
Keywords: Role ambiguity; strategic alliance; longitudinal data; supply chain; franchisee entrepreneurs.

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ABSTRACT

This study examines how the widespread use of co-branding through strategic alliances affects role ambiguity among retailers. The prevailing logic suggests that vertical control limits uncertainty, yet this is not consistently supported. We investigate the ability of vertical control mechanisms to curtail role ambiguity among franchisee entrepreneurs. The model predicts that the stage of an alliance influences the level of vertical control and ambiguity and the effect of control on role ambiguity. Data collected over a four-year period offer evidence that the influence of vertical control mechanisms on franchisee role ambiguity varies predictably over the course of the alliance.

1. INTRODUCTION

Corporate entrepreneurship may forge strategic alliances to increase the marketplace performance by leveraging the resources of multiple entrepreneurs in a business network (Venkatesh, Mahajan, & Muller, 2000). Each partner augments the core competencies while acquiring the essential capabilities for serving a new market (Lee, Johnson, & Grewal, 2008, Solís-Molina, Hernández-Espallardo, & Rodríguez-Orejuela, 2022). Despite the attractiveness of alliances to create new business and enter new markets, the pooling of resources presents new challenges to the firm (Baldi, 2013). Trading partners report poor returns (Ariño & Doz, 2000) and high failure rates (Park & Ungson, 2001) from alliances. The extant literature indicates that most alliances fail to meet their objectives (Rooks, Snijders, & Duysters, 2013).

The often-reported failures of alliances may be associated with the number of stages that an alliance passes through during development and maturation (Das & Teng, 2002). The transfer of knowledge between the parties to an alliance is fraught with ambiguity (Jensen & Meckling, 1991). Copious research examines the efforts to enhance the knowledge transfer between the parties to an alliance (Das & Teng, 2000, Giakoumaki, Avlonitis, & Baltas, 2016), yet few
studies investigate the effects of strategic alliances on the other firms in a value chain (Kogut, 2000). For example, the Dell–Oracle alliance enables franchisee entrepreneurs of both firms to offer a broader portfolio of products to downstream customers (Hardy, 2013).

Research that examines the conditions faced by franchisee entrepreneurs over the course of an alliance has the potential to contribute to marketing theory and practice. Heide’s (1994) governance typology and Palmatier, Houston, Dant, and Grewal’s (2013) relationship dynamics perspective recognise that interfirm relationships change through several stages, but neither essay examines whether the efficacy of control mechanisms fluctuates with each stage. As boundary spanners, franchisee entrepreneurs are prone to experience uncertainty regarding the activities that are essential to achieving the desired outcomes (Lyles & Lenz, 1982; Singh, 1993). Role theory (Schaubroek, Ganster, Sime, & Ditman, 1993) and transaction cost economics (Williamson, 1985) identify vertical control as a means to lower uncertainty, yet the alliance research does not support this proposition universally (Gong, Shenkar, Luo, & Nyaw, 2001; Shenkar & Zeira, 1992). We suggest that the influence of control varies over the course of the alliance. Substantial research illustrates that alliances evolve (Das & Teng, 2002), but the influence of the stage of the alliance on franchisee entrepreneurs remains to be examined.

The research also contributes to managerial practice. Consistent with the prior research illustrating that the efficacy of an alliance is contingent on its relationships with parties that are external to the agreement (Das & Teng, 1998; Tjemkes, Vos, & Burgers, 2012), we examine whether role ambiguity influences relationships with franchisee entrepreneurs and their customers. By illustrating that the efficacy of vertical control varies over the course of the alliance, we inform management about the contingent utility of control to constrain ambiguity and raise effectiveness.
We begin our analysis by presenting the theoretical model. We subsequently describe the data collection methods and results. We close by outlining some implications of our study for interfirm research and practice.

2. THEORETICAL MODEL

Role stress research examines the conditions that evoke adverse reactions, notably role ambiguity, and the consequences of these reactions in the enactment of a role (Biddle, 1986). Role theory facilitates the examination of the interaction among the factors that influence role stress and effectiveness in co-branded franchise systems (Pinello, Picone, & Mocciaro Li Destri, 2022, Kahn & Byosiere, 1992). We incorporate role theory into a model that addresses two perspectives on the antecedents and consequences of stress. First, the model examines the antecedents and consequences of ambiguity without regard for the stage of the alliance. This baseline model is a differentiated replication of the prior research examining the antecedents and consequences of role ambiguity (Jackson & Schuler, 1983; Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). We identify vertical control as a mechanism employed by the franchisor to lower franchisee role ambiguity. The success of the franchisee is largely contingent on the ability to work successfully with the franchisor to serve consumers. Thus, we suggest that role ambiguity affects the franchisee entrepreneur’s ability to enhance customer satisfaction as well as the quality of the franchisee’s relationship with the franchisor.

The second component of the model provides the opportunity to examine whether the stage of an interfirm alliance affects the factors within the baseline model. Role theory suggests that external events can influence the factors in the baseline model as well as the relationships among the factors. These subsequent models are close replications of our initial analysis. We
investigate whether the stage of the alliance affects the constructs in the baseline model as well as the relationships inherent to the model. Figure 1 provides an overview of the conceptual model. In the following section, we initially present a baseline model of ambiguity, and we subsequently examine whether the stage of the alliance affects this model.

2.1 Baseline Model of Role Ambiguity

Organisational role theory characterises a role as a set of prescriptions that define the appropriate behaviour for a person occupying a position in an organisation (Biddle & Thomas, 1966; Chreim, Williams, & Hinings, 2007). In industries that rely on franchising, the role of the franchisee entrepreneur is manifest in the training programmes, contracts, and operating system documentation (Keating, 1991). Despite the prescription of expectations, franchisee entrepreneurs are inclined to experience role ambiguity. Role ambiguity refers to a lack of clarity concerning the expectations associated with a role (House & Rizzo, 1972; Schmitz & Ganesan, 2014). For example, franchisees encounter ambiguity when searching for effective ways to invest in local advertising (Bradach, 1998). Franchisor mergers or other actions that involve the introduction of additional products have the potential to increase the ambiguity related to many facets of operations, such as advertising allocations, trademarks, reporting requirements, and operations (Jemison & Sitkin, 1986; Scott & Goodhard, 1998).
Marketing research underscores the need to foster coordination and communication in alliances (Lee et al., 2008). *Vertical control* is a form of coordination that focuses on the franchisee entrepreneur’s perceptions of the extent to which the franchisor maintains control over decision making (Mohr, Fisher, & Nevin, 1996). This form of control focuses on the franchisor’s monitoring of the franchisee entrepreneur’s behaviour (Jacobides & Croson, 2001). Lyles and Lenz’s (1982) analysis of strategic planning in the banking industry indicates that these vertical
control mechanisms influence role stress. Role theory (Schaubroeck et al., 1993) suggests that formal operating procedures reduce role ambiguity by clarifying the relationships involved in a venture. Similarly, transaction cost economics (Williamson, 1985) maintains that the codification of information transmission reduces uncertainty (Gong et al., 2001). Franchising research also underscores the need to exercise control to achieve consistency across multiple, geographically dispersed units (Castrogiovanni & Justis, 1998). Limited decision-making authority circumscribes obligations and leads to less confusion over role responsibilities (Podsakoff, Williams, & Todor, 1986). Thus, the following is proposed:

**H1:** Vertical control is negatively associated with role ambiguity.

Relationship satisfaction and efforts to achieve customer satisfaction are two related facets of effectiveness that examine a franchisee entrepreneur’s relationship with the franchisor and the franchisee’s customers. **Relationship satisfaction** assesses a franchisee entrepreneur’s sense of contentment with his or her affiliation with the franchisor (Mohr et al., 1996). Role theory (Kahn et al., 1964) underscores the dysfunctional influences of role ambiguity on satisfaction, and research in a variety of contexts reveals noxious influences of role ambiguity on satisfaction within the organisation (Fisher & Gitelson, 1983; Rizzo, House, & Lirtzmann, 1970). Franchisee entrepreneurs who lack information that is essential to performing their roles experience dissatisfaction with the role and role partners (Breaugh & Colihan, 1994; Lankau & Scandura, 2002).

**H2:** Role ambiguity is negatively related to relational satisfaction.

**Efforts to achieve customer satisfaction** describe the energy dedicated to serving customers (Kumar, Stern, & Achrol, 1992). The level of role stress should influence the efforts to achieve customer satisfaction. Singh (1993) indicates that customer-related performance
wanes when boundary-spanning personnel experience role ambiguity. As the obligations associated with performance become less clear, franchisee entrepreneurs have greater difficulty in meeting customer expectations. Pfeffer and Salancik (1978) similarly suggest that, as the demands on the franchisee entrepreneur increase, the potential to address customer concerns diminishes. Franchisee entrepreneurs prioritise obligations other than customer needs, and they dedicate time to performing tasks that do not benefit consumers (Nygaard & Dahlstrom, 2002). Therefore, the following is proposed:

**H3**: Role ambiguity is negatively related to efforts to increase customer satisfaction.

### 2.2 Alliance Stage as a Modifier of the Baseline Model

The baseline model identified above is consistent with the logic of most prior, relevant organisational research. Based on 9 studies with a sample of 1,300, Jackson and Shuler’s (1985) meta-analysis reports an average correlation of -.49 between vertical control and ambiguity. Similarly, a sample of 3,619 informants in 17 studies yields an average correlation of -.53 between ambiguity and satisfaction with supervision. A total of 7 studies examines the relationship between vertical control and ambiguity, and 41 studies investigate the relationship between ambiguity and satisfaction with supervision. Role ambiguity is identified as a determinant of customer satisfaction by 3 studies (e.g., Hartline & Ferrell, 1996).

Empirical studies generally support the relationships in the baseline model, but they do not consider whether interfirm alliances affect the model. Strategy research identifies three stages of an alliance: the formative, operational, and outcome stages (Chao, 2011; Das & Teng, 1998; Zajac & Olsen, 1993). The stage of the franchisor’s alliance should influence the operations of the downstream franchisee entrepreneurs. During the **formative stage**, franchisors identify partners, negotiate resource allocations, and establish the alliance (Tjemkes et al., 2012).
Downstream franchisee entrepreneurs are generally unfamiliar with the franchisors’ deliberations, and their operations are not directly affected by the franchisors’ negotiations. During the operational stage, the new alliance between franchisors implements the agreement. The beginning of this stage is characterised by substantial volatility (D’Aunno & Zuckerman, 1987), during which the franchisors begin to assess whether the alliance is achieving its objectives (Narayandas & Rangan, 2004). The implementation of the alliance directly affects franchisee entrepreneurs, as they are directed to make modifications to their operations to accommodate the alliance. The outcome stage emerges as the franchisors begin to obtain results from the alliance. Objective returns and attitudes toward the alliance are readily observable at this juncture (Chao, 2011). The preliminary strategies developed during the operational stage are modified to accommodate the market needs (Narayandas & Rangan, 2004). As the alliance identifies tactics that yield desirable returns, these tactics become codified into operating procedures designed to guide the franchisee entrepreneur’s activity (Ring & Van de Ven, 1994).

The formative, operational, and outcome stages of the franchisors’ alliance should influence the constructs and patterns presented in the static model. Wright, Hoskisson, and Busenitz (2001) illustrate that bureaucratic mechanisms are often employed to constrain individuals from engaging in innovative approaches to problem solving. In distribution channels that employ business format franchising, vertical control is particularly enacted to restrict experimentation and ensure consistency (Keating, 1991). The introduction of a second business format or new product lines in the operational stage, however, initially demands novel solutions that should be accompanied by increases in autonomy. Consistent with this view, Bruining, Boselie, Wright, and Bacon (2005) report greater levels of employee flexibility and responsibility in buyouts that focus on product development and innovation. Over time, the
franchisee entrepreneurs and the new franchisor alliance engage in sense making and identification of best practices (Ring & Van de Ven, 1994). As the alliance approaches the outcome stage, the novel routines employed to achieve the desired ends become incorporated into operating procedures that are enforced via vertical control (Zucker, 1977).

**H4**: Relative to the formative and outcome stages, franchisees operating during the operational stage report lower levels of vertical control.

Change in the alliances among franchisors is shown to influence the level of *role ambiguity* in a variety of settings. Jemison and Sitkin (1986) maintain that an acquisition disrupts strategies and emerging roles become misunderstood, whereas Schweiger and DeNisi (1991) report that employees have less information necessary for job performance after a merger is established. Newly formed alliances that generate additional responsibilities complicate role requirements and make it difficult to determine expectations (Park & Ungson, 2001).

These studies indicate higher levels of role ambiguity during the operational stage, and related research suggests that this increase is one period in a transition process. In their analysis of corporate spin-offs, Corley and Gioia (2004) describe three stages of identity ambiguity encountered by the newly independent firm. The clarity of the identity realised before the spin-off is replaced by tension related to determining what the organisation is becoming, but eventually the level of tension recedes to levels like those prior to the alliance (Das & Teng, 2002). Similarly, Floyd and Lane (2000) describe a strategic renewal process during which new knowledge and innovative behaviour augment the core competencies and product market domains. At the inception of the alliance, franchisee entrepreneurs encounter appreciably higher levels of non-consensus regarding priorities and expectations. Over time, leaders engage in sense-giving imperatives that resolve identity tensions and reduce conflicts between old and new responsibilities (Ring & Van de Ven, 1994). Therefore, the following is proposed:
**H5:** Relative to the formative and outcome stages, franchisees operating during the operational stage report greater role ambiguity.

Research in an interorganisational contracting setting suggests that the implementation of an interfirm contract influences effectiveness. Bruining et al. (2005) distinguish between agreements forged either to facilitate innovation or to control costs. Gulati (1995) also distinguishes among alliances established to develop new competencies and improve strategic positions and alliances driven by cost control, bandwagon effects, and legitimacy. Alliances established to enhance market positions and establish competencies should influence the level of relational satisfaction. Schweiger and DeNisi’s (1991) analysis examined a merger prompted by a desire to combine complementary product lines. Participating employees reported decrements in perceptions of company caring and job satisfaction in the four months after a merger. Downstream franchisee entrepreneurs should similarly report less satisfaction with franchisors during the operational stage. As franchisee entrepreneurs begin to voice concerns to franchisors, the parties to the merger should engage in action designed to enhance working relationships (Piderit, 2000).

**H6:** Relative to the formative and outcome stages, franchisees operating during the operational stage report lower levels of relational satisfaction.

Corley and Gioia (2004) offer evidence of a ritualistic, immediate response to a corporate spin-off in which employees were less motivated to provide customer service and downplay efforts to market established technologies with established customers. The management subsequently enacted a sense-making imperative designed to re-establish the firm as a value-driven organisation among its customers. Bruining et al.’s (2005) study of buyouts illustrates a rebellious response in which the management eventually enacted programmes to make employees more market-oriented. The levels of franchisees’ entrepreneurial efforts to raise
customer satisfaction should analogously falter during the operational stage but rekindle during the outcome stage of the alliance. Alliances established to enhance market positions should encounter an initial stage during which the procedures for marketing the products of the two firms are not well established (Jemison & Sitkin, 1986). As franchisee entrepreneurs begin to understand the means for marketing the new, diverse product mix, the efforts to raise customer satisfaction should correspondingly increase. Therefore, the following is proposed:

**H7**: Relative to the formative and outcome stages, franchisees operating during the operational stage report lower efforts to achieve customer satisfaction.

The stage of the alliance also has the potential to influence the relationship between the constructs outlined in the baseline model. There is, however, little consensus regarding the optimal level of vertical control employed in interfirm relationships (Glaister, Husan, & Buckley, 2003). Conventional wisdom suggests that vertical controls are implemented to guide the direction of franchisee entrepreneurs (Keating, 1991). Monitoring offers control that reduces the information asymmetry between the exchange parties (Eisenhardt, 1985). To the extent that asymmetry is reduced, franchisee entrepreneurs should report lower levels of ambiguity. Although meta-analysis indicates that the existence of written rules and procedures governing work activities limits role ambiguity (Jackson & Schuler, 1985), research examining role ambiguity in interfirm alliances does not consistently support a negative relationship between vertical control and ambiguity. Wong, DeSanctis, and Staudenmayer (2007) report that limited vertical control yields lower levels of role ambiguity, whereas Gong et al. (2001) find no association between formalisation and ambiguity.

Role research (Elliott & Eisdorfer, 1982) recognises that formal procedures influence the production of ambiguity. Although role theory further recognises that external factors can modify this influence, it is silent with respect to the external conditions that affect the production
of role ambiguity. We suggest that the stage of the alliance influences the effect of vertical control on role ambiguity. In the formative stage of an alliance between franchisors, there is relatively little uncertainty concerning effective franchisee operations. Under these circumstances franchisors are able to devise control structures that lead to the desired outcomes. When the relationship moves to the operational stage, there is often a great deal of volatility (D’Aunno & Zuckman, 1987). Franchisors are reluctant to institute policies during this stage, since there is limited assurance that the policies will lead to greater clarity (Kelly, Schaan, & Joncas, 2002). As the relationship develops toward the outcome stage, franchisors are able to identify and codify the practices that lead to the desired performance outcomes.

**H8:** The stage of the alliance influences the relationship between vertical control and role ambiguity. In the formative and outcome stages, vertical control lowers ambiguity, whereas it raises ambiguity during the operational stage.

This model implicates the alliance stage as a modifier of the relationship between vertical control and role ambiguity, yet it does not implicate the stage of the alliance as a factor that influences the relationship between ambiguity and interfirm outcomes (i.e., satisfaction with the franchisor and efforts to raise customer satisfaction). The interfirm alliance and role research does not reveal the circumstances under which ambiguity has a positive influence on a franchisee entrepreneur’s relationship with the customers or the franchisor. We consider below the method employed to assess this model.
3. METHOD

3.1 Empirical Context

The retail network of a Norwegian oil refiner served as the empirical context. Several milestones characterise the transitions in the retail distribution network when we conducted this research. Our charting of these milestones (see Table 1) draws on public (e.g., annual reports) and private (e.g., contracts) documents made available by the firm over the course of this study.

<table>
<thead>
<tr>
<th>Year</th>
<th>Strategic Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The refiner establishes a separate company to handle franchise retail operations, and it reports a desire to augment the product mix at gas stations. The broader product mix includes a wider variety of groceries and products commonly sold at grocery stores and quick service restaurant products. The first dual branded gas/convenience stations are developed. The refiner is sole owner of the retail operations, and the grocer is a primary supplier to these locations.</td>
</tr>
<tr>
<td></td>
<td>Formative stage data collection: 174 of 364 franchisees.</td>
</tr>
<tr>
<td>2</td>
<td>The strategic alliance is established as fifty-percent ownership of retail operations is sold to the grocer. The refiner reports renewed interest in gaining merchandising expertise and broader product mixes of grocery-related products.</td>
</tr>
<tr>
<td></td>
<td>Operational stage data collection: 221 of 357 franchisees.</td>
</tr>
<tr>
<td>4</td>
<td>Dual-branded gas/convenience stations evince enhanced concept development, improved security, collaboration, information technology, and customer loyalty programs.</td>
</tr>
<tr>
<td></td>
<td>Outcome stage data collection: 112 of 322 franchisees.</td>
</tr>
</tbody>
</table>

The franchisees who participated in this study are self-employed entrepreneurs who manage locations with 4 to 10 employees. Because these informants are the sole liaisons between their agencies and the franchisor, a single-informant design is appropriate at the franchisee level (Kumar, Stern, & Anderson, 1993). Prior to the initial data collection, the survey was administered
to franchisee entrepreneurs and area managers of another Norwegian oil refiner. The area
managers oversee 4 to 10 retail outlets, and it was infeasible to acquire reports on each franchisee
entrepreneur. Nevertheless, we obtained 71 matched franchisee–franchisor reports representing a
95 per cent response rate from the franchisor’s representatives. A comparison of the coefficient
alpha, item-to-total correlations, and exploratory factor loadings indicated consistency in the factor
structure across dyads.

The sampling procedure in the primary study was consistent over the three stages of data
collection. The survey instrument was reviewed by the director of the retail network and the retail
managers’ union. Initial telephone calls to the franchisee entrepreneurs ensured that the appropriate
person was aware of the forthcoming survey. The instrument was subsequently sent to the
franchisee entrepreneurs along with supporting letters from the retail union, the franchisors, and the
research team. Follow-up phone calls two weeks after the mailing contributed to the response rates.
In the formative stage, 174 of 364 (48%) franchisee entrepreneurs participated, whereas 221 of 357
(62%) franchisee entrepreneurs participated in the operational stage. In the outcome stage, 112 of
322 (35%) of the franchisee entrepreneurs completed the survey.

The absence of significant differences between early and late respondents suggests that
non-response bias is not problematic (Armstrong & Overton, 1977). The guarantee of anonymity
precluded the tracking of the responses of specific franchisee entrepreneurs, yet surveys for the
operational and outcome stages asked the respondents about their participation in the previous
phase of the study. There were no significant differences between (prior stage) participants and
non-participants with respect to the constructs in the model. The potential for method bias was
examined using the strategies outlined by Podsakoff, MacKenzie, Lee, and Podsakoff (2003). The
survey design ensured anonymity, which reduces the likelihood of socially desirable responses,
which are a main source of such variance. We further compared the four-factor model with a single-factor model (De Clercq, Dimov, & Thongpapanl, 2013). At each of the stages of the alliance, the single-factor model yielded a poorer fit to the data. For example, in the formative stage, the single-factor model ($\chi^2 = 462.949, p < .05; \text{d.f.} = 65$) yielded a poorer fit to the data than the measurement model ($\chi^2 = 89.809, p < .05; \text{d.f.} = 59$).

### 3.2 Measure Development

Our measure assessment incorporated the techniques outlined by Gerbing and Anderson (1988). The coefficient alpha, item-to-total correlations, and exploratory factor analysis served as the initial bases for purifying the measures. Items that did not evince acceptable factor loadings at the formative, operational, or outcome stages were eliminated. Scree tests and eigenvalues offered evidence that a single factor represented the items in each conceptual domain. English versions of the scales are provided in the measurement appendix.

#### 3.2.1 Vertical Control

Vertical control refers to the degree to which the franchisor maintains authority over decision making. Mohr et al. ’s (1996) three-item measure was employed in each phase of data collection.

#### 3.2.2 Role Ambiguity

Ambiguity considers the lack of clarity associated with a role. The four ambiguity items are based on the scale developed by Rizzo et al. (1970).

#### 3.2.3 Franchisee Effectiveness

Relational satisfaction assesses the level of contentment in the relationship with the franchisor, and efforts to raise customer satisfaction refer to the energy dedicated to serving customers. Three relational satisfaction measures and three items measuring efforts to increase satisfaction were adapted from Kumar et al. (1992).

### 3.3 Construct Validity

We employed EQS (Bentler, 1995) to examine the construct validity and structural
parameters via the two-step process outlined by Anderson and Gerbing (1988). As a supplement to this procedure, we evaluated the measurement equivalence for each construct over time (Vandenberg & Lance, 2000). The factor loading of the third indicator for relational satisfaction in the operational phase ($\lambda = .875$) is significantly greater ($\chi^2[1] = 4.208$, $p < .01$) than the loading in the formative stage ($\lambda = .671$). The non-significant difference between the loadings of all the other indicators at each alliance stage provides additional support for convergent validity.

Confirmatory factor analyses of the formative ($\chi^2[59] = 89.809$, $p < .05$; RMSR = .01; CFI = .945), operational ($\chi^2[59] = 103.311$, $p < .01$; RMSR = .05; CFI = .955), and outcome stages ($\chi^2[59] = 99.712$, $p < .05$; RMSR = .01; CFI = .915) offer evidence of a reasonable fit between the proposed measurement models and the data. The statistically significant factor loadings are indicative of convergent validity. Examination of the standardised residuals and Lagrange multipliers (Anderson, 1987) indicate no significant cross-loadings. As a further test of discriminant validity, we compared the confirmatory models with a series of models in which the correlation between two constructs was set to unity. Chi-square difference tests comparing these models provide evidence of discriminant validity. For example, the discriminant test for efforts to raise customer satisfaction and relational satisfaction is significant in the formative ($\chi^2[1] = 86.656$, $p < .05$), operational ($\chi^2[1] = 111.694$, $p < .05$), and outcome stages ($\chi^2[1] = 46.588$, $p < .05$). Table 2 provides correlation matrices for each phase of data collection.
Table 2
Correlations among independent and dependent variable across stages of the alliance

<table>
<thead>
<tr>
<th></th>
<th>Formative Stage (n = 174)</th>
<th>Operational Stage (n = 221)</th>
<th>Outcome Stage (n = 112)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical Control</td>
<td>.707</td>
<td>.755</td>
<td>.775</td>
</tr>
<tr>
<td>Role Ambiguity</td>
<td>-.218</td>
<td>.144</td>
<td>-.180</td>
</tr>
<tr>
<td>Relational Satisfaction</td>
<td>-.022</td>
<td>.063</td>
<td>-.191</td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>-.067</td>
<td>.086</td>
<td>-.084</td>
</tr>
</tbody>
</table>

Correlations with absolute values of (.14) or greater are significant at p < .05.

4. RESULTS

Structural equation modelling provided the basis for examining H1–3 and 8, and an analysis of the variance facilitated the assessment of H4–7. The initial structural equations suggest some correspondence between the models in the formative (χ^2[62] = 93.764, p < .05; CFI = .943), operational (χ^2[62] = 107.803, p < .05; CFI = .954), and outcome stages (χ^2[62] = 102.203, p < .05; CFI = .916).
Table 3
Structural equation model of antecedents and consequences of role ambiguity

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Dependent Variable</th>
<th>Structural Equations Models</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Formative</td>
<td>Operational</td>
<td>Outcome</td>
<td></td>
</tr>
<tr>
<td></td>
<td>γ-β</td>
<td>(t-value)</td>
<td>γ-β</td>
<td>(t-value)</td>
<td>γ-β</td>
</tr>
<tr>
<td>Vertical Control</td>
<td>Role Ambiguity</td>
<td>-.267</td>
<td>(-2.384)</td>
<td>.172</td>
<td>(2.015)</td>
</tr>
<tr>
<td>Role Ambiguity</td>
<td>Relational Satisfaction</td>
<td>-.412</td>
<td>(-3.699)</td>
<td>-.453</td>
<td>(-4.455)</td>
</tr>
<tr>
<td>Role Ambiguity</td>
<td>Customer Satisfaction</td>
<td>-.216</td>
<td>(-2.225)</td>
<td>-.176</td>
<td>(-2.275)</td>
</tr>
<tr>
<td></td>
<td>χ²</td>
<td>(df)</td>
<td>(p-value)</td>
<td>CFI</td>
<td></td>
</tr>
<tr>
<td></td>
<td>93.764</td>
<td>62</td>
<td>p&lt;.05</td>
<td>.943</td>
<td></td>
</tr>
<tr>
<td></td>
<td>107.803</td>
<td>62</td>
<td>p&lt;.05</td>
<td>.954</td>
<td></td>
</tr>
<tr>
<td></td>
<td>102.203</td>
<td>62</td>
<td>p&lt;.01</td>
<td>.916</td>
<td></td>
</tr>
</tbody>
</table>

Table 4
Influences of the stage of the strategic alliance

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>F- Ratio</th>
<th>d.f.</th>
<th>Alliance Effects¹</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Formative</td>
<td>Operational</td>
<td>Outcome</td>
</tr>
<tr>
<td>Vertical Control</td>
<td>500.352 *</td>
<td>2,502</td>
<td>5.52 A</td>
</tr>
<tr>
<td>Role Ambiguity</td>
<td>4.093 *</td>
<td>2,502</td>
<td>2.79 A</td>
</tr>
<tr>
<td>Relational Satisfaction</td>
<td>3.984 *</td>
<td>2,502</td>
<td>3.85 A</td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>0.552</td>
<td>2,502</td>
<td>6.29</td>
</tr>
</tbody>
</table>

* F statistic significant at p < .05
1 - Column entries are mean levels of dependent variables for each phase of the alliance. Columns with different postscripts have Bonferroni inequalities that are significantly different at p < .05.

H1 identifies vertical control as a determinant of role ambiguity. Although the influence of control on ambiguity outlined in H1 is supported during the formative (γ = -.267; t = -2.384)
and outcome stages ($\gamma = -0.258$; $t = -2.055$), the influence is negative during the operational stage ($\gamma = 0.172$; $t = 2.015$). The influence of vertical control on ambiguity in the operational phase is significantly different from the influence in the formative ($\chi^2[1] = 10.212$, $p < .05$) and outcome stages ($\chi^2[1] = 4.208$, $p < .05$), yet it does not vary between the formative and the outcome stage ($\chi^2[1] = 0.088$, $p < .05$). Together these results support H8.

The relationship between role ambiguity and effectiveness is the focus of H2–3. In support of H2 and H3, role ambiguity yields lower relational satisfaction (formative: $\beta = -0.412$; $t = 3.699$; operational: $\beta = -0.453$; $t = -4.455$; outcome: $\beta = -0.433$; $t = -3.118$) and efforts to raise customer satisfaction (formative: $\beta = -0.216$; $t = -2.225$; operational: $\beta = -0.176$; $t = -2.275$; outcome: $\beta = -0.500$; $t = -4.163$). The influence of ambiguity on relational satisfaction does not vary across time periods, but the influence of ambiguity on efforts to raise customer satisfaction is greater in the outcome stage than in the operational stage ($\chi^2[1] = 3.89$, $p < .05$).

Table 4 provides a summary of the tests of H4–7. H4 states that the stage of the alliance influences the mean level of vertical control. Consistent with the hypothesis, the phase of the alliance is related to vertical control ($F[2,502] = 500.352$, $p < .05$). The Bonferroni inequalities indicate that control is lower during the operational stage ($\bar{x} = 2.44$) than during the formative ($\bar{x} = 5.52$) and outcome stages ($\bar{x} = 5.80$). The level of control does not vary between the formative and the outcome stage. H5, which indicates the phase of the alliance as a determinant of ambiguity, is partially supported ($F[2,502] = 4.093$, $p < .05$). The Bonferroni inequalities indicate that ambiguity is lower in the outcome stage ($\bar{x} = 2.45$) than in the formative stage ($\bar{x} = 2.79$) and the operational stage ($\bar{x} = 2.76$). H6 is partially supported ($F[2,502] = 3.984$, $p < .05$), and the Bonferroni equalities indicate that relational satisfaction in the formative stage ($\bar{x} = 3.85$) is lower than the levels observed in the operational ($\bar{x} = 4.19$) and outcome stages ($\bar{x} = 4.00$).
Relational satisfaction does not vary between the operational and the outcome stage. H7 is not supported ($F_{[2,502]} = 0.552, p > .05$), as efforts to raise customer satisfaction do not vary between alliance stages.

5. DISCUSSION

The objective of this research was to examine whether the efficacy of vertical control varies over the life of an alliance between franchisors. The results suggest that the stage of the alliance influences vertical control, role ambiguity, and relational satisfaction. In addition, the stage of the alliance influences the efficacy of vertical control. Although control limits ambiguity in the formative and outcome stages, it exacerbates ambiguity during the operational stage. Regardless of the stage of the alliance, role ambiguity reduces relational satisfaction and efforts to raise customer satisfaction. Before addressing the implications of these results, we consider the limitations of the research.

5.1 Limitations

Our model is grounded in role theory and alliance research, and the design provides some confidence to indicate the stage of the alliance as an important consideration in the analysis of ambiguity and satisfaction. This longitudinal research has the potential to reduce common method variance and enhance causal inference (Scandura & Williams, 2000, Tomas, Ketchen, & Slater, 2002). The use of Likert scales to measure the predictor and criterion variables reduces cognitive processing and encourages consistent responses that may not reflect the item content (Podsakoff et al., 2003). The use of semantic differentials or other scales could alleviate some common method variance.
The second limitation concerns the simultaneous collection of the predictor and criterion variables. The collection of independent and dependent variables at different points in time increases the confidence in the causal assertions gleaned from the study. The guarantee of anonymity incorporated into this study may have increased the response rate, but it precluded the observation of specific agencies over the course of the alliance. Statistical analyses of the data collected in the operational and outcome stages indicated no significant difference between respondents and non-respondents from earlier stages. Nevertheless, charting a relationship over time from different vantage points offers greater confidence to make assertions about the influence of contractual mechanisms on organisational properties (Scandura & Williams, 2000).

In longitudinal studies the advantages of employing only data from respondents who participated across the collection stages must be weighed against the inevitable reductions in the sample size.

The third limitation is the use of single informants as the primary vehicle for the analysis of the theoretical model when prior research indicates that multiple informants offer enhanced reliability and validity (Kumar et al., 1993). The size of the agencies precluded the collection of multiple reports from respondents who could complete the questionnaire competently, and it was thus not feasible to obtain reports on each franchisee from the area managers who serve as the franchisor’s liaisons in the field. Nevertheless, there may be appreciable levels of social desirability bias in the franchisee entrepreneurs’ self-reports of their relationship with the franchisor (Furnham, 1986).

The fourth limitation concerns the sole reliance on vertical control as a mechanism to influence ambiguity. The research by Miao and Evans (2012) indicates that outcome and capability control also influence ambiguity, and the combined use of these alternative control
mechanisms quells ambiguity. Future research should augment the current study by examining the effect of these mechanisms over the stages of an alliance.

5.2 Implications

Our findings contribute to the management theory of corporate entrepreneurship and strategic alliances and research on franchising. The results illustrate how action taken at one level in a channel affects processes at other levels. Fang, Palmatier, Scheer, and Li (2008) recognise that the relationships developed by collaborating firms are enacted by downstream franchisee entrepreneurs, yet this observation is rarely incorporated into interfirm research. We illustrate that the alliances forged by franchisors have a significant influence on operations at the retail level. Given the breadth of agreements established by franchisors, research is warranted to examine the mechanisms for quelling franchisee uncertainty while enhancing franchisee performance.

The study also has implications for the design of interfirm research underscores the merits of analysing changes in performance in response to changes in co-branding channel management (Nguyen, Romaniuk, Faulkner & Cohen, 2019). Models of interfirm relationships (e.g., Heide, 1994; Palmatier et al., 2013) similarly recognise that interfirm relationships progress through several stages. Our model augments this logic by framing the alliance as series of stages that require different strategies to achieve the desired outcomes (Zajac & Olsen, 1993). The incorporation of interfirm alliance research into future studies should similarly provide the ability to predict relationship development.

The efficacy of vertical control is observed in the formative and outcome stages, yet control increases ambiguity during the operational stage. The change in the degree of vertical control over the course of the alliance has implications for the analysis of the perceptions
associated with the control structures. As Lepine, Podsakoff, and Lepine (2005) illustrate, stressors that are viewed as challenging have a direct positive influence on performance, yet hindrance stressors have contrasting influences on performance. Research is warranted to investigate whether the perceived nature of vertical control varies over the course of an alliance. In addition, these findings demand investigation procedures that alleviate ambiguity in the operational stage. Studies examining the mechanisms for clarifying and communicating strategy provide insights into the success of alliances (Marks & Mirvis, 2001; Paulraj, Lado, & Chen, 2008).

Our results have implications because researchers attempt to investigate alliances. Consistent with prior research (Hoang & Antoncic, 2003; Reuer, Zollo, & Singh, 2002; Venkatesh et al., 2000), our study underscores the need to examine the development of alliances over time. Research that attempts to generalise from data collected at a single point in time is unlikely to be able to capture the dynamics associated with the development of the alliance. By reproducing empirical analyses, researchers identify the limits on the application of theory (Open Science Collaboration, 2015). Thus, researchers should employ longitudinal designs that enable the observation of changes in relationships over time (Ployhart & Venderberg, 2010).

Although our findings are to some extent endemic to the research milieu, they provide some implications for managerial practice. Given the enduring influence of role ambiguity on relational satisfaction and efforts to increase customer satisfaction, managers of interfirm alliances should monitor the level of ambiguity faced by downstream franchisee entrepreneurs. These managers can also plan for likely responses from franchisee entrepreneurs over the course of the alliance. As the alliance progresses toward the operational stage, the efficacy of vertical control diminishes. Managers can supplement these control structures via relational norms
designed to enrich interfirm relationships (Poppo & Zenger, 2002). As the relationship continues to develop, the management can focus on identifying operating procedures that limit uncertainty and increase satisfaction levels (Heide, 1994). The judicious use of vertical controls and bilateral governance mechanisms should increase franchisee entrepreneurs’ productivity over the course of an alliance between franchisors.
References


Appendix. Constructs/Measures

<table>
<thead>
<tr>
<th>SCALE ITEMS</th>
<th>Formative</th>
<th>Research Phase*</th>
<th>Operational</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vertical Control</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In the past six months, the company has changed or influenced our programs and policies.</td>
<td>0.620&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.833&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.746&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>The company can pretty much dictate how we sell their product.</td>
<td>0.732</td>
<td>0.683</td>
<td>0.754</td>
<td></td>
</tr>
<tr>
<td>We yield to recommendations from them on general business practices.</td>
<td>0.651</td>
<td>0.609</td>
<td>0.693</td>
<td></td>
</tr>
<tr>
<td><strong>Role Ambiguity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There are clear goals and strategy from the refiner. (r)</td>
<td>0.534&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.662&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.670&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>The refiner is totally clear regarding answer to inquiries about system operations. (r)</td>
<td>0.531</td>
<td>0.549</td>
<td>0.607</td>
<td></td>
</tr>
<tr>
<td>The refiner is clear about the how store managers are evaluated and rewarded. (r)</td>
<td>0.600</td>
<td>0.583</td>
<td>0.649</td>
<td></td>
</tr>
<tr>
<td>The store managers responsibilities are made clear from the refiner to the store manager. (r)</td>
<td>0.797</td>
<td>0.857</td>
<td>0.783</td>
<td></td>
</tr>
<tr>
<td><strong>Relational Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We are satisfied with the refiner’s cooperation over inventory management.</td>
<td>0.841&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.524&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.635</td>
<td></td>
</tr>
<tr>
<td>We are satisfied with the refiner’s sales promotions.</td>
<td>0.636</td>
<td>0.741</td>
<td>0.758</td>
<td></td>
</tr>
<tr>
<td>We are satisfied with the refiner’s direction and management.</td>
<td>0.671</td>
<td>0.875</td>
<td>0.726</td>
<td></td>
</tr>
<tr>
<td><strong>Customer Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We do everything we can to make our customers happy.</td>
<td>0.645&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.753&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.925&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>We provide quality assistance in the solution of any problem involving the refiner’s products.</td>
<td>0.975</td>
<td>0.975</td>
<td>0.856</td>
<td></td>
</tr>
<tr>
<td>We help customers reduce their concerns about the refiner’s products by providing useful information.</td>
<td>0.619</td>
<td>0.793</td>
<td>0.558</td>
<td></td>
</tr>
</tbody>
</table>

Summary Statistics

<table>
<thead>
<tr>
<th></th>
<th>χ² (d. f. = 59)</th>
<th>p- value</th>
<th>RMSR</th>
<th>CFI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>89.809</td>
<td>.01</td>
<td>.05</td>
<td>.945</td>
</tr>
<tr>
<td></td>
<td>103.311</td>
<td>.01</td>
<td>.05</td>
<td>.955</td>
</tr>
<tr>
<td></td>
<td>99.712</td>
<td>.01</td>
<td>.06</td>
<td>.915</td>
</tr>
</tbody>
</table>

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a – All factor loadings have T-values that exceed 2.0.
b – These items are fixed for the purpose of scaling.
(r) – These items were reverse scored.