know little about firm capabilities that may determine whether conflict can be beneficial. Nevertheless, the business spectrum is undergoing significant changes that are requiring firms to develop new expertise, invest in new resources and generate new capabilities with a direct impact on channel outcomes. Multi-channel configurations are increasingly common, not just among traditional bricks and mortar channels (e.g., Wal Mart), but also among traditionally digital channels (e.g., Amazon). Technology-enabled abilities to monitor and measure outcomes (e.g., IOT-based component performance monitoring technologies) increasingly affect how channel partners organize their transactions.

Programs like sales contests to encourage cooperation and competition among distribution channels are increasingly common in both business and consumer markets. New machine learning and artificial intelligence tools are being increasingly adopted by firms (e.g., in the pharmaceutical industry) to enhance the efficiency of sales conversions. While these new technologies and processes are naturally expected to have a direct impact on channel outcomes, their role in determining the nature of conflict is unknown. In particular, whether they allow firms to manage channel conflict and impart unique competitive advantage is of significant managerial interest. The general lack of research in this domain calls for more explicit attention to such potential conflict management capabilities.

6.5.6. Episodic Nature of Conflict

Despite a large part of the literature drawing upon conflict as a process, there has been very little work devoted to the different *episodes* of conflict (Pondy 1967) that has motivated this View 2 perspective of the world. We feel there is a need for more investigation into the episodic nature of conflict. Part of this research should also explicitly consider the static versus dynamic interpretations of conflict, one of the core differences between the two views.

6.6. CONCLUSION

To conclude, we conduct a careful analysis to compare the two different views of channel conflict on three managerially driven themes: channel objective, conflict characteristics, and managerial approach towards conflict management. From our careful and exhaustive survey of published research, we find the differences between the two views are pervasive in the extant scholarly literature. The two views framework, not only helps us organize the literature in a parsimonious manner, but it also helps us identify several limitations and incompleteness in extant

work. To the best of our knowledge, we are the first to do this. Our efforts identify several areas of inquiry for future researchers in the domain. A point to note is the differences between the views are not just scholarly nuances. While it is not clear if the aggregate evidence is more in comportment with one or the other view, when we look at practice carefully, we can readily see how different firms' approaches to conflict management match that of View 1 or View 2, presumably reflecting the dominant perspective held at the firm. Given significant resources are often directly or indirectly assigned to conflict management, ineffective allocations can have non-trivial economic consequences for the channel. Thus, we humbly hope the research, as well as the practical implications of our work, will serve to motivate other researchers to contribute more to this important area in marketing.

7. CONCLUSION

In this dissertation, we have attempted to address the existing gaps in marketing channel conflict area using different research methodologies (literature survey, meta-analysis, panel data analysis), sources (previous studies, financial and franchise industry databases), and econometric techniques such as Two-stage-SEM, Conditional Mixed Process (CMP) regression, three-stage least square (3SLS), and non-linear regression to develop a perspective on Channel Conflict.

In Chapter 1, we conduct a comprehensive, detailed survey of the relevant marketing, management, and economics literature. We find that Channel Conflict is a complex construct. We show that conflict is a multi-facet phenomenon and can be seen as a process with different episodes that requires unique considerations. We also provide insights into how managers' perspectives on channel conflict could be important tools for interpreting the channel conflict. We offer insights on causes and manifestation of channel conflict. We also review different conflict resolution approaches that can be employed by managers in marketing channels. The most important insight from the literature review was the relationship between channel conflict and performance. There is ambiguity about functionality and dysfunctionality of channel conflict. Finally, we find that there are not enough insights on the relationship between channel conflict and governance. In fact, the empirical evidence of the impact of channel conflict on structural changes in the channel is scarce. Based on the identified gaps and ambiguities, we allocated the chapters 2 and 3 on the relationship between channel conflict and performance. We also focus on the relationship between channel conflict and structural changes in the channel in Chapter 4.

In chapter 2, we conducted a comprehensive meta-analysis on channel conflict and its relationship with other constructs, particularly channel performance. We provide an answer to ambiguity on the conflict-performance link. We established a fundamental empirical

generalization – that channel conflict and performance are negatively linked. Our further analysis of this relationship by dichotomizing performance into the joint and individual channel performance reinforced our findings. We also showed that conflict is negatively related to the relational constructs satisfaction, trust, and commitment. We also explored the sources of variation channel conflict-performance link by conducting moderation analysis. In fact, we identified some essential boundary conditions for the existing empirical results. We found that the contextual factors of measurement, sampling, and channel characteristics significantly moderate the conflict – performance link. We also found that the performance measurement, the number of firms in the sample, recency (time) of study, the country of firms in samples, use of focal firm, and agency relationship moderate conflict-performance link.

In Chapter 3, we investigated the channel conflict and performance link using a different approach. Our meta-analysis findings shed some lights on this less investigated relationship. However, we cannot test the non-linear relationship (inverted U-shaped) relationship using meta-analysis. In fact, in chapter 3, we focused on three limitations of with previous studies: research design, measurement, and non-linear relationship test. We tested this non-linear relationship using secondary longitudinal data in the franchise context. For the first time, we empirically showed that conflict is not necessarily bad for business performance and that conflict's net impact on business performance is nuanced, resulting from a tension between the learning forced upon the business partners as well as transaction costs of dealing with the feud. Our findings showed that there is a threshold effect for channel conflict and performance relationship in the marketing channel. Finally, we find that this inverted U-shaped relationship is moderated by the size and age of the firm.

In chapter 4, we provided a new perspective on the nature of decision on channel structure and governance. We offer insights on how a firm decides on channel structure and governance. We

add to the current literature by showing that a history of conflict is an important determinant of channel structure and contractual changes. Our work also offers new insights into the simultaneous decision on channel structure and governance (contractual changes). In this study, we showed that firms react to intense conflict (litigation) and its potential negative effect by changing their channel structure and governance to safeguard their specific assets - brand. Channel leaders (franchisors) try to evaluate negative effect of conflict (litigation) on their interaction with other channel partners (franchisees) and their endeavors in attracting new potential partners (franchisees). A high number of conflict incidence in the channel would be the indicators of the negative signal in attracting new channel partners. We showed that firms mostly try to add more items to their contract in reaction to conflict instead of changing the channel structure by going toward vertical integration. Our results reinforced the current trend among franchisors that add new items to their contract every year to prevent conflict. Our findings also explained why franchisors change the contract items that they are the primary sources of conflict in the first place.

Finally, in chapter 5, we conducted a careful analysis to compare the two different views of channel conflict that we identified in the literature and industry practices. These two views are compared based on three managerially driven themes: channel objective, conflict characteristics, and managerial approach towards conflict management. Our exhaustive survey of published research and news press showed that the differences between the two views are pervasive channel conflict literature. The two views framework helps us organize the extensive literature which rooted in different disciplines such as psychology and economics, in a parsimonious manner. This framework also helps us identify a potential roadmap for future research on channel conflict. It is also important to notice that the difference between the two views are not limited to just scholarly works, but it also manifests itself in how managers view and manage conflict in practice. We cannot explicitly provide support for one view over the other one, but we can readily see how

different firms manage channel conflict that comports to View 1 or View 2. We hope this framework can be helpful for both researchers and managers in conducting research on channel conflict and managing channel conflict in everyday channel activities.

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8. APPENDICES

8.1. APPENDIX A

8.1.1. Independence of Studies

Using a method developed by Wood (2008), we checked for the independence of the primary studies in this meta-analysis. We divided the primary studies into two groups: duplicate and independent. The former group includes studies that share at least one author while the latter group includes all remaining studies. If one data set is used by more than one study, we only consider one of them for inclusion in the meta-analysis. We checked if there is a significant difference between duplicate and independent groups. The significant difference (significant *p*-value) is an indicator of lack of independence (Wood 2008). We report *p*-values and *t* values in Table A.1. We only observe two significant *p*-values for trust-performance and conflict-interdependence relationships due to the low number of studies that are used in this meta-analysis.

Table A. 1: Data set Independence Test

Correlation	**Group**	**Mean**	**Standard Deviation**	***t* value**	***p*-value**
Trust-Commitment	Duplicate Independent	.67 .74	.02 .13	1.52	.17
Interdependence-Commitment	No same author or same sample for the relationship between these two variables				
Interdependence-Trust	Duplicate Independent	.09 .17	.02 .17	1.11	.33
Commitment-Satisfaction	No same author or same sample for the relationship between these two variables				
Trust-Satisfaction	No same author or same sample for the relationship between these two variables				
Interdependence-Satisfaction	No same author or same sample for the relationship between these two variables				

Correlation	Group	Mean	Standard Deviation	*t* value	*p*-value
Commitment-Performance	Duplicate	.20	.06	1.15	.33
	Independent	.69	.85		
Trust-Performance	Duplicate	.23	.03	6.25	.00
	Independent	.64	.15		
Interdependence-Performance	Duplicate	.28	.14	-.56	.61
	Independent	.14	.49		
Satisfaction-Performance	Duplicate	.29	.18	1.21	.25
	Independent	.61	.83		
Commitment-Conflict	Duplicate	-.25	.12	-.71	.49
	Independent	-.39	.59		
Trust-Conflict	Duplicate	-.32	.84	.52	.64
	Independent	-.54	.53		
Interdependence-Conflict	Duplicate	-.22	.19	2.67	.02
	Independent	.02	.13		
Conflict-Satisfaction	Duplicate	-.53	.36	-.037	.97
	Independent	-.54	.62		
Conflict-Performance	Duplicate	-.09	.55	-1.72	.09
	Independent	-.34	.23		

We also calculate sample-adjusted meta-analytic deviancy statistic (SAMD) to identify outliers among studies. Using the SAMD statistic, a systematic and standardized technique, we can identify studies that do not appear to fit with other studies in meta-analysis. To obtain SAMD statistic, first we calculate the sampling distribution for every study as follows:

$$\text{Var (i)} = \frac{(1 - \bar{\text{r}}^2_{[\text{w.o study}]})^2}{\text{N} - 1} \qquad (A-1)$$

where *i* refers to the ith study in a meta-analysis and *N* is the sample size of the study (Hunter and Schmidt 1990; Huffcutt and Arthur 1995). Then we calculate the sampling error variance of a mean coefficient for correlational data as follows:

$$\text{Var}(\bar{\text{r}}) = \frac{(1 - \bar{\text{r}}^2_{[\text{w.o study}]})^2}{\text{N} - \text{K}} \qquad (A-2)$$

where *N* is the total sample size, and *K* is the number of studies to compute the mean coefficient. Finally, we compute the SAMD statistic as follows:

$$\mathrm{SAMD(i)} = \frac{\mathrm{r_{[study\ i]}} - \bar{\mathrm{r}}_{\mathrm{[w.o\ study]}}}{\sqrt{\mathrm{Var(i)} + \mathrm{Var}(\bar{\mathrm{r}})}} \qquad (A-3)$$

We draw scree plot of SAMD values (absolute values) to check if there is any outlier among studies. We could not locate any specific outlier, but correlations could be categorized into two groups. No apparent reason found for some of the studies identified as extreme. Moreover, a test of homogeneity shows that there is heterogeneity among all tested relationships. The presence of some unknown moderators operating on a limited number of studies could explain this observed differenced. We also checked for publication bias in the next section.

8.1.2. Publication Bias and Heterogeneity

To investigate the presence of publication bias, we used funnel plots and failsafe *N*s. The funnel plot is a scatter plot of the effect size on the horizontal axis and the sample size on the vertical axis (Cooper and Hedges 1994). If there is no bias, a funnel plot should usually show a symmetrically inverted funnel shape in which small sample studies scattered at the bottom of the diagram while large sample studies narrowing at the top of the graph (Sterne and Egger 2001). If we cannot observe a symmetric inverted funnel, it does not mean that we have publication bias for sure. Asymmetry of the funnel plot could have other reasons. Therefore, funnel plot should be used in combination of other techniques such as failsafe *N*s (Sabherwal, Jeyaraj, and Chowa 2006; Sutton et al. 2000). We developed a funnel plot for each of 15 correlations in our model. None of the plots indicates a serious publication bias problem. Figure A.1 shows a sample funnel plot (for the correlation between interdependence and conflict).

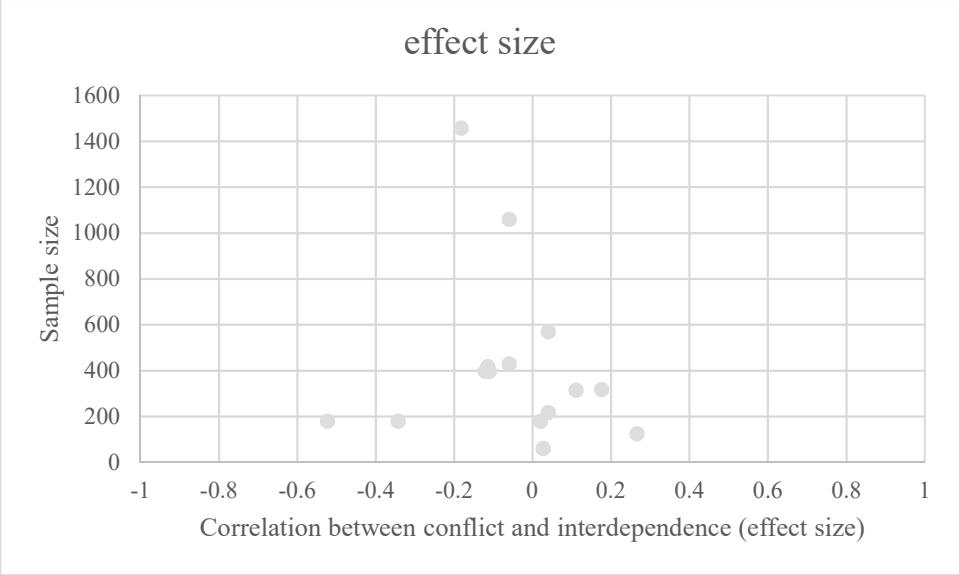

Figure A. 1: Example of funnel plot for conflict and interdependence relationship

To complement our publication bias investigation, we conduct failsafe *N* test. The output of this test is the number of additional studies (with null results) needed to change the relationship between two variables non-significant at a pre-specified level (In this study we used significance level of .05) (Williams and Livingstone 1994; Wu and Lederer 2009). We calculated the failsafe *N*s for 15 main correlations by using the correlations corrected for reliability.[23]

The values for failsafe Ns vary from 35 to 1,445, with an average of 324. We also calculated Orwin's failsafe *N*s that vary from 15 to 885, with an average of 182.27.[24] The robustness of results is assured with the calculated failsafe *N*s using both methods. Table A.2 reports Orwin's failsafe *N*s. Together, these results of failsafe *N*s and the funnel plots show that publication bias is not a significant problem in this study.

[23] Failsafe = $k(\bar{r}_k/\bar{r}_c - 1)$; where k is the number of studies included in the meta-analysis, $\bar{r}_k$ is the mean of the correlation, and $\bar{r}_c$ is a pre-specified value of that correlation (Hunter & Schmidt, 1990, p. 513).

[24] Orwin's failsafe $N = k(\bar{r}_k - \bar{r}_c/\bar{r}_c)$ where k is the number of studies included in the meta-analysis, $\bar{r}_k$ is the mean of the correlation, and $\bar{r}_c$ is a pre-specified value of that correlation (Orwin, 1983).

Table A. 2: Orwin's failsafe Ns

Constructs	Orwin's failsafe *N*
Conflict-interdependence	43
Conflict-trust	267
Conflict-commitment	69
Conflict-satisfaction	885
Conflict-performance	464
Interdependence-trust	20
Interdependence-commitment	15
Interdependence-satisfaction	23
Interdependence-performance	27
Trust-commitment	179
Trust-satisfaction	196
Trust-performance	61
Commitment-satisfaction	71
Commitment-performance	72
Satisfaction-performance	342

8.1.3. Conversion Formulas when Correlation Coefficient (r) is not reported

When F-value is reported, and there is only one independent variable in a study, correlation coefficient (*r*) is calculated as follows (Hunter and Schmidt 1990, p. 272):

$$\mathrm{r} = \sqrt{\frac{\mathrm{F}}{\mathrm{F} + \mathrm{n} - 2}} \qquad (A-4)$$

where *n* is the number of observations.

In the same token, when t-value of regression coefficient is reported, and there is only one independent variable, correlation (*r*) is calculated as follows (Hunter and Schmidt 1990, p. 272):

$$\mathrm{r} = \sqrt{\frac{\mathrm{t}^2}{\mathrm{t}^2 + \mathrm{n} - 2}} \qquad (A-5)$$

where *n* is the number of observations.

Peterson and Brown (2005) offer an approach to impute r-based meta-analytic effect sizes using beta coefficients. When we do not have access to correlation coefficients, we can use their formula as follows:

$$\mathrm{r} = \beta + .05\lambda \qquad (\mathrm{A}-6)$$

where β is beta coefficient and λ is an indicator variable that equals 1 when β is nonnegative and 0 when β is negative.

The effect sizes (correlation coefficient) are corrected for reliabilities by using the following formula which is proposed by Hunter and Schmidt (1990):

$$\text{Corrected r} = \frac{\text{r}}{\sqrt{\alpha_1 \times \alpha_2}} \qquad (A-7)$$

where *r* is the correlation coefficient, and α_1 and α_2 are reliability coefficients for related variables in the study.

8.1.4. Heterogeneity Indices for Correlation Coefficients

I^2 heterogeneity index indicates what proportion of total variation in the pooled effect sizes is due to heterogeneity among primary studies. This index is neutral to the number of studies and expected to be an accurate measure of the impact of study heterogeneity on effect size and variation estimates (Higgins and Thompson 2002). Table A.3 reports I^2 heterogeneity indices for correlation coefficients.

Table A. 3: The I^2 heterogeneity indices for correlation coefficients among the factors

	Performance	Satisfaction	Trust	Commitment	Conflict	Interdependence
Performance	0.000					
Satisfaction	.844	0.000				
Trust	0.636	0.674	0.000			
Commitment	0.916	0.578	0.883	0.000		
Conflict	0.548	0.964	0.610	0.896	0.000	
Interdependence	0.916	0.142	0.774	0.089	0.417	0.000

8.1.5. List of Measures Used for Conflict and Performance in the Meta-Analysis

In keeping with the spirit of meta-analysis, we collected similar, yet different, constructs into encompassing constructs. Conflict and performance are good examples of this practice. We do not observe a unique and consistent operationalization of conflict across the studies. To resolve this inconsistency, Coughlan et al. (2001) propose that we should consider importance, frequency, and intensity of conflictual issues in measuring conflict. Manifest conflict is the most used measure that is used in primary studies. In the same token, different measures are used for performance in interfirm relationship context. Sales (both perceptual and non-perceptual) and expected performance are among the most used performance measures in primary studies. We present the full list of measures that are used for conflict and performance as well as other inter-firm constructs in Table A.4.

Moreover, performance in interfirm relationship was measured based on the appraisal of respondents. In some studies, respondents (channel member) rate their individual performance while in other studies, respondents (channel members) evaluate joint channel performance or the contributions of channel members to the channel performance. We report the results of analyses for individual performance and joint performance separately in Appendix C.

Table A. 4: Measures of all constructs

Constructs	Measures	Representative papers
Conflict	Manifest conflict	Anderson and Narus 1984; Kumar et al. 1995
	Combination of frequency, importance, and intensity of conflictual issues	Habib 1987; Cronin and Morris 1989
	Affective and cognitive conflict	Plank, Newell, and Reid 2006
	Functional conflict	Anderson and Narus 1990; Morgan and Hunt 1994
	Destructive act	Hibbard et al. 2001
	Interpersonal conflict	Bradford et al. 2004
	Task conflict	Bradford et al. 2004
	Perceived conflict	Weaven et al. 2014
Performance	Profit	Anderson and Narus 1984; Ross et al. 1997
	Compared Performance	Kumar et al. 1995
	Sales	Rosson and Ford 1980; Mehta et al. 2011
	Overall (financial) performance	Webb and Hogan 2002; LaBahn and Harich 1997; Gaski 1989; Palmatier et al. 2007
	Sale growth	Rosson and Ford 1980
	Revenue	Winsor et al. 2012
	Economic satisfaction	Dickson and Zhang 2004
	Expected performance	Cronin and Morris 1989
	Perceived performance	Plank et al. 2006
Satisfaction	Satisfaction with overall relationship; Positive affective state from relationship with another firm	Ahmed and Al-Motawa 1997; Anderson and Narus 1984; Arndt and Ogaard 1986; Frazier, Gill, and Kale 1989; Gaski and Nevin 1985; Kumar, Stern, and Achrol 1992; Mohr, Fisher, and Nevin 1996.
Trust	Combined honesty and benevolence	Duarte and Davies 2004; Kumar, Scheer and Steenkamp 1995a, 1995b; Leonidou, Palihawadana and Theodosiou 2006; Morgan and Hunt 1994.
Commitment	Intention to continue the relationship	Kumar, Scheer and Steenkamp 1995a, 1995b; Leonidou, Palihawadana and Theodosiou 2006; Luo, Liu, and Xue 2009; Mohr, Fisher, and Nevin 1996; Ross, Anderson, and Weitz 1997.
Interdependence	Sum of firms' dependence on each other (dyadic relationship): measured from both sides of dyad using Likert scale	Kumar, Scheer and Steenkamp 1995b; Hibbard, Kumar, and Stern 2001; Luo, Liu, and Xue 2009; Samaha, Palmatier, and Dant 2011; Van Bruggen, Kacker, and Nieuwlaat 2005.
	Firms' percentage of sales and profit that depend on each other (dyadic relationship)	Gundlach and Cadotte 1994.

8.1.6. The Baseline Theoretical Frameworks

Here, we briefly describe the three baseline theoretical frameworks that we used in our meta-analysis.

8.1.6.1. The Trust-Commitment *(T-C) Perspective*

This perspective proposes that relationship performance in a channel is determined by the level of the buyer's trust in and/or commitment to a seller (Morgan and Hunt 1994). Conflict is seen as one of the key outcomes of the inter-firm interactions. Trust is modeled as affecting relationship performance, including conflict, directly or indirectly through commitment. Initiating, maintaining and avoiding conflicts in the relationships are considered key endeavors of channel members, with trust being key (Balliet and Van Lange 2013). Trust is defined in multiple ways, with Morgan and Hunt's (1994) definition, "confidence in an exchange partner's reliability and integrity" (p. 316) being quite relevant to our context. However, despite the multiplicity of definitions, most definitions of trust revolve around expectations, predictability, and confidence in other's behavior (Balliet and Van Lange 2013), which allows comparisons in our aggregate approach. Commitment, on the other hand, is more about expectations of relationship continuity. Moorman et al. (1992) define commitment as "an enduring desire to maintain a valued relationship" (p. 316). Dwyer et al.'s (1987) definition of relational continuity in inter-firm relationships is also similar.

The exchange outcomes of conflict and cooperation are positively affected by trust and commitment, if both parties act in a way that leads to the satisfaction of the committed and trusted exchange partners (Anderson and Weitz 1992; Hibbard et al. 2001; Poppo and Zenger 2002). Zaheer et al. (1998) also show that trust partially reduces the intensity of conflict in the inter-firm

interactions, encouraging both parties to initiate cooperation (reduce conflict) in a mutual manner (Deutsch 1958). Panel (a) of Figure 3-1 represents the traditional T-C framework.

8.1.6.2. The Interdependence (INT) Perspective

This perspective derives its inspiration from the power and conflict paradigms of inter-firm relationships. The key motivator is the interdependence of channel members in performing channel tasks (Kim and Hsieh 2003; Stern et al. 1996; Kumar et al. 1995; 1998). Interdependence and drive for autonomy provide motives for both cooperation and conflict in a channel (Van De Ven and Walker 1984). The more interdependent the parties, the more likely they have to resolve their problems and converge their interests. Thus, interdependence mediates the effect of trust and commitment on the exchange outcomes, such as conflict. Conflict is therefore seen as a consequence of the interdependence (Zhou et al. 2007).

Jap and Ganesan (2000) show that (mutual or dyadic) interdependence plays a critical role in predicting inter-firm relationship and exchange outcomes. Papers such as Frazier and Rody (1991); Kumar et al. (1995) investigate the role of interdependence in inter-firm performance outcomes and channel conflict. The broad findings of these studies show that interdependence positively affects the exchange outcomes because both parties are eager to maintain the relationship and resolve the conflict (Hibbard et al. 2001). Nevertheless, the empirical results are not unequivocal, for some other studies show that interdependence actually increases conflict (*cf.* Brown et al. 1983; Frazier et al. 1989). Panel (b) of Figure 3-1 shows the traditional Interdependence (INT) framework.

8.1.6.3. The Intra-Channel Conflict (ICC) Perspective

Note that in both the T-C and the Interdependence perspectives, channel conflict is primarily seen as an outcome of the channel process. On the other hand, Rosenberg and Stern's

(1971) model of ICC presents a counterpoint by conceptualizing conflict as a mediating variable. They model conflict as part of a process with three elements: sources, conflict level, and outcomes of conflict. This is represented in panel (a) of Figure 3-2. Several papers empirically explore the antecedents and outcome constructs under the broad rubric of this model (Brown 1980; Etgar 1979; Lusch 1976b; Reve and Stern 1979). Typical sources that have been investigated are goal incompatibility, drive for autonomy, and interdependence; while outcomes studied include satisfaction and financial performance. This overlapping set of variables offers an opportunity to compare the aggregate empirical results on the role of conflict and its relationship with channel outcomes, particularly performance.

8.2. APPENDIX B: The list of studies

Table B. 1: List of Studies Used in the Meta-Analysis

No.	Study	Source	Sample sizes (N)	Number of samples	Constructs
1	Ahmed and Al-Motawa 1997	Journal of Global Marketing	20	1	Conflict, performance, and satisfaction
2	Al-Khatib and Vitell 2000	Journal of Marketing Channels	300	1	Conflict, performance, satisfaction, and trust
3	Anderson and Narus 1984	Journal of Marketing	153	1	Conflict, performance, and satisfaction
4	Anderson and Narus 1990	Journal of Marketing	253 and 217	2	Conflict and trust
5	Arndt and Ogaard 1986	AMA conference proceedings	85, 104, 85, and 104	4	Conflict and satisfaction
6	Bradford, Stringfellow, and Weitz 2004	Journal of Retailing	81	1	Conflict and satisfaction
7	Brown, Johnson, and Koenig 1995	International Journal of Research in Marketing	78	1	Conflict and satisfaction
8	Brown, Lusch, and Smith 1991	International Journal of Physical Distribution & Logistics Management	32, 32, 32, and 32	4	Conflict and satisfaction
9	Coote, Forrest, and Tam 2003	Industrial Marketing Management	152	1	Conflict, trust, and commitment
10	Cronin and Baker 1993	Journal of Marketing Channels	117	1	Conflict, performance, and satisfaction
11	Cronin and Morris 1989	Journal of Academy of Marketing Science	117 and 117	2	Conflict and performance

No.	Study	Source	Sample sizes (N)	Number of samples	Constructs
12	Daroczi 2003	Doctoral Dissertation	110	1	Conflict, performance, and trust
13	de Carvalho and Sequeira 2013	International Journal of Wine Research	61	1	Conflict, trust, and Interdependence
14	Dickson and Zhang 2004	Journal Fashion Marketing and Management	150	1	Conflict and satisfaction
15	Duarte and Davies 2004	Journal of Marketing Channels	887	1	Conflict, satisfaction, and trust
16	Dwyer and Oh 1987	AMA conference proceeding	189	1	Conflict and satisfaction
17	Dwyer and Oh 1986	AMA conference proceedings	52	1	Conflict and satisfaction
18	Dwyer, Oh, and Lagace 1986	Proceeding of Franchise conference	34	1	Conflict and satisfaction
19	Frazier, Gill, and Kale 1989	Journal of Marketing	51	1	Conflict and satisfaction
20	Ganesan 1993	Journal of Marketing Research	63	1	Conflict and satisfaction
21	Gaski 1989	European Journal of Marketing	44	1	Conflict, performance, and satisfaction
22	Gaski and Nevin 1985	Journal of Marketing Research	281	1	Conflict, performance, and satisfaction
23	Gaski and Ray 2001	Industrial Marketing Management	113	1	Conflict and performance
24	Gilliland, Bello, and Gundlach 2010	Journal of the Academy of Marketing Science	314	1	Conflict and interdependence
25	Goldkuhl 2007	Doctoral Dissertation	113	1	Conflict, performance, and satisfaction
26	Gundlach and Cadotte 1994	Journal of Marketing Research	179 and 179	2	Conflict, performance, and interdependence

No.	Study	Source	Sample sizes (N)	Number of samples	Constructs
27	Habib 1987	Academy of Management Journal	38	1	Conflict and performance
28	Hibbard, Kumar, and Stern 2001	Journal of Marketing Research	429	1	Conflict, performance, and interdependence
29	Jap and Ganesan 2000	Journal of Marketing Research	1457	1	Conflict, performance, satisfaction, and interdependence
30	Kemp and Ghauri 2001	Chain and Network Science	78	1	Conflict, trust, and performance
31	Kim 2003	International Journal of Research in Marketing	283 and 171	2	Conflict and satisfaction
32	Kumar, Scheer, and Steenkamp 1995a	Journal of Marketing Research	417 and 289	2	Conflict and performance
33	Kumar, Scheer, and Steenkamp 1995b	Journal of Marketing Research	417	1	Conflict, interdependence, trust, and commitment
34	Kumar, Stern, and Achrol 1992	Journal of Marketing Research	83 and 56	2	Conflict, performance, and satisfaction
35	LaBahn and Harich 1997	Journal of International Marketing	142, 104, and 96	3	Conflict and performance
36	Lapuka 2010	Doctoral Dissertation	185	1	Conflict and performance
37	Lee 2001	Journal of Business Research	95	1	Conflict and satisfaction
38	Leong 2004	Doctoral Dissertation	34	1	Conflict, performance, satisfaction, trust, and commitment
39	Leonidou, Palihawadana and Theodosiou 2006	European Journal of Marketing	122	1	Conflict, Satisfaction, trust, and commitment
40	Luo, Liu, and Xue 2009	Journal of Management Studies	216	1	Conflict, performance, and interdependence
41	Manaresi 1993	Doctoral Dissertation	176 and 176	2	Conflict and performance

No.	Study	Source	Sample sizes (N)	Number of samples	Constructs
42	Mehta et al. 2011	Journal of Global Marketing	177, 101, and 52	3	Conflict and performance
43	Mohr, Fisher, and Nevin 1996	Journal of Marketing	125	1	Conflict, satisfaction, and commitment
44	Moore 1990	Doctoral Dissertation	81 and 59	2	Conflict, performance, and satisfaction
45	Morgan & Hunt 1994	Journal of Marketing	204	1	Conflict, trust, and commitment
46	Nazarious 2010	Master Thesis	175	1	Conflict and performance
47	Olsen and Granzin 1993	Journal of Business Research	90	1	Conflict and satisfaction
48	Osmonbekov, Bello, and Gilliland 2009	Industrial Marketing Management	216	1	Conflict, performance, and commitment
49	Palmatier, Dant, and Grewal 2007	Journal of Marketing	396 and 396	2	Conflict, performance-interdependence, trust, and commitment
50	Plank, Newell, and Reid 2006	Journal of Purchasing and Supply Management	433	1	Conflict and performance
51	Rajagopal and Rajagopal 2009	The Journal of Operational Research Society	214	1	Conflict, performance, satisfaction, trust, and commitment
52	Ren, Oh, and Noh 2010	Industrial Marketing Management	224	1	Conflict, performance, and trust
53	Rose et al. 2007	Journal of Business Research	98 and 98	2	Conflict, performance, and satisfaction
54	Rosenberg and Stern 1971	Journal of Marketing Research	11, 12, 11, 87, 87, and 11	6	Conflict and performance
55	Ross, Anderson, and Weitz 1997	Management Science	510	1	Conflict, performance, and commitment
56	Rosson and Ford 1980	Management International Review	17	1	Conflict and performance

No.	Study	Source	Sample sizes (N)	Number of samples	Constructs
57	Rutherford, Anaza, and Phillips 2012	Journal of Marketing Theory and Practice	185	1	Conflict and satisfaction
58	Sakano, Onzo, and Johnson 1989	Waseda Business and Economic Studies	74	1	Conflict and performance
59	Samaha, Palmatier, and Dant 2011	Journal of Marketing	1060	1	Conflict, performance, and interdependence
60	Sanzo et al. 2003	Industrial Marketing Management	174	1	Conflict, satisfaction, and trust
61	Schmitz and Wagner 2007	Journal of Marketing Channels	236	1	Conflict, trust, and commitment
62	Schul, Lamb, and Little 1981	AMA conference proceedings	349	1	Conflict, performance, and satisfaction
63	Schul 1987	AMA conference proceedings	391	1	Conflict, performance, and satisfaction
64	Shankarmahesh, Ford, and LaTour 2004	International Marketing Review	179	1	Conflict, satisfaction, trust, and interdependence
65	Shoham, Rose, and Kropp 1997	Journal of Global Marketing	92	1	Conflict and satisfaction
66	Skinner, Gassenheimer, and Kelley 1992	Journal of Retailing	226	1	Conflict and satisfaction
67	Terawatanavong, Whitwell, and Widing 2007	European Journal of Marketing	570	1	Conflict, satisfaction, trust, interdependence, and commitment
68	Van Bruggen, Kacker, and Nieuwlaat 2005	International Journal of Research in Marketing	317	1	Conflict, satisfaction, interdependence, trust, and commitment
69	Vijayasarathy and Robey 1997	Information and Management	97	1	Conflict, performance, and satisfaction
70	Weaven et al. 2014	Journal of Business Economic and Management	345	1	Conflict and satisfaction

No.	Study	Source	Sample sizes (N)	Number of samples	Constructs
71	Webb and Hogan 2002	Journal of Business and Industrial Marketing	62	1	Conflict, performance, and satisfaction
72	Wilkinson 1981	Journal of Retailing	75	1	Conflict and satisfaction
73	Winsor et al. 2012	Journal of Small Business Management	138, 52, and 68	3	Conflict, performance, and satisfaction
74	Yang et al. 2012	Industrial Marketing Management	360	1	Conflict and trust

8.3. APPENDIX C: Individual versus Joint Performance

Table C. 1: The I^2 heterogeneity indices for correlation coefficients among the factors for individual performance model

	Performance	**Satisfaction**	**Trust**	**Commitment**	**Conflict**	**Interdependence**
Performance	0.000					
Satisfaction	.000	0.000				
Trust	.000	.032	0.000			
Commitment	.829	.000	.885	0.000		
Conflict	.000	.971	.026	.904	0.000	
Interdependence	.930	.000	.731	.000	.000	0.000

Table C. 2: The I^2 heterogeneity indices for correlation coefficients among the factors for joint performance model

	Performance	**Satisfaction**	**Trust**	**Conflict**	**Interdependence**
Performance	0.000				
Satisfaction	.722	0.000			
Trust	.000	.857	0.000		
Conflict	.377	.878	.964	0.000	
Interdependence	.163	.919	.000	.000	0.000

Table C. 3: Goodness of fit indices for individual performance model

Goodness fit indices	**Model 1 (T-C)**	**Model 2 (ICC-TC)**	**Model 3 (INT)**	**Model 4 (ICC-INT) Full mediation**	**Model 5 (ICC-INT) Part mediation**
RMSEA	.020	.004	.070	.014	.015
TLI	.876	.995	-.545	.936	.932
CFI	.959	.999	.073	.974	.977
AIC	28.364	-2.287	738.571	14.619	13.285
BIC	-10.324	-25.500	668.931	-31.807	-25.404

Table C. 4: Goodness of fit indices for joint performance model

Goodness fit indices	**Model 1 (T-C)**	**Model 2 (ICC-TC.)**	**Model 3 (INT.)**	**Model 4 (ICC-INT.) Full mediation**	**Model 5 (ICC-INT) Part mediation**
RMSEA	.011	.007	.028	.009	.009
TLI	.771	.900	-.572	.830	.829
CFI	.908	.970	.057	.932	.945
AIC	3.160	-.667	67.652	1.311	1.000
BIC	-27.375	-23.567	21.851	-29.224	-21.901

8.4. APPENDIX D: Two-Stage Meta-Analytic Structural Equation Modeling (TSSEM)

Structural Equation Modeling (SEM) is a widespread and powerful statistical technique, which is used to test hypothesized models in different disciplines such as management and marketing. The main reason for the popularity of SEM is that it allows researchers to test and compare different theoretical models involving several constructs. The proposed theoretical models can be empirically tested by the use of a likelihood ratio (LR) statistic as well as different goodness-of-fit indices such as CFI, TLI, and RMSEA. If the proposed theoretical models are not rejected based on the value of test statistics or goodness-of-fit indices, researchers can say that their models are consistent with the collected data (Cheung 2015).

Researchers use similar constructs to propose and test different models. However, it is difficult to compare and synthesize the models that proposed by various studies. Each study has its own specific and idiosyncratic primary data and characteristics that make it difficult to compare proposed models by different researchers even though they used almost similar constructs in their theoretical models. Researchers use meta-analytic structural equation modeling as a possible solution for inconsistent research findings using the SEM method. Using meta-analytical structural equation modeling (MASEM), researchers are able to synthesize correlation and covariance matrices from different studies and use SEM to fit the proposed model.

MASEM is a technique that allows researchers to combine meta-analysis and SEM for the purpose of synthesizing research findings (Cheung 2015; Landis 2013; Viswesvaran and Ones 1995). One of the most important advantages of combining meta-analysis and structural equation modeling in theory testing is that we do not need all relationships specified by a theory need to be included in each primary study (Viswesvaran and Ones 1995).

Conventionally, all MASEMs are done in two stages. In the first stage of analysis, we synthesize correlation (or covariance) matrices into a pooled correlation (or covariance) matrix. In the second stage of analysis, we used the pooled correlation matrix to fit and compare different proposed structural models. There exist different methods for MASEM. One of the more popular ones is the MASEM method of Viswesvaran and Ones (1995). In this study, we used the method proposed by Cheung and Chan's (2005, 2009). They called their method Two-Stage SEM (TSSEM) because unlike traditional MASEM, they used SEM in both stages of analysis. In traditional MASEM, SEM is only used in the second stage of the analysis, and mostly univariate meta-analytic techniques are used to create pooled correlation matrix in the first stage. Our choice of Cheung and Chan's (2005; 2009) TSSEM method for the analyses is largely motivated by their discussion of the advantages of TSSEM over MASEM.[25] The advantages they enumerate include: (a) *TSSEM address certain*

[25] See Cheung (2005, 2009, 2014) for more details of the presumed advantages.

limitations of diagnosticity inherent in interpreting MASEM results: In MASEM, only pooled correlation matrix is used as observed covariance matrix in fitting the model while in TSSEM, both the pooled correlation matrix as well as asymptotic covariance matrix (ACM) is used to capture both the variances of pooled correlations and covariances between correlations. Moreover, MASEM is based on correlations under the assumption that the elements of pooled correlational matrix are independent. In case of poor fit of the model, MASEM cannot untangle whether it is due to lack of independence among elements of pooled correlation matrix or it is due to a poor model. (b) *TSSEM addresses some inherent limitations of MASEM in interpreting goodness-of-fit indices:* Cheung and Chan (2005) point to some problems in the interpretation of Chi-square (χ^2) and fit indices when the pooled correlation matrix is used as the input of SEM instead of the covariance matrix. (c) *TSSEM is better able to control for sampling variations:* Since TSSEM uses the ACM, which incorporates information about sampling variation, it can control for large and small sampling variations, unlike traditional MASEM. For more detailed differences between traditional MASEM and TSSEM, readers can refer to Cheung and Chan (2005; 2009), Landis (2013), and Cheung (2015).

8.4.1. Different types of TSSEM

There are two types of models in meta-analysis: fixed effects models (FE) and random-effects (RE) models (Cheung 2015; Schmidt, Oh, and Hayes 2009).

Researchers use FE models to make conditional inferences based on data collected from primary studies. The central assumption in FE models is that all studies share common effect sizes. In meta-analytic SEM FE model, the primary assumption is that the population correlation matrices are equal for all studies (Cheung 2015, p. 224). In the meta-analytic SEM RE model, the main assumption is that the observed effect sizes are drawn from a distribution of multiple realizations of the studies.

An FE model assumes that population correlation matrices are homogeneous while an RE model assumes that correlation matrices may vary across studies (Cheung, 2014). It is impractical to argue for a common fixed-effect across the sample of our studies. In other words, homogeneous population correlation matrices assumption may not be realistic in our study. If we apply an FE model to heterogeneous data, the estimated standard errors will be underestimated (Cheung 2015). The main difference between an FE and an RE model is on the first stage of analysis. The same procedures will be exactly used in the second stage of analysis. The studies that we used for our meta-analysis have different sample sizes, different research contexts, different temporal periods, and often different frameworks. As such, RE seems to be more appropriate. Regardless, in order to also have an empirical basis to select one model over the other, we explore which offers a better fit for the data.

8.4.2. Two-stage process

We used OpenMx and metaSEM packages of R (version 3.1.3) to conduct the TSSEM analysis (Cheung 2013; 2014; 2015). In the first stage, correlation matrices pooled together. We conducted both FE and RE models to test which of the models should be used. When we used an FE model, the homogeneity of the correlation matrices is tested using *Q* statistic. If an RE model is used, we can check the degree of heterogeneity of the pooled correlation matrix elements using I^2 heterogeneity index. In the second stage of analysis, we use obtained pooled correlation matrix as well ACM which will be used to weigh the pooled correlation matrix elements to fit the structural model. Below, we explain the details of each stage in detail.

8.4.2.1. Stage 1 of the analysis: pooling correlation matrices

We conduct the first stage of TSSEM using both FE and RE models (Cheung 2015). The results of the first stage analysis (confirmatory factor analysis) show that which model (FE or RE) should be used based on goodness-of-fit indices as well as I^2 heterogeneity index. The null of homogeneous effect sizes across studies will be rejected when Tucker-Lewis Index (TLI) and Comparative Fit Index (CFI) is ≤0.9, and the Root Mean Square Error of Approximation (RMSEA) is ≥0.08 (Meyers et al., 2006). An FE model is justifiable only when there is an acceptable level of homogeneity across effect sizes. The goodness-of-fit indices, as well as I^2 heterogeneity index calculated for related correlation coefficients among our

constructs in the model, show that there exists heterogeneity across effect sizes, and we should use RE model to continue our analysis in the second stage. As a result, we retain the pooled correlation and ACM obtained from RE model for the second stage of analysis. We will use ACM to correct for the existing heterogeneity by weighting pooled correlations in the second stage of analysis (Cheung 2015).

8.4.2.2. Stage 2 of the analysis: using SEM to fit the models

Each included study in meta-analysis has a different sample size, and we may have missing elements in our pooled correlation matrix. We can use only one sample size to fit the structural model (Cheung 2015). Therefore, the precisions of some of the pooled correlation elements are overestimated, whereas those of the other elements are underestimated. Cheung and Chan (2005; 2009) propose to use WLS (Weighted Least Square) or Asymptotically Distribution-Free (ADF) estimation method to fit the structural models to resolve the aforementioned problem in the second stage of analysis (see Browne 1984 for details). The primary rationale to use the WLS estimation method is that we will weigh the correlation elements by the inverse of its sampling covariance matrix (ACM), which is obtained the first stage of analysis. Using this procedure, we will assign different weights to the elements of the estimated correlation matrix depending on their precisions. In other words, we used ACM to correct for the existing heterogeneity inherent in the pooled correlations and differences in sample sizes for each pair in the pooled correlation matrix. In fact, we multiply each pair in

the ACM by the total sample size of the studies that contributed correlations to each respective pair using *OpenMx* and *metaSEM* packages of R (version 3.1.3) as recommended by Cheung and Chan (2005) and Cheung (2013; 2014; 2015). Using WLS estimation method, we are able to compute the goodness-of-fit indices: the relative fit index (CFI), the parsimonious fit index (TLI), and the absolute fit index (RMSEA). CFI and TLI of at least 0.90, and RMSEA of 0.08 or less indicate a very good model fit (Hu and Bentler, 1999). We can also use AIC to select a model balancing between fit and complexity. A lower value of AIC indicates a higher level of parsimony and fit. We should note that when we use the covariance-based SEM methods such as WLS, goodness-of-fit indices (e.g., TLI) may not be as good as other covariance-based SEM methods such as maximum likelihood (Cheung and Chan 2005). In other words, the lower values of goodness-of-fit indices do not indicate an inferior fit of the model.

Finally, the values of fit indices and AIC will enable us to find out which of the proposed structural models fit our collected data from primary studies. Moreover, WLS estimation method provides the path coefficients and their significance levels for all tested structural models (Cheung 2015).

8.5. Appendix E for Chapter 3

8.5.1. Alternative measures of performance – U-shaped tests

We use revenue which is derived by royalty fees as the dependent variable (performance measure). The calculated value for the extremum is 8.62. We test the slope of the curve before and after the extremum point. The slope for the first part of curve is positive and significant (slope = .312, t-value = 4.376, p<001). The slope of the second part of the curve is negative and significant (slope -30.02, t-value = -3.152; p<.001). Finally, the t-value for the overall test of the presence of inverse U-shaped has a t-value of 3.15 (p-value<.001). The Fieller interval for extremum point is [6.27; 15.38], which is located in the data range.

We use revenue which is derived by franchise fees as the dependent variable (performance measure). The calculated value for the extremum point is 15.83. We test the slope of the curve before and after the extremum point. The slope for the first part of curve is positive and significant (slope = .102, t-value = 2.097, p<05). The slope of the second part of the curve is negative and significant (slope -5.316, t-value = -2.14; p<.05). Finally, the t-value for the overall test of the presence of inverse U-shaped has a t-value of 2.10 (p-value<.05). The Fieller interval for extremum point is [3.72; 51.04], which is located in the data range.

We use franchise revenue which is derived by sum of franchise fees and royalty fee from income statement as the dependent variable (performance measure). The

calculated value for the extremum point is 7.42. We test the slope of the curve before and after the extremum point. The slope for the first part of curve is positive and significant (slope = .396, t-value = 3.176, p<.001). The slope of the second part of the curve is negative and significant (slope -44.333, t-value = -2.77; p<.001). Finally, the t-value for overall test of the presence of inverse U-shape has a t-value of 2.78 (p-value<.01). The Fieller interval for extremum point is [4.86; 13.94], which is located in the data range.

We use franchise revenue that is extracted from income statement as the dependent variable (performance measure) and repeat the analysis using *cmp* method. The calculated value for the extremum point is 24.52. We test the slope of the curve before and after the extremum point. The slope for the first part of curve is positive and significant (slope = .251, t-value = 7.20, p<.001). The slope of the second part of the curve is negative and significant (slope -8.338, t-value = -4.14; p<.001). Finally, the t-value for overall test of the presence of inverse u-shape has a t-value of 4.14 (p-value<.001). The Fieller interval for extremum point is [19.37; 36.70], which is located in the data range.

Table E. 1- Results of CMP estimation method

CMP	Dependent variables		
	Conf Coef (std err)	Conf_sq Coef (std err)	Perf Coef (std err)
$Conf_{(t-1)}$			.334 (.049) ***
$Conf\_sq_{(t-1)}$			-.013 (.004) ***
$Ltrad_{(t-1)}$	.117 (.054) **	1.37 (124)	
$Ltrad\_sq_{(t-1)}$		.051 (.290)	
$Fexp_{(t-1)}$	.091 (.061) *	.884 (1.50)	
$Fexp\_sq_{(t-1)}$		-.099 (.254)	
$Lfran_{(t-1)}$	.257 (.045) ***	4.684 (1.10) ***	
$Lfran\_sq_{(t-1)}$		-.310 (.097) ***	
$Arbit_{(t-1)}$	-1.00 (.97)	-2.506 (1.48) +	
$Grth3_{(t)}$	.002 (.001) **	.042 (.011) ***	
$Mediat_{(t-1)}$	-.144 (.096)	-2.24 (1.47)	
$Rel\_st_{(t)}$	-.076 (.095)	-2.03 (1.46)	
$Size_{(t)}$			.001(.000) ***
$Lavest_{(t-1)}$			.552 (.043) ***
$Age_{(t)}$			.017 (.003) ***
$Adv_{(t)}$			.00002 (.000) ***
Year dummies			included
Category dummies			Included
Constant	-.782 (.212) ***	-10.47 (3.70) **	12.83 (.742) ***
Number of observations	2,177	2,177	2,688
Number of total observations		3,602	
Log Likelihood		-19,234.791	
LR Chi2 (58)		1,656.74***	

*** p<.001, ** p<.01, * p<.05, + p<.1

Table E. 2- Results of Winsorising at (1, 99) percent

3SLS	Dependent variables		
	Conf Coef (std err)	Conf Coef (std err)	Conf Coef (std err)
Conf $_{(t-1)}$			.361 (.066) ***
Conf_sq $_{(t-1)}$			-.016 (.002) ***
Ltrad$_{(t-1)}$	-.015 (.055)	-.182 (1.175)	
Ltrad_sq $_{(t-1)}$		-.073 (.288)	
Fexp$_{(t-1)}$	.002 (0.065)	-1.110 (1.472)	
Fexp_sq$_{(t-1)}$		.208 (.266)	
Lfran$_{(t-1)}$	.299 (.043) ***	3.606 (.990) ***	
Lfran_sq$_{(t-1)}$		-.190 (.098) +	
Arbit$_{(t-1)}$	-.124 (.098)	-.963 (1.257)	
Grth3$_{(t)}$	.002 (.001) **	.035 (.010) ***	
Mediat$_{(t-1)}$	-.017 (.097)	.031 (1.25)	
Rel_st$_{(t)}$	.231 (.094) *	2.645 (1.218) *	
Size$_{(t)}$			.001(.000) ***
Lavest$_{(t-1)}$			.679(.066) ***
Age$_{(t)}$			.015(.004) ***
Adv$_{(t)}$			.00002 (.000) ***
Year dummies			
Category dummies			
Constant	-.876 (.195) ***	-8.823(-2.967) **	6.828 (1.495) ***
Number of observations	1,255	1,255	1,255
R-sq	.114	.047	.417
Chi2	180.25***	80.14***	929.08***

*** p<.001, ** p<.01, * p<.05, + p<.1

Table E. 3- Results with addition of cubic term of conflict

3SLS	Dependent variables			
	Conf Coef (std err)	Conf_sq Coef (std err)	Conf_cube Coef (std err)	Perf Coef (std err)
$Conf_{(t-1)}$				.378 (.078) ***
$Conf\_sq_{(t-1)}$				-.021 (.008) *
$Conf\_cube_{(t-1)}$				.0003 (.000) +
$Ltrad_{(t-1)}$	-.015 (.055)	-.182 (1.175)	-5.373 (25.322)	
$Ltrad\_sq_{(t-1)}$		-.073 (.288)	3.390 (9.394)	
$Ltrad\_cube_{(t-1)}$			-.752 (1.304)	
$Fexp_{(t-1)}$	.002 (0.065)	-1.115 (1.472)	-24.670 (31.576)	
$Fexp\_sq_{(t-1)}$		.210 (.266)	2.627 (7.723)	
$Fexp\_cube_{(t-1)}$			.283 (.682)	
$Lfran_{(t-1)}$	.299 (.043)***	3.618 (.990) ***	55.943 (20.746) **	
$Lfran\_sq_{(t-1)}$		-.191 (.098) *	-3.780 (2.269) +	
$Lfran\_cube_{(t-1)}$			-.0001 (.0001)	
$Arbit_{(t-1)}$	-.124 (.098)	-.960 (1.257)	-10.332 (20.757)	
Grth3	.002 (.001) **	.035 (.010) ***	.592 (.163) ***	
$Mediat_{(t-1)}$	-.017 (.097)	.032 (1.249)	6.132 (20.602)	
$Rel\_st_{(t)}$	.231 (.094)*	2.647 (1.218) *	39.139 (20.109) +	
$Size_{(t)}$				.001(.000) ***
$Lavest_{(t-1)}$				.678(.066) ***
$Cexpr_{(t)}$				.015(.004) ***
$Adv_{(t)}$				.00002 (.000) ***
Year dummies				
Category dummies				
Constant	-.870 (.195)***	-8.858(-2.967) **	-122.821 (54.638) **	6.831 (1.495) ***
Number of observations	1,255	1,255	1,255	1,255
R-sq	.114	.047	.022	.417
Chi2	180.34***	80.28***	49.41***	930.14***

*** p<.001, ** p<.01, * p<.05, + p<.1

Table E. 4- Without endogeneity

Simple regression	**Performance (revenue)** **Coef (std err)**
Conflict $_{(t-1)}$	.201 (.041) ***
Conflict_sq $_{(t-1)}$	-.004 (.001) ***
Size	.001(.000) ***
Lavest	.659(.058) ***
Age	.017(.004) ***
Adv	.00002 (.000) ***
Year dummies	included
Category dummies	included
Constant	7.113 (1.672) ***
Number of observations	1,720
R-sq	.42
F value (37,1682)	33.10***

*** p<.001, ** p<.01, * p<.05

8.6. Appendix F for Chapter 4

Table F. 1- CMP test with two interactions

CMP with two interactions	**Dependent variables**			
	conflict	**fgov**	**Contract_sum**	**Copen**
fgov(t-1)	-	3.685(43.10) ***	-	-
ltrade	.121 (1.90)+	-	-	-
fexpr	.003 (1.63)	-	-	-
lfranchise	.287 (6.06) ***	-	-	-
arbit	-.486 (-3.99) ***	-	-	-
Growth3	.002 (1.31)	-	-	-
Mediat	-.003 (-.03)	-	-	-
Rel_state	-.006 (-.06)	-	-	-
conflict (t-1)		-.006(-1.21)	.385(3.50) ***	.344 (1.21)
Adv_total(t-1)	-	.000977(2.14)*	.0002(2.53)*	-.00002 (-2.31) *
lavestart (t-1)	-	-.00000209(-1.11)	-	-.0000244 (-.33)
Laveff(t-1)	-	.0000708(1.72) +	-	-.00002 (-1.87) +
duration	-	.117(4.60) ***	-	1.335 (1.40)
Conflict * adv_total	-	.000285 (4.10) ***	-.00001(-1.31)	-.00351 (-1.21)
Year dummies	-			
Constant	-.462(-1.98) *	-2.269(-36.20) ***	75.598 (11.63) ***	.0290 (.01)
Sample size	3,429			
Wald $\chi 2$ (p-value)	4514.31 (<.000)			

*** p<.001, ** p<.01, * p<.05, + p<.1

Table F. 2- CMP test with two interactions

CMP with two interactions	Dependent variables			
	conflict	fgov	Contract_sum	Copen
fgov(t-1)	-	3.685(43.10) ***	-	-
ltrade	.121 (1.90)+	-	-	-
fexpr	.003 (1.63)	-	-	-
lfranchise	.287 (6.06) ***	-	-	-
arbit	-.487 (-3.99) ***	-	-	-
Growth3	.002 (1.31)	-	-	-
Mediat	-.003 (-.03)	-	-	-
Rel_state	-.006 (-.05)	-	-	-
conflict (t-1)	-	-.006(-1.21)	.385(3.50) ***	.341 (1.21)
Adv_total(t-1)	-	.000977(2.14) *	.0002(2.53) *	-.00003(-2.43) **
lavestart (t-1)	-	-.00000209(-1.11)	-	-.0000236 (-.32)
Laveff(t-1)	-	.0000708(1.72)+	-	-.00002 (-1.87) +
duration	-	.117(4.60). ***	-	1.338 (1.41)
Conflict * adv_total	-	.000290 (4.12)***	-.00001(-1.31)	
Year dummies	-	-	-	-
Constant	-.462(-1.98) *	-2.268(-36.20)***	75.598 (11.63)***	.030 (.01)
Sample size	3,429			
Wald $\chi 2$ (p-value)	4677.87 (.000)			

*** p<.001, ** p<.01, * p<.05, + p<.1

Table F. 3- CMP test with two interactions

CMP with two interactions	Dependent variables			
	conflict	fgov	Contract_sum	Fterm
fgov(t-1)	-	3.729(47.62) ***	-	-
ltrade	.122 (1.90)+	-	-	-
fexpr	.003 (1.61)	-	-	-
lfranchise	.286 (4.96) ***	-	-	-
arbit	-.489 (-3.94) ***	-	-	-
Growth3	.002 (1.21)	-	-	-
Mediat	-.003 (-.03)	-	-	-
Rel_state	-.006 (-.05)	-	-	-
conflict (t-1)	-	-.005(-1.02)	.368(3.37) ***	1.539 (3.37) ***
Adv_total(t-1)	-	.000946(2.09) *	.0002(2.54) *	-.00004(-1.12)
lavestart (t-1)	-	-.00000222(-1.09)	-	-.0000694 (-1.04)
Laveff(t-1)	-	.0000656(1.60)	-	-.00004 (-3.33) ***
duration	-	.116(4.59).000	-	-1.345 (-1.34)
Conflict * adv_total	-	.000285 (4.07) ***	-.00001(-1.34)	-
Year dummies	-	-	-	-
Constant	-.462(-1.98) *	-2.273(-36.32) ***	75.604 (11.63) ***	9.317 (.3.52) ***
Sample size	3,428			
Wald χ^2 (p-value)	4933.24 (.000)			

*** p<.001, ** p<.01, * p<.05, + p<.1

Table F. 4- CMP test with three interactions

CMP	Dependent variables			
	conflict	**fgov**	**Contract_sum**	**Fterm**
fgov(t-1)	-	3.729(47.62) ***	-	-
ltrade	.122 (1.90)+	-	-	-
fexpr	.003 (1.61)	-	-	-
lfranchise	.287 (4.96) ***	-	-	-
arbit	-.489 (-3.94) .000	-	-	-
Growth3	.002 (1.31)	-	-	-
Mediat	-.005 (-.04)	-	-	-
Rel_state	-.006 (-.05)	-	-	-
conflict (t-1)	-	-.005(-1.02)	.368(3.37) ***	1.551 (3.37) ***
Adv_total(t-1)	-	.000969(2.12)*	.0002(2.53) *	.00002 (1.45)
lavestart (t-1)	-	-.00000222(-1.09)	-	-.0000731 (-1.08)
Laveff(t-1)	-	.0000656(1.60)	-	-.00004 (-3.33) ***
duration	-	.116(4.59).000	-	-1.357 (-1.36) ***
Conflict * adv_total	-	.000278 (4.03) ***	-.00002(-1.30)	-.000021 (-3.63) ***
Year dummies	-	-	-	-
Constant	-.455(-1.608)	-2.273(-36.32) ***	75.603 (11.63) ***	9.310 (3.51) ***
Sample size	3,428			
Wald χ^2 (p-value)	5929.43 (<.000)			

*** p<.001, ** p<.01, * p<.05, + p<.1

Table F. 5- CMP test with three interactions

CMP with two interactions	Dependent variables			
	conflict	fgov	Contract_sum	Buy back
fgov(t-1)	-	3.712(47.53) ***	-	-
ltrade	.123 (1.90)+	-	-	-
fexpr	.003 (1.65) +	-	-	-
lfranchise	.280 (5.936) ***	-	-	-
arbit	-.495 (-4.03) ***	-	-	-
Growth3	.001 (.86)	-	-	-
Mediat	-.004 (-.03)	-	-	-
Rel_state	.0007 (.01)	-	-	-
conflict (t-1)	-	-.006(-1.10)	.363(3.04) **	.147 (.58) ***
Adv_total(t-1)	-	.000938(2.14) *	.0002(2.54) *	-.00004 (-1.66)
lavestart (t-1)	-	-.00000182(-.88)	-	.000181 (1.58)
Laveff(t-1)	-	.0000708(1.72)+	-	-.00002 (-1.87)**
duration	-	.118(4.64).000	-	1.726 (2.90) ***
Conflict * adv_total	-	.000287 (4.22)***	-.00001(-1.29)	-00305 (.94)
Year dummies	-	-	-	-
Constant	-.415(-1.58)	-2.278(-36.22)***	75.630 (11.59)***	-.971 (-.63)
Sample size	3,428			
Wald χ^2 (p-value)	4562.78 (<.000)			

*** p<.001, ** p<.01, * p<.05, + p<.1

Table F. 6- CMP test with three interactions

CMP	Dependent variables			
	Conflict	**fgov**	**Contract_sum**	**Buy back**
fgov(t-1)	-	3.712(47.53) ***	-	-
ltrade	.123 (1.85)+	-	-	-
fexpr	.003 (1.65) +	-	-	-
lfranchise	.280 (5.93) ***	-	-	-
arbit	-.495 (-4.03) ***	-	-	-
Growth3	.001 (.87)	-	-	-
Mediat	-.004 (-.03)	-	-	-
Rel_state	.0007 (.01)	-	-	-
conflict (t-1)	-	-.005(-1.10)	.362(3.04) **	.150 (.60)
Adv_total(t-1)	-	.000967(2.09) *	.0002(2.57) **	-.00003 (-1.64)
lavestart (t-1)	-	-.00000182(-.88)		.000180 (1.58)
Laveff(t-1)	-	.0000708(1.72) +		-.00002 (-1.87) +
duration	-	.118(4.64) ***		1.723 (2.90) **
Conflict * adv_total	-	.000279 (4.03) ***	-.00001(-1.26)	-00305 (.94)
Year dummies	-	-	-	-
Constant	-.415(-1.58)	-2.278(-36.22) ***	75.630 (11.59) ***	-.970 (-.63)
Sample size	3,428			
Wald χ^2 (p-value)	4995.66 (<.000)			

*** p<.001, ** p<.01, * p<.05, + p<.1

Table F. 7- CMP test with three interactions

CMP with two interactions	Dependent variables			
	conflict	fgov	Contract_sum	fcease
fgov(t-1)	-	3.718(47.24) ***	-	-
ltrade	.149 (2.30)*	-	-	-
fexpr	.003 (1.65) +	-	-	-
lfranchise	.217 (3.53) ***	-	-	-
arbit	-.441 (-3.83) ***	-	-	-
Growth3	.008 (2.86) **	-	-	-
Mediat	-.004 (-.03)	-	-	-
Rel_state	.04 (.40)	-	-	-
conflict (t-1)		-.006(-1.36)	.381(3.44) ***	4.289 (3.48) ***
Adv_total(t-1)	-	.000993(2.09) *	.0002(2.51) *	-.00004 (-1.33)
lavestart (t-1)	-	-.00000223(-1.10)	-	-.000000 (0.00)
Laveff(t-1)	-	.0000706(1.62)	-	-.0001 (-1.30)
duration	-	.119(4.63) ***	-	-.177 (-.05)
Conflict * adv_total	-	.000288 (4.01) ***	-.00001(-1.29)	-00003 (-2.63) **
Year dummies	-	-	-	-
Constant	-.431(-1.75) +	-2.277(-35.80) ***	75.493 (11.50) ***	8.563 (.79) .431
Sample size	3,428			
Wald χ^2 (p-value)	4745.64 (.000)			

*** p<.001, ** p<.01, * p<.05, + p<.1

Table F. 8- CMP test with two interactions

CMP with two interactions	Dependent variables			
	conflict	fgov	Contract_sum	fcease
fgov(t-1)	-	3.718(47.24) ***	-	-
ltrade	.149 (2.31)*	-	-	-
fexpr	.003 (1.65) +	-	-	-
lfranchise	.217 (3.53) ***	-	-	-
arbit	-.441 (-3.83) ***	-	-	-
Growth3	.008 (2.85) **	-	-	-
Mediat	-.002 (-.01)	-	-	-
Rel_state	.04 (.40)	-	-	-
conflict (t-1)	-	-.006(-1.36)	.381(3.44) ***	4.270 (3.47) ***
Adv_total(t-1)	-	.00107(2.15) *	.0002(2.51) **	-.00001 (-2.11) *
lavestart (t-1)	-	-.00000223(-1.10)	-	-.000000 (0.04)
Laveff(t-1)	-	.0000706(1.62)	-	-.0001 (-1.30)
duration	-	.119(4.63) ***	-	-.158 (-.04) +
Conflict * adv_total	-	.000269 (3.88) ***	-.00001(-1.35)	-
Year dummies	-	-	-	-
Constant	-.431(-1.75) +	-2.277(-35.80) . ***	75.493 (11.50) ***	8.573 (.79)
Sample size	3,428			
Wald χ^2 (p-value)	4906.66 (<.000)			

*** p<.001, ** p<.01, * p<.05, + p<.1

Table F. 9- CMP test with three interactions

CMP with two interactions	Dependent variables			
	conflict	fgov	Contract_sum	Fnon-renew
fgov(t-1)	-	3.713(47.18) ***	-	-
ltrade	.152 (2.48)**	-	-	-
fexpr	.003 (1.57)	-	-	-
lfranchise	.177 (3.31)***	-	-	-
arbit	-.453 (-3.95) ***	-	-	-
Growth3	.0006 (.61)	-	-	-
Mediat	.033 (.31)	-	-	-
Rel_state	.016 (.15)			
conflict (t-1)	-	-.002(-.47)	.431(3.59) ***	-.213 (-.69)
Adv_total(t-1)	-	.000998(2.21) *	.0002(2.54) **	.00003 (3.78) ***
lavestart (t-1)	-	-.00000237(-1.19)		-.000054 (1.77) +
Laveff(t-1)	-	.0000688(1.64)		-.00002 (-3.04) **
duration	-	.120(4.71) ***		-.4 (-.72)
Conflict * adv_total	-	.000261 (3.83) ***	-.00001(-1.35)	.000580 (2.53) *
Year dummies	-	-	-	-
Constant	-.431(-1.75) +	-2.281(-36.28) ***	75.615 (11.46) ***	3.560 (2.90) .004
Sample size	3,428			
Wald χ^2 (p-value)	6724.83 (.000)			

*** p<.001, ** p<.01, * p<.05, + p<.1

Table F. 10- CMP test with two interactions

CMP with two interactions	Dependent variables			
	conflict	**fgov**	**Contract_sum**	**Fnon-renew**
fgov(t-1)	-	3.713(47.18) ***	-	-
ltrade	.152 (2.49)*	-	-	-
fexpr	.003 (1.57)	-	-	-
lfranchise	.178 (3.32) ***	-	-	-
arbit	-.452 (-3.95) ***	-	-	-
Growth3	.0007 (.61)	-	-	-
Mediat	.032 (.31)	-	-	-
Rel_state	.016 (.15)	-	-	-
conflict (t-1)	-	-.002(-.48)	.431(3.59) ***	-.209 (-.68) .495
Adv_total(t-1)	-	.000920(2.22) *	.0002(2.52) *	.00005(3.60) ***
lavestart (t-1)	-	-.00000237(-1.18)	-	-.000053 (1.75) +
Laveff(t-1)	-	.0000688(1.64)	-	-.00002 (-3.04) **
duration	-	.120(4.71) ***	-	-.403 (-.73)
Conflict * adv_total	-	.000290 (4.71) ***	-.00001(-1.28)	-
Year dummies	-	-	-	-
Constant	-.431(-1.75) +	-2.281(-36.28) ***	75.615 (11.46) ***	3.557 (2.90) **
Sample size	3,428			
Wald χ^2 (p-value)	6724.83 (<.000)			

*** p<.001, ** p<.01, * p<.05, + p<.1

Table F. 11- CMP for firms with experience of more than 7 years

CMP	Dependent variables		
	conflict	**fgov**	**Contract_sum**
fgov(t-1)	-	4.155(58.20) ***	-
ltrade	.095 (1.34)	-	-
fexpr	.003 (1.64)	-	-
lfranchise	.319 (4.98) ***	-	-
arbit	-.567 (-4.03) ***	-	-
Growth3	.001 (.94)	-	-
Mediat	.096 (.12)	-	-
Rel_state	.015 .13)	-	-
conflict (t-1)	-	-.007(-1.38)	.429(3.64) ***
Adv_total(t-1)	-	.000978(1.97) *	.0002(2.68) **
lavestart (t-1)	-	-.00000000413(-1.39)	-
Laveff(t-1)	-	.0000231(.54)	-
duration	-	.151(6.00) ***	-
Conflict * adv_total	-	.0000271 (3.65) ***	-.00000752(-1.05)
Year dummies	-	-	-
Constant	-.567(-1.75) +	-2.400(-36.77) ***	75.578 (11.63) ***
Sample size	2,714		
Wald χ^2 (p-value)	1878412.16 (<.000)		
Log Pseudo likelihood	-12082.514		

*** p<.001, ** p<.01, * p<.05, + p<.1

Table F. 12- CMP for firms with more than 15 outlets

CMP with two interactions	Dependent variables		
	conflict	fgov	Contract_sum
fgov(t-1)	-	3.953(64.38) ***	
ltrade	.078(1.17)	-	
fexpr	.004 (1.20)	-	
lfranchise	.361 (6.11) ***	-	-
arbit	-.485 (-3.76) ***	-	-
Growth3	.002 (1.31)	-	-
Mediat	.015 (.68)	-	-
Rel_state	-.010 (-.08)	-	-
conflict (t-1)	-	-.004(-.87)	.365(3.34). ***
Adv_total(t-1)	-	.000000731(2.09) **	.0001(4.01) ***
lavestart (t-1)	-	-.00000000387(-1.74)	-
Laveff(t-1)	-	.000000367(.082)	-
duration	-	.117 (4.80) ***	-
Conflict * adv_total	-	.000000292 (5.22) ***	-.00000303(-.84)
Year dummies	-	-	-
Constant	-.567(-1.75) +	-2.295(-36.66) ***	75.514 (11.57) ***
Sample size	3174		
Wald χ^2 (p-value)	6511.21 (.000)		
Log Pseudo likelihood	-12082.514		

*** p<.001, ** p<.01, * p<.05, + p<.1

Table F. 13- CMP for firms with more than 15 outlets and more than 7 years' experience

CMP with two interactions	Dependent variables		
	conflict	fgov	Contract_sum
fgov(t-1)	-	4.145(57.04) ***	-
ltrade	.047 (.63)	-	-
fexpr	.004 (1.19)	-	-
lfranchise	.394 (5.33) ***	-	-
arbit	-.536 (-3.70) ***	-	-
Growth3	.001 (.76)	-	-
Mediat	.120 (.83)	-	-
Rel_state	.022 (.17)	-	-
conflict (t-1)	-	-.006(-1.32)	.407(3.50) ***
Adv_total(t-1)	-	.000000845(1.97) *	.0001(4.91) ***
lavestart (t-1)	-	-.00000000409(-1.36)	-
Laveff(t-1)	-	.000000279(.63)	-
duration	-	.150 (4.80) ***	-
Conflict * adv_total	-	.000000289 (4.31) ***	-.00000153(-.57)
Year dummies	-	-	-
Constant	-.959(-.2.72) **	-2.399(-36.21) ***	75.471 (11.53) ***
Sample size	2,622		
Wald χ^2 (p-value)	1593264.03 (<.000)		
Log Pseudo likelihood	-9811.7469		

*** p<.001, ** p<.01, * p<.05, + p<.1