

A meta-analytic review of the effects of organizational control in marketing exchange relationships

Jody L. Crosno · James R. Brown

Received: 3 November 2013 / Accepted: 2 April 2014 / Published online: 25 May 2014
© Academy of Marketing Science 2014

Abstract A growing body of empirical research has investigated various aspects of control in exchange relationships; however, understanding of this phenomenon is still in its infancy. The objective of our research is to review this literature quantitatively with meta-analysis to derive some empirical generalizations and reconcile the contradictory results about the effects of organizational control in marketing exchange relationships. This study finds that process and output control generally produce positive outcomes, especially when used jointly. It also finds that, because control encompasses more than monitoring alone, the former is generally more effective in producing positive outcomes. Our research also finds that organizational control can have either positive or negative consequences depending on the organizational setting (i.e., interorganizational vs. intraorganizational context)

Keywords Meta-analysis · Organizational control · Crowding out and disciplining effects · Marketing exchange

Introduction

Many marketing exchanges can be characterized as relationships between principals and agents, with the latter performing some

task on behalf of the principals (Bergen et al. 1992; Kashyap et al. 2012). For example, researchers commonly view franchisees as agents who operate their businesses on behalf of their franchisor principals (Anderson and Coughlan 2002; Rubin 1978). The sales force also acts directly on behalf of the company, either as company employees or independent sales agents (Anderson 1985). Regardless, the sales force is an agent of the principal firm whose goods and services it markets. Similarly, firms outsource many of their functions to contract manufacturers, distribution intermediaries, and facilitating agencies (e.g., advertising agencies, marketing research firms, third-party logistics providers) that act as agents on their behalf (Bergen et al. 1992).

Agents have an information advantage over their principals and may exploit this advantage (Bergen et al. 1992). For example, poor agent performance may be due to shirking, yet the agent may indicate to the principal that its poor performance was due to market forces (e.g., increased competition, decreased demand) rather than its shirking. To overcome this situation of information asymmetry, principals may attempt to control their agents' behavior and outcomes (Eisenhardt 1985). Dunkin' Donuts, for example, recently required its franchised stores that chronically do not meet standards to invest in electronic surveillance equipment (New York Post 2009). This equipment enables the franchisor to monitor the store and its employees to ensure that company standards are being met. Monitoring and control are not restricted to franchised relationships. Cisco Systems, caught off-guard by shortages of components from Asian sources, reacted with a number of steps to rectify the situation, including sending Cisco employees to key suppliers and contract manufacturers to monitor product quality and output levels (Berndtson 2010). The question is whether these efforts will be successful.

Unfortunately, the available research—conducted in a variety of marketing contexts, such as personal selling and sales management, marketing channels, and new product

Jody L. Crosno and James R. Brown contributed equally to this research; the order of authors was determined by a coin toss.

Electronic supplementary material The online version of this article (doi:10.1007/s11747-014-0386-5) contains supplementary material, which is available to authorized users.

J. L. Crosno (✉) · J. R. Brown
College of Business and Economics, West Virginia University,
Morgantown, WV 26506-6025, USA
e-mail: jody.crosno@mail.wvu.edu

J. R. Brown
e-mail: j.brown@mail.wvu.edu

development—provides no clear answer. For example, control has been both positively and negatively linked to satisfaction (Challagalla and Shervani 1996; Douthitt and Aiello 2001), opportunistic behaviors (Antia et al. 2006; John 1984), and performance (Aulakh et al. 1996; Bello and Gilliland 1997), among other consequences. In other words, a principal's control over its agents appears to have both its intended effects and unintended consequences.

These contradictory findings suggest that the context of exchange might influence the effectiveness of a principal's control mechanisms. For this reason, we believe that the time is ripe for a quantitative synthesis of the control literature to understand what we know about the construct, identify the boundaries of that knowledge, assess gaps in that knowledge, and reconcile contradictory empirical findings.

Toward those ends, we conduct a meta-analysis of the literature on control in marketing relationships, seeking to answer the following research questions: (1) Does control in general lead to positive or negative consequences? (2) Which contextual factors (i.e., moderators) are most effective in influencing the desired effects of control and mitigating its undesirable effects? (3) Why does the research context affect the positive or negative effects of control? In answering these questions, the reasons for the conflicting empirical findings should emerge, thereby identifying boundaries around what is known about the consequences of organizational control in marketing. For researchers, the answers should also illuminate unresolved issues, unexplained phenomena, and gaps in our knowledge about control's effects in marketing exchange relationships. For managers, the results should provide guidance as to the conditions under which different types of control are most appropriate, thereby helping them avoid the dysfunctional consequences of mismatches between the underlying conditions and the type of control.

Conceptualization

Control defined

Control refers to an organization's set of procedures for monitoring, directing, evaluating, and compensating agents (e.g., employees, trading partners) (Anderson and Oliver 1987). Organizations may focus their control efforts on outcomes and/or the processes believed to lead to those outcomes. Output control is the development, monitoring, and evaluation of performance outcomes such as sales volume, market share, inventory turn rate, and/or product quality. Process control, in contrast, is the development, monitoring, and evaluation of the procedures used to perform a task (Jaworski and MacInnis 1989).¹

¹ Because process control is sometimes referred to as behavior control (Anderson and Oliver 1987), we use these terms interchangeably.

Examples of process control include on-site inspections of agent processes and operating procedures, direct observation of agent behavior, and assessment of customer feedback (cf. Heide et al. 2007). Firms use control systems to reduce information asymmetry (Eisenhardt 1985) and ensure contractual compliance (Murry and Heide 1998).

While various theories provide insight on control in exchange relationships, we focus on agency theory and transaction cost economics to provide the basic conceptual underpinnings for control in marketing relationships. We also use a number of other theories (e.g., cognitive evaluation theory, relationship marketing) to explain why control mechanisms may not work as designed. Table 1 enumerates the theoretical constructs under study, provides conceptual definitions and illustrative measurement items for each, and shows the primary theoretical home for each.

Theoretical foundations

Agency theory Agency theory focuses on how principals can efficiently control the activities of agents who have decision-making authority (Eisenhardt 1985; Anderson and Oliver 1987). A major agency problem is determining whether the self-interested agent acts “in a manner consistent with the principal's goals” (Bergen et al. 1992, p. 3). This problem is compounded when the principal lacks information about the agent's performance (i.e., information asymmetry exists between the principal and the agent), but it can be mitigated with contracts that align the agent's and the principals' goals. When contracts cannot bring those goals into complete alignment, the principal must overcome information asymmetries through overt control of the agent's actions (Bergen et al. 1992; Brickley and Dark 1987).

Two key formal mechanisms of control predominate the literature: process (or behavior) control and output control. The choice between process and output control depends on (1) the principal's knowledge of the process by which the agent generates the desired outputs (Anderson and Oliver 1987; Eisenhardt 1985; Ouchi 1979); (2) the difficulty the principal faces in observing agent behavior or measuring agent outputs (Tremblay et al. 2003); and (3) the clarity of relationship goals (Ouchi 1979; Eisenhardt 1985).

Transaction cost economics (TCE) The essence of transaction cost economics is that firms attempt to minimize the costs of consummating and managing their transactions (e.g., the costs of negotiating the agreement, monitoring performance, enforcing contractual provisions, and otherwise managing the exchange relationship). TCE posits that firms can organize their transactions in ways that limit these transaction costs (Williamson 1975, 1985). Market-based transactions rely on the invisible hand of the market to limit problems of safeguarding, adaptation, and performance evaluation

Table 1 Conceptual definitions of constructs

Construct	Primary Theoretical Home	Conceptual Definition	Illustrative Measurement Items
Commitment	Relationship Marketing	Commitment is the desire and willingness to maintain a valued relationship (Moorman et al. 1993; Morgan and Hunt 1994).	<ul style="list-style-type: none"> •A high sense of unity exists between the alliance partner and my firm. My firm is going to continue with the alliance for years. My firm expects the alliance to be long lasting. My firm adjusts its operations when necessary for the alliance. (Bello et al. 2010) •We have a strong sense of loyalty to this customer. We think of this customer as part of our organization. We have a sense of partnership with this customer. (Joshi 2009) •I really care about the future of this organization. I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful. (Piercy et al. 2006)
Opportunism	Agency Theory/Transaction Cost Economics	Opportunism is guileful self-interest seeking behaviors that benefit one party at the expense of its exchange partner (Williamson 1975; Wathne and Heide 2000).	<ul style="list-style-type: none"> •I tend to ignore certain job-related activities simply because they are not monitored by the division. Even if my productivity is inconsistent, I still try to make it appear consistent. (Agarwal and Ramaswami 1993) •We have reason to believe that the company hides important information regarding our station. The company has not kept promises made when we entered the relationship. (Dahlstrom and Nygaard 1999) •On occasion, we lie about certain things in order to protect our interests. We sometimes promise to do things without actually doing them later. We do not always act in accordance with our contract(s) (Heide et al. 2007)
Output or Outcome Control	Agency Theory	Output (sometimes called outcome) control is exercised when principals attempt to influence agents' performance by developing, monitoring and evaluating of performance standards or outcomes (Anderson and Oliver 1987; Jaworski and MacInnis 1989).	<ul style="list-style-type: none"> •Specific performance goals are established for my job. My immediate boss monitors the extent to which I attain my performance goals. If my performance goals are not met, I would be required to explain why. (Jaworski and MacInnis 1989; Ramaswami 1996) •The extent to which I attain my quantitative goals is critically evaluated. If my quantitative performance goals are not met, I would be required to explain why. My pay increases are based on how my performance compared with my goals. (Fang et al. 2005) •Our efforts to monitor the distributor's results on each factor can be described as [do not monitor...monitor a great deal]: 1. Market penetration of new products. 2. Increasing the customer base in their market. 3. Sales volume of our products. (Bello and Gilliland 1997)
Performance	Agency Theory/Transaction Cost Economics	Performance includes objective and subjective evaluations of goal attainment (Kumar et al. 1992).	<ul style="list-style-type: none"> •The technology will contribute a great deal to the functionality of our products. The technology will contribute a great deal to the competitiveness of our products. The technology will contribute a great deal to the profitability of our products. (Carson 2007) •The employee: Performed above average on annual sales objectives. Performed above average on business growth objective. Performed above average on professional growth objective. (Ramaswami and Singh 2003) •How would you evaluate your performance on your agency's sales goals? Compared with other salespeople working for your company, how would you evaluate your effort? Compared with other salespeople working for your company, how would you evaluate your overall performance? (Oliver and Anderson 1994)

Table 1 (continued)

Construct	Primary Theoretical Home	Conceptual Definition	Illustrative Measurement Items
Behavior or Process Control	Agency Theory	Process (sometimes termed behavior) control is exercised when principals attempt to influence how a given task is performed by developing, monitoring and evaluating the <i>procedures</i> (e.g., means, behaviors, activities) agents use to perform the task, which is thought to lead to a given outcome (Anderson and Oliver 1987; Jaworski and MacInnis 1989).	<ul style="list-style-type: none"> •Contributing to your company's gaining significant market share. Generating a high level of sales. Exceeding sales targets. (Atuahene-Gima and Li 2002) •My immediate boss monitors the extent to which I follow established procedures. My immediate boss evaluates the procedures I used to accomplish a given task. My immediate boss modifies my procedures when desired results are not obtained. (Jaworski and MacInnis 1989; Ramaswami 1996) •We were up-to-date and well informed of activities undertaken by the subcontractor. We spent a lot of time observing the subcontractor as it worked. We were interested in how the subcontractor was actually completing its work. We closely monitored the job-related behaviors of the subcontractor throughout the project. (Stephen and Coote 2007) •Our efforts to influence the way the distributor performs [the following] activities can be describes as [no influence attempted...great deal of influence attempted]: 1. Distributor's promotional activities for our product. 2. The way distributor introduces new product. 3. Distributor's selling policy and procedures for new products. (Bello and Gilliland 1997)
Satisfaction	Relationship Marketing	Satisfaction is a positive affective or emotional state resulting from the appraisal of an exchange relationship (Schul et al. 1985).	<ul style="list-style-type: none"> •I find my work very satisfying. I feel that I am really doing something worthwhile in my job. My job is interesting and rewarding. My work provides me with a sense of accomplishment. I often think about quitting my current job. (Fang et al. 2005) •Your firm is satisfied with major supplier. Your firm is satisfied with the overall supplying of major supplier. Your firm is satisfied with the performance of major supplier. (Ryu et al. 2007) •I think of quitting this job. Overall, I am satisfied with this job. (Jaworski et al. 1993)
Trust	Relationship Marketing	Trust is the belief that an exchange partner is honest, reliable, and is interested in the welfare of the other party (Doney and Cannon 1997; Morgan and Hunt 1994).	<ul style="list-style-type: none"> •This is one of the most trustworthy suppliers with whom we do business. Sometimes this vendor is not completely honest with us. We trust that this supplier keeps our best interests in mind. (Gundlach and Cannon 2010) •How free do you feel to discuss with your immediate supervisor the problems and difficulties in your job without jeopardizing your position or having it held against you later? Immediate supervisors at times must make decisions which seem to be against the interest of the employees. When this happens to you as an employee, how much trust do you have that your immediate supervisor's decision was justified by other considerations? (Ramaswami and Singh 2003) •Both parties trusted each other throughout the course of the project. We had a trust-based relationship with our subcontractor. We were confident in relying upon our subcontractor. (Stephen and Coote 2007)
Relationship Quality	Relationship Marketing	Relationship quality is the overall assessment of the strength of an exchange relationship (Palmatier et al. 2006).	<ul style="list-style-type: none"> •Higher-order construct comprised of commitment, satisfaction, and trust (Garbarino and Johnson 1999; Smith 1998).

(Williamson 1975). In other words, market-based transactions employ output control to assure agreed-upon performance (Anderson and Oliver 1987). Ownership (i.e., hierarchical exchange) and contractual agreements (i.e., hybrid exchange) are other ways in which these problems can be mitigated; however, these forms of exchange require control to ensure that company employees or independent agents implement the firm's will (Williamson 1975, 1985). These means of transacting can provide additional coordination and control by adding process control to the output control afforded by market-based exchange (Williamson 1991).

Control in marketing exchange relationships

Firms control their exchange partners to detect and reduce opportunism (Jensen and Meckling 1976; Stump and Heide 1996) and to ensure that they meet their contractual obligations (Murry and Heide 1998). Control reduces information asymmetry (Eisenhardt 1985) and limits the discretion of exchange partners (Brickley and Dark 1987). However, as noted earlier, control can have both intended and unintended consequences, which we explore next.

Disciplining versus crowding out effects Early institutional economic theory focuses on the disciplining effect of control (e.g., Alchian and Demsetz 1972; Jensen and Meckling 1976; Williamson 1975). The purpose of control is to assure that agents comply with their contractual agreements and avoid behaving opportunistically. Effective control systems motivate agents to increase their efforts on behalf of the principal and reduce the benefits of opportunistic behavior to the agent (Frey 1993). They also stimulate agents to work smarter by adjusting their efforts to be more effectual (cf. Sujan 1986). These results are known as the *disciplining effects* of control.

Control systems, however, can also produce a *crowding out effect*, which arises when they decrease the agent's incentives to perform on behalf of the principal (Frey 1993). There are at least four interrelated reasons for this effect. First, the agent subordinates its autonomy when it enters into a contract with the principal (Van de Ven and Walker 1984); the more autonomy the agent gives up, the lower the value of that relationship to the agent (i.e., higher the costs of acceding autonomy) (cf. Halaby 1986). If these costs become too great (i.e., when in the eyes of the agent, the principal exceeds its legitimate authority), the agent's attachment to the principal weakens. That is, the value of the relationship to the agent erodes, thereby motivating the agent to restore that value by contractual shirking or otherwise imposing additional costs on the principal (Heide et al. 2007).

The first reason for crowding out has restoring value at its heart, while the second reason has at its core restoring autonomy. Here, control systems may produce psychological reactance by impinging on the agent's freedom to determine for itself the best means for achieving the principal's aims (Frey

1993; Ishida and Brown 2011). In other words, principal control may decrease the agent's intrinsic motivation to perform well, and increase its motivation to behave dysfunctionally. This happens because principal control represents a threat to the agent's freedom of action. The agent then becomes motivated to recapture lost autonomy and, hence, behaves in ways that are counter to the principal's wishes (Brehm 1966; Murry and Heide 1998). Stated a bit differently, principal control alienates the agent from the principal, thereby causing the agent to "act out" by behaving opportunistically (cf. Ouchi 1979).

The third reason for the crowding out effects of control has trust as its centerpiece. More intensive control signals that the principal distrusts the agent (Murry and Heide 1998) and,

As a consequence, the agent affected sees no reason why he or she should not behave in a [sic] opportunistic way (to use Williamson's terminology). This will maximize his or her utility by exploiting all possibilities for profitable shirking to the full. Hence, ... increased monitoring [and control] raises the marginal utility from shirking as the agent's 'bad conscience' is absolved by the breakdown of trust with the principal: Thus to some extent monitoring 'crowds out' work effort (Frey 1993, pp. 664–665).

The fourth reason why organizational control may crowd out desired behavior is also based on trust, but with organizational fairness logic (Husted and Folger 2004) instead of economic reasoning (Frey 1993). Essentially, Husted and Folger (2004) argue that monitoring and control erode trust and, hence, fairness in the principal-agent relationship. Note that we adopt Husted and Folger's (2004, p. 720) definition of fairness, which is "the perception by a person that a decision, outcome, or procedure is both balanced and correct." When agents perceive unfairness, "they may respond by reducing their effort, exiting [the relationship], stealing [from the principal], or changing their beliefs with respect to the value of their inputs [to the relationship] or outcomes [from the relationship]" (Husted and Folger 2004, p. 721). In other words, they may respond to the perceived unfairness of monitoring and control by behaving opportunistically—the very behavior that control was to eliminate!

Research suggests that output control is likely to produce disciplining effects (cf. Ramaswami 1996; Heide et al. 2007; Kashyap et al. 2012), as there is no intrusion or intervention that undermines the party's self-control. Behavior control, in contrast, is more likely to produce crowding out effects (Jaworski 1988; Ramaswami 1996; Heide et al. 2007). Behavior control is accompanied by loss of autonomy, as there are strict guidelines on which activities are to be performed and how these activities should be performed (Heide et al. 2007; Kashyap et al. 2012). The loss of autonomy and self-control produces reactance effects (Brehm 1966; Ghoshal and Moran 1996; John 1984), in which the controlled party is

motivated to counter the constraints imposed by the controlling party to restore prior freedoms.

Performance The most widely studied consequence of monitoring and control has been performance. Newer perspectives of performance take a Triple Bottom Line (3P) perspective: planet, people, and profit (Cronin et al. 2011). The “planet” P refers to environmental performance such that the firm’s “activities do not erode the natural resources” (Chabowski et al. 2011, p. 56). The “people” P deals with the social impact of organizational ventures on society as a whole (Chabowski et al. 2011; Cronin et al. 2011). The “profit” P is the traditional aspect of performance that assesses how well the firm creates economic value and generates shareholder returns (Chabowski et al. 2011; Cronin et al. 2011).

Because the research studies that we review focus on the profitability or economic aspects of performance, we take that same perspective in this research. In other words, we define performance in this context to be the objective and subjective evaluations of economic and financial goal attainment (cf. Kumar et al. 1992).

The empirical results of the studies investigating the performance effects of organizational control have been mixed. Several studies have found that output and process control enhance performance (e.g., Baldauf et al. 2001; Cravens et al. 2004; Heide et al. 2007; Joshi 2009). These results are indicative of the disciplining effect, wherein monitoring, feedback, and corrective action result in heightened performance. Other researchers have found that output and process control negatively affect performance (Agrawal and Lal 1995; Challagalla and Shervani 1996; Grant and Cravens 1996; Lewis et al. 2002). Hence, both types of control also appear to have crowding out effects, that is, situations in which agents react adversely to having their performance scrutinized.

Still other researchers could not uncover a significant relationship between either form of control and performance (e.g., Atuahene-Gima and Li 2002; Aulakh and Gencturk 2000; Challagalla and Shervani 1996; Gundlach and Cannon 2010; Kabadayi and Ryu 2007). These findings may indicate that both disciplining and crowding out effects operate simultaneously, thereby cancelling each other.

Opportunism Opportunism is guileful self-interest seeking, which entails withholding or distorting critical information (Williamson 1985), and/or willful evasion or shirking of contractual obligations (Wathne and Heide 2000). Agents who behave opportunistically do so for two basic reasons: (1) to achieve their own ends, irrespective of their principals’ goals, and (2) to avoid sanctioning for not reaching their principals’ goals. Two characteristics of output control enable the principal to limit opportunistic behavior. First, the principal-agent

relationship pivots on the outcomes that are monitored and evaluated. Achieving those outcomes enables both the principal and the agent to reach their respective goals. In other words, these outcomes align the agent’s incentives with the principal’s interests. As such, control over outputs is consistent with the agent’s self-interests and, as a result, leads to lower agent opportunism (Bergen et al. 1992). Second, because output control is less intrusive, agents are free to choose their own means for achieving the targeted outcomes. Hence, they are more likely to refrain from behaving opportunistically (Heide et al. 2007). For these reasons, the disciplining effect should prevail (i.e., output control should limit opportunism).

Strict guidelines about what should be performed and how is the essence of process control. Agents may view such control as intrusive and overly restrictive of their autonomy (Heide et al. 2007; Ramaswami 1996). Agents often react to these restrictions by behaving aggressively and opportunistically (John 1984). In other words, process control may crowd out the very behavior it was intended to limit (cf. Frey 1993). Indeed, empirical research supports this contention (Heide et al. 2007; Ramaswami 1996). Thus, we expect the relationship between process control and opportunism to be positive.

Relationship quality Consistent with the literature (Crosby et al. 1990; Garbarino and Johnson 1999), we view *relationship quality* as the “overall assessment of the strength of a relationship, conceptualized as a composite or multidimensional construct capturing the different but related facets of a relationship” (Palmatier et al. 2006, p. 138). Following Smith (1998) and Garbarino and Johnson (1999), we consider trust, satisfaction, and commitment to be the chief dimensions of relationship quality. Control may enhance relationship quality by acting as a medium for communicating expectations and for receiving performance feedback. Such bilateral communication builds trust and commitment and enhances the overall exchange relationship (e.g., Anderson and Narus 1990; Mohr and Nevin 1990), including satisfaction (Cravens et al. 1993; Jaworski et al. 1993). Other research suggests that monitoring and control may hinder relationship quality by signaling mistrust (Bello et al. 2010) and decreasing satisfaction (Challagalla and Shervani 1996). As mentioned earlier, more intensive control signals that the principal distrusts the agent, which in turn may erode relationship quality (Frey 1993; Husted and Folger 2004) and lead to subsequent guileful behaviors (Ramaswami and Singh 2003).

Moderators

Extant research has identified various methodological characteristics of empirical research that moderate the

focal relationships studied (Assmus et al. 1984). These characteristics may help us identify conditions under which control produces desired consequences and those in which its effects are undesirable. Consequently, we examined characteristics and form of control and organizational setting as research attributes that may influence whether control crowds out desired behavior or enhances it.

One potential moderator is the breadth of control studied. Specifically, control comprises an organization's set of procedures for monitoring, directing, evaluating, and compensating agents (Anderson and Oliver 1987), while monitoring is one aspect of control. Because control is a more holistic approach to managing an agent's behavior, we anticipate that control will produce more of the desired effects than monitoring alone.

Firms may opt to use process control, output control, or a combination of the two. Control forms may "combine synergistically" to influence goal attainment (cf. Jaworski 1988, p. 31). In other words, such plural forms "work together to reinforce and complement one another" (Cannon et al. 2000, p. 184). As mentioned, however, research also suggests that extensive control may generate crowding out effects. Therefore, we examined the use of plural versus singular forms of control. Plural forms of control capture the use of both output *and* process control, whereas singular forms use only output *or* process control. We also examined whether informal controls (e.g., self, professional) were used in conjunction with output and/or process control.²

Finally, we examined the research setting as a moderator. Institutional economics suggests that intraorganizational settings have heightened levels of coordination and control (Williamson 1991) and, therefore, have superior ability to monitor and control agent actions. Therefore, intraorganizational settings were compared to interorganizational settings.

Meta-analysis research method

In the following paragraphs, we describe the steps undertaken to conduct our meta-analysis of control in marketing exchange relationships. We start with a discussion of our search of the literature. Then, we explain our procedures for coding the empirical studies that investigate control. We conclude this section with a discussion of the analysis procedure.

² Professional controls are enacted "when peers within one's work unit engage in collegial interaction, discussion, and informal evaluations of a colleague's work," while self-control is enacted "when the individual shows commitment and willingness to take responsibility for his or her job" (Jaworski and MacInnis 1989, p. 408).

Literature search

First, we performed a keyword search (e.g., behavior control, outcome control, output control, process control, monitoring, surveillance, bureaucratic control, metering) of ABI/Global Inform and Business Source Premier databases to identify relevant studies. Second, electronic and manual searches of the following journals for relevant articles published from 1975 to 2010 were conducted: *Academy of Management Journal*; *Administrative Science Quarterly*; *Bell Journal of Economics*; *European Journal of Marketing*; *Industrial Marketing Management*; *Journal of Business Research*; *Journal of Economic Behavior and Organization*; *Journal of International Business Studies*; *Journal of Law and Economics*; *Journal of Law, Economics, and Organization*; *Journal of Marketing*; *Journal of Marketing Channels*; *Journal of Marketing Research*; *Journal of Personal Selling and Sales Management*; *Journal of Retailing*; *Journal of the Academy of Marketing Science*; *Management Science*; *Marketing Science*; *Rand Journal of Economics*; and *Strategic Management Journal*. These journals publish the vast majority of research on monitoring and control in marketing exchange relationships. Finally, after scanning the references of the initially obtained studies, the authors identified and included additional articles on monitoring and control.

A study was included in the analysis if it met three criteria: (1) it measured some form of control (e.g., output control, process monitoring) and at least one consequence of interest, (2) it was set in a marketing context (sales, channels, new product development, etc.), and (3) it included sufficient information to calculate an effect size. Overall, 65 empirical papers (with 66 independent samples) were deemed eligible for inclusion and were coded for the analysis.³ Two independent coders well-versed in the topic were used to code the studies (overall agreement >98%) and disagreements were resolved through discussion (Szymanski and Henard 2001).

Procedure

The effect size used in this meta-analysis was Pearson's product moment correlation, r . When one study provided multiple effect sizes for the same relationship, the mean r was computed and used in the analysis. The procedures outlined by Hunter and Schmidt (1990) were used to combine the observed correlations. First, box-and-whisker plots (Behrens 1997) were examined for outliers (Tukey 1977). No outliers were found in the data. Therefore, the analysis included 165 effect sizes. The sample sizes ranged from 41 to 1,042 and the total sample size (i.e., the combined N) was 14,232.

³ A complete list of studies included in the analysis is available upon request.

Next, to help account for measurement error, the correlations were corrected for attenuation when the reliabilities were reported for the measure (Hunter and Schmidt 1990). We then transformed the corrected correlations to Fisher's z scores, which we subsequently weighted by sample size to adjust for sampling error (Hunter and Schmidt 1990). Once averaged, the Fisher's z scores were transformed back to correlation coefficients. We calculated the χ^2 for association (Palmatier et al. 2005), the 95% confidence interval for the sample-weighted, reliability-corrected mean r (i.e., mean r_{wc}) (Rosenberg et al. 2000), and Rosenthal's (1979) fail-safe N to address the impact of unpublished studies not uncovered in our literature search (i.e., the file drawer problem).

Chi-square tests of homogeneity were next conducted for each relationship (Hunter and Schmidt 1990). A significant chi-square test indicates the presence of heterogeneity in the observed correlations that cannot be explained by statistical artifacts alone (Carlson et al. 2009). Pairwise correlations with significant heterogeneity were further analyzed to test for significant moderators. Specifically, the studies were categorized into one of two groups for each moderator variable. Then we examined the within and between group variance to determine if there was a significant difference between each group's average effect size (Rosenberg et al. 2000).⁴

Meta-analysis results

Table 2 reports the univariate meta-analysis results for output and process control. Answers to the first research question can be found in this table.

Does control in general lead to a positive disciplining or a negative crowding out effect?

Table 2 shows overwhelming evidence for the disciplining effects of control. Both output and process control are positively related to performance ($r=.12$, $p\leq.01$ and $r=.18$, $p\leq.01$, respectively), trust ($r=.23$, $p\leq.01$ and $r=.35$, $p\leq.01$, respectively), satisfaction ($r=.28$, $p\leq.01$ and $r=.34$, $p\leq.01$, respectively), and commitment ($r=.28$, $p\leq.01$ and $r=.31$, $p\leq.01$, respectively). In other words, control generally increases economic outcomes and enhances relationship quality.

In terms of opportunism, the results are not so clear. Whereas output control is not significantly related to opportunism ($r=.00$, $p>.10$), process control is positively related to opportunism ($r=.05$, $p\leq.05$). Thus, process control appears to foster opportunistic behavior, thereby crowding out desired behaviors.

⁴ A technical appendix is available upon request.

Which contextual factors (i.e., moderators) are most effective in influencing the desired effects of control (i.e., its disciplining effects) and mitigating its undesirable crowding out effects?

We examined how various contextual factors—monitoring vs. control, plural vs. single forms of control, presence vs. absence of informal controls, and intra- vs. interorganizational context—moderate the effects of control. Due to small numbers, an aggregated relationship quality variable (i.e., trust, satisfaction, and commitment) was created for the moderator analysis. Table 3 shows that all of the contextual factors we examined moderate the effects of control.

Monitoring versus control In general, control is more effective than monitoring alone in generating disciplining effects. Specifically, output control is more strongly and positively associated with performance than output monitoring alone ($\chi^2_{(1)}=19.30$, $p\leq.01$). Process control is more positively associated with relationship quality than process monitoring ($\chi^2_{(1)}=8.78$, $p\leq.01$). Further, process monitoring is strongly and positively related to opportunism, whereas process control is negatively related to opportunism. This difference is statistically significant ($\chi^2_{(1)}=132.57$, $p\leq.01$). Thus, in terms of opportunism, process control produces disciplining effects while process monitoring alone crowds out desired effects. Note that the links between process control and process monitoring in terms of performance do not differ significantly ($\chi^2_{(1)}=.39$, $p>.10$).

Plural forms of control Our Table 3 findings indicate that using plural forms of control leads to disciplining effects and using singular forms of control leads to crowding out effects. Specifically, when both output control and process control are used together, each is more strongly and positively related to performance (output control: $\chi^2_{(1)}=15.18$, $p\leq.01$; process control: $\chi^2_{(1)}=19.14$, $p\leq.01$) than when they are used alone. Further, the relationship between process control and opportunism ($\chi^2_{(1)}=39.17$, $p\leq.01$) is negative when the principal uses both forms of control and positive when the principal uses process control alone.

Informal controls The presence of informal controls is the weakest of all of the moderators that we examine (Table 3), yielding marginal results at best. The relationship between output control and performance ($\chi^2_{(1)}=.47$, $p>.10$) does not vary significantly based on the presence or absence of informal controls (e.g., self, professional). Yet the results suggest that informal controls enhance performance marginally ($\chi^2_{(1)}=3.04$, $p\leq.10$) when used in conjunction with process control. The relationship between process control and opportunism ($\chi^2_{(1)}=2.31$, $p>.10$) and process control and relationship quality ($\chi^2_{(1)}=1.17$, $p>.10$) does not vary significantly based on the presence or absence of

Table 2 Univariate results for output and process control

Relationship	<i>k</i> ^a	Total <i>N</i>	Simple Average <i>r</i>	Average <i>r</i> Corrected for Reliability	Sample-weighted, Reliability-corrected <i>r</i>	χ^2 for Association (d.f. = 1)	95% CI Lower Bound	95% CI Upper Bound	Fail-safe <i>N</i> ^b	Q-Statistic for Homogeneity Test (d.f.)
OC-PC	33	7470	0.428	0.537	0.561	2872.15	0.545	0.577	30825.1	1093.12 (32)
OC-Performance	29	6953	0.107	0.129	0.121	101.11	0.096	0.145	975.4	122.22 (28)
OC-Opportunism	6	1405	0.006	0.004	0.001	0.00	-0.067	0.070	0.0	8.36 (5)
OC-Relationship Quality	15	4030	0.433	0.267	0.284	339.86	0.253	0.365	1542.9	169.59 (14)
OC-Trust	5	918	0.198	0.238	0.225	47.45	0.136	0.311	87.3	32.79 (4)
OC-Satisfaction	9	3044	0.216	0.260	0.279	248.45	0.240	0.318	667.8	86.57 (8)
OC-Commitment	5	1929	0.174	0.209	0.281	159.09	0.221	0.338	178.2	37.01 (4)
PC-Performance	40	7606	0.150	0.180	0.183	256.66	0.160	0.206	3220.4	184.50 (39)
PC-Opportunism	11	2503	0.070	0.106	0.050	6.17	0.005	0.095	47.2	468.06 (10)
PC-Relationship Quality	20	4644	0.280	0.330	0.331	541.54	0.302	0.357	3580.4	97.47 (19)
PC-Trust	9	1483	0.301	0.357	0.348	191.48	0.293	0.400	637.9	34.02 (8)
PC-Satisfaction	11	3185	0.297	0.348	0.338	389.83	0.302	0.373	1441.3	63.68 (10)
PC-Commitment	7	2275	0.225	0.262	0.308	227.77	0.260	0.353	418.5	16.39 (6)

^a *k* = number of studies. Since only one effect size was extracted/calculated from each study, this number is also indicative of the number of effect sizes.

^b Fail-safe *N* is an indicator of the reliability of the mean effect size. Lower values suggest that the results should be interpreted cautiously, as publication bias may be present.

informal controls. Interestingly, the results suggest that informal controls may hinder relationship quality when output control is used ($\chi^2_{(1)}=3.22, p \leq .10$) but the effect is marginal.

Organizational setting This moderator appears to have the greatest impact on the differential effects of output and process control. Process control is more strongly and positively associated with performance ($\chi^2_{(1)}=29.96, p \leq .01$) and relationship quality ($\chi^2_{(1)}=20.04, p \leq .01$) within organizations than

between them. Thus, the disciplining effects of process control appear stronger in intraorganizational contexts than in interorganizational ones. The negative association between process control and opportunism provides further evidence for these disciplining effects within organizations (Table 3). Note, however, that process control is positively associated with opportunism in interorganizational contexts and the difference between these two contexts is statistically significant ($\chi^2_{(1)}=201.72, p \leq .01$). This finding suggests a crowding out effect

Table 3 Moderator results^{a,b}

Moderated Relationship	Monitoring v. Control		Plural Forms of Control		Informal Controls		Organizational Setting	
	Monitor	Control	Both OC and PC	OC or PC	Present	Absent	Inter	Intra
Output Control								
OC-PERF	.036 (6)	.154 (23)*	.146 (24)	.036 (5)*	.113 (12)	.129 (17)	.126 (8)	.123 (20)
OC-RQ	–	–	–	–	.266 (8)	.321 (7)***	.099 (4)	.330 (10)*
Process Control								
PC-PERF	.199 (9)	.180 (31)	.218 (23)	.115 (17)*	.219 (9)	.176 (30)***	.093 (14)	.225 (25)*
PC-OPPRT	.583 (2)	-.037 (9)*	-.036 (7)	.230 (4)*	.023 (5)	.085 (6)	.559 (3)	-.090 (8)*
PC-RQ	.224 (4)	.345 (16)*	.340 (13)	.306 (7)	.318 (8)	.346 (12)	.226 (7)	.366 (12)*

* $p \leq .01$

** $p \leq .05$

*** $p \leq .10$

^a The cell entries include the average effect size for each moderator level and the number of effect sizes for each level in parentheses. We excluded studies that could not be coded into one of the subgroups of the moderator. We use a dash to indicate we did not perform the analysis when the number of effect sizes for one level of the moderator is less than two.

^b The test of homogeneity suggests there is not sufficient heterogeneity in the OC-Opportunism relationship to test for moderators.

for process control in interorganizational relationships.

The relationship between output control and performance does not vary by organizational setting ($\chi^2_{(1)}=.01, p>.10$), but the output control-relationship quality link is stronger in intra- versus interorganizational settings ($\chi^2_{(1)}=34.37, p\leq.01$), offering further support for the disciplining effects of control within organizations as compared to between organizations.

Relative to the other moderators, this one produced more and stronger differences in effect sizes. In addition, it is theoretically compelling because it addresses how organizational boundaries shape the effects of control. For these reasons, we examine the organizational setting moderator in more detail by estimating a structural equation model to answer our next research question.

Why does the research context affect the disciplining or crowding out effects of control?

As noted above, the moderator analysis suggests that the effects of control vary significantly between the two important research contexts of intra- and interorganizational relationships. By definition, intraorganizational (or within-firm) relationships (WF) occur between members of the same organization. In their simplest forms, WF relationships occur between owner-principals and agent-employees, with the principals' authority rooted in their rights of ownership. Interorganizational relationships (IO) occur between principals and agents employed by different organizations (e.g., franchisors and independent franchisees). For these relationships, authority is rooted in contracts between principals and their independent agents.

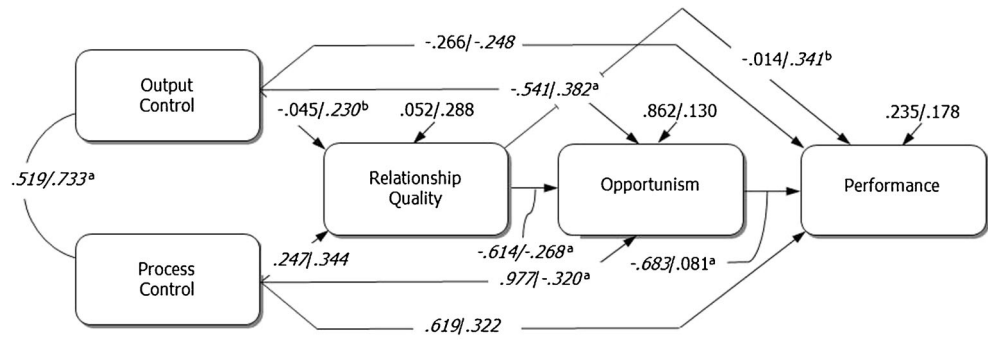
Under certain conditions (e.g., frequent transactions, uncertainty, and investment in transaction specific

assets), WF relationships are superior to IO relationships (especially, those characterized by limited-scope or market contracts) in limiting opportunism (Williamson 1975, 1985). However, under other conditions, the higher-powered incentives of the marketplace provide superior control over the principal-agent relationship. To explore these differences further, we developed and tested a structural model that links control with its consequences (see Fig. 1 and Table 4).

Model rationale Our basic structural model shows output and process control affecting opportunism and subsequent performance (see Fig. 1). The basic premise is that output control will limit opportunism and enhance performance, whereas process control will increase opportunism and hinder performance. In other words, we believe that the disciplining effects of control (i.e., its intended effects) should predominate for outcome control. Yet, due to strict guidelines on which activities to perform and how these activities should be performed, process control will produce crowding out effects, especially in interfirm settings where independent firms value their autonomy (Heide et al. 2007).

According to Frey (1993), increased monitoring and control will crowd out desired behavior when relationships between principals and their agents are more personalized. The reason for this is two-fold. Agent self-determination (i.e., autonomy) will decrease because the principal signals with increased control that the agent is no longer to be trusted to perform autonomously on the principal's behalf. Similarly, self-evaluation also decreases with increased control (i.e., the principal shows that it does not trust the agent's ability to act appropriately on its behalf). Therefore, we include relationship quality (as a proxy for more personalized relationships) as a mediator. We compared this model between the IO

Fig. 1 Empirical consequences of organizational control in marketing relationships* † ‡



*The first/second number is the standardized parameter estimate from the interorganizational (IO)/intraorganizational (WF) subsample.

†Italicized estimates are statistically significant at $p \leq .05$.

‡Both models are fully saturated and, hence, fit the data perfectly.

^aParameters are statistically different at $p \leq .01$.

^bParameters are statistically different at $p \leq .05$.

^cParameters are statistically different at $p \leq .10$.

Table 4 A comparison of the effects of output and process control between the interorganizational and intraorganizational contexts

Structural Parameters [†]	Interorganizational (IO) Sample						Intraorganizational (WF) Sample					
	Relationship Quality		Opportunism		Performance		Relationship Quality		Opportunism		Performance	
	Unstd. Est.	t-value	Unstd. Est.	t-value	Unstd. Est.	t-value	Unstd. Est.	t Value	Unstd. Est.	t Value	Unstd. Est.	t Value
OC	-0.045	-0.407	-0.541	-12.761 ^a	-0.266 ^c	-1.666	0.230	3.258 ^a	0.382	4.804 ^a	-0.248	-3.098 ^a
PC	0.247	2.222 ^b	0.977	22.519 ^a	0.619	2.509 ^b	0.344	4.864 ^a	-0.320	-3.942 ^a	0.322	3.985 ^a
RQ	—	—	-0.614	-16.520 ^a	-0.014	-0.085	—	—	-0.268	-4.255 ^a	0.341	5.408 ^a
OPPRT	—	—	—	—	-0.683	-2.971 ^a	—	—	—	—	0.081	1.455
OC ↔ PC			0.519 ^a						0.733 ^a			
Goodness of Fit Indices												
R ²	0.052		0.862		0.235		0.288		0.130		0.178	
GFI			1.000						1.000			
χ ²			0.000						0.000			
df			0						0			
p			0.000						0.000			
CFI			1.000						1.000			
NFI			1.000						1.000			

[†] OC = output control, PERF = performance, PC = process control, RQ = relationship quality, and OPPRT = opportunism.

^a $p \leq 0.01$

^b $p \leq 0.05$

^c $p \leq 0.10$

and WF contexts to detect empirical differences in construct linkages.⁵

Next, we discuss the results that are consistent across the two contexts. We then describe the results that are not consistent across the two contexts. The theoretical reasoning for each of these findings is also discussed. We begin with the disciplining effects of organizational control.

Disciplining effects Figure 1 shows that, consistent with the disciplining effects of control, process control enhances performance in both the WF (0.32, $p \leq 0.01$) and IO samples (0.62, $p \leq 0.01$). It also restricts opportunism (-0.32, $p \leq 0.01$) in the WF sample. These results indicate that process control provides both intra- and interfirm agents with more specific direction for achieving higher levels of performance, and provides the necessary restraints on opportunistic behavior within firms.

⁵ We performed multiple-group analysis to test statistically for differences in parameter estimates between the IO and WF samples (Byrne 2001; Jöreskog and Sörbom 1989). A two-group model that imposed no constraints on the parameters was found to fit the data acceptably ($\chi^2 = .00$, $df = 4$, $p = 1.00$). This fit statistic provided the baseline against which we compared the fit of alternative models. In the first alternative model, we set all of the structural parameters in the IO equal to those of the WF sample. The change in the chi-square fit index was statistically significant ($\Delta\chi^2 = 209.99$, $df = 10$, $p < .01$), indicating that the structural parameters do differ between the IO and WF samples (see Fig. 1).

We found that output control results in disciplining effects by limiting opportunism in the IO sample (-0.54, $p \leq 0.01$) (Fig. 1). First, when the principal increases its scrutiny of the agent’s outcomes, it limits the agent’s ability to behave opportunistically. Second, heightened output control (i.e., monitoring, evaluation, and remediation) focuses both the principal and agent on achieving higher levels of performance. Third, by targeting the agent’s ends, rather than its means, the principal preserves the agent’s self-determination over the steps it takes to reach shared goals. This form of control also boosts the agent’s self-efficacy because the principal signals that it trusts the agent’s discretion in choosing the means to achieving its desired ends. Hence, these findings are consistent with the cognitive evaluation theory perspective on monitoring and control (Frey 1993; Deci and Ryan 1985).

Crowding out effects Figure 1 shows that output control significantly reduces performance for the WF sample (-0.25, $p \leq 0.01$), but not the IO sample (-0.27, $p > 0.05$). These findings suggest that, in the WF sample, output control appears to undermine (i.e., crowds out) desired results (i.e., enhanced performance). Thus, feedback and direction on output may not be enough to improve performance for company-employed agents.

Table 5 Decomposition of the effects of output and process control: interorganizational versus intraorganizational samples

Structural Path*	Interorganizational (IO) Sample				Intraorganizational (WF) Sample			
	Direct Effects	Indirect Effects Through RQ	Indirect Effects Through OPPRT	Total Effects	Direct Effects	Indirect Effects Through RQ	Indirect Effects Through OPPRT	Total Effects
OC→PERF	-0.266 ^c	-0.018	0.370 ^a	0.085	-0.248 ^a	0.073	0.031 ^c	-0.144
PC→PERF	0.619 ^b	0.100	-0.667 ^a	0.052	0.322 ^a	0.110	-0.026	0.406
RQ→PERF	-0.014	—	0.420 ^a	0.406	0.341 ^a	—	-0.022 ^c	0.319
OC→OPPRT	-0.541 ^a	0.028 ^a	—	-0.513	0.382 ^a	-0.062 ^a	—	0.320
PC→OPPRT	0.977 ^a	-0.152 ^a	—	0.825	-0.320 ^a	-0.092 ^a	—	-0.412

*OC = output control, PERF = performance, PC = process control, RQ = relationship quality, and OPPRT = opportunism

^a $p \leq 0.01$

^b $p \leq 0.05$

^c $p \leq 0.10$

Similarly, output control exacerbates opportunism in the WF sample (0.38, $p \leq 0.01$). A possible reason for this could be the agents' reactions to a mismatch between the WF reward and control systems. We explore this possibility more completely in the Discussion section. Process control, in contrast, heightens opportunism (0.98, $p \leq 0.01$) in the IO sample, which is likely because independent firms value their autonomy. This classic crowding out result will also be more fully addressed in the Discussion section.

Figure 1 further indicates that opportunism is an important mediator of the control-performance relationship in IO samples.⁶ The indirect effects implied by the parameter estimates for the interorganizational sample support the above conclusion (Table 5).

Although process control directly enhances performance in IO relationships (0.62, $p \leq 0.05$ from Table 4), it indirectly undermines that disciplining effect by exacerbating opportunism which in turn crowds out enhanced performance (i.e., the indirect effect of process control on performance through opportunism is -0.67, $p \leq 0.01$) (Table 5).

Similarly, the disciplining effects of output control in the IO sample directly limit opportunism (-0.54, $p \leq 0.01$ from Table 4) and, as a result, indirectly heighten performance (.37, $p \leq 0.01$) (Table 5). This is in contrast to the direct (although non-significant) crowding out effects of output control on performance (-0.27, $p > .05$ from Table 4) and indirect effects on opportunism (.03, $p \leq 0.01$). On balance, the positive disciplining effects and negative crowding out effects of output control on performance tend to cancel each other in the IO

sample (i.e., total effects=0.09 from Table 5), as we speculated earlier.

For the WF samples, the indirect effects of output and process control through opportunism are not sufficiently large to warrant further analysis (Table 5). This is in contrast to our findings for the IO sample. With the WF sample, opportunism had no significant, direct impact on performance (0.08, $p > 0.05$). Apparently, principals in intraorganizational relationships with their agents have figured out ways to limit the dysfunctional effects of opportunism, either through more comprehensive methods of monitoring and controlling agent behavior or by offering more subtle and varied rewards (Anderson and Weitz 1986).

Discussion

Overview of the meta-analysis

Drawing primarily on agency theory and transaction cost economics (TCE), this study quantitatively synthesized theoretical correlates of two aspects of organizational control: output and process control. Our goal was to answer three research questions suggested by the empirical literature pertaining to the effects of output and process control in marketing exchange relationships. In particular, we focused on the contradictory effects of organizational control on opportunism and performance uncovered in the literature. We begin our discussion by explaining how this study addresses its underlying research questions.

(1) *Does control in general lead to positive or negative consequences?* Our meta-analysis showed that both output and process control generally have a disciplining effect. Both positively affected economic outcomes (i.e., enhanced performance and reduced opportunism) and boosted relationship

⁶ Fig. 1 and Table 5 indicate that relationship quality also mediates the effects of control, more so on opportunism than on performance. We emphasize opportunism because its mediating effects are stronger than those for relationship quality.

quality. The one exception is that process control appears to foster opportunistic behavior rather than mitigate it. Process control generally had stronger effects than did output control. Moreover, we found output control and process control to be positively related, suggesting that organizations often use plural forms of control.

(2) *Which contextual factors (i.e., moderators) are most effective in influencing the desired effects of control and mitigating its undesirable effects?* The moderator analysis compared the effect sizes of studies that solely used the narrower monitoring construct versus those that used the broader control construct. Control generally produced stronger disciplining effects (i.e., less opportunism, greater performance, and superior relational quality) than did monitoring, but process monitoring led to crowding out effects by strongly exacerbating opportunism. The moderator analysis also suggested that plural forms generally produce desirable results (i.e., higher levels of performance and relationship quality and lower levels of opportunism). The presence of informal controls (e.g., self, professional) were not strongly or consistently related to the effectiveness of either outcome or process control.

The moderator analyses further revealed that differences exist among the effect sizes due to organizational setting. Control in WF (intraorganizational) versus IO (interorganizational) settings generally produced stronger and more disciplining effects, but process control generated more opportunism (i.e., crowded out desirable behavior) in IO settings.

(3) *Why does the research context affect the disciplining or crowding out effects of control?* The structural model analysis generally supported the findings of the moderator analysis comparing the WF and IO samples. Of particular note is the overall finding that the disciplining effect of control in marketing organizations predominated its crowding out effect. We did, however, uncover some evidence of crowding out in both samples. See Table 6 for a summary of the disciplining and crowding out effects uncovered by the structural model estimation.

Disciplining effects

Output control Our structural model uncovered only one direct disciplining effect for output control: its negative impact on opportunism in IO samples. Thus, the monitoring, feedback, and direction provided by output control limits opportunism in interorganizational contexts.

But, output control produced numerous indirect disciplining effects across both WF and IO samples. Our results show that these effects operate in two ways. First, output control enhances relationship quality which, in turn, limits opportunism in WF samples. According to Ishida and Brown (2011), the guidance and feedback provided through the control process strengthens the principal-agent relationship because, through it, the principal signals its trust in the agent, demonstrates a deeper understanding of the agent’s role, shows interest in the agent’s activities, and develops enhanced bilateral communications. And, higher quality relationships (i.e., those characterized by high levels of trust, commitment, and satisfaction) experience lower levels of opportunism (e.g., Gundlach et al. 1995; Palmatier et al. 2007).

Second, output control provokes opportunism in WF samples. This finding is consistent with our arguments for crowding out: (1) restoring value to the agent, (2) reestablishing the agent’s autonomy (i.e., psychological reactance), (3) reinforcing the principal’s distrust, and (4) redressing the principal’s unfair behavior toward the agent. And, this opportunism weakly and positively affects performance. This suggests that opportunism sometimes pays, at least for the party behaving in this fashion. Thus, in a perverse way (i.e., increased opportunism leading to increased performance), output control within firms exerts a disciplining effect. Both of these indirect effects occurred for WF samples, but only the latter held for IO samples (i.e., outcome control indirectly and positively affects performance through opportunism).

Process control This form of control produces some disciplining effects in both WF and IO samples. Thus, by monitoring agent behaviors, providing them with feedback, and offering

Table 6 Summary of direct and indirect effects of control in marketing organizations

Outcomes	Disciplining Effects		Crowding Out Effects	
	Output Control	Process Control	Output Control	Process Control
Intraorganizational Samples				
Opportunism	Indirect	Direct, Indirect	Direct	—
Performance	Indirect	Direct	Direct	—
Interorganizational Samples				
Opportunism	Direct	Indirect	Indirect	Direct
Performance	Indirect	Direct	Direct	Indirect

them guidance, principals can directly limit opportunistic behavior in WF samples and enhance performance in both samples. Further, process control in both WF and IO relationships indirectly and negatively associates with opportunism through relationship quality. The reasons for this parallel those for outcome control within firms just described.

Crowding out effects

Output control In addition to its disciplining effects, output control results in crowding out effects in both samples. In the WF sample, output control resulted in direct, crowding out effects for both opportunism and performance. One reason may be the apparent mismatch between the WF reward and control systems. Agents will focus on whatever performance dimensions are stressed by the principal's control mechanisms (Cravens et al. 1993; Oliver and Anderson 1994). If the principal rewards behavior but employs output control, agents may split their attention on generating outputs and undertaking specified behaviors. But, because they are rewarded for their behaviors (as is more likely in within-firm relationships), their ability to achieve output goals may be constrained by the principal's reward system. Thus, agents may see output control as intrusive and overly restricting their autonomy (cf. Heide et al. 2007; Ramaswami 1996). To assert their independence, agents may not behave in ways sanctioned by the principal-agent agreement. In other words, the mismatch between the WF reward system and its control system could crowd out desired agent behavior. Specifically, output control is likely to crowd out desired behaviors within firms where the reward system is expected to emphasize behaviors rather than output.

For IO samples, output control has a direct crowding out effect on performance for the reasons noted above. In addition, outcome control indirectly bolstered opportunism through relationship quality. This supports Frey's (1993) notion that monitoring and control may have more deleterious effects when employed in close relationships, perhaps by signaling mistrust.

Process control This form of control had demonstrated no crowding out effects in WF samples; however, it directly heightened opportunism in IO samples. Through process control, the principal specifies the procedures and activities to which the agent must adhere to achieve the desired output. These dictates restrict the agent's ability to choose its own means for achieving the desired ends. Psychological reactance suggests that agents will exert their autonomy by behaving counter to the principal's wishes (Brehm 1966). One way in which they can do this is by distorting information about their performance, shirking their contractual obligations, and/or otherwise exercising their independence in dysfunctional ways (i.e., behaving opportunistically) (Brown et al. 2000; Frey 1993). In other words, process control seems to crowd out desired behavior in

interfirm relationships. It also indirectly reduced performance due to the mediating effect of opportunism.

Summary

Our findings show that both output and process control produce direct as well as indirect disciplining effects on opportunism and performance (see Table 6 for a summary of these effects). Yet output control also directly crowds out desired behaviors by boosting opportunism and reducing performance in WF samples. Process control exhibits no crowding out in WF samples, but directly exacerbates opportunism and indirectly decreases performance in IO samples. Note that we found relationship quality serves as a positive mediator (i.e., helps produce a disciplining effect), while opportunism acts as a negative mediator (i.e., generates a crowding out effect).

Implications for managers

Our meta-analysis suggests that both process and output control tend to enhance performance and relationship quality in marketing exchange relationships. The disadvantage is that they may also slightly increase the level of opportunism in those relationships.

Our findings show that, because a principal's control involves monitoring, evaluating, and guiding their agents toward desired behavior and performance, it results in stronger disciplining effects than simply just monitoring the agents. Therefore, managers are advised to supplement monitoring with other aspects of control (i.e., evaluation and direction) to enhance agent performance.

We also found that plural forms of control (i.e., process and output control together) "combine synergistically" to deliver disciplining effects (cf. Jaworski 1988, p. 31) that are more potent than either form of control by itself. Indeed, the moderator results indicate that process control used solely leads to crowding out effects.

Our findings also indicate that context matters. Managers cannot expect their independent agents (e.g., channel members) to react to its control efforts in the same ways as do company-employed agents (e.g., an in-house sales force). This is most evident with process control. While our structural model findings show that process control produces disciplining effects in both WF and IO contexts, they also indicate that process control generates crowding out effects in IO contexts, but not in WF settings. These crowding out effects for opportunism are somewhat mitigated by the disciplining effects of process control on relationship quality. The crowding out of performance by process control in the IO context was limited by the negative impact of opportunism on performance. Clearly, strengthening principal-agent relationships and managing opportunism by means other than

organizational control enhance the disciplining effects of process control.

Our structural model results also show that output control can limit opportunism by both independent agents and company employees, mostly in an indirect fashion by enhancing relationship quality. This indirect disciplining effect counteracts the direct crowding out effects of output control in WF samples. Thus, regardless of the organizational context, managers should ensure that they implement output control in a way that strengthens the principal-agent relationship, thereby limiting the crowding out effects of output control.

Implications for researchers

Our findings pose a number of questions for further research on control in marketing exchange relationships. For example, we found that output and process control have different effects depending upon the research setting (i.e., WF vs. IO marketing settings). Several alternative explanations for the varying effects of organizational control across different organizational settings can be advanced. For example, agents who are more extrinsically driven may require more output control, while process control is believed to be more appropriate for those who are more intrinsically motivated (Oliver and Anderson 1994). Hence, understanding the agent's motivation, aligning incentives to tap that motivation, and developing control schemes that are consistent with the agent's motives is an important research challenge. See Fong and Tosi (2007) for some initial steps in this regard.

We advanced four possible explanations for crowding out effects. The crowding out effect occurs when the principal's control creates imbalances in the principal-agent relationship by: (1) violating the psychological employment contract (Halaby 1986; Heide et al. 2007), (2) impinging too greatly on the agent's autonomy (Frey 1993; Ishida and Brown 2011), (3) signaling the principal's distrust of the agent (Frey 1993), or (4) undermining organizational fairness (Husted and Folger 2004). To rebalance the relationship, the agent behaves in the exact opposite fashion desired by the principal. Further research is needed to determine which, if any, of these explanations predominate and the conditions under which they do.

Our structural model analysis demonstrated the mediating roles of relationship quality and opportunism in shaping the disciplining and crowding out effects of control in marketing organizations. Because we were constrained to correlations derived from our meta-analysis, we were unable to explore fully these roles. Thus, gaining a better understanding of these mediating roles represents fertile ground for additional research.

In addition, the impact of measurement difficulty in shaping organizational control has not been investigated sufficiently, nor has the role of contractual incompleteness.

Unfortunately, too few studies have investigated these variables along with control for us to quantitatively evaluate these relationships; however, this would be a viable avenue for future research as empirical evidence accumulates.

Our meta-analysis shows that output and process control can have both positive and negative effects (i.e., disciplining and crowding out effects, respectively). Determining how much control is too much and how much is not enough is critical to the effective management of marketing exchange relationships. Thus, uncovering any possible non-linear (e.g., threshold) effects of control is another fruitful direction for further research in this area, as is understanding the longitudinal effects of output and process control.

Limitations of this research

We strived to uncover the population of empirical control studies through an extensive electronic and manual search. One limitation endemic to meta-analyses, however, is the possibility of overlooking studies. Another limitation is grouping different operationalizations of the correlates into one variable (e.g., subjective and objective performance, economic and noneconomic satisfaction). Future research may benefit from examining the operationalizations of the correlates as a potential moderator. Finally, we recognize that the constructs in our model are only a subset of the potentially relevant variables. We were limited to the variables that were examined most frequently with control.

Conclusion

We believe that this research contributes to the literature in several important ways. First, it identified the boundaries of control in marketing organizations, specifically, which control mechanisms worked best in which organizational context. Second, it suggests that managers can avoid negative, unwanted consequences by choosing control mechanisms that are most appropriate to their organizational context. Third, this study provided with explanations as to how these contradictory effects may have arisen. Further research is needed to verify and refine these explanations. Finally, we synthesized the literature's theoretical explanations as to why organizational control may crowd out desired behaviors. In these ways, this study advances the literature on control in marketing organizations.

In conclusion, we echo the words of Geyskens et al. (1998, p. 245) who argue that "primary research and meta-analysis are complementary parts of a programmatic stream of research." Our quantitative meta-analysis was based on previous primary research and helps us understand what we know about control. It also helps us understand gaps

in our knowledge about control. Based on this knowledge, future empirical research can close those gaps and provide additional insight into the control of marketing exchange relationships.

References

- Agarwal, S., & Ramaswami, S. N. (1993). Marketing controls and employee responses: the moderating role of task characteristics. *Journal of the Academy of Marketing Science*, 21(Fall), 293–306.
- Agrawal, D., & Lal, R. (1995). Contractual arrangements in franchising: an empirical investigation. *Journal of Marketing Research*, 32(May), 213–221.
- Alchian, A. A., & Demsetz, H. (1972). Production, information costs, and economic organization. *American Economic Review*, 62(December), 777–795.
- Anderson, E. (1985). The salesperson as outside agent or employee: a transaction cost analysis. *Marketing Science*, 4(Summer), 234–254.
- Anderson, E., & Coughlan, A. T. (2002). Channel management: Structure, governance, and relationship management. In B. A. Weitz & R. Wensley (Eds.), *Handbook of marketing* (pp. 223–247). London: Sage.
- Anderson, J. C., & Narus, J. A. (1990). A model of distributor firm and manufacturer firm working partnerships. *Journal of Marketing*, 54(January), 42–58.
- Anderson, E., & Weitz, B. A. (1986). Make-or-buy decisions: vertical integration and marketing productivity. *Sloan Management Review*, 27(Spring), 3–19.
- Anderson, E., & Oliver, R. L. (1987). Perspectives on behavior-based versus outcome-based salesforce control systems. *Journal of Marketing*, 51(October), 76–88.
- Antia, K. D., Bergen, M. E., Dutta, S., & Fisher, R. J. (2006). How does enforcement deter gray market incidence? *Journal of Marketing*, 70(January), 92–106.
- Assmus, G., Farley, J. U., & Lehmann, D. R. (1984). How advertising affects sales: meta-analysis of econometric results. *Journal of Marketing Research*, 21(February), 65–74.
- Atuahene-Gima, K., & Li, H. (2002). When does trust matter? Antecedents and contingent effects of supervisee trust on performance in selling new products in China and the United States. *Journal of Marketing*, 66(July), 61–81.
- Aulakh, P. S., & Gencturk, E. F. (2000). International principal-agent relationships: control, governance, and performance. *Industrial Marketing Management*, 29(November), 521–538.
- Aulakh, P. S., Kotabe, M., & Sahay, A. (1996). Trust and performance in cross-border marketing partnerships: a behavioral approach. *Journal of International Business Studies*, 27 (Special Issue), 1005–1032.
- Baldauf, A., Cravens, D. W., & Piercy, N. F. (2001). Examining business strategy, sales management, and salesperson antecedents of sales organization effectiveness. *The Journal of Personal Selling & Sales Management*, 21(Spring), 109–122.
- Behrens, J. T. (1997). Principles and procedures of exploratory data analysis. *Psychological Methods*, 2(2), 131–160.
- Bello, D. C., & Gilliland, D. I. (1997). The effect of output controls, process controls, and flexibility on export channel performance. *Journal of Marketing*, 61(January), 22–38.
- Bello, D. C., Katsikeas, C. S., & Robson, M. J. (2010). Does accommodating a self-serving partner in an international marketing alliance pay off? *Journal of Marketing*, 74(November), 77–93.
- Bergen, M., Dutta, S., & Walker, O. C. Jr. (1992). Agency relationships in marketing: a review of the implications and applications of agency and related theories. *Journal of Marketing*, 56, 1–24.
- Berndtson, C. (2010). Anatomy of a shortage. *Computer Reseller News*, (July 1), 42.
- Brehm, J. W. (1966). *A theory of psychological reactance*. New York: Academic.
- Brickley, J. A., & Dark, F. H. (1987). The choice of organizational form, the case of franchising. *Journal of Financial Economics*, 18(June), 401–420.
- Brown, J. R., Dev, C. S., & Lee, D.-J. (2000). Managing marketing channel opportunism: the efficacy of alternative governance mechanisms. *Journal of Marketing*, 64(April), 51–65.
- Byrne, B. M. (2001). *Structural equation modeling with AMOS: Basic Concepts, Applications, and Programming*. Mahwah: Lawrence Erlbaum Associates.
- Cannon, J. P., Achrol, R. S., & Gundlach, G. T. (2000). Contracts, norms, and plural form governance. *Journal of the Academy of Marketing Science*, 28(Spring), 180–194.
- Carlson, J. P., Vincent, L. H., Hardesty, D. M., & Bearden, W. O. (2009). Objective and subjective knowledge relationships: a quantitative analysis of consumer research findings. *Journal of Consumer Research*, 35(February), 864–876.
- Carson, S. J. (2007). When to give up control of outsourced new product development. *Journal of Marketing*, 71(January), 49–66.
- Chabowski, B. R., Mena, J. A., & Gonzalez-Padron, T. L. (2011). The structure of sustainability research in marketing, 1958–2008: a basis for future research opportunities. *Journal of the Academy of Marketing Science*, 39(February), 55–70.
- Challagalla, G. N., & Shervani, T. A. (1996). Dimensions and types of supervisory control: effects on salesperson performance and satisfaction. *Journal of Marketing*, 60(January), 89–105.
- Cravens, D. W., Ingram, T. N., LaForge, R. W., & Young, C. E. (1993). Behavior-based and outcome-based salesforce control systems. *Journal of Marketing*, 57(October), 47–59.
- Cravens, D. W., Lassk, F. G., Low, G. S., Marshall, G. W., & Moncrief, W. C. (2004). Formal and informal management control combinations in sales organizations: the impact on salesperson consequences. *Journal of Business Research*, 57(March), 241–248.
- Cronin, J. J., Jr., Smith, J. S., Gleim, M. R., Ramirez, E., & Martínez, J. D. (2011). Green marketing strategies: an examination of stakeholders and the opportunities they present. *Journal of the Academy of Marketing Science*, 39(February), 158–174.
- Crosby, L. A., Evans, K. R., & Cowles, D. (1990). Relationship quality in services selling: an interpersonal influence perspective. *Journal of Marketing*, 54(July), 68–81.
- Dahlstrom, R., & Nygaard, A. (1999). An empirical investigation of ex post transaction costs in franchised distribution channels. *Journal of Marketing Research*, 36(May), 160–170.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self determination in human behavior*. New York: Plenum Press.
- Doney, P. M., & Cannon, J. P. (1997). An examination of the nature of trust in buyer-seller relationships. *Journal of Marketing*, 61(April), 35–51.
- Douthitt, E. A., & Aiello, J. R. (2001). The role of participation and control in the effects of computer monitoring on fairness perceptions, task satisfaction, and performance. *Journal of Applied Psychology*, 86(October), 867–874.
- Eisenhardt, K. M. (1985). Control: organizational and economic approaches. *Management Science*, 31(February), 134–149.
- Fang, E., Evans, K. R., & Landry, T. D. (2005). Control systems' effect on attributional processes and sales outcomes: a cybernetic information-processing perspective. *Journal of the Academy of Marketing Science*, 33(Fall), 553–574.

- Fong, E. A., & Tosi, H. L. (2007). Effort, performance, and conscientiousness: an agency theory perspective. *Journal of Management*, 33(April), 161–179.
- Frey, B. S. (1993). Does monitoring increase work effort? The rivalry with trust and loyalty. *Economic Inquiry*, 31(October), 663–670.
- Garbarino, E., & Johnson, M. S. (1999). The different roles of satisfaction, trust, and commitment in customer relationships. *Journal of Marketing*, 63(April), 70–87.
- Geyskens, I., Steenkamp, J.-B. E. M., & Kumar, N. (1998). Generalizations about trust in marketing channel relationships using meta-analysis. *International Journal of Research in Marketing*, 15, 223–248.
- Ghoshal, S., & Moran, P. (1996). Bad for practice: a critique of the transaction cost theory. *Academy of Management Review*, 21(January), 13–47.
- Grant, K., & Cravens, D. W. (1996). Examining sales force performance in organizations that use behavior-based sales management processes. *Industrial Marketing Management*, 25(September), 361–371.
- Gundlach, G. T., & Cannon, J. P. (2010). “Trust but verify”? The performance implications of verification strategies in trusting relationships. *Journal of the Academy of Marketing Science*, 38(August), 399–417.
- Gundlach, G. T., Achrol, R. S., & Mentzer, J. T. (1995). The structure of commitment in exchange. *Journal of Marketing*, 59(January), 78–92.
- Halaby, C. N. (1986). Worker attachment and workplace authority. *American Sociological Review*, 51(October), 634–649.
- Heide, J. B., Wathne, K. H., & Rokkan, A. I. (2007). Interfirm monitoring, social contracts, and relationship outcomes. *Journal of Marketing Research*, 44(August), 425–433.
- Hunter, J. E., & Schmidt, F. L. (1990). *Methods of meta-analysis*. Newbury Park: Sage Publications.
- Husted, B. W., & Folger, R. (2004). Fairness and transaction costs: the contribution of organizational justice theory to an integrative model of economic organization. *Organization Science*, 15(November–December), 719–729.
- Ishida, C., & Brown, J. R. (2011). The crowding out effects of monitoring in franchise relationships: the mediating role of relational solidarity. *Journal of Marketing Channels*, 18(1), 19–41.
- Jaworski, B. J. (1988). Toward a theory of marketing control: environmental context, control types, and consequences. *Journal of Marketing*, 52(July), 23–39.
- Jaworski, B. J., & MacInnis, D. J. (1989). Marketing jobs and management controls: toward a framework. *Journal of Marketing Research*, 26(November), 406–419.
- Jaworski, B. J., Stathakopoulos, V., & Shanker Krishnan, H. (1993). Control combinations in marketing: conceptual framework and empirical evidence. *Journal of Marketing*, 57(January), 57–69.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(October), 305–360.
- John, G. (1984). An empirical investigation of some antecedents of opportunism in a marketing channel. *Journal of Marketing Research*, 21(August), 278–289.
- Jöreskog, K. G., & Sörbom, D. (1989). *LISREL 7: a guide to the program and applications* (2nd ed.). Chicago: SPSS.
- Joshi, A. W. (2009). Continuous supplier performance improvement: effects of collaborative communication and control. *Journal of Marketing*, 73(January), 133–150.
- Kabadayi, S., & Ryu, S. (2007). The protection of the trustor through the use of control mechanisms and its performance implications. *The Journal of Business & Industrial Marketing*, 22(4), 260–271.
- Kashyap, V., Antia, K. D., & Frazier, G. L. (2012). Contracts, extracontractual incentives, and *ex post* behavior in franchise channel relationships. *Journal of Marketing Research*, 49(April), 260–276.
- Kumar, N., Stern, L. W., & Achrol, R. S. (1992). Assessing reseller performance from the perspective of the supplier. *Journal of Marketing Research*, 29(May), 238–253.
- Lewis, M. W., Welsh, M. A., Dehler, G. E., & Green, S. G. (2002). Product development tensions: exploring contrasting styles of project management. *Academy of Management Journal*, 45(June), 546–564.
- Mohr, J., & Nevin, J. R. (1990). Communication strategies in marketing channels: a theoretical perspective. *Journal of Marketing*, 54(October), 36–51.
- Moorman, C., Zaltman, G., & Deshpandé, R. (1993). Relationships between providers and users of market research: the dynamics of trust within and between organizations. *Journal of Marketing Research*, 29(August), 314–328.
- Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(July), 20–38.
- Murry, J. P. Jr., & Heide, J. B. (1998). Managing promotion program participation within manufacturer-retailer relationships. *Journal of Marketing*, 62(January), 58–68.
- New York Post (2009). Donut in the sky: Dunkin’ presses franchisees to accept surveillance. (October 2), http://www.nypost.com/p/news/business/item_ubwoX1
- Oliver, R. L., & Anderson, E. (1994). An empirical test of the consequences of behavior- and outcome-based sales control systems. *Journal of Marketing*, 58(October), 53–67.
- Ouchi, W. G. (1979). A conceptual framework for the design of organizational control mechanisms. *Management Science*, 25(September), 833–848.
- Palmatier, R. W., Dant, R. P., Grewal, D., & Evans, K. R. (2005). Leveraging relationship marketing strategies for better performance: a meta-analysis. MSI Working Paper Series, *Issue 3*(05–003), 107–140.
- Palmatier, R. W., Dant, R. P., Grewal, D., & Evans, K. R. (2006). Factors influencing the effectiveness of relationship marketing: a meta-analysis. *Journal of Marketing*, 70(October), 136–153.
- Palmatier, R. W., Dant, R. P., & Grewal, D. (2007). A comparative longitudinal analysis of theoretical perspectives of interorganizational relationship performance. *Journal of Marketing*, 71(October), 172–194.
- Piercy, N. F., Cravens, D. W., Lane, N., & Vorhies, D. W. (2006). Driving organizational citizenship behaviors and salesperson in-role behavior performance: the role of management control and perceived organizational support. *Journal of the Academy of Marketing Science*, 34(Spring), 244–262.
- Ramaswami, S. N. (1996). Marketing controls and dysfunctional employee behaviors: a test of traditional and contingency theory postulates. *Journal of Marketing*, 60(April), 105–120.
- Ramaswami, S. N., & Singh, J. (2003). Antecedents and consequences of merit pay fairness for industrial salespeople. *Journal of Marketing*, 67(October 2003), 46–66.
- Rosenberg, M. S., Adams, D. C., & Gurevitch, J. (2000). *MetaWin: statistical software for data analysis, Version 2*. Sunderland: Sinauer Associates, Inc.
- Rosenthal, R. (1979). The ‘file drawer problem’ and tolerance for null results. *Psychological Bulletin*, 86(3), 638–641.
- Rubin, P. H. (1978). The theory of the firm and the structure of the franchise contract. *Journal of Law and Economics*, 21, 223–233.
- Ryu, S., Kabadayi, S., & Chung, C. (2007). The relationship between unilateral and bilateral control mechanisms: the contextual effect of long-term orientation. *Journal of Business Research*, 60(July), 681–689.
- Schul, P. L., Little, T. E., & Pride, W. M. (1985). Channel climate: its impact on channel members’ satisfaction. *Journal of Retailing*, 61, 9–38.

- Smith, B. (1998). Buyer-seller relationships: bonds, relationship management, and sex-type. *Canadian Journal of Administrative Sciences*, 15(March), 76–92.
- Stephen, A. T., & Coote, L. V. (2007). Interfirm behavior and goal alignment in relational exchanges. *Journal of Business Research*, 60(April), 285–295.
- Stump, R. L., & Heide, J. B. (1996). Controlling supplier opportunism in industrial relationships. *Journal of Marketing Research*, 33(November), 431–441.
- Sujan, H. (1986). Smarter versus harder: an exploratory attributional analysis of salespeople's motivation. *Journal of Marketing Research*, 23(February), 41–49.
- Szymanski, D. M., & Henard, D. H. (2001). Customer satisfaction: a meta-analysis of empirical evidence. *Journal of the Academy of Marketing Science*, 29(Winter), 16–35.
- Tremblay, M., Cote, J., & Balkin, D. B. (2003). Explaining sales pay strategy using agency, transaction cost and resource dependence theories. *The Journal of Management Studies*, 40(November), 1651–1682.
- Tukey, J. W. (1977). *Exploratory data analysis*. Reading: Addison-Wesley.
- Van de Ven, A. H., & Walker, G. (1984). The dynamics of interorganizational coordination. *Administrative Science Quarterly*, 29(December), 598–621.
- Wathne, K. H., & Heide, J. B. (2000). Opportunism in interfirm relationships: forms, outcomes, and solutions. *Journal of Marketing*, 64(October), 36–51.
- Williamson, O. E. (1975). *Markets and hierarchies: analysis and antitrust implications: a study in the economies of internal organization*. New York: Free Press.
- Williamson, O. E. (1985). *The economic institutions of capitalism: firms, markets, relational contracting*. New York: Free Press, Collier Macmillan.
- Williamson, O. E. (1991). Comparative economic organization: the analysis of discrete structural alternatives. *Administrative Science Quarterly*, 36(2), 269–296.