**Title:** Opportunities in Buyer-Supplier Relations. New Insights from Quantitative Synthesis. Co-authors Michael Knipper & David Strutton.

**Authors:** Maj Hawkins Timothy G

**Performing Organization:** University of North Texas

**Performing Organization Report Number:** C104-1754

**Sponsoring/monitoring Agency:** The Department of the Air Force

**Sponsoring/Monitoring Agency Report Number:** AFIT/CIA, BLDG 125, 2950 P STREET, WPAFB OH 45433

**Distribution Statement:** Approved for Public Release Distribution Unlimited.
Opportunism in Buyer-Supplier Relations: New Insights from Quantitative Synthesis

Manuscript Prepared for the Journal of the Academy of Marketing Science

March 20, 2006

Timothy G. Hawkins, Maj, USAF, CPCM, C.P.M.
Lecturer and Doctoral Student, Department of Marketing & Logistics
University of North Texas
Phone (940) 565-4787

Michael Knipper, Maj, USAF
Lecturer and Doctoral Student, Department of Marketing & Logistics
University of North Texas
Phone (940) 565-4787

David Strutton,
Chair, Department of Marketing & Logistics
University of North Texas
P.O. Box 311396
Denton, TX 76203-1396
Phone (940) 565-3123
E-mail strutton@unt.edu

20060410004
THE VIEWS EXPRESSED IN THIS ARTICLE ARE THOSE OF THE AUTHOR AND DO NOT REFLECT THE OFFICIAL POLICY OR POSITION OF THE UNITED STATES AIR FORCE, DEPARTMENT OF DEFENSE, OR THE U.S. GOVERNMENT.
Opportunism in Buyer-Supplier Relations: New Insights from Quantitative Synthesis

Abstract

Whenever either party to a buyer-seller relationship acts opportunistically, consequences can be severe. After more than two decades of focused research, a wide divergence of empirical opinion regarding key opportunistic concepts and relationships remains. The need for additional theoretically- and managerially-actionable insight into the identity, nature and scope of the key antecedents to opportunism is clear. To this end, a review of quantitative research on the opportunism phenomenon in buyer-supplier relations conducted in this study revealed disparate findings across several antecedents. Based on those findings, a meta-analysis of the literature was conducted to: Investigate the relationship of four antecedents (dependence, bureaucratization, relational norms, and uncertainty) to opportunism within buyer-seller relations, Resolve the disparate relationship magnitudes and directions that currently exist, and (3) Identify moderators that might assist in explaining these disparate effect sizes.

From a theoretical perspective, the results suggests dependence should be included as a control variable, threats of opportunism should be treated as surrogates for actual opportunism, and that TCA Theory provides the best modeling platform from which to investigate these relationships. From a managerial perspective, the results suggest the possibility of opportunism within buyer-seller relations indeed is essentially universal, but that directing material resources in the hopes of eliminating anticipated opportunism may likely prove unprofitable. Additional theoretical and practical implications are developed and discussed.

Keywords: opportunism, transaction cost economics, relational exchange theory, buyer-supplier relationships, meta-analysis
“Who cheats? Well, just about anyone, if the stakes are right,” suggest best-selling authors Levitt and Dubner (2005:24). This may sound extreme. But experienced readers would have to be extremely idealistic to assert the business world operates otherwise. To be certain, within the business-to-business context, there are those who do not always subscribe to a classic win-win philosophy. The very human agents representing buying and selling firms operating in the B2B context routinely navigate a potential minefield of constrained situations. Those buyers and sellers also navigate their individual courses in constant pursuit of professional and personal objectives. And given that the utility functions of those human agents are inherently mismatched — not just on an individual, but also on a situational basis - an essentially intrinsic divergence of views is likely to surface.

Occasionally, these exchange agents choose a course of action that is not only self-serving, but also detrimental to the other exchange party. In buyer-seller relations such behavior is called *opportunism*, defined as self-interest-seeking with guile (Williamson 1975). Opportunistic behaviors include, but are not limited to, cheating, lying, stealing, or misrepresentation. Firms may act opportunistically when the gain in wealth ensuing from the opportunistic behavior is presumed to exceed the expected present discounted value of the earnings from the relationship (Klein 1980).

By definition, one channel member’s opportunistic behavior often has detrimental consequences on the other. Opportunism can certainly increase costs or decrease revenue for the injured party (Wathne and Heide 2000). Studies also indicate that opportunism eats away at those behaviors that would typically promote adherence to relational norms amongst those firms
sharing a buyer-seller relationship (Gassenheimer et al. 1996). This outcome, in turn, can severely impact individual firm and channel performance, especially over the longer term.

The goal of reducing opportunistic behavior is predicated on both channel members committing to each other so that trust and loyalty dominate temptations for greed. It has been suggested that “truly successful, high-performance long-term channel relationships are built on commitment and all that is embedded within it” (Rylander et al. 1997:67). If for no other reason, academicians and practitioners alike should strive to understand the phenomenon thoroughly.

Opportunism has historically received substantial attention from academic researchers. But if anything, exploration has recently accelerated, likely, in large part due to Wathne and Heide’s (2000) review. In this article, opportunism’s forms, outcomes, and solutions were subjected to a qualitative literature review. While this synthesis enhanced understanding of opportunism and charted a research agenda, several important questions about the phenomenon remain unaddressed. For example, Wathne and Heide did not address the antecedents of opportunism. Moreover, their propositions are inevitably confounded by shortcomings that are inherently associated with literature reviews. According to Wolfe, (1986), these include:

- “The selective inclusion of studies,
- Differential subjective weighting of studies in the interpretation of findings,
- Misleading interpretations of study findings,
- The failure to examine characteristics of the studies as potential explanations for disparate or consistent results across studies, and
- The failure to examine moderating variables” (Wolfe 1986:10).

A review of the relevant literature reveals substantial lack of agreement about the roles played by various antecedents that may provoke firm tendencies to behave opportunistically. To
begin with, much of the literature supports a contention that a positive relationship exists between the level of dependence and the likelihood that opportunistic actions will occur (Schilling and Steensma 2002; Rokhan et al. 2003; Kwon and Suh 2005). There are, however, other prominent studies that suggest an inverse relationship exists (Joshi and Stump 1999; Wang 2002). In addition, a similar disparity exists regarding the proposition that uncertainty also serves as an antecedent to opportunistic channel member behaviors. Some studies (Lee 1998; Wang 2002) indicate that as the degree of uncertainty between the buyer and supplier increases, so does the propensity for opportunism. Other studies suggest an inverse relationship exists (Stump and Heide 1996; Lee et al. 2001). Moreover, some studies have shown that formal controls (i.e. bureaucratization) have helped to minimize opportunism (Dalhstrom and Nygaard 1999). Yet others directly contradict this suggestion, reporting instead that formal controls actually motivate opportunistic behaviors (Gilliland and Manning 2002; John 1984). Finally, clear inconsistencies across prior research regarding the relationship between bureaucratization and opportunism are also evident.

The issues and concepts just introduced are hardly inconsequential. To the contrary, each harbors substantial practical and theoretical significance. If possible, these sorts of gaps in our understanding of opportunistic behavior within channel settings should be narrowed. Just as clearly, a most effective way to reduce disparities such as these must involve an empirical examination of the existing research in aggregate. Such an examination necessarily calls for a meta-analysis.

By contrast, empirical findings associated with the relationship between relational norms and opportunism is consistent. Relational norms help establish trust, commitment, communications, and cooperation between buyers and suppliers, with an end goal of reducing
the propensity for opportunistic behavior (Joshi and Stump 1999). Without exception, these relational norms have been found to reduce opportunism (Morgan and Hunt 1994; Jap and Anderson 2003; Gruen and Shah 2000). Nonetheless, further investigation is required to explain the relative strength of the relationship compared to other antecedents and to examine whether previous studies' contextual factors moderate the relationship. This investigation also requires a quantitative synthesis of existing empirical observations.

RESEARCH PROBLEM

Numerous studies address opportunism. However, its antecedents have not been explored (Das 2006). Additionally, the disparate findings that have emerged in the cumulative complicate academician or practitioner efforts to identify or manage the true antecedents to opportunism. The findings of determinants of opportunism vary in terms of statistical significance, direction, and magnitude. A practical and theoretical resolution of these various discrepancies would surely prove practically constructive and carry great theoretical weight.

In an effort to address the disparities associated with the four primary antecedents of opportunism, this article reports the results of a meta-analysis. Hopefully, the results will synthesize findings from previous quantitative studies and uncover meaningful patterns in the relationships between opportunism and its antecedents. The study should build upon the current understanding of opportunism and permit development of implications and identification of critical areas for future research.

Meta-analysis permits the degree to which the variance in key effect sizes is real (i.e., not due to sampling or measurement error) to be documented. The procedure also unveils moderating variables that might account for the variance in the opportunism relationships. This
is highly functional. Academicians and practitioners would each benefit from understanding, with greater, though still not exact, certainty:

- Whether actions of bureaucratization, dependence, and uncertainty effectively increase or decrease opportunism,
- The overall expected strength of these relationships,
- Their relative importance, and
- The identity of any moderating constructs and how they might alter the relationships of the four primary antecedents and opportunism.

To our knowledge, no meta-analysis has ever been conducted in an attempt to synthesize the empirical literature surrounding the opportunism phenomena. With this in mind, the research objectives of this study are to:

- Map the constructs that have been studied empirically, and reveal the relative and overall strengths of their relationships with opportunism,
- Resolve directional discrepancies between the antecedents and opportunism, and
- Uncover the moderators that affect the magnitude of the relationships (i.e., effect size) between the antecedents and opportunism.

The next section describes the characteristics that may influence the directions and magnitudes of the relationships between opportunism and its antecedents.

**LITERATURE REVIEW and HYPOTHESIS DEVELOPMENT**

Since Williamson’s (1975) seminal explication of opportunism’s role in transaction cost analysis (TCA), marketing, economics, and management researchers have attempted to explain the opportunism concept and the antecedents and outcomes associated with it. Its role has expanded from an explanation of firm boundaries to a key phenomenon in buyer-seller relations
(Morgan and Hunt 1994). Based on a review of the literature, opportunism may be summarized as a function of the level of dependence, degree of existence/non-existence of relational norms, degree of bureaucratization, and level of uncertainty, as depicted below:

\[
\text{Opportunism} = f(\text{dependence, relational norms, bureaucratization, uncertainty})
\]

The TCA and relational exchange (RET) theories essentially frame the concept of opportunism. TCA contributes dependence, bureaucratization, and uncertainty as antecedents. RET introduces relational norms as an antecedent to opportunism.

TCA is a multi-functional, cost-based approach used to study the economic organization by using the transaction as the core unit of analysis (Williamson 1981). Williamson (1975) bases TCA reasoning on two fundamental assumptions. The first assumption is that humans are intrinsically tempted to behave opportunistically. The second is that there are limits to human awareness and knowledge. Williamson (1975) termed this “bounded rationality.” Consequently, and inescapably, resultant contracts between buyers and sellers will never be able to accommodate every contingency. Thus, opportunities for renegotiations will emerge – again, inexorably, because the opportunity to renegotiate, at least, cannot be avoided. At that point, one party is inevitably placed in a position of inferior power or dependency position, and thus is more susceptible to the other party’s opportunistic action.

**Antecedents to Opportunism**

While much of the research supports many of the central tenets of TCA, it does so to varying degrees. In addition, RET specifies relational norms as affecting opportunism. Table 1 summarizes 31 empirical studies that reported relationships between opportunism and various antecedents. Where theory supported aggregations, existing studies’ antecedents were
categorized as either synonymous with dependence, relational norms, bureaucratization, or uncertainty.

---Insert Table 1 about here---

**Dependence**

Dependence is the most frequently explored antecedent to opportunism. Circumstances where the buyer's or supplier's effectiveness is contingent on the performance of the other partner, and where few or no alternatives exist, place the more needy party at the mercy of the other, less needy, party. Such circumstances, termed *lock-ins*, leave the dependent side of the dyad with few options, and therefore it is *held-up*. TCA theory posits that because the victim of opportunism has few or no recourse, the ramifications (e.g. retaliation) for such behavior are few to non-existent. This theory has proven highly illuminating as evidenced by the fact that numerous studies support the proposition that a positive relationship exists between dependence and opportunism (Provan and Skinner 1989; Ping 1993; Anderson 1988; Rokkan et al. 2003; Joshi and Arnold 1997).

Dependence can evolve in many forms. One of those forms is embodied in the concept commonly known as a *transaction specific asset* (TSA), defined as a non-transferable investment whose utility is unique to a specific buyer-supplier relationship. TSAs may include site specificity, physical asset specificity, and human asset specificity (Williamson 1981). Williamson (1981) views asset specificity as the most important determinant as to whether opportunism will occur. Essentially, dependence may be described as a simultaneously-inverse phenomenon. For example, an investor firm becomes more vulnerable to opportunism from a trading partner in which it has invested, while the firm in receipt of the investment becomes less
susceptible to opportunistic forays from the now more dependent party. Either the buyer or seller may be the invested party, depending on the circumstances.

Power in dyadic relationships creates dependency. Provan and Skinner (1989:204) argue that a strong relationship exists between power and opportunism. They posit that the relationships between buyers and suppliers is represented by “two important aspects of power—dependence and control over decisions.” Power could be conceptualized as a serious threat of one-sided opportunistic action, rendering the less powerful party more dependent on the other. Therefore, in this study, power is treated as if it were synonymous with dependence.

In effect, TCA theory suggests firms that are more able to create lock-in situation are more likely to behave opportunistically. Reciprocally, the theory predicts that invested firms (i.e. those that are held up) will tend not to behave opportunistically for fear of jeopardizing their investment. Therefore, it is hypothesized that:

\[ H_{1a}: \] Where opportunism of a dependent channel member (investor) is measured, dependence will be negatively correlated with opportunism.

\[ H_{1b}: \] Where opportunism of a non-dependent channel member (investee) is measured, dependence will be positively correlated with opportunism.

**Bureaucratization**

The degree of bureaucratization in the buyer-supplier relationship also may influence the presence or absence of opportunistic behavior. Previous research has defined bureaucratization by its several sub-dimensions including formalization, centralization, and standardization (Paswan, Dant, and Lumpkin 1998). Each sub-dimensions has been examined in relation to opportunism.
Specifically, studies have examined the formalization of operating procedures (John 1984; Provan and Skinner 1989), centralization of authority (John 1984), controls (John 1984; Gilliland and Manning 2002; Achrol and Gundlach 1999), and formal contracts (Dahlstrom and Nygaard 1999; Cavusgil et al. 2004; Deeds and Hill 1999). Formalization includes efforts to administer and control the activities, processes, outputs, and obligations of exchange members (Gilliland and Manning 2002).

In this study’s review, four of the eight eligible studies found positive relationships between various forms of bureaucratization and opportunism. The other four studies uncovered inverse relationships. Further investigation of this phenomenon is clearly needed.

These divergent findings may be associated with the consequences incurred by the imposition of bureaucratic controls. TCA theory suggests that the use of contracts as safeguards should decrease opportunism. Dahlstrom and Nygaard (1999) also support the theory. In a franchisor-franchisee relationship, opportunism is reduced by the use of written contracts and explicit procedures that dictate the duties and responsibilities of both parties. However, other research (John 1984; Gilliland and Manning 2002; Provan and Skinner 1989; Dahlstrom and Boyle 1994) suggests the presence of bureaucratic structuring (e.g. controls) actually increases opportunism. In a study conducted in an international setting, Cavusgil et al. (2004) found mixed results. Only under certain circumstances did formal controls affect opportunism, and this relationship was moderated by the hostility of the legal environment.

Current findings are little short of being diametrically disparate. Therefore, a priori, it is not practical to hypothesize the direction of the relationship between bureaucratization and opportunism, e.g., no resounding evidence exists to support one or another assertion. Instead, we propose that potentially intervening moderators, which clearly may affect the direction and
magnitude of the relationship between bureaucratization and opportunism within the buyer-seller context, should be investigated. Those potential moderators will be introduced and explained below in greater detail. Such analysis may cast further explicatory light upon what has, to date, proven to be a disparate collection of empirical results.

Relational Norms

Heide and John (1992:34) defined relational norms as “expectations about behavior that are at least partially shared by a group of decision makers that have been shown to govern individual exchange relationships between firms.” They are commonly operationalized as solidarity (common responsibilities and interests), mutuality (mutual benefit and trust), flexibility (good faith modification), role integrity (dyadic roles extend beyond transactions), and harmonization of conflict (attempt to reach mutually-satisfactory compromise) (Gundlach et al. 1995).

The presence of relational norms within a buyer-seller relationship has been observed to reduce opportunism (Gundlach et al. 1995; Achrol and Gundlach 1999; Brown et al. 2000; Joshi and Stump 1999; Lai et al. 2005). Additionally, Achrol and Gundlach (1999) found that relational norms effectively curtail the potentially negative impact of asymmetric investment (dependence) on opportunism. The direct and indirect effects of relational norms on opportunism render their establishment and continuity essential to successful buyer-supplier relationships. Likewise, we expect to find that the level of relational norms established between partners will result in reduced opportunism. Thus, it is hypothesized that:

H$_2$: In the context of buyer-seller relationships, the presence of relational norms will be inversely associated with opportunism.
Uncertainty

Uncertainty is a permanent fixture in buyer-seller relations. Uncertainty entails "the inability to predict partner behavior or changes in the external environment (Joshi and Stump 1999:293)." TCA explicitly acknowledges uncertainty through its reliance on bounded rationality. Uncertainty coupled with bounded rationality essentially guarantees unforeseen situations will arise in which buyers and suppliers must renegotiate (Schilling and Steensma 2002). When combined with environmental volatility (Skarmeas et al. 2002), significant potential exists to exceed the four corners of a contract. Self incentive-ized interpretation and renegotiation are effectively invited.

Lee (1998) decomposed uncertainty into three components: adequacy of available information, predictability of outcomes, and confidence about outcomes. Four studies (Lee 1998; Schilling and Steensma 2002; Skarmeas et al.. 2002; Joshi and Stump 1999) found positive relationships between uncertainty and opportunism. Collectively, these studies reinforce the premise that changing circumstances not governed by the contract will invite renegotiation.

Conversely, several studies found an opposite effect between uncertainty and opportunism (Schilling and Steensma 2002; Stump and Heide 1996; Kwon and Suh 2005), thus undermining the same premise. Therefore, a priori, we do not hypothesize the direction of the relationship between uncertainty and opportunity. Instead, we propose that potentially intervening moderators, which affect the direction and magnitude of the relationship between uncertainty and opportunism in buyer-seller relationships, should be investigated in pursuit of further explanation.

The theoretical model (Figure 1) developed for this study features four presumed antecedents to opportunism (i.e., dependence, bureaucratization, relational norms, and
uncertainty) and three outcome constructs (i.e., performance, firm boundaries, relational exchange). The number of studies examining the relationship between opportunism and its outcomes was insufficient; therefore, outcomes of opportunism were not synthesized in this study. The shaded region (Figure 1) depicts the scope of our study. As the body of research matures, a comprehensive study of opportunism’s outcomes (e.g. performance, firm boundaries, and relational exchanges) should become feasible.

---Insert Figure 1 about here---

**Average Effect Size**

Many reported effect sizes included in this research revealed a disturbing trend of inconsistency. In fact, the correlations reported between opportunism and the antecedents of dependence, bureaucratization, and uncertainty were concurrently positive and negative, of comparatively small magnitude, and featured an overall average near zero, respectively. This suggests moderators may account for a large portion of the disparity revealed through prior research endeavors.

To the contrary, however, the effects reported with respect to the relationship between relational norms and opportunism were consistent. Thus, there is little doubt that the presence of relational norms should effectively suppress opportunism or threats of opportunism within buyer-seller relationships. Because effects associated with the relational norms were consistent, and effects associated with the other antecedents were not, it was hypothesized that:

H3 Relational norms will produce a significantly larger effect size (i.e. correlation with opportunism) than will the antecedents of dependence, bureaucratization, and uncertainty.
Moderators

Omitted Variables

Studies that omitted one or more of the antecedents to opportunism (i.e., dependence, bureaucratization, relational norms, and uncertainty) may have artificially generated an inflated relationship between the reported antecedent and the level of opportunism displayed by the buyer or supplier firm. For example, if a study reported a strong inverse correlation between relational norms and opportunism, the presence of dependence, bureaucratization, or uncertainty might reduce the strength of this relationship. In theory, each of these key antecedents accounts for variance in opportunism. Therefore, it is posited that:

\[ H_4 \] Studies that omitted one or more of the antecedents to opportunism (i.e., dependence, bureaucratization, relational norms, or uncertainty) will result in a stronger positive or stronger negative relationship

Sample Size

Although sample size was coded and investigated, it was not hypothesized, a priori, that sample size would suggest a difference in effect size. Sample size was accounted for with the Fisher-Z transformation of the correlation, which is commonly used in meta-analyses to counter the distorting effect of varying sample sizes (Hedges and Olkin 1985).

Actual or Potential Opportunism

Studies measuring a survey respondent’s perceived threat of opportunism, rather than actual opportunistic behavior, may exacerbate the relationship between an antecedent and the level of opportunism. The premise is that the buyer or supplier may fear that the other party is not entirely trustworthy. Trustworthiness can be viewed as a buyer’s or supplier’s confidence that the other party can be relied upon (Moorman et al. 1992). The consequences of actual
breaches of trust may not be as severe as buyers and suppliers fear them to be. Much of our expectation stems from an optimistic versus pessimistic outlook. Business partners that have shared assets may still consider the relationship "arms-length" and anticipate the worst outcome (Rousseau et al. 1998). More simply put, B2B partners may fear the worst and respond pessimistically when evaluating threats of opportunism (versus actual opportunistic behavior).

As such, it is hypothesized that:

H5 Studies measuring threats of opportunism, as opposed to actual opportunistic behaviors, will display a stronger correlation in the positive direction.

This hypothesis will be tested for each of the four antecedents. The variable ActualPerceived (Table 2) indicates the study was coded with a "1" if the measured opportunism was actual and a "0" if it was measured as a potential threat.

National Setting

In 1996, Johnson et al. reported that Western cultures were less opportunistic than their Japanese counterpart. Additionally, Hofstede (1983) suggested that many western culture nations (e.g. USA, Australia, Canada) are not as prone to avoid uncertainty, as are the nations of Japan or Korea. On this basis, then, it appears logical to suspect that samples collected by country may prompt differences in the correlations between antecedents and their associated level of opportunism. Note, however, this hypothesis is non-directional, given that 23 of the 31 studies examined samples originating in the U.S. The remaining eight studies included either European Union countries, Australia, Canada, Japan, or a multi-national setting. All but one (i.e. Japan) of the studies could be classified as a western-culture sample, and all can be considered
independent (vs. collectivist) cultures. Nevertheless, in an exploratory fashion, national setting was examined as a potential moderator. As such, it is posited that:

\[ H_6 \] The relationships between the antecedents and opportunism for U.S. and non-U.S. samples will significantly differ.

The variable \textit{Country} represents U.S. (coded “1”) versus multi-national (coded “0”) and the variable \textit{Country2} represents non-U.S. (“1”) vs. U.S. (“0”).

\textit{Number of Industries}

Most studies examined in this analysis were based on samples gathered from just one industry. However, several studies featured analysis based on samples derived from multiple industries. Multiple industries should yield more variation in the data (Geyskens et al. 1998). As such, it is hypothesized that:

\[ H_7 \] Studies that sampled multiple industries, as opposed to a single industry, will produce larger effect sizes.

The variable \textit{Industry} represents a single (“1”) versus a multiple-industry (“0”) study.

\textit{Type of Firm}

The additional complexity associated with evaluating an intangible service as opposed to a tangible product often prompts buyers or suppliers to establish more exacting forms of governance (i.e. bureaucratization) to reduce opportunistic behavior. Because services are evaluated by instances of performance rather than a physical object, such specifications are more difficult to define (Parasuraman et al. 1985). Likewise, quality assurance and monitoring are more difficult and variable with services. On this basis, then, the final hypothesis tested in this study is that:
The level of opportunism should be higher when a buyer or supplier operates in a services-dominated environment.

The variable *FirmType* represents a product ("1") versus a service ("0"), while the variable *FirmType2* represents a product/service mix ("1") or other ("0").

**METHODOLOGY AND META-ANALYTIC PROCEDURES**

**Selection of Studies**

The sampling frame of the meta-analysis consisted of all empirical studies that have investigated the relationships between four antecedents of opportunism. Efforts to identify empirical studies in the marketing literature prompted searches using ABIInform, EBSCO Host and Proquest, and reviews of numerous conference proceedings and dissertation abstracts. By using a keyword search of *opportunism*, its synonyms, and many other associated words (e.g. guile, self-interest, selfishness, power, dependence, asset specificity, relational norms, bureaucratization, and relational norms), more than 500 studies were uncovered. Of that group of studies, only 28 (27 Journal Articles and 1 conference proceeding) reported sufficient statistical data for a meta-analysis.

Three dissertations (Lohtia 1991; Ponsford 1993; Labahn 1992) listing correlations between opportunism and various antecedents were also obtained as a result of this search. Additionally, we contacted the authors of studies with unpublished statistics, but they were unable to provide the required data. Overall, the sampling frame consisted of 31 studies and 83 effects from those studies. While it cannot be stated with absolute certainty that no other studies existed, this search process likely captured the population of the empirical studies that examine
opportunism and its antecedents. An exhaustive search of multiple sources continued until the return on search effort became nil, thereby reducing the threat of the file-drawer effect.

**Statistic for Effect Coding**

For purposes of comparison through meta-analysis, studies must present a common statistical measure (Franke 2001). The study reported below uses the Pearson product-moment correlation (r). The 83 product-moment correlations obtained for opportunism and its antecedents were obtained from the summary data present in the 31 studies. Of those effects, 69 were reported by their corresponding r-value. The remaining 14 effects were converted from their reported t-statistic using methods suggested by Wolf (1986). Overall, correlations ranged from -0.76 to 0.68. The studies represent data from seven different countries. They were drawn from a relatively balanced distribution between product and service firms.

**Coding**

For each correlation, the following potential moderators were coded: (1) antecedent(s) included in the study, (2) whether the study failed to consider other antecedents to opportunism, (3) whether the study examined multiple industries or a single industry, (4) whether opportunism was based on a product or service firm-type, (5) the national setting of the study, 6) whether opportunism reported was actual or potential/threat, and 7) by large or small sample size. A study was coded with a qualitative dummy variable for the antecedents it included or omitted. For example, if a study reported a correlation for dependence and opportunism, formalization and opportunism, but omitted relational norms and uncertainty, it was coded with a "1" for both
dependence and formalization and a "0" for both relational norms and uncertainty. Size was also coded with a "1" if it was larger than the mean sample size across all studies and a "0" if below.

Based on constraints advocated by Wolf (1986), it was apparent that a model-level analysis (exploring each of the 83 correlations individually) rather than a study-level analysis (averaging the correlations within a study) was appropriate. This decision was also based in part on the Q-test for homogeneity of effects within studies. A homogeneous distribution of the effect sizes suggests that the combined results are essentially consistent with each other. Homogeneity tests are helpful in determining whether sampling error can explain the variance in the findings or whether moderating variables exist that may be responsible for the observed distribution of effects.

The null hypothesis that the sample effects came from the same population and that there is no variation in the sample correlations was rejected with the Q-test (52.19 rejected at p<0.01; \( \chi^2 = 154474.6, df = 30 \)). This indicates that significant heterogeneity within studies exists (Hedges and Olkin 1985). The test of homogeneity of population correlations is to conclude non-homogeneity if the statistic \( Q = \sum_{i=1}^{k} (n_i - 3)(z_i - z_w), \) [where \( z_1, \ldots, z_k \) are the z-transforms of correlation \( r_1, \ldots, r_k \); \( z_w \) is the weighted average correlation; and \( n_i \) is sample size], is larger than a critical value from the \( \chi^2 \) distribution with \( k - 1 \) degree of freedom (Hedges and Olkin 1985).

Four ANCOVA, dummy-variable regression models were used to determine whether the moderators were significant. The regression models included the individual antecedents of dependence, bureaucratization, relational norms, and uncertainty. Stepwise regression explained the variance in opportunism by substantive characteristics. For example, the regression models
included qualitative variables that indicate whether other antecedents had been omitted from the study and whether it was a U.S. or foreign country setting.

----Insert Table 2 about here---

RESULTS AND DISCUSSION

Consistency of Antecedents based on Average Effect Size

Prior to examining the regression model, an average effect size for each antecedent was computed. The results indicate that relational norms have the strongest association with opportunism with a mean correlation of -0.287. Dependence ($r_{avg} = 0.097$), bureaucratization ($r_{avg} = 0.070$), and uncertainty ($r_{avg} = -0.012$) have a weaker average correlation where all three indicate average correlations which are less than ± 0.1. Possible explanations for these marginal relationships follow.

Concerning dependence, an attempt to aggregate studies is confounded by a nuance of the phenomenon. Recall hypotheses 1a and 1b that posit opposite effects of dependence on opportunism contingent on which side of the buyer-seller dyad is examined and which party is invested (i.e., has something to lose, and thus may be "held up"). Figure 2 illustrates, in accord with TCA theory, how each party's opportunism should be measured according to the party that is invested. The empirical studies that examined in this meta-analysis spanned all four cases:

- Supplier opportunism measured; supplier is the investor;
- Buyer opportunism measured; supplier is the investor;
- Supplier opportunism measured; buyer is the investor;
- Buyer opportunism measured; buyer is the investor.

---Insert Figure 2 about here---
Additionally, in some cases, it was difficult to determine whether opportunism was measured at the invested or the investee party. Partitioning the effects to correspond to the hypothesized relationship directions, therefore, was not possible, likewise rendering inferences implausible. As such, insufficient information was reported in the studies to examine hypotheses 1a and 1b. Though disguised by a low averaged correlation, the average of the absolute value of correlations is 0.21. What is known with an acceptable degree of certainty, however, is that dependence is an important antecedent to opportunism.

The marginal overall correlation between bureaucratization and opportunism may be attributed to two factors. First, consistent with the convention of Paswan et al. (1998), centralization, formalization, and the use of contractual safeguards were aggregated into the construct bureaucratization used in this study. But these three dimensional concepts may be sufficiently distinct to affect opportunism differently.

However, an examination of each individually revealed further inconsistency. Whereas centralization consistently related positively to opportunism, contractual safeguards and formalization relate both positively and negatively to opportunism. A superior explanation, therefore, is that: (1) there are too few effects to draw definitive conclusions and/or (2) that bureaucratization is too situation-dependent driving opposite effects on opportunism. Relatedly, the culprit driving the miniscule overall correlation between uncertainty and opportunism may be a lack of studies and/or that uncertainty is too situation-dependent, thereby increasing the variance in results.

Nonetheless, the small overall effects of dependence, bureaucratization, and uncertainty on opportunism, coupled with a relatively strong correlation between relational norms and opportunism supports hypotheses 2 and 3. Among all of the antecedents to opportunism,
relational norms is the strongest, and is significantly more explanatory than is dependence, bureaucratization, and uncertainty.

Further, the overall direction of the relationships between dependence, bureaucratization and opportunism was found to be positive. However, the relationship magnitudes are sufficiently small to question any direct interpretation of these two overall effects. An examination of the moderator effects (e.g., omitted variables) was employed to ascertain why the findings for dependence, bureaucratization, and uncertainty were disparate and relatively weak.

**Omitted Variables**

Of the four antecedents, only one – *dependence* - was significant when omitted. This finding partially supports hypothesis 4. This implies that future studies examining the relationship between relational norms and opportunism should control for the significant effect of dependence. Otherwise, if the “dependence” construct is not included in a study, the positive relationship between relational norms and opportunism may be artificially inflated. Thus, except for relational norms, studies investigating the effects of dependence, bureaucratization, or uncertainty on opportunism can be performed in isolation without a threat to validity.

**Actual vs. Potential Opportunism**

Studies examining the relationship between dependence and opportunism reported higher effect sizes when the measured opportunism was potential (e.g. threatened) rather than actual. Apparently, respondents’ perceptions’ of actual opportunistic actions differ meaningfully from their perceptions of threats of opportunism. This implies that firms who are dependent upon other partners have differing levels of trust. Perhaps firms that are highly dependent upon another party are more vulnerable to loss and thus are more likely to have pessimistic future
expectations. Thus, they anticipate the worst outcome. Our hypothesis regarding potential opportunism being more extreme than actual opportunism did not occur for the other three antecedents; thus, $H_5$ was partially supported.

**National Setting**

Consistent with $H_6$, results from studies investigating the relationship between bureaucratization and opportunism indicate that non-U.S. exchange members are less opportunistic when greater bureaucratization (e.g. formal controls or contractual safeguards) is in place. This implies the prevailing organizational culture of foreign firms may respect governing rules and authority more than do U.S. firms. The result may also imply that, when contrasted with the organizational cultures of US firms, international organizational cultures may encourage more within channel cooperation and collaboration, and correspondingly less competition. Regardless, the fact that foreign firms reported relative dearth of opportunism places them at odds with their apparently more combative American counterparts.

**Industry (Single vs. Multi-Industry)**

The findings did not reveal industry type (single vs. multiple) as a significant moderator between the antecedents and opportunism. Thus, $H_7$ could not be supported. The prisoner’s dilemma (Hill 1990) posits that a non-zero probability perpetually exists that one or more exchange members will behave opportunistically. The results observed here provide a testament to the presumed ubiquity of the opportunism phenomenon and to the relevance of the “prisoner’s dilemma (Levitt and Dubner 2005; Nooteboom 1996). In an admittedly backhanded manner,
they also underscore the need for more managerial actionable insights into the identity, nature, and scope of the role played by antecedents to opportunism within buyer-seller relationships.

**Firm Type (Product vs. Service)**

Firm type moderated the relationship between relational norms and opportunism. This supported $H_8$. As hypothesized and as suggested by Parasuraman et al. (1985), detecting opportunism is more difficult when evaluating a service versus a product. Whereas relational norms tend to reduce opportunistic behavior, they are apparently more successful in doing so when a tangible product, rather than a service, is being procured.

This finding is perhaps best explained through considering a service’s more-elusive nature. With services, the required performance levels are inherently more difficult to verify. Consider a third-party logistics provider who is required to utilize air-ride trailers when transporting goods. Verifying whether each shipment met the requirement would prove prohibitively cumbersome. Conversely, the quality of delivered products is more easily verifiable than the quality of services (Parasuraman et al. 1985). Since the prospectively opportunistic player does not want to damage the trust placed in him or her by an exchange partner, and since opportunistic acts are more-readily discoverable with products (e.g. quality shirking), one should not be surprised that opportunism appears less likely in service dominated exchange settings.

The findings for the remaining antecedents of dependence, bureaucratization, and uncertainty do not suggest that the firm type moderates their relationship with opportunism. Therefore, this hypothesized moderator effect was only partially supported.

----Insert Table 3 about here---
THEORETICAL AND MANAGERIAL IMPLICATIONS

In a theoretical context, the finding of a significant omitted variable effect implies that when researchers empirically investigate the relationships between relational norms and opportunism, dependence should also be included as a control variable. Otherwise, researchers run a severe risk of inflating their effects, and undermining the validity of their contributions.

This study also implies that researchers should not treat threats of opportunism as surrogates for actual opportunistic behaviors. These results reveal that theoretical effects produced by the two measures different significantly. Studies that rely on measured threats of opportunism should explicitly qualify their results as such and not attempt to project findings to actual opportunistic behavior. Where a statistically-sufficient number of actual acts of opportunism are not available for measure via survey, researchers should consider alternative investigative methods such as quasi-experiments.

A third theoretical implication relates to researchers’ reporting of relationships between dependence and opportunism. For the benefit of researchers and those who review that research, researchers should explicate precisely how their hypothesized relationships align with TCA theory. Figure 2 is provided as a simple heuristic to assist the researcher and reviewers in this endeavor. For example, if a researcher hypothesizes that dependence is positively related to opportunism, he or she is limited to two of the four possible cases:

- Buyer opportunism measured; supplier is the investor
- Supplier opportunism measured; buyer is the investor
One means to validate the reciprocal nature of TCA theory as it relates to dependence is to measure opportunism at both sides of the dyad. This would verify that, indeed, the investee is most prone to behave opportunistically.

Thought-provoking as well as practical managerial implications also may be gleaned from these research findings. To begin with, the results suggest the possibility of exchange members capitalizing on instances of opportunism appears omnipresent. So too, apparently, is the temptation amongst buyers or sellers to act opportunistically. In light of the extremely negative economic and relational outcomes associated with opportunistic behavior (as extensively documented in the extant literature), executives who are ultimately accountable for B2B relationship success should proactively dissuade such behavior within their firms.

One means to dissuade opportunistic intentions is to mitigate its probability of occurrence via supplier selection (Wathne and Heide 2000). Another unconventional yet intuitive means is to look internally at the buyer’s own employees. Just as certain suppliers might have a greater propensity to deal opportunistically, so might employees. These employees might place the buyer-supplier relationship at risk, especially where relational-norm-based strategic partnerships are agreed upon by buyer and supplier executives, but are not communicated to mid-level managers who execute the relationships on an ongoing basis (Bowersox 1990). Therefore, not only should source selection authorities assess opportunism propensity when selecting suppliers, they should also do the same for their own new hires – particularly those who will interact frequently with suppliers.

A second implication follows from the widely recognized fact that human managers make decisions based on their experiences with actual opportunism and fears of potential opportunism. Because our findings indicate that actual opportunism is less severe than
anticipated opportunism, these results imply that it may be unprofitable to direct significant resources in hopes of eliminating anticipated opportunism. For example, the result of expending resources to monitor or establish formal, water-tight agreements with a buyer or supplier may fall short of the benefits. Dutta, Bergen, and John (1994) suggest that some level of tolerance for opportunism is more practical than complete elimination. Most firms will cheat if the stakes are high enough (Levitt and Dubner 2005) – this is nothing more than an intractable fact of human nature. Yet opportunistic behavior – particularly executed over a longer term – will typically ensure that there is no long run for the relationships in question. Given that most modern managers understand there is much mutual value to be gained from participating in longer-term strategic relationships grounded deeply in mutual trust, executives should strive to tamp down on the all-too human behavioral tendency commonly known as opportunism. It makes sense, then, to suggest that executives or executive trainers should teach their subordinate managers to weigh costs and benefits associated with the elimination or reduction of opportunism prior to investment. And of course, executives should exemplify no tolerance for opportunism in their dealings with their subordinates. In intra-organizational settings, exemplification probably provides the best instruction (Strutton 2004).

That actual opportunism tends not to be as severe as anticipated raises a more serious, macro-level implication within buyer-supplier relationships. That implication is associated with power. Cox (2001), among others, suggests power is the cornerstone of all buyer-supplier relationships. This perspective suggests that in polarizing relationships as either relational or transactional, the literature may be misleading. Relationships should not be classified as one (relational) or the other (transactional), for they are rarely mutually exclusive. Hence, even strategic relationships supposedly based on relational norms such as trust, commitment, and
cooperation are susceptible to power plays. These data suggest that to assume otherwise appears naïve.

The follow-on question then becomes: under what conditions will “relational” exchange revert to power manifestations? Perhaps the experienced buyer or supplier (depending on which side of the exchange dyad holds the power advantage) executive does not buy into the damaging effect of opportunism, and therefore, decides to engage in power-based opportunistic behavior. Perhaps the exchange member possessing inferior power should attempt to ascertain, in a strategic manner, the threshold point at which their partner is likely to revert to power-based tactics, and institute actions prior to reaching that threshold that would either thwart the opportunistic behavior or put a stop to its occurrence at all.

Relatedly, this study validates prior claims that services are more difficult to monitor than are physical products. To gauge the propensity toward opportunism of suppliers offering bundled products and services, buyers should concentrate their monitoring efforts toward the delivered product and work to establish strong relational norms to discourage potential “cheating” for the service aspect of the bundle.

Finally, the finding that nationality moderates the relationship between bureaucratization and opportunism has direct and practically significant implications given the inexorable trend toward a “flattened” global trade economy. Given the observation that non-U.S. firms tend to respect bureaucratic mechanisms, when dealing with non-U.S. firms, U.S. managers should utilize centralized authority, formal procedures, and specific, detailed contractual terms and conditions to safeguard their interests. Cavusgil et al. (2004) suggest that legal hostilities that exist in international channels require more formalized and bureaucratic measures to ensure the accords embedded in buyer-seller agreements are honored.
LIMITATIONS and SUGGESTIONS FOR FUTURE RESEARCH

This study is limited in that relatively few have addressed opportunism empirically. Although several moderators accounted for the disparate findings within the dependence, bureaucratization, and relational norms, there were no significant moderators for uncertainty. This was not surprising, though, as only nine uncertainty effects were reported in the literature. As the number of studies pertaining to each of the antecedents of opportunism increases, future meta-analyses may yield more useful insights regarding the phenomenon. Moreover, a more thorough investigation would have incorporated all of the qualitative literature with that of the quantitative (Wolf 1986).

Additional research is needed to address:

- The effect of uncertainty on opportunism,
- Whether the effects of the various antecedents on opportunism change over time, and
- Under what conditions formalization and contractual safeguards increase or decrease opportunism.

Specifically, research is needed that addresses uncertainty and its relationship with opportunism. Few studies have addressed this relationship, and those that have, indicate conflicting findings. Additionally, a longitudinal study measuring the effects of opportunism over time should yield meaningful insights. A plausible hypothesis is that relational norms and bureaucratization erode over the long-term, thereby resulting in increased opportunism. Finally, with such inconsistent relationships discovered between formalization and contractual safeguards on opportunism, research should follow the condition-seeking approach (Greenwald et al. 1986) to theory.
construction to identify under what conditions these antecedents affect opportunism, in what direction, and why.
REFERENCES


<table>
<thead>
<tr>
<th>Study Number</th>
<th>Year</th>
<th>Author(s)</th>
<th>Title</th>
<th>Sample Size</th>
<th>Operationalized Antecedent</th>
<th>Antecedent Group</th>
<th>r-value or converted r-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2005</td>
<td>Nunlee</td>
<td>The Control of Intra-Channel Opportunism Through the use of Inter-Channel Communication</td>
<td>84</td>
<td>Reflecting Information</td>
<td>Relational Norms</td>
<td>-0.31</td>
</tr>
<tr>
<td>2</td>
<td>1998</td>
<td>Lee</td>
<td>Developing International Strategic Alliances Between Exporters and Importers: The Case of Australian Exporters</td>
<td>105</td>
<td>Decision-making Uncertainty</td>
<td>Uncertainty</td>
<td>0.34</td>
</tr>
<tr>
<td>3</td>
<td>1999</td>
<td>Dahlstrom and Nygaard</td>
<td>An Empirical Investigation of Ex Post Transaction Costs in Franchised Distribution Channels</td>
<td>125</td>
<td>Formalization</td>
<td>Formalization</td>
<td>-0.45</td>
</tr>
<tr>
<td>4</td>
<td>2002</td>
<td>Schilling and Steensma</td>
<td>Disentangling the Theories of Firm Boundaries: A Path Model and Empirical Test</td>
<td>127</td>
<td>Commercial Uncertainty</td>
<td>Technological Uncertainty</td>
<td>0.08</td>
</tr>
<tr>
<td>5</td>
<td>1996</td>
<td>Stump and Heide</td>
<td>Controlling Supplier Opportunism in Industrial Relationships</td>
<td>160</td>
<td>Performance Ambiguity</td>
<td>Uncertainty</td>
<td>-0.39</td>
</tr>
<tr>
<td>6</td>
<td>1999</td>
<td>Joshi and Stump</td>
<td>Determinants of Commitment and Opportunism: Integrating and Extending Insights from Transaction Cost Analysis and Relational Exchange Theory</td>
<td>168</td>
<td>Dependence</td>
<td>Dependence</td>
<td>-0.16</td>
</tr>
<tr>
<td>7</td>
<td>2002</td>
<td>Skarmeas, Katsikeas, and Schlegelmilch</td>
<td>Drivers of Commitment and its Impact on Performance in Cross-Cultural Buyer-Seller Relationships: The Importer’s Perspective</td>
<td>292</td>
<td>Environmental Volatility</td>
<td>Uncertainty</td>
<td>0.19</td>
</tr>
<tr>
<td>8</td>
<td>1992</td>
<td>Labahn (Dissertation)</td>
<td>Early Supplier Involvement in New Product Development: A Vendor’s Perspective</td>
<td>347</td>
<td>Mutuality</td>
<td>Relational Norms</td>
<td>-0.28</td>
</tr>
<tr>
<td>9</td>
<td>1991</td>
<td>Lothia (Dissertation)</td>
<td>A Transaction Cost and Resource Dependence Based Model of Buyer-Seller Relations</td>
<td>146</td>
<td>Buyer's Perception of Seller Power</td>
<td>Dependence</td>
<td>0.37</td>
</tr>
<tr>
<td>10</td>
<td>2000</td>
<td>Anselmi and Marquardt (Conf Proc)</td>
<td>A Manufacturer's Advantage and the Reduction in Distributor Opportunism: The Role of a Benevolent Perspective of Governance</td>
<td>206</td>
<td>Manufacturer Relative Dependence</td>
<td>Manufacturer Relative Dependence</td>
<td>0.26</td>
</tr>
<tr>
<td>11</td>
<td>1984</td>
<td>John</td>
<td>An Empirical Investigation of Some Antecedents of</td>
<td>151</td>
<td>Cooperation</td>
<td>Relational Norms</td>
<td>-0.53</td>
</tr>
<tr>
<td>Year</td>
<td>Authors</td>
<td>Title</td>
<td>Pages</td>
<td>Notes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
<td>----------------------------------------------------------------------</td>
<td>-------</td>
<td>-------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>Gruen and Shah</td>
<td>Determinants and Outcomes of Plan Objectivity and Implementation in Category Management Relationships</td>
<td>128</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>Lee, Pae and Wong</td>
<td>A Model of Close Business Relationships In China (Guanxi)</td>
<td>306</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1994</td>
<td>Morgan and Hunt</td>
<td>The Commitment-Trust Theory of Relationship Marketing</td>
<td>204</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>Johnson, Cullen, and Sakano</td>
<td>Opportunistic Tendencies in JVs with the Japanese: The Effects of Culture, Shared Decision Making, and Relationship Continuity</td>
<td>155</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>Kwon and Suh</td>
<td>Trust, Commitment and Relationship in Supply Chain Management: A Path Analysis</td>
<td>171</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>Jap and Anderson</td>
<td>Safeguarding Performance Under Ex Post Opportunism</td>
<td>321</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1994</td>
<td>Morgan and Hunt</td>
<td>The Commitment-Trust Theory of Relationship Marketing</td>
<td>204</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>Johnson, Cullen, and Sakano</td>
<td>Opportunistic Tendencies in JVs with the Japanese: The Effects of Culture, Shared Decision Making, and Relationship Continuity</td>
<td>155</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year</td>
<td>Authors</td>
<td>Title</td>
<td>Page</td>
<td>Dimensions</td>
<td>Relational Norms</td>
<td>Value</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
<td>-------</td>
<td>------</td>
<td>------------</td>
<td>------------------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>Gassenheimer, Baucus, and Baucus</td>
<td>Cooperative Arrangements Among Entrepreneurs: An Analysis of Opportunism and Communication in Franchise Structures</td>
<td>162</td>
<td>606.7x798.7</td>
<td>Communication</td>
<td>0.53</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>Brown, Dev, and Lee</td>
<td>Managing Marketing Channel Opportunism: The Efficacy of Alternative Governance Mechanisms</td>
<td>368</td>
<td>606.7x798.7</td>
<td>Ownership</td>
<td>-0.02</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>Rokkan, Heide, and Wathne</td>
<td>Specific Investments in Marketing Relationships: Expropriation and Bonding Effects</td>
<td>198</td>
<td>606.7x798.7</td>
<td>Solidarity</td>
<td>-0.21</td>
<td></td>
</tr>
<tr>
<td>1997</td>
<td>Joshi and Arnold</td>
<td>The Impact of Buyer Dependence on Buyer Opportunism in Buyer-Supplier Relationships: The Moderating Role of Relational Norms</td>
<td>158</td>
<td>606.7x798.7</td>
<td>Buyer</td>
<td>0.68</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>Achrol and Cundlach</td>
<td>Comparative Commitment</td>
<td>101</td>
<td>606.7x798.7</td>
<td>Contract</td>
<td>-0.06</td>
<td></td>
</tr>
<tr>
<td>1994</td>
<td>Dahlstrom and Boyle</td>
<td>Behavioral Antecedents To Intrinsic Motivation In Capital Equipment Exchange Relationships</td>
<td>94</td>
<td>606.7x798.7</td>
<td>Mediated Influence</td>
<td>0.24</td>
<td></td>
</tr>
<tr>
<td>1989</td>
<td>Provan and Skinner</td>
<td>Interorganizational Dependence and Control as Predictors of Opportunism in Dealer-Supplier Relations</td>
<td>226</td>
<td>606.7x798.7</td>
<td>Service</td>
<td>-0.31</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>Cavusgil, Deligonul, and Zhang</td>
<td>Curbing Foreign Distributor Opportunism: An Examination of Trust, Contracts, and the Legal Environment in International Channel Relationships</td>
<td>142</td>
<td>606.7x798.7</td>
<td>Formal Contract</td>
<td>-0.09</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Authors</th>
<th>Title</th>
<th>Citation</th>
<th>Co-Specialize/Co-Share</th>
<th>Dependence</th>
<th>Relative N</th>
<th>HS</th>
<th>FOC</th>
<th>Bureaucratization</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>Gilliland and Manning</td>
<td>When Do Firms Conform to Regulatory Control? The Effect of Control Processes on Compliance and Opportunism</td>
<td>173</td>
<td>Co-Specialize</td>
<td>0.28</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1993</td>
<td>Ping</td>
<td>The Effects of Satisfaction and Structural Constraints on Retailer Exiting, Voice, Loyalty, Opportunism, and Neglect</td>
<td>222</td>
<td>Co-Specialize</td>
<td>0.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>Deeds and Hill</td>
<td>An Examination of Opportunistic Action Within Research Alliances: Evidence From the Biotechnology Industry</td>
<td>109</td>
<td>Co-Specialize</td>
<td>0.34</td>
<td>Co-Specialize</td>
<td></td>
<td></td>
<td>Co-Specialize</td>
</tr>
<tr>
<td>1993</td>
<td>Parkhe</td>
<td>Strategic Alliance Structuring: A Game Theoretic and Transaction Cost Examination of Interfirm Cooperation</td>
<td>111</td>
<td>Co-Specialize</td>
<td>0.22</td>
<td>Relational N</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>Heiman and Nickerson</td>
<td>Empirical Evidence Regarding the Tension Between Knowledge Sharing and Knowledge Expropriation in Collaborations</td>
<td>36</td>
<td>Co-Specialize</td>
<td>0.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Model</th>
<th>Variable</th>
<th>Scale level</th>
<th>Expected Sign</th>
<th>Coefficient</th>
<th>T-statistic</th>
<th>Significance</th>
<th>( R^2 )</th>
<th>F</th>
<th>d.f.</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependence</td>
<td>Formalization</td>
<td>nominal/omitted</td>
<td>+</td>
<td>0.155</td>
<td>0.894</td>
<td>0.378</td>
<td>0.122</td>
<td>4.161</td>
<td>33.00</td>
<td>0.040**</td>
</tr>
<tr>
<td></td>
<td>Relational Norms</td>
<td>nominal/omitted</td>
<td>-</td>
<td>0.063</td>
<td>0.376</td>
<td>0.709</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Uncertainty</td>
<td>nominal/omitted</td>
<td>+</td>
<td>-0.016</td>
<td>-0.098</td>
<td>0.923</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Actual Perceived</td>
<td>nominal</td>
<td>-</td>
<td>-0.345</td>
<td>-2.112</td>
<td>0.049**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sample Size</td>
<td>nominal</td>
<td>0</td>
<td>-0.056</td>
<td>-0.319</td>
<td>0.752</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Country</td>
<td>nominal</td>
<td>0</td>
<td>0.069</td>
<td>0.382</td>
<td>0.705</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Country2</td>
<td>nominal</td>
<td>0</td>
<td>0.078</td>
<td>0.447</td>
<td>0.658</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Firm Type</td>
<td>nominal</td>
<td>-</td>
<td>0.100</td>
<td>0.563</td>
<td>0.577</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Firm Type2</td>
<td>nominal</td>
<td>+</td>
<td>-0.027</td>
<td>-0.159</td>
<td>0.874</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Industry</td>
<td>nominal</td>
<td>0</td>
<td>-0.054</td>
<td>-0.265</td>
<td>0.792</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intercept</td>
<td></td>
<td></td>
<td>0.392</td>
<td>2.600</td>
<td>0.014</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formalization</td>
<td>Dependence</td>
<td>nominal/omitted</td>
<td>-</td>
<td>-0.078</td>
<td>-0.428</td>
<td>0.677</td>
<td>0.688</td>
<td>26.506</td>
<td>13.00</td>
<td>0.000**</td>
</tr>
<tr>
<td></td>
<td>Relational Norms</td>
<td>nominal/omitted</td>
<td>+</td>
<td>0.079</td>
<td>0.408</td>
<td>0.691</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Uncertainty</td>
<td>nominal/omitted</td>
<td>0</td>
<td>all formalization studies omitted uncertainty</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Actual Perceived</td>
<td>nominal</td>
<td>0</td>
<td>all studies including formalization measured actual opportunism</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sample Size</td>
<td>nominal</td>
<td>0</td>
<td>0.043</td>
<td>0.254</td>
<td>0.804</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Country</td>
<td>nominal</td>
<td>0</td>
<td>0.376</td>
<td>1.534</td>
<td>0.153</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Country2</td>
<td>nominal</td>
<td>0</td>
<td>-0.805</td>
<td>-5.149</td>
<td>0.000**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Firm Type</td>
<td>nominal</td>
<td>-</td>
<td>-0.130</td>
<td>-0.782</td>
<td>0.451</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Firm Type2</td>
<td>nominal</td>
<td>+</td>
<td>0.194</td>
<td>1.224</td>
<td>0.247</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Industry</td>
<td>nominal</td>
<td>0</td>
<td>0.065</td>
<td>0.375</td>
<td>0.715</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intercept</td>
<td></td>
<td></td>
<td>0.185</td>
<td>-5.149</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relational Norms</td>
<td>Dependence</td>
<td>nominal/omitted</td>
<td>+</td>
<td>0.380</td>
<td>0.373</td>
<td>0.019**</td>
<td>0.524</td>
<td>13.222</td>
<td>26.00</td>
<td>0.000**</td>
</tr>
<tr>
<td></td>
<td>Formalization</td>
<td>nominal/omitted</td>
<td>+</td>
<td>0.165</td>
<td>1.089</td>
<td>0.862</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Actual Perceived</td>
<td>nominal</td>
<td>+</td>
<td>0.165</td>
<td>1.098</td>
<td>0.865</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sample Size</td>
<td>nominal</td>
<td>0</td>
<td>-0.135</td>
<td>-0.930</td>
<td>0.942</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Country</td>
<td>nominal</td>
<td>0</td>
<td>-0.069</td>
<td>-0.278</td>
<td>0.338</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Country2</td>
<td>nominal</td>
<td>0</td>
<td>-0.167</td>
<td>-1.178</td>
<td>0.976</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Firm Type</td>
<td>nominal</td>
<td>0</td>
<td>0.210</td>
<td>1.511</td>
<td>0.970</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Firm Type2</td>
<td>nominal</td>
<td>0</td>
<td>-0.811</td>
<td>-5.053</td>
<td>0.000**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Industry</td>
<td>nominal</td>
<td>0</td>
<td>-0.075</td>
<td>-0.415</td>
<td>0.622</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intercept</td>
<td></td>
<td></td>
<td>0.163</td>
<td>1.230</td>
<td>0.231</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncertainty</td>
<td>Dependence</td>
<td>nominal/omitted</td>
<td>+</td>
<td>0.557</td>
<td>1.297</td>
<td>0.559</td>
<td>0.821</td>
<td>0.821</td>
<td>8.00</td>
<td>0.743</td>
</tr>
<tr>
<td></td>
<td>Formalization</td>
<td>nominal/omitted</td>
<td>-</td>
<td>-0.738</td>
<td>-1.172</td>
<td>0.450</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Relational Norms</td>
<td>nominal/omitted</td>
<td>-</td>
<td>-0.485</td>
<td>0.882</td>
<td>0.547</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Actual Perceived</td>
<td>nominal</td>
<td>-</td>
<td>-0.588</td>
<td>-0.933</td>
<td>0.522</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sample Size</td>
<td>nominal</td>
<td>-</td>
<td>-0.187</td>
<td>-0.662</td>
<td>0.529</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Country</td>
<td>nominal</td>
<td>0</td>
<td>0.037</td>
<td>0.087</td>
<td>0.945</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Country2</td>
<td>nominal</td>
<td>0</td>
<td>-0.533</td>
<td>-0.589</td>
<td>0.661</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Firm Type</td>
<td>nominal</td>
<td>-</td>
<td>-0.075</td>
<td>-0.415</td>
<td>0.622</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Firm Type2</td>
<td>nominal</td>
<td>0</td>
<td>-0.075</td>
<td>-0.415</td>
<td>0.622</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Industry</td>
<td>nominal</td>
<td>0</td>
<td>0.523</td>
<td>0.830</td>
<td>0.559</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p<.10
** p<.05
<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Relationship</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis 1a</td>
<td>H1a: Where opportunism of a dependent channel member (investor) is measured, dependence will be negatively correlated with opportunism.</td>
<td>Insufficient information to either support or fail to support</td>
</tr>
<tr>
<td>Hypothesis 1b</td>
<td>H1b: Where opportunism of a non-dependent channel member (investee) is measured, dependence will be positively correlated with opportunism.</td>
<td>Insufficient information to either support or fail to support</td>
</tr>
<tr>
<td>Hypothesis 2</td>
<td>The relationship between opportunism and relational norms will produce supported the largest average “effect size”</td>
<td>Supported</td>
</tr>
<tr>
<td>Hypothesis 3</td>
<td>Relational norms will produce a significantly larger effect size (i.e. correlation with opportunism) than will the antecedents of dependence, bureaucratization, and uncertainty</td>
<td>Supported</td>
</tr>
<tr>
<td>Hypothesis 4</td>
<td>Studies that omitted one or more of the antecedents to opportunism (i.e., dependence, bureaucratization, relational norms, or uncertainty) will result in a stronger positive or stronger negative relationship</td>
<td>Partially Supported (when Dependence is omitted from Relational Norms’ studies)</td>
</tr>
<tr>
<td>Hypothesis 5</td>
<td>Constructs measuring the perceived threat of opportunism as opposed to actual opportunistic behavior will result in a stronger positive or stronger negative relationship</td>
<td>Partially Supported (Dependence)</td>
</tr>
<tr>
<td>Hypothesis 6</td>
<td>The relationships between the antecedents and opportunism for U.S. and non-U.S. samples will be significantly different</td>
<td>Partially Supported (non U.S. firms are less opportunistic when bureaucratic controls are in place)</td>
</tr>
<tr>
<td>Hypothesis 7</td>
<td>Studies that sampled multiple industries versus a single industry will produce larger effect sizes</td>
<td>Not Supported</td>
</tr>
<tr>
<td>Hypothesis 8</td>
<td>The level of opportunism should be higher when a buyer or supplier operates in a services-dominated environment.</td>
<td>Partially Supported (opportunism greater for service-type firms in Relational Norms’ studies)</td>
</tr>
</tbody>
</table>
Figure 1.
Antecedents To and Consequences of Opportunism

Figure 2
Expected Relationship Between Dependence and Opportunism

<table>
<thead>
<tr>
<th>Invested Party</th>
<th>Buyer</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buyer</td>
<td>(-)</td>
<td>(+)</td>
</tr>
<tr>
<td>Supplier</td>
<td>(+)</td>
<td>(-)</td>
</tr>
</tbody>
</table>