Dual Control of Salesforce in Partially Integrated Channels

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Abstract

A manufacturer using a partially integrated channel (PIC) dispatches its own salesforce to the retailers that it sells through. The manufacturer salesforce in a PIC is simultaneously subject to controls by the manufacturer and the retailer, which we call dual control. Despite its increasing prevalence, how dual control influences salesforce performance remains understudied. We develop a discriminating alignment framework through two steps to answer this question. The first step examines the influence of a controller on the efficacy of a control mechanism. The efficacy of a control mechanism varies with the party that exerts control. The second step expands this logic to dual control. The performance effect of dual control is equivocal: It may have a positive, negative, or no influence on salesforce performance depending on discriminating alignment. To improve salesforce performance, a manufacturer’s control and a retailer’s control must compensate for each other’s weaknesses. Empirical tests based on matched dyadic data of dual control of salesforce by apparel manufacturers and retailers support our predictions with considerable theoretical and managerial implications.

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Keywords: Partially integrated channel; Process control; Outcome control; Discriminating alignment; Salesforce performance

Introduction

Manufacturers increasingly rely on partially integrated channels (PICs) to reach and serve customers. A manufacturer using a PIC sells through retailers but also staffs retailer stores with its own salesforce. Partially integrated channels are found in diverse industries including high-end fashion apparel (e.g., Armani’s own boutique within Neiman Marcus), cosmetics (e.g., Shiseido’s counters within Nordstrom), and consumer electronics (e.g., Samsung’s Experience Shop within Best Buy). Manufacturer salesforce working in a PIC is subject to controls by two “masters”: The manufacturer that employs the salesforce and the retailer that hosts the salesforce. Fig. 1 illustrates dual control of salesforce in a PIC. The manufacturer has a one-to-many control relationship with its salesforce deployed in various retailers, whereas the retailers have a many-to-many relationship with them.

Using a PIC has been shown to enhance a manufacturer’s downstream flexibility and control (Kim et al. 2011) and to economize a retailer’s cost of hiring, training, and compensating its own salesforce (Lal, Egawa, and Toyama 2006). However, it also presents a theoretically underappreciated quandary: The manufacturer’s control of salesforce overlaps with the retailer’s control of salesforce, hence dual control of salesforce.\textsuperscript{2} In addition to the manufacturer’s control of its salesforce, a hosting retailer also is motivated to control the manufacturer salesforce (salesforce hereafter) because those salespeople, although they are the manufacturer’s employees, represent the retailer to customers and influence its own sales performance. The retailer needs to ensure that (a) manufacturer brands are presented to customers in line with the retailer’s image, (b) salesforce activities provide a coherent shopping experience to customers, and (c) manufacturer salesforce remains cognizant of the retailer’s own interests in their interactions with customers.

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Dual control in a PIC can potentially be synergistic or conflicting. Yet, the performance effect of dual control remains undertheorized with two unexplored puzzles. First, the role of the party that applies control remains unexplored. Prior research focused on controls by a single party: an employer’s control of in-house salesforce (Anderson and Oliver 1987) or a manufacturer’s control of independent distributors (Bello and Gilliland 1997). Therefore, researchers did not have to account for influence of multiple controllers. In contrast, two layers of control—one by a manufacturer and the other by a retailer—overlap in a PIC (Rangan 2006). This setting makes it imperative to account for the varying influence of two different controllers because an identical control can have a dissimilar effect depending on who applies it (Crosno and Brown 2015).

Second, would salesforce controls by a manufacturer and a retailer complement or substitute each other for salesforce performance? One may surmise that two different controls would complement each other while two identical controls would substitute each other. Although those are reasonable conjectures, lack of theorizing and empirical evidence make it impossible to make any definite statement on the consequences of dual control. As the first step to address these gaps, this study takes a nuanced approach on dual control guided by the following research question: How does dual control shape salesforce performance in a PIC?

We theorize that dual control has a positive influence on salesforce performance only when a retailer’s control is discriminatingly aligned with that of a manufacturer. It is called discriminating because only certain combinations of two controls has a positive influence on salesforce performance, whereas others may be inconsequential or even counterproductive.

Addressing this research question is important for theoretical and pragmatic reasons. From a theoretical standpoint, studying dual control expands the theoretical scope of salesforce control research from a single firm’s controls to simultaneous controls by two firms. From a pragmatic standpoint, deploying dual control is costly and a wrong configuration of dual control may diminish salesforce performance despite expending resources for control efforts, thereby hurting all three parties in a PIC: the manufacturer, the retailer, and the salesforce.

Our original theoretical contributions are twofold. First, building on recent studies highlighting the importance of considering social (Heide, Wathe and Rokkan 2007) or informational (Heide, Kumar, and Wathe 2014) requirements for control, we theorize that a control mechanism works only when its requirements are matched by control capacity of the controller (Ouchi 1979), thereby explaining why the effect of an identical control may vary with the party that applies control (Crosno and Brown 2015). Second, we explicate through a discriminating alignment framework why the effect of dual control is nuanced—has a positive, negative, or no effect on salesforce performance—depending on a particular configuration of control mechanisms.3 We test the proposed ideas using matched-pair dyadic data of a manufacturer and a retailer of fashion apparel. Subsequent sections develop the hypotheses (§2), describe the methods (§3), analysis and results (§4), and discuss implications of the study for theory and practice (§5).

Theoretical Development

Discriminating Alignment

The first step

We develop the logic of discriminating alignment between controls in two steps. The first step is concerned with the efficacy of a single control mechanism through a match between control requirements and a controller’s control capacities. The two cardinal mechanisms of salesforce control are process con-

3 Our discriminating alignment framework is consistent with two recent studies that examined how specific governance mechanisms operate under different governance modes. (1) Kumar, Heide, and Wathe (2011) examined how a firm’s two governance mechanisms (norms and incentives) applied to its supplier relationships match or mismatch with the same governance mechanisms applied to its internal relationships for manufacturer performance. (2) Heide, Kumar, and Wathe (2014) examined how the effect of two governance mechanisms (monitoring and norm) on supplier opportunism and supplier performance varies under single versus dual governance modes.
Table 1
Overview of the theoretical logic.

<table>
<thead>
<tr>
<th>Classes of control mechanisms</th>
<th>Outcome control</th>
<th>Process control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social requirements are...</td>
<td>Reciprocity</td>
<td>Reciprocity and legitimate authority</td>
</tr>
<tr>
<td>Informational requirements are...</td>
<td>Prices</td>
<td>Rules</td>
</tr>
<tr>
<td>A retailer as a host of PIC salesforce...</td>
<td>Has social and informational capacities for outcome control</td>
<td>Lacks social capacity and its informational capacity mismatches with process control</td>
</tr>
<tr>
<td>A manufacturer as an employer of PIC salesforce...</td>
<td>Has social capacity but its informational capacity mismatches with outcome control</td>
<td>Has social and informational capacities for process control</td>
</tr>
</tbody>
</table>

Control and outcome control (Anderson and Oliver 1987; Kraft 1999). Process control involves developing rules and procedures for salesforce to follow. A controller applies process control by monitoring and evaluating salesforce behaviors for the extent of compliance with prescribed rules and procedures. Therefore, salespeople are rewarded or penalized for complying with those rules and procedures. Process control does not consider outcomes, which means salespeople are incentivized mainly through behavior-based incentives. In contrast, outcome control focuses on meeting prespecified target outcomes for the salesforce. A controller applies outcome control by specifying and measuring outcomes against predefined targets. Therefore, salespeople under outcome control are rewarded or penalized for achieving target outcomes (e.g., a sales quota). Outcome control does not consider salesforce behaviors, which means salespeople are incentivized mainly through outcome-based incentives.4

A key theoretical idea of the first step is that deploying a control mechanism does not automatically ensure desired performance. Instead, it creates certain demands, while a controller is endowed with differential control capacities. A control mechanism enhances salesforce performance only when the controller’s control capacities match control requirements. Table 1, which is derived from Ouchi (1979), summarizes our logic on the match between control requirements and control capacities.

Requirements for control
Applying a control mechanism raises two types of requirements to meet: Social and informational. Social requirements refer to a set of agreements necessary for a control mechanism to be deployed and accepted. Informational requirements refer to the information necessary for a controller to evaluate objectively the extent to which the desired influence is achieved.

Applying outcome control raises a social requirement of reciprocity and informational requirements of prices. Reciprocity means that a controller and a controlee share an expectation to engage in mutually fair exchange with each other (Ouchi 1979). Prices represent a bundle of information necessary to judge the objective values of outcomes. Using prices as information for outcome control requires meeting two conditions. First, a competitive process needs to exist to define a fair value for an outcome. For our research context of PIC, the existence of a competitive process would assure that comparison between competing brands being sold through a retailer has taken place and that rewards or penalties for an outcome are equitable. Second, a controller using outcome control should be able to precisely specify, measure, and compensate for meeting desired outcomes. For our research context, being able to focus on those outcomes that can be precisely specified, measured, and compensated would meet information requirements of prices for outcome control.

In contrast, applying process control raises social requirements of reciprocity and legitimate authority and informational requirements of rules. The former means, in addition to meeting the basic condition of reciprocity, a controlee needs to accept the controller’s authority to control her (Simon 1997). The latter means that a controller needs prespecified standards to monitor and evaluate the process of the controlee’s work (Ouchi 1979).

Capacities for control
A controller carries a certain set of social and informational capacities for control. A retailer as a host of the salesforce carries social capacity for reciprocity and informational capacity for price provision. For the social capacity, a retailer relies on the norm of reciprocity in exchange (Ouchi 1980); a retailer promises a specific reward (e.g., store gift card) in return for the equitable consideration (exceeding a sales goal) by the salesforce.

The informational capacity of price provision in this context means a retailer can specify desired outcomes that can be measured and rewarded. A retailer affords a competitive process between competing brands from multiple manufacturers for comparing salesforce outcomes. In addition, a retailer, not being an employer of PIC salesforce, can focus on those outcomes that are common across competing brands and amenable to be specified, measured, and compensated, which matches the informational requirements for outcome control.

In contrast, a manufacturer as an employer of the salesforce carries social capacity of legitimate authority and informational capacity of rule provision. In addition to the norm of reciprocity that is the foundation of any exchange, the manufacturer as an employer enjoys legitimate authority to direct salesforce behavior. In exchange for stable wages and job security, a salesperson “accepts the idea that the employer has the legal right to command and to . . . monitor employee behavior. . . .” (Ouchi 1979, p. 838). Therefore, it can legitimately develop and enforce its own set of rules and policies (Mahoney 2005; Simon 1997).

The second step
The second step in our theoretical development extends the logic of the first step to the alignment between a manufacturer’s control and a retailer’s control (i.e., dual control). Discriminating alignment in the second step refers to the nuanced alignment of one master’s control of the salesforce with another master’s

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4 We delimit our focus on formal control mechanisms for managing salesforce. See Ellickson (1987) and Black (1998) for a broader approach on combing different control mechanisms beyond formal controls.
control of the salesforce. We call it discriminating because a retailer’s control has a positive influence on salesforce performance when combined with a specific type of a manufacturer’s control but not the other. Fig. 2 illustrates our research model based on the logic developed in the first step.

**The Joint Effect of Two Different Control Mechanisms on Salesforce Performance**

Applying two different controls have differential performance effects depending on who applies them. Specifically, combining a retailer’s outcome control with a manufacturer’s process control has a *positive* influence on salesforce performance ($H_1$), whereas combining a retailer’s process control with a manufacturer’s outcome control has *no* influence on salesforce performance ($H_2$).

**Complementary effect between manufacturer process control and retailer outcome control**

A manufacturer as an employer carries high social and informational capacities for process control. The manufacturer’s legitimate authority over its salesforce empowers the manufacturer with social capacity to enforce the rules for process control. High informational capacity for rule provision means the manufacturer can impose its own rules for controlling sales processes. Therefore, a manufacturer’s process control of salesforce is likely to have a positive influence on salesforce performance.

However, two shortcomings arise from the salesforce focusing attention on following such rules. First, it creates behavioral rigidity by constraining discretion that might be necessary to achieve sales goals (Child 1973; Hitt, Hoskisson, and Ireland 1990). Second, salespeople under greater process control may game the system by directing their efforts toward affecting the evaluation measures (e.g., sales process) rather than toward the target outcomes (e.g., profitability) (Eccles and Crane 1988). The manufacturer’s predominant focus on process control while paying less attention to outcomes may make it harder for the salesforce to attain sales goals. Therefore, another control mechanism must compensate for the shortcomings of the manufacturer’s process control.

A retailer’s outcome control of salesforce addresses this gap when it is combined with a manufacturer’s process control. A retailer as a host of salesforce carries high social and informational capacities for outcome control. A retailer can offer reciprocal reward/punishment to salesforce for meeting/failing to achieve sales outcomes, thereby meeting the social requirement of reciprocity. A retailer as a host of the salesforce can specify and measure desired outcomes (e.g., sales volume), thereby meeting information requirements of prices.

A retailer’s outcome control complements a manufacturer’s process control in two ways. First, the retailer’s outcome control encourages the salesforce to pay attention to attaining sales goals (Hultink and Atuahene-Gima 2000), while the manufacturer’s process control simultaneously encourages rule compliance (Babakus et al. 1996). In effect, combination of controls assures both sales goal attainment and sales process alignment. Second, from the standpoint of the salesforce, the manufacturer’s emphasis on sales processes through process control and the retailer’s emphasis on achieving sales goals through outcome control reinforce the salesforce’s role as employees of the manufacturer and their role as the guest salesforce for the retailer (Heide and Watne 2006), thereby fostering higher motivation to work for the manufacturer and to cooperate with the retailer. Therefore, pairing a retailer’s outcome control with a manufacturer’s process control compensates each other’s weakness and we predict that

**Hypothesis 1.** The interaction of manufacturer process control with retailer outcome control has a positive influence on salesforce performance.

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Additive effect between manufacturer outcome control and retailer process control

In contrast, combining a retailer’s process control with a manufacturer’s outcome control is likely to have no influence on salesforce performance for two reasons. For outcome control, a manufacturer carries a social capacity of reciprocity, which meets the social requirement for outcome control. However, its informational capacity of rule provision mismatches with informational requirement of prices for outcome control in two ways.

First, a negligible competitive process exists in the employment relationship between a manufacturer and the salesforce to arrive at fair prices for sales outcomes. A key reason for lack of competitive process is some tasks that are performed by salesforce for its employer (i.e., manufacturer) are unique to the employer (e.g., being trained for the manufacturer brand) and thus outcomes of those tasks (e.g., brand expertise) are not subject to market comparison and valuation. It is hard for a manufacturer to price objectively such firm-specific outcomes.

Second, the manufacturer’s employment relationship with salesforce is an incomplete contract (Ouchi 1980, p. 132), which means some duties and outcomes for salesforce are intentionally left unspecified. An employment contract is designed as incomplete because the manufacturer wants to be able to order its salesforce to perform unplanned activities in the future (Ouchi 1979). The incompleteness of employment contract does not match with the information requirement of price for outcome control where duties, outcomes, and compensations of exchange parties are fully prespecified. Therefore, a manufacturer is only partially capable of facilitating outcome control and greater manufacturer outcome control alone is unlikely to improve salesforce performance.

For retailer process control, the retailer as a host of salesforce also lacks the social capacity that would empower the retailer with legitimate authority for process control to work, which means the retailer’s attempt to manage the salesforce through its own rules (i.e., process control) will be resisted by the salesforce. Heide, Wathne, and Rokkan (2007, p. 427) similarly suggest this resistance to process control by a party with insufficient legitimate authority. Further, a retailer’s informational capacity of price provision mismatches with the information requirement of rules for process control of the salesforce (Ouchi 1980). Therefore, a retailer’s deployment of process control incurs extra costs without commensurate benefits. In effect, while the manufacturer’s greater outcome control fails to improve salesforce performance, the retailer’s emphasis of process control cannot compensate for the shortcomings of the manufacturer’s outcome control. Thus, combining a retailer’s process control with a manufacturer’s outcome control fails to influence salesforce performance. This leads to our second hypothesis.

Hypothesis 2. The interaction of manufacturer outcome control with retailer process control has no influence on salesforce performance.

The Joint Effect of Two Identical Controls on Salesforce Performance

The joint effect of two identical controls is nuanced: Combining a retailer’s process control with a manufacturer’s process control has a negative influence on salesforce performance (H1), whereas combining a retailer’s outcome control with a manufacturer’s outcome control has no influence on salesforce performance (H4).

Substitutive effect between manufacturer process control and retailer process control

Recall that a manufacturer’s process control has a positive influence on salesforce performance, whereas a retailer’s greater process control has a negative influence on salesforce performance. We propose that the combining the two process controls penalizes performance of salesforce for two reasons. First, a retailer’s process control dampens the benefits of the manufacturer’s process control; the salesforce is being subjected to the retailer’s rules as well as to the manufacturer’s rules. Overemphasis on rule compliance and the predominant attention to sales process while paying little attention to sales goal attainment should detract salesforce performance. In particular, given the retailer’s lack of legitimate authority over salesforce, its use of process control is likely to backfire with salesforce’s resistance to the retailer’s control efforts, thereby detracting salesforce performance (Heide, Wathne, and Rokkan 2007). Second, a potential discrepancy exists between a manufacturer’s rules and a retailer’s rules because rules are by definition specific to an organization (Ouchi 1979, p. 835). Conflicting rules from the two masters are likely to create confusion and frustration as salesforce spend valuable time to sort out and accommodate rules from two masters, thereby negatively influencing salesforce performance. Therefore, we predict that

Hypothesis 3. The interaction of manufacturer process control with retailer process control has a negative influence on salesforce performance.

Additive effect between manufacturer outcome control and retailer outcome control

Recall that a manufacturer’s greater outcome control has no influence on salesforce performance, whereas a retailer’s greater outcome control has a positive influence on salesforce performance. Adding a retailer’s outcome control to a manufacturer’s outcome control is likely to have no influence on salesforce performance. A manufacturer’s greater outcome control does not influence salesforce performance because the manufacturer’s informational capacity of rule provision mismatches with the informational requirements to specify, measure, and reward desired outcomes. In contrast, a retailer affords a better job in specifying, measuring, and compensating for target outcomes because a retailer is endowed with informational capacities of price provision. Therefore, the salesforce under retailer outcome control can better focus on achieving prespecified outcomes.

Despite the compensatory effect of the retailer’s outcome control, sales processes get less attention in this combination.
because neither the manufacturer nor the retailer closely monitors and evaluates salesforce’s compliance with the required sales procedures. As a result, overemphasis on achieving only measurable outcomes by both a manufacturer and a retailer carries a risk of neglecting un incentivized but necessary outcomes (e.g., brand expertise), which should adversely affect sales force performance. Therefore, the upside of the retailer’s high capacity for outcome control is offset by the downside of inattention to sales processes, rendering the joint effect nonsignificant. We therefore predict that

**Hypothesis 4.** The interaction of a manufacturer outcome control with retailer outcome control has no influence on salesforce performance.

**Methods**

**Empirical Study Context**

We collected data from the fashion apparel industry in South Korea to test the proposed ideas. This industry consists of a large number of small, independent apparel manufacturers. Department store chains are the main sales channel for high-end fashion apparel brands in South Korea. This empirical setting is appropriate for testing our theoretical model for three reasons. First, PIC is a pervasive form of sales channel for fashion apparel in South Korea through which apparel manufacturers reach customers. Salesforce of apparel manufacturers are deployed to the manufacturer’s shop within a department store (Jerath and Zhang 2010), fulfilling sales tasks typically performed by the retailer salesforce in the United States. Second, variations in size and specialty exist across apparel manufacturers, which ensures that there will be varying degrees of controls by manufacturers and retailers. Finally, concentration of department stores in South Korea, a populous but geographically small country, mitigates the potential confounding by geographic dispersion of stores. Our unit of analysis is a manufacturer’s salesforce at the store level.

**Sampling and Data Collection**

We collected dyadic data from both apparel manufacturers and retailers. Our data collection procedure is graphically summarized in Fig. 3. We used senior sales and marketing executives as the key informants for the manufacturer survey. First, we randomly selected 200 women’s fashion apparel manufacturers out of 496 listed in the Fashion Brands Yearbook that offered their products through department stores. We contacted each manufacturer to solicit their participation. Twenty-five manufacturers either could not be reached or declined to participate. For the remaining 175 apparel manufacturers, we identified a senior
sales/marketing executive as the key informant. Then, we administered the questionnaires in person, asking each informant to fill out the survey about their salesforce control mechanisms and performance of their salesforce working at the preassigned store of a department store chain (e.g., store B of department store chain A). Informants were asked to respond to questions with regard to the chief salesperson of the store as the representative of the store salesforce. We obtained 120 completed questionnaires for a response rate of 69%.

We then collected matched-pair data from the department store chains (DSCs hereafter) where the focal manufacturers deploy their own salesforce. We matched each of the 120 responses from manufacturer informants with the corresponding preassigned store of the DSC and distributed the retailer questionnaires to the key informant with deep knowledge of storewide sales operations. The key informants from the focal store were floor managers, who were in charge of supervising the manufacturer salesforce on her floor of their department store. Surveys were delivered and picked up in person. We obtained 94 completed questionnaires for a response rate of 78%. Combining retailer data with manufacturer data, we obtained 94 usable matched-pair responses for apparel manufacturers and department store floor managers.

**Measure Development**

We used existing measures where possible and adapted them based on in-depth interviews with industry experts in South Korea. This ensured that the items were meaningful and unambiguous in the South Korean research context. See Appendix A Supplementary data for measurement items.

**Measures for the manufacturer survey**

Manufacturer process control was measured via a four-item, reflective scale adapted from Jaworski, Stathakopoulos, and Krishnan (1993). Manufacturer outcome control was measured via a three-item, reflective scale adapted from Jaworski, Stathakopoulos, and Krishnan (1993) and Bello and Gilliland (1997). Salesforce performance was measured via an eleven-item, formative scale including sales outcomes as well as behaviors. Measurement items were adapted from Behrman and Perreault (1982) and Babakus et al. (1996) for a PIC setting through field interviews with fashion apparel sales executives.

**Measures for the retailer survey**

For a retailer’s process control of salesforce, we used four items that are relevant for the retailer’s management of manufacturer salesforce behavior. Therefore, the measurement items for retailer process control differ from those for manufacturer process control. For retailer’s outcome control, we used three items identical to the manufacturer survey but adapted one based on feedback during the preliminary field interviews. Retailers’ evaluation of salesforce performance relied on the same items as those of the manufacturer survey except one item, inventory management, which is not the concern of a retailer in a PIC.

**Control variables**

We used the following variables to account for rival explanations for salesforce performance: manufacturer power, brand sales volume, and specialized investment to salesforce. We included manufacturer power to rule out the halo effects of manufacturer power on the respondent’s perception of salesforce performance, measured using a five-item, reflective scale adapted from Kumar, Scheer, and Steenkamp (1995). Brand sales volume was measured as the prior year’s total sales volume of the focal manufacturer’s brand. Specialized investment to salesforce was measured with a four-item, reflective scale that captures the potential loss the manufacturer would incur with the loss of salesforce (Anderson and Weitz 1992).

We included the following control variables for a retailer’s evaluation of salesforce performance: manufacturer brand reputation, brand share, and specialized investment in the brand. Manufacturer brand reputation was measured from the retailer’s perspective via a three-item, reflective scale from Kim et al. (2011). Brand share was measured as the percentage share of the focal brand among apparel brands carried by the department store. Specialized investment in brand used a three-item, reflective scale that captures the brand-specific investment the retailer has made for the focal brand (Anderson and Weitz 1992). Additional variables used as instruments to assess endogeneity but not used in the reported model are summarized in Appendix A Supplementary data.

**Scale validation**

Means, standard deviations, scales Alphas, and construct correlations for manufacturer data and retailer data are summarized in Table 2. The loading of all indicators on the principal theoretical constructs in the EFA are higher than .60. Further, a confirmatory factor analysis showed that the overall fit was significant ($\chi^2 (303) = 534.61$ for manufacturer data and $\chi^2 (209) = 450.26$ for retailer data). Other goodness of fit measures show a reasonable fit given the small sample size (Brown and Cudeck 1993) (e.g., root mean squared error of approximation (RMSEA) = .08 (.09), non-normed fit index (NNFI) = .90 (.81), and comparative fit index (CFI) = .91 (.84) for manufacturer (retailer) data). However, lower goodness-of-fit scores of retailer data merit caution in data analysis and interpretation. The composite trait reliabilities ($\geq .83$ for manufacturer data and $\geq .84$ for retailer data) exceed the cutoff heuristic of .70 and the smallest average variance extracted (AVE) is .56 for

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5 Note that some measurement items for manufacturer process control captures coordination between a manufacturer and a retailer because the focal salesperson is the chief salesperson whose task includes coordination between the manufacturer and the retailer in addition to engaging in sales activities.

6 After discussion with department stores and floor managers, we replaced “inventory management” item of manufacturer outcome control with “customer satisfaction with services” for retailer outcome control measure because it is the responsibility of the manufacturer salesforce to manage their own inventory in a PIC.
Table 2
Descriptive statistics and construct correlations.

(a) Manufacturer data

<table>
<thead>
<tr>
<th>Construct</th>
<th>Mean</th>
<th>SD</th>
<th>C-alpha</th>
<th>Items 1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Input control</td>
<td>5.97</td>
<td>.59</td>
<td>N/A</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Performance ambiguity</td>
<td>2.85</td>
<td>1.14</td>
<td>.86</td>
<td>3</td>
<td>−12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Retailer feedback</td>
<td>4.91</td>
<td>1.33</td>
<td>.96</td>
<td>4</td>
<td>.25</td>
<td>−.28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4. Centralization</td>
<td>5.60</td>
<td>.93</td>
<td>.82</td>
<td>4</td>
<td>.25</td>
<td>−.31</td>
<td>.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Manufacturer power</td>
<td>5.82</td>
<td>1.16</td>
<td>.93</td>
<td>5</td>
<td>−.32</td>
<td>−.24</td>
<td>.16</td>
<td>.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Manufacturer sales volume</td>
<td>3,144.09</td>
<td>3,862.17</td>
<td>−</td>
<td>1</td>
<td>−.04</td>
<td>−.03</td>
<td>.11</td>
<td>.15</td>
<td>.35</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Idiosyncratic investment to salesforce</td>
<td>5.16</td>
<td>1.06</td>
<td>.89</td>
<td>4</td>
<td>.19</td>
<td>−.33</td>
<td>.40</td>
<td>.14</td>
<td>.12</td>
<td>.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Process control</td>
<td>5.21</td>
<td>1.04</td>
<td>.85</td>
<td>4</td>
<td>−.55</td>
<td>.26</td>
<td>.28</td>
<td>.38</td>
<td>.23</td>
<td>.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Outcome control</td>
<td>6.24</td>
<td>.68</td>
<td>.83</td>
<td>3</td>
<td>−.28</td>
<td>.07</td>
<td>.32</td>
<td>.18</td>
<td>.11</td>
<td>.38</td>
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<td>10. Salesforce performance</td>
<td>5.90</td>
<td>.80</td>
<td>N/A</td>
<td>11</td>
<td>.42</td>
<td>−.25</td>
<td>.43</td>
<td>.14</td>
<td>.19</td>
<td>−.09</td>
<td>.56</td>
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(b) Retailer data

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<tr>
<th>Construct</th>
<th>Mean</th>
<th>SD</th>
<th>C-Alpha</th>
<th>Items 1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
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<tr>
<td>1. Input control</td>
<td>5.63</td>
<td>.82</td>
<td>N/A</td>
<td>9</td>
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<tr>
<td>2. Market uncertainty</td>
<td>3.64</td>
<td>1.33</td>
<td>.92</td>
<td>4</td>
<td>.36</td>
<td></td>
<td></td>
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<td>3. Manufacturer feedback</td>
<td>4.68</td>
<td>.83</td>
<td>.95</td>
<td>3</td>
<td>−.10</td>
<td>.21</td>
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<tr>
<td>4. Retailer power over salesforce</td>
<td>4.17</td>
<td>1.14</td>
<td>.79</td>
<td>3</td>
<td>.08</td>
<td>.21</td>
<td>−.14</td>
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<td>5. Manufacturer brand reputation</td>
<td>5.38</td>
<td>.88</td>
<td>.84</td>
<td>3</td>
<td>.13</td>
<td>.31</td>
<td>−.13</td>
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<tr>
<td>6. Brand share</td>
<td>17.25</td>
<td>7.50</td>
<td>−</td>
<td>1</td>
<td>.10</td>
<td>.11</td>
<td>−.01</td>
<td>−.07</td>
<td>.16</td>
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<td>7. Idiosyncratic investment to brand</td>
<td>4.97</td>
<td>1.31</td>
<td>.91</td>
<td>3</td>
<td>−.01</td>
<td>.11</td>
<td>.13</td>
<td>−.01</td>
<td>.00</td>
<td>.07</td>
<td></td>
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<td>8. Process control</td>
<td>5.37</td>
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<td>.86</td>
<td>5</td>
<td>.36</td>
<td>.22</td>
<td>−.20</td>
<td>.05</td>
<td>.19</td>
<td>.18</td>
<td>.06</td>
<td></td>
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<tr>
<td>9. Outcome control</td>
<td>6.08</td>
<td>.74</td>
<td>.88</td>
<td>3</td>
<td>.25</td>
<td>.28</td>
<td>.16</td>
<td>.00</td>
<td>.07</td>
<td>.02</td>
<td>.10</td>
<td>.51</td>
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<tr>
<td>10. Salesforce performance</td>
<td>5.42</td>
<td>.86</td>
<td>N/A</td>
<td>10</td>
<td>.21</td>
<td>.44</td>
<td>.36</td>
<td>−.21</td>
<td>.36</td>
<td>.07</td>
<td>.00</td>
<td>.18</td>
</tr>
</tbody>
</table>

*Correlation coefficients that are larger than .19 (.23) are significant at .05 (.01) level.

b Alpha is not applicable to a formative scale.

† Correlation coefficients that are larger than .19 (.26) are significant at .05 (.01) level.

manufacturer data and .66 for retailer data, exceeding the .50 cutoff criteria (Fornell and Larcker 1981). Both EFA and CFA thus suggested that our measures exhibit internal consistency. All indicators loaded significantly on their latent factors, indicating convergent validity. We compared the AVE values for each pair of constructs with the $\Phi^2$ value between them to assess discriminant validity. No $\Phi^2$ is greater than the individual AVE values, which suggests discriminant validity. The results of the key informant bias check (i.e., respondents’ knowledge and experience on apparel sales) and common method bias checks (Harman single factor test and marker variable test) indicate no serious threat of such biases.

Descriptive Information

Table 2a suggests that manufacturers engage in intensive input control of salesforce (mean = 5.97 out of seven-point scale). Manufacturers engage in greater outcome control than process control (mean = 6.24 versus 5.21), but there is more variation in process control than in outcome control (s.d. = 1.04 versus .68), which suggests that outcome control is more common across manufacturers. Manufacturers rated their salesforce performance high (5.90 out of seven-point scale). Manufacturers compensate salesforce through various incentives including salary only (6.7%), salary plus commission (15.8%), salary plus bonus (28.3%), but almost half of all manufacturers only use commissions (49.2%). Table 2b shows that retailer respondents rated manufacturer brand reputation reasonably high (mean = 5.38 out of seven-point scale) and the focal brand accounts for 17.25% of the apparel sales in the store. Retailers also engage in greater outcome control than process control (mean = 6.08 versus 5.37), but variation is almost identical between process control and outcome control (s.d. = .71 versus .74). Before testing the hypotheses, we evaluated the endogeneity of the predictors in our model but found no evidence for it (see Appendix A Supplementary data).

Analysis and Results

We used a three-step hierarchical OLS regression model in which we first added control variables (manufacturer power, brand sales volume, and specialized investment to salesforce) to account for rival explanations of salesforce performance (model 1.1 in Table 3), followed by the main effect terms of manufacturer controls and retailer controls (model 1.2 in Table 3), then the interaction terms between manufacturer controls and retailer controls to test the hypotheses (model 1.3). The corresponding Eqs. (1.1)–(1.3) appear below. The variance inflation factor score ranges from 1.1 to 2.3, which suggests that multicollinearity is
Table 3
Estimation results for salesforce performance.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Model 1.1 Controls only</th>
<th>Model 1.2 Controls and main effects</th>
<th>Model 1.3 Controls and main effects + interaction effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>6.24*** (22.27)</td>
<td>6.39*** (22.70)</td>
<td>6.43*** (27.19)</td>
</tr>
<tr>
<td>Controls</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturer power</td>
<td>.13** (1.97)</td>
<td>.09 (1.37)</td>
<td>.11** (2.03)</td>
</tr>
<tr>
<td>Sales volume</td>
<td>−.05 (−1.25)</td>
<td>−.07 (−1.78)</td>
<td>−.06 (−1.94)</td>
</tr>
<tr>
<td>Specialized investment in salesforce</td>
<td>.42*** (6.91)</td>
<td>.38*** (6.32)</td>
<td>.25*** (4.95)</td>
</tr>
<tr>
<td>Main effects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process control_manufacturer</td>
<td>.14* (2.01)</td>
<td>.10* (1.72)</td>
<td></td>
</tr>
<tr>
<td>Outcome control_manufacturer</td>
<td>.04 (1.57)</td>
<td>.03 (1.59)</td>
<td></td>
</tr>
<tr>
<td>Process control_retailer</td>
<td>−.12* (−1.78)</td>
<td>−.10* (−1.91)</td>
<td></td>
</tr>
<tr>
<td>Outcome control_retailer</td>
<td>.09 (1.32)</td>
<td>.10 (1.54)</td>
<td></td>
</tr>
<tr>
<td>Focal interaction effects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process control_manufacturer × Outcome control_retailer</td>
<td>H1: (+)</td>
<td></td>
<td>.17*** (2.47)</td>
</tr>
<tr>
<td>Outcome control_manufacturer × Process control_retailer</td>
<td>H2: (0)</td>
<td>−.01 (−.08)</td>
<td></td>
</tr>
<tr>
<td>Process control_manufacturer × Process control_retailer</td>
<td>H3: (−)</td>
<td>−.13* (−2.23)</td>
<td></td>
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<tr>
<td>Outcome control_manufacturer × Outcome control_retailer</td>
<td>H4: (0)</td>
<td>.05 (.74)</td>
<td></td>
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<tr>
<td>Nonfocal interactions</td>
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<tr>
<td>Process control_manufacturer × Outcome control_manufacturer</td>
<td></td>
<td>.06 (.87)</td>
<td></td>
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<tr>
<td>Process control_retailer × Outcome control_retailer</td>
<td></td>
<td>.01 (.27)</td>
<td></td>
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<tr>
<td>$R^2$</td>
<td>33.6%</td>
<td>38.5%</td>
<td>42.2%</td>
</tr>
<tr>
<td>$R^2_{adj}$ (Model F)</td>
<td>31.9% (19.70*** )</td>
<td>34.7% (10.11*** )</td>
<td>34.6% (5.61*** )</td>
</tr>
<tr>
<td>$ΔR^2$ (F-change)</td>
<td>4.9% (2.25)</td>
<td>8.6% (1.62)</td>
<td></td>
</tr>
</tbody>
</table>

Bold values represent significant results.

* $p < .05$ (one-tailed tests).

** $p < .01$ (one-tailed tests).

*** $p < .001$ (one-tailed tests).

not a concern. Table 3 presents the results.

Salesforce performance = $θ_0 + θ_1 \times \text{Manufacture power}$  
+ $θ_2 \times \text{Sales volume} + θ_3 \times \text{Idiosyncratic investment to salesforce} + \ldots$  

(1.1)

$θ_4 \times \text{Manufacture process control} + θ_5 \times \text{Manufacturer outcome control} + θ_6 \times \text{Retailer process control} + θ_7 \times \text{Retailer outcome control} + \ldots$  

(1.2)

$θ_8 \times \text{Manufacture process control} \times \text{Retailer outcome control}$  
+ $θ_9 \times \text{Manufacturer outcome control} \times \text{Retailer process control} + θ_{10} \times \text{Manufacturer process control} \times \text{Retailer process control} + θ_{11} \times \text{Manufacturer outcome control} \times \text{Retailer process control} + θ_{12} \times \text{Retailer process control} \times \text{Retailer outcome control} + θ_{13} \times \text{Retailer process control} \times \text{Retailer outcome control} + ε$  

(1.3)

The results of estimating the effects of control variables in model 1.1 indicate that manufacturer power and specialized investment to salesforce are related positively to salesforce performance ($θ_1 = .13$, $p < .05$ and $θ_3 = .42$, $p < .001$ respectively).

The main effects in model 1.2 show that manufacturer process control has a positive effect ($θ_4 = .14$, $p < .05$) but retailer process control has a negative effect ($θ_6 = −.12$, $p < .05$) on salesforce performance. These results support the two baseline assertions in our theory development; that manufacturer process control has a positive influence on salesforce performance but retailer process control has a negative influence on salesforce performance.

The hypotheses are tested in model 1.3. Salesforce performance improves when a retailer exercises higher level of outcome control under higher levels of manufacturer process control ($θ_{10} = .17$, $p < .01$), supporting H1. However, combining manufacturer outcome control with retailer process control has no influence on salesforce performance ($θ_9 = −.01$, n.s.) in support of H2. Salesforce performance diminishes when a retailer exercises higher level of process control in conjunction with higher levels of manufacturer process control ($θ_{13} = .03$, n.s.), in support of H4. We also included two nonfocal interaction terms solely for model specification completeness. Neither the combination of manufacturer process control and outcome control ($θ_{12} = .06$, n.s.) nor the combination of retailer process control and outcome control ($θ_{13} = .01$, n.s.) affects salesforce performance. We replicated the estimation of salesforce performance model with the retailer’s data to successfully confirm the robustness of our results.
Limitations

Our results should be interpreted cognizant of the three limitations. First, we limited the focus of our theory development to formal controls because formal control is costly and firms typically resort to formal control first where a history of a previous relationship does not exist. However, not considering informal controls is a limitation of this study. Second, we measured salesforce performance in a holistic way by emphasizing the importance of capturing the entire domain of salesforce performance. However, salesforce performance is multifaceted (e.g., process performance and outcome performance) and accordingly different facets of performance may be affected by a different set of predictors. Therefore, further research should have finer-grained theorizing on salesforce performance. Third, the fashion apparel industry in South Korea provides an appropriate setting to test the proposed ideas. However, the effects of dual control are likely to be contingent on a host of contextual variables including brand reputation, store reputation, and power-dependence relationships between manufacturers and retailers, which we did not consider in this study. Further research on the moderating effects of those variables is therefore warranted.

Discussion

Our study was motivated by the growing prevalence of PICs but lack of knowledge on the performance effect of dual control. Therefore, our understanding of how two firms’ simultaneous control of the same salesforce affects salesforce performance remains limited. Our premise was that differences in how dual control is configured can help explain differences in salesforce performance in a PIC. Our middle-range theory developed the idea that a retailer’s control improves salesforce performance only when its alignment with a manufacturer’s control is discriminating—discriminating in that only a certain configuration improves salesforce performance. Noteworthy in our theory development are conceptually connecting control requirements with control capacities of a controller and decomposing a predominantly monolithic view on the effect of dual control on salesforce performance.

Contributions and Theoretical Implications

Discriminating alignment

Our distinctive contribution is to offer a nuanced explanation on why dual control may improve, diminish, or be inconsequential to salesforce performance. We theorized that a compensatory fit (Gulati and Puranam 2009) should exist between two controls for improving salesforce performance. Indiscriminately combining two control mechanisms is a wildcard that can backfire. That is why combining a retailer’s outcome control with a manufacturer’s process control improves salesforce performance, whereas combining a retailer’s process control with a manufacturer’s outcome control does not.

Our findings offer two theoretical implications. First, the results highlight the importance of considering who applies control as the catalyst for a control to be beneficial. The merit of considering the differential control capacities of a manufacturer and a retailer remains invisible until we examine them simultaneously and theoretically link control requirements with control capacities of a controller.

Our second theoretical implication is to move past a simplistic notion of a complementary or substitutive effect of dual control to show the controller-contingent performance effects of control combinations. Our results highlight the importance of discriminating alignment between two controls. Fig. 4 illustrates our central findings. In Fig. 4, Panel A, greater retailer outcome con-
Control diminishes salesforce performance ($\beta = -0.15, p < .05$) when manufacturer process control is low, whereas greater retailer outcome control improves salesforce performance ($\beta = 0.21, p < .05$) when manufacturer process control is high. Therefore, increasing retailer outcome control improves salesforce performance only under high manufacturer process control ($H_1$). Conversely, Panel B shows that greater retailer process control does not influence salesforce performance ($\beta = -0.06$, n.s.) when manufacturer process control is low, whereas greater retailer process control diminishes salesforce performance ($\beta = -0.28, p < .01$) when manufacturer process control is high ($H_3$). These results illustrate the differential effects of combining a retailer’s control with a manufacturer’s control.

**Contribution to salesforce control research**

Our study results offer two implications for salesforce control research. First, our conceptual framework expands the scope of salesforce controls. Specifically, we theorized the contingent efficacy of a control by connecting control requirements with control capacity of a controller (Ouchi 1979). We resurrected Ouchi’s insightful, but dormant idea of control requirements: Deploying each control mechanism demands a distinct set of informational and social requirements. In turn, we developed the idea of differential control capacities of controllers in a PIC. A controller possesses unique social and informational capacities that can catalyze a control mechanism.
Our findings offer new insights into how the often-ignored context of control deployment can resolve a persistent paradox of varying effects of process control and outcome control. A recent meta-analysis (Crosno and Brown 2015, p. 307) found that process control and outcome control each has opposite effects on opportunism depending on whether the control is applied within a firm (e.g., manufacturer control of PIC salesforce) or between two firms (e.g., retailer control of PIC salesforce). Our controller-contingent view of control helps explain this paradox. Recognizing the differential control capacities of each controller and connecting them with requirements for control enable us to explain why Crosno and Brown (2015) found that the identical control has a diametrically opposite effect on opportunism depending on who applies that control.

This is illustrated by the 2 × 2 heat map in Fig. 5, which uses four mean-split subgroups representing high and low levels of manufacturer control and retailer control. Comparing Fig. 5A with Fig. 5B clearly suggests that combining two different controls does not automatically improve salesforce performance. Combining high manufacturer process control with high retailer outcome control improves salesforce performance (Fig. 5A), but combining high manufacturer outcome control with high retailer process control fails to improve salesforce performance (Fig. 5B). The controller that applies each control must be considered in conjunction with types of control for enhancing salesforce performance. Similarly, comparing Fig. 5C with Fig. 5D shows that the negative effect of identical controls from both controllers depends on the type of control. Combining high manufacturer process control with high retailer process control hurts salesforce performance (Fig. 5C), but combining high manufacturer outcome control with high retailer outcome control does not influence salesforce performance (Fig. 5D).

Second, we found nuanced effects of dual control by two masters with three out of four combinations failing to improve salesforce performance. Our results indicate that the effect is not uniform, ranging from complementary (when a manufacturer’s process control is combined with a retailer’s outcome control), substitutive (when a manufacturer’s process control is combined with a retailer’s process control), to additive (when a manufacturer’s outcome control is combined with a retailer’s process control or outcome control). These results cast doubt on the pervasive “more is better” premise for deploying multiple control mechanisms (Cravens et al. 2004; Joshi and Randall 2001). Instead, a combination of two controls enhances salesforce performance only when two controls combined complement each other.

**Future Research Directions**

We suggest three areas for further research. First, controls by multiple masters deserve more research attention. An increasing trend toward partial integration means more employees are subject to controls by multiple masters, which may raise management challenges to every party involved in a PIC. This trend is visible in almost every corporate function beyond sales including purchasing (Kidwell and Freeland 1995), information technology (Kunda, Barley, and Evans 2002), and research and development (Mayer and Nickerson 2005). Second, an essential element of a salesforce control system is how salespeople are being incentivized. Although we controlled for the effect of salesforce incentives on manufacturer process control or outcome control, PICs raise new and intriguing questions. Who is paying what to the salesforce? Are all the incentives monetary, or some nonmonetary incentives (e.g., favorable working conditions) are being used? What are their effects? Third, the potential effect of informal controls (Ellickson 1987) under partial integration deserves further theory development. The extant literature on the interaction between formal and informal controls (Poppo and Zenger 2002; Tiwana 2010) suggests that the role of informal controls in a PIC, in conjunction with formal controls, deserves further research attention.

**Conclusion**

We examined the unexplored question of salesforce control simultaneously by two masters in a partially integrated channel, where a manufacturer sells through retailers but sets up and staffs its own store within a retailer’s store premises. Our results suggest that combining control by two masters enhances salesforce performance in a partially integrated channel if and only if such control mechanisms are discriminatingly aligned. We hope this study spurs further research on salesforce control by multiple masters.

**Appendix A. Supplementary data**

Supplementary data associated with this article can be found, in the online version, at http://dx.doi.org/10.1016/j.jretai.2017.04.003.

**References**


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