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Heterogeneous adaptability: Learning, cash resources, and the fine-grained adjustment of misaligned governance

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Abstract

Research Summary: When can a firm make *fine-grained* adjustments to misaligned subsidiary governance? We examine whether and under what conditions a firm will adapt the equity stake it owns in a subsidiary, enabling improved alignment of the stake with the uncertainty in the local environment. We predict that the rate of adaptation of misaligned equity stakes depends on the experiential and vicarious learning from which the firm can draw, and that these learning effects are contingent on possessing fungible slack resources, specifically cash. Using a sample of 726 Japanese-foreign subsidiaries established in 38 host countries over a 21-year period, we find support in line with our predictions. Overall, this study explicates heterogeneous adaptability in subsidiary governance and similar strategic tasks.

Managerial Summary: Whether due to suboptimal choices or changing conditions, firms must sometimes change how they relate with and control their subsidiaries. Whereas much research has addressed adaptation in the form of discrete changes in ownership mode, we examine under what conditions a firm can make *fine-grained* adjustments to misaligned subsidiary governance. We argue that a firm can learn to make such adjustments, not only from its own experience but also vicariously by observing other firms in the same foreign environment. Furthermore, we consider whether cash is a valuable resource for this purpose. Overall, this study shows how firms can pursue strategic adaptation in subsidiary governance and related tasks.

KEYWORDS

adaptability, equity stakes, governance alignment, learning, resources

1 | INTRODUCTION

Proper governance decisions that align investments with the conditions around them are deemed essential to developing and maintaining an effective corporate strategy (Williamson, 1999). Accordingly, a sizable amount of research has considered how firms' governance decisions should be aligned with the surrounding conditions, especially uncertainty (e.g., Williamson, 1991). In addition, a growing literature has looked at the after-effects of misaligned governance—that is, of the condition where a firm obtains substantially more, or less, ownership and control over a subsidiary or other business unit than conditions warrant. Most of it has addressed the performance penalties associated with misalignment (e.g., Sampson, 2004). A smaller set of studies has considered whether a firm might adjust misaligned governance. This work has primarily focused on firms shifting between discrete governance modes or otherwise making major governance changes (e.g., Nickerson & Silverman, 2003).

All but missing from this literature is the consideration of fine-grained adaptation within a given governance choice. As a recent review by Cuypers et al. (2021, p. 38) pointed out, "most studies have focused on discrete and substantial changes in governance mode [...] However, firms might also make finer-grained adaptations to their governance modes to minimize transaction costs that arise from changes in the conditions surrounding the transaction." Ignoring these fine-grained adjustments is problematic in that observing only large-scale mode changes leads to both an under-estimation of the frequency of adaptation and an over-estimation of its magnitude, and more importantly this obscures the understanding of what explains fine-grained adaptation.

In this study, we focus on the extent to which a firm adapts a misaligned governance choice in a fine-grained manner, and what determines heterogeneity in such observed adaptability. In general, strategic adaptation means deliberate and purposeful adjustments that benefit an organization by improving fitness with a changing environment (Barnard, 1938; Chakravarthy, 1982). We conceptualize adaptability as encompassing the abilities to diagnose, orchestrate, and implement purposeful, alignment-enhancing adjustments. Specifically, governance adaptability has been deemed "the central problem of economic organization" (Williamson, 1991, p. 278). The question of what determines fine-grained governance adaptability is essential for strategy research because diverse and changing environmental conditions eventually compel adaptation (Barnard, 1938; Williamson, 1999); yet the alternatives to fine-grained adaptation, that is, making discrete mode shifts or foregoing any adaptation, generally entail large costs and risks. Thus, understanding heterogeneous adaptability, specifically its under-researched fine-grained dimension, contributes to one of the "fundamental issues in strategy," which is to understand why firms differ (Nelson, 1991; Rumelt et al., 1994, p. 2). To pinpoint adaptability through fine-grained governance changes, we examine the equity stakes (i.e., the percentage of equity) held by corporate parents in their foreign subsidiaries.

In so doing, we consider two questions. First, we examine whether and at what rate firms conduct fine-grained adaptation of ownership of foreign subsidiaries, given misalignment relative to what could be expected given local conditions. Second, we examine how experiential and vicarious learning contribute to such adaptation, and how these effects in turn vary with the availability of fungible slack resources, specifically cash. Theoretically, we relate these conditions with heterogeneous adaptability. Empirically, we examine fine-grained adjustments in the equity stakes held by Japanese automotive firms in their foreign subsidiaries over a period encompassing 21 years. To assess adaptation rates, we employ a partial (dynamic) adjustment model (Haveman, 1993; Nickerson & Silverman, 2003). We leverage an extant model of how observed equity stakes depend on a subsidiary's environmental conditions (Cuypers & Martin, 2010) to measure the degree of misalignment in each subsidiary.

We aim to make three main contributions. First, we document empirically that fine-grained adjustments in equity stakes are common but incomplete, thus describing a situation of bounded adaptation. This extends research on discrete mode shifts (e.g., Nickerson & Silverman, 2003), as well as research on non-ownership approaches to governance, which addresses different governance dimensions (Chi & Roehl, 1997; Reuer et al., 2002).

Second, we extend literature on governance adaptation by focusing on the determinants of a firm's adaptation rate. To begin, we explicate learning mechanisms that contribute to adaptation. Focusing on learning about adapting subsidiaries (rather than related but distinct tasks such as forming subsidiaries), we show that adaptability varies not only with direct experience, but also with vicarious learning from others facing the same host environment.

Third, we incorporate the role of fungible slack resources, specifically cash. We predict and show that cash conditions the effects of learning on adaptability. In so doing, we extend a small but insightful literature about the strategic consequences of cash-based slack (e.g., Kim & Bettis, 2014; Natividad, 2013). Overall, this study broadly informs research on business unit governance and specifically advances understanding of heterogeneous adaptability, that is, what determines how firms adapt misaligned governance modes (and plausibly, other forms of strategic misalignment).

2 | BACKGROUND

An essential part of a firm's strategy is to find a proper alignment between its activities and investments, and environmental conditions. This is especially true for the governance of such transactions (Williamson, 1999). However, given bounded rationality and an uncertain and changeable environment, firms are bound to find that the governance of some of their investments is out of alignment with the environment—for example, because the firm takes too much ownership over a subsidiary or activity that can be better undertaken by a separate party or the market, or because the firm foregoes ownership of assets that it should instead own.

Although views differ about the nature of the after-effects of such misalignment, research implies that its consequences are severe. An early view was that misaligned investments, or even their parent firms, would be selected out (Silverman et al., 1997; Williamson, 1985). More recent research has associated misalignment with weaker performance in going concerns (e.g., Nickerson & Silverman, 2003; Sampson, 2004). Either way, it is important for firms to ensure that their governance decisions are aligned with the environment. Hence, a key question is how a firm may adjust if a subsidiary's governance is misaligned. The few studies about this have focused on adjustments in the form of discrete shifts between modes of governance, such as making versus buying (Nickerson & Silverman, 2003). Yet the possibility remains that more fine-grained adjustments are undertaken. Ignoring such fine-grained adjustments might obscure our understanding of the rate and magnitude of governance adaptation and of what drives it. Thus, it is essential to understand under what conditions an existing governance arrangement is adjusted.

2.1 | Equity stakes and environmental uncertainty[1]

To understand fine-grained governance adaptation, the variable of direct interest in this study is a parent firm's equity stake in a foreign subsidiary. Ownership, represented by equity stakes, is an essential dimension of governance as it determines the eventual disposition of returns and control over a subsidiary (Hennart, 1991). Furthermore, equity stakes are quantifiably granular, enabling fine-grained measurement, and adjustment (Nakamura & Yeung, 1994). Specifically, an equity stake is the percentage of a subsidiary's equity that is held by a given parent, varying from a minimum observable of 1%–100%. When discussing the literature, we use "governance mode" to refer to a broader set of choices that encompasses discrete and mutually exclusive ownership options, including make versus buy (i.e., own a supplier or not) and non-equity alliance versus EJV (i.e., whether a separate legal entity is set up).

Firms establishing a foreign subsidiary must decide how much equity to seek in the venture. They face a trade-off whereby a lower stake reduces the downside risk which equals the initial investment (e.g., Reuer & Leiblein, 2000), while a higher stake lets the firm capture more cash flows from the subsidiary (Pindyck, 1988). No single stake is universally superior; rather, a firm's optimal stake depends on various factors, crucial among them the uncertainty in the environment surrounding the subsidiary (Cuypers & Martin, 2007; Williamson, 1985). Specifically, higher environmental (or exogenous) uncertainty favors a lower stake to limit downside risk; conversely, lower environmental uncertainty justifies taking a higher stake to obtain more cash flow (Chi & McGuire, 1996; Cuypers & Martin, 2010). Thus, firms should align their equity stake with environmental uncertainty.

Setting equity stakes optimally is far from easy, for at least two reasons. First, in evaluating the local conditions and setting an equity stake, a firm (its managers) operates with bounded rationality. This is particularly so in foreign environments, which are cognitively more distant and diverse (Aharoni, 1966; Buckley et al., 2007). This implies that at any point in time, errors may creep into decisions about equity stakes. Second, even if an equity stake was well aligned at one point, changing conditions in a host country can render it less optimal (Cuypers & Martin, 2007; Inkpen & Beamish, 1997). Thus, whether due to initial misalignment or to changing environmental conditions, firms regularly need to decide whether to adjust their equity stakes. Adaptation takes the form of adjusting the equity stake to be more consistent with what is optimal given the conditions in a given host country. Accordingly, we aim to identify factors that influence the extent to which firms adapt their equity stakes in a direction that reduces misalignment.

[1]The concept of uncertainty we use throughout this article corresponds to what Roberts and Weitzman (1981) and Cuypers and Martin (2010) refer to as exogenously resolving uncertainty in the environment. For simplicity we refer to this as "uncertainty," although strictly speaking this is operationalized as risk.

3 | PREDICTIONS

3.1 | Misalignment and equity stake adaptation

It is well understood that misalignment in governance is costly; that is, when firms' governance arrangements depart from theoretical expectations, there is a reduction in performance compared with better-aligned instances (e.g., Leiblein et al., 2002; Nickerson & Silverman, 2003; Sampson, 2004). This concerns equity stakes in foreign subsidiaries too. If misalignment consists of a firm taking a lower equity stake than expected considering the levels of uncertainty in the host environment, the firm is reducing its downside risk more than necessary while foregoing valuable cash flows (Pindyck, 1988). On the other hand, if misalignment consists of a firm taking a greater equity stake than expected, then the firm can capture a larger share of the subsidiary's cash flows, but is making an unnecessarily large resource commitment and exposes itself to excessive downside risk (Cuypers & Martin, 2007; Reuer & Leiblein, 2000). Hence, regardless of the direction in which a firm's equity stake is misaligned, there will be costs associated with it.

Whether to achieve higher profitability or simply to survive competitive pressures, firms will look for ways to correct organizational misalignments (March & Simon, 1958). Although bounded rationality stands in the way of instantly diagnosing and correcting misalignment, the costs of governance misalignment are generally substantive enough that a firm will notice them[2] and aim to correct the situation (Nickerson & Silverman, 2003; Reuer & Ariño, 2002). Thus, Nickerson and Silverman (2003) found that firms switched from employing drivers to contracting owner–operators after deregulation in the for-hire trucking industry, that is, a shift in governance mode. Similarly, we expect firms to address fine-grained ownership misalignment, and to adapt their equity stakes in accordance with the subsidiary's environment. Hence, we propose the following baseline prediction:

> *Baseline* Prediction. A foreign parent will adjust its equity stake in a subsidiary when it is misaligned with levels of uncertainty in the host country environment.

3.2 | The facilitating role of experiential and vicarious learning in post-formation adaptation

Although we expect firms to adjust their misaligned equity stakes in general, we expect *heterogeneity* in their rates of adaptation. Diagnosing misalignment and implementing adaptation is a knowledge-intensive task that requires comparing the current arrangement with alternatives while considering the specificities of the local environment. One factor that stands to matter for equity stake adjustments is learning. Relatedly, Reuer et al. (2002) showed that a firm's prior experience (in their case, with forming subsidiaries) could have a facilitating effect on post-formation changes in alliances (regarding governance formalization). That is because with experience, firms develop routines better suited to assessing misalignment and to making adjustments (Reuer et al., 2002). The process of adjusting the size of an investment is also subject to learned routines (Cuypers &

[2]In line with existing literature on governance adaptation (e.g., Nickerson & Silverman, 2003; Reuer & Ariño, 2002), we remain agnostic about the mechanisms whereby firms notice misalignment, such as whether they do so through cognitive attention or responding to performance feedback. We return to this matter in the discussion section.

Martin, 2007). Accordingly, we expect more experienced firms to have higher rates of adaptation when their equity stakes are misaligned.

Furthermore, we can specify the sources and types of learning most relevant in that situation. Starting with the firm's *own experience*, we expect that the most relevant guidance will come from experience that pertains to the specific task of subsidiary ownership adaptation and in the same national host environment. As Eggers (2012, p. 316) put it concerning product development, "the capability to adapt ... is governed by a learning-by-doing process." In our case, learning-by-doing is important because fine-grained ownership adaptation requires a subtle understanding of the unique tasks involved, including negotiating *adjusted* stakes with partners and corresponding operational changes and commitments (Ariño & De La Torre, 1998; Pearce, 1997). Furthermore, learning in the same country is important because the uncertainty conditions being adapted to are inherently local, as are the financial and regulatory institutions involved in adjustment transactions (Brouthers & Bamossy, 1997; Williamson, 1991). Absent such specificity in task and host country, the benefits of learning stand to be negligible due to the limited relevance of weakly related experience (Argote et al., 2021), and there may even occur negative transfers whereby superficially similar experience becomes a misleading guide for the present task (Haskell, 2001). That is, we expect the facilitating effect of experience to pertain to the previous adaptation of equity stakes in the same country, rather than to less proximate tasks.[3] Accordingly, we predict that:

> **Hypothesis 1a (H1a).** The greater a foreign parent firm's experience with adapting equity stakes in its subsidiaries in a given host country, the higher the rate of adaptation of the firm's equity stake in a misaligned subsidiary.

While learning from direct experience enhances adaptability as stated in Hypothesis 1a, it relies on a relatively small pool of potential input, bounded by the firm's pre-existing subsidiaries (in the same country) and the number of times that their equity stakes have been adapted. As we show below, such equity adjustments are more frequent than may commonly be assumed. Still, they are not the only or the most plentiful source of learning opportunities.

Another pathway is to learn from the experience of other firms (Ingram & Baum, 1997). Such *vicarious* learning allows a firm to examine alternatives without incurring the cost of learning-by-doing (Miner & Haunschild, 1995), albeit often without the depth of insight that comes from first-hand experience. Studies have provided evidence of vicarious learning and its benefits regarding foreign subsidiary location and survival (e.g., Jiang et al., 2014; Shaver et al., 1997), particularly in uncertain environments.

Although studies of the effect of vicarious learning on adaptability are lacking so far, we expect benefits for governance adaptation too. Learning from the experience of others allows exposure to a broad set of comparable cases that enable "what if" inferences for a variety of situations. As with direct experience, vicarious observation of the same task—here, peer firms *adapting* equity stakes—provides the most specific learning opportunity. Likewise, given national idiosyncrasies, observing peer parents making fine-grained governance adaptations in the same host country is most relevant. Such specific vicarious exposure to other parents making adaptations will help the firm to recognize when its own equity stake is misaligned, and inform it about

[3] By contrast, Reuer et al. (2002) considered the role of experience with *forming* alliances on subsequent adjustments in said alliances. This was justified as they sought to understand whether such experience would *substitute* for the need for later adjustments. In Appendix S1, we replicate their approach by considering the firm's experience and vicarious learning with forming subsidiaries as well.

how to make adaptations. Thus, we also expect vicarious learning to facilitate equity adaptations. Hence, we propose:

> **Hypothesis 1b (H1b).** The greater a foreign parent firm's vicarious exposure to other foreign firms' adapting their equity stakes in their subsidiaries in a given host country, the higher the rate of adaptation of the firm's equity stake in a misaligned subsidiary.

3.3 | The contingency effect of fungible slack resources

So far, our argument has identified two learning pathways—one via direct experience and another via vicarious exposure—that enable governance adaptation by helping diagnose in what direction misalignment exists and how this could be remedied. Such learning determines the range of *potential* behaviors of a firm (Fiol & Lyles, 1985; Huber, 1991). However, *actual* adaptive change (Fiol & Lyles, 1985) requires resources to implement, especially slack resources (Chakravarthy, 1982). Herein lies another source of heterogenous adaptability.

The interplay between learning and slack resources arises because the former gives a trigger and direction to change activities, while the latter enables these. As mentioned above, the type of governance adaptation of interest here involves not only negotiation and administrative steps—which are resource-consuming in their own right—but also corresponding adjustments in the operation of the unit, and thus new and revised commitments of resources (Doz, 1996). Such adjustments require flexibility in resources, involve coordination inside the parent firm as well as with any partner, and are time-sensitive (Doz, 1996). For this type of situation, slack resources are essential (Bourgeois, 1980). In particular, slack financial resources matter because their fungible nature ensures that they can be transferred and activated with maximum flexibility and at short notice (Natividad, 2013). Specifically, financial slack in the form of cash holdings "is the most flexible form of slack a firm can have since it can be converted at any time for any purpose" (Kim & Bettis, 2014, p. 2056); conversely, they did not find similar benefits for absorbed (thus, non-fungible) forms of financial slack. Being "fully fungible," cash thus enables a firm to "move aggressively" (Kim & Bettis, 2014, p. 2055) and respond to environmental uncertainty and change (O'Brien & Folta, 2009) in the most efficient and flexible way.

However, fungible resources such as cash do not provide a direction for adaptive tasks; rather, their use assumes that the firm can duly identify the suitable direction for adaptation. As predicted in Hypotheses 1a and 1b, the initiation and direction of governance adaptation depend on specific learning. We thus expect an interplay between the firm's cash and learning, regardless of whether learning arose experientially (as in Hypothesis 1a) or vicariously (as in Hypothesis 1b). Specifically, we predict that the effects of both forms of learning on equity stake adaptation are magnified by the parent's cash resources:

> **Hypothesis 2a (H2a).** The greater a foreign parent firm's cash holdings, the stronger the relationship between the firm's prior experience with adapting its subsidiaries' equity stakes in a given host country and the rate of adaptation of its equity stake in a misaligned subsidiary.

> **Hypothesis 2b (H2b).** The greater a foreign parent firm's cash holdings, the stronger the relationship between the firm's vicarious exposure to other foreign firms'

adapting their equity stakes in their subsidiaries in a given host country and the rate of adaptation of the firm's equity stake in a misaligned subsidiary.

4 | RESEARCH DESIGN

4.1 | Sample

We test our hypotheses using longitudinal data on foreign subsidiaries of Japanese automotive parts manufacturers, covering the period from 1979 until 2001. The primary source of subsidiary-level data is the *Japan Auto Parts Industry Directory*, which was published every 3–4 years by *Dodwell Marketing Consultants*. This directory provides detailed information about the ownership (specifically the Japanese parent's equity stake), location, history, and activities of each subsidiary. We tracked each subsidiary across different editions using subsidiary and parent names and locations. We complemented the subsidiary-level data with parent-level information from the same source and from Nikkei's NEEDS database. We obtained host country-level data from commonly used sources, as described in Appendix A.

A total of 1005 foreign subsidiaries of 327 Japanese parents in 47 different host countries were documented in at least two issues of our data source, allowing us to assess changes at the subsidiary level. Given our modeling as described below, we excluded records with incomplete data at the subsidiary, parent, or host-country level. Using these selection criteria, our final estimation sample includes 726 foreign subsidiaries of 196 Japanese parents in 38 host countries.[4]

Our data are particularly suitable to study the effects of uncertainty and learning on subsidiary adaptations, for several reasons. First, compared with many commonly used data sources (e.g., Refinitiv's SDC Platinum database), our data provide detailed information about the ownership, location, history, and activities of each subsidiary at multiple time intervals. This allows us to study fine-grained changes in equity stakes and other features of subsidiaries. Second, Japanese data in general (e.g., Nakauchi & Wiersema, 2015) and specifically data on the Japanese automotive industry (e.g., Martin et al., 1998) have been widely used in strategy and international business research and shown to be reliable. Third, Japan was the world's second-largest source of foreign direct investment (behind the United States) during the period of our sample (UNCTAD, 2002). This provides a large number of observations that cover a wide range of host countries. As a result, we observe substantial variation in Japanese parents, subsidiaries, and levels of learning and uncertainty conditions in the host countries. Finally, Japanese firms are prone to using a wide range of equity levels (Delios & Beamish, 1999). This ensures considerable variation in observed equity stakes. Overall, a sample of Japanese-owned organizations taps into an important population with appropriate variance.

4.2 | Dependent variable

In short, we measure fine-grained governance adjustment as changes in the equity stake held by the Japanese parent that indicate improved fit (i.e., decreased misalignment) with what can be expected given local uncertainty. To calculate this, we follow a two-step procedure similar to the ones used in Anderson (1988), Nickerson and Silverman (2003), and Reuer and Ariño (2002). In a

[4]When there was shared ownership of the subsidiary, the partners of the Japanese parent were overwhelmingly local companies for which systematic data were unfortunately not available.

first step, we determine to what extent a parent's equity stake in a subsidiary corresponds with what would be theoretically expected given the uncertainty surrounding the subsidiary. To estimate this expected equity stake, we adapted Cuypers and Martin's (2010) model about the impact of exogenous uncertainty on equity stakes for a different sample of foreign subsidiaries (in China). Using a two-tailed Tobit model, they found that parents setting up foreign subsidiaries in environments with higher levels of exogenous uncertainty took smaller equity stakes. Similarly, we use a two-tailed Tobit model with various sources of uncertainty as independent variables to calculate expected equity stakes. Specifically, besides several control variables, we include variables capturing three components of a host country's formal institutional environment, that is, political uncertainty, legal/regulatory uncertainty, and economic uncertainty. The model has substantive explanatory power ($\chi^2 = 764.99$, $p = .000$) and the three uncertainty measures have the expected negative effects ($p = .000$), consistent with Cuypers and Martin's (2010) findings. In this way, we build on a proven framework, but use information derived from our specific sample to model the expected relationship between environmental uncertainty (as well as several control variables) and a parent's equity stake in a subsidiary. Appendix A reports details of this first step, including the variables used and an overview of the results.

In a second step, we calculate the equity stake we would predict for a given subsidiary given the levels of uncertainty in a particular host country at a particular time, using the estimated coefficients from the model in the first step.[5] This allows us to then calculate the difference between the equity stake predicted by the model, and the actual stake observed. That is, we measure the equity stake misalignment as the residual (i.e., the difference between the observed and predicted value) for each observation (Martin, 2013).

Equity stake misalignment varies theoretically from −99% (where the parent took almost no equity when it should have taken maximum equity) to +99% (where the parent took nearly complete equity when it should have taken minimum equity). In other words, negative values correspond to a situation where a Japanese parent has a lower equity stake than expected, while positive values imply that the parent has a higher equity stake than expected. However, our predictions pertain to the degree of misalignment, regardless of its direction. Therefore, to facilitate interpretation of results, we use the absolute value of the level of misalignment as dependent variable. We label this *Absolute Misalignment*. Absolute Misalignment ranges from 0%, when the parent's equity stake corresponds perfectly to the equity stake we predicted, to almost 100% (99%), when the parent's equity stake is exactly opposite to what we predicted (i.e., the firm took almost no equity when it should have taken maximum equity, or vice versa).

4.3 | Independent variables

4.3.1 | Adaptation experience (H1a and H2a)

In line with our predictions, we focus on learning about the specific task at hand, that is, equity stake adaptation in the focal host country. Accordingly, we measure a Japanese parent's *Adaptation*

[5]The predicted equity stakes are based on the estimated coefficients we derived in the first step and incorporate several parent- and subsidiary-level control variables that are an integral part of our estimation model. Hence, the predicted equity stakes vary for every observation and we do not claim that a particular level of equity stake is desirable for all (Japanese) firms, even if they are surrounded by similar levels of uncertainty. Therefore, our approach incorporates each firm's unique situation and provides a measure of (mis)alignment rather than one of imitation or conformity with other firms in terms of equity stakes (Martin, 2013). We discuss specific analyses to distinguish adaptive learning from isomorphic imitation in Appendix S3.

Experience as the total number of equity stake adaptations it has undertaken before the focal observation in the same host country as the focal subsidiary. In Appendix S1, we detail how the results are robust to multiple alternative specifications of this measure (Argote et al., 2021).

4.3.2 | Vicarious adaptation learning (H1b and H2b)

Paralleling the adaptation experience measure, we proxy vicarious learning by the count of the equity stake adaptations that were made by all sample Japanese parent firms that were active in the same host country preceding the focal observation. We label this *Vicarious Adaptation Learning*. Again, the results are robust with several alternative specifications of this variable (see Appendix S1).

4.3.3 | Parent firm's cash holdings (H2a and H2b)

Following Kim and Bettis (2014), we measure the parent firm's fungible slack resources via its cash holdings. This is measured in absolute currency (here, in trillions of Yen) as the flexibility value of cash is subject to economies of scale (Kim & Bettis, 2014). We label this variable *Parent Cash*.

4.4 | Control variables

We control for several other factors that may influence equity misalignment or adaptation. First, we control for the *Subsidiary Age*, measured by years since subsidiary founding. Second, we control for the *Relative Size* of parent to subsidiary, using the ratio of the Japanese parent's employees to the subsidiary's number of employees (divided by 1000 to avoid having to use scientific notations for the coefficients in the tables). Third, we measure the Japanese *Parent Profits*, expressed in trillions of Yen. Fourth, we use a dummy variable to capture whether the parent is listed on the stock market (*Parent listed* = 1) or not (0). Fifth, we control for whether the Japanese parent is a member of a keiretsu business group (*Parent Keiretsu Membership* = 1, otherwise 0). Sixth, we measure the Japanese parent's financial leverage using the *Parent Debt–Equity Ratio*. Seventh, we control for the *Parent Size* using its total assets in trillions of Yen. Eight, we include *year* effects to control for potential trends and any time-bound unobserved heterogeneity. Ninth, we add *subsidiary* effects for each stake to help control for subsidiary- or parent-level unobserved heterogeneity.

4.5 | Model specification and estimation

Our predictions concern how firms adapt their misaligned equity stakes (absolute values) after the subsidiary is established. The data represent an unbalanced panel. To model the rate of period-to-period change in misaligned equity stakes, we follow the tradition of studies of organizational adaptation and employ a partial (dynamic) adjustment model (e.g., Haveman, 1993; Nickerson & Silverman, 2003). This takes the following form:

$$Misalignment_{i(t+1)} = \beta_0 + \beta_1 Lagged\ Misalignment_{it} + \beta_k X_{it} + \alpha_i + \omega_t + \varepsilon_{it}$$

where i refers to a subsidiary (including its Japanese parent-level controls) and t refers to a time period, X_{it} are the independent and control variables, α_i is the effect for a given subsidiary, ω_t is the effect for a given year, and ε_{it} is a normally distributed error term.

Our main analysis employs generalized least squares estimation.[6] In partial-adjustment models, a lagged dependent variable (i.e., equity stake misalignment in the previous period) is included as an explanatory variable and plays a critical role in establishing whether firms adapt and at what rate.[7] As a result, the interpretation of the Lagged Misalignment variable is central to testing our predictions.[8] Namely, if the coefficient for Lagged Misalignment is substantially different from both 0 and 1, this indicates that Japanese parents adapt their misaligned equity stakes. If adaptation were unconstrained, parents would perfectly realign their equity stakes regardless of the degree of misalignment in the previous period. Hence, the coefficient for Lagged Misalignment would be 0. In contrast, if the parent did not adapt its equity stake at all, the level of misalignment in the previous period would be a perfect predictor of misalignment in the subsequent period. Its coefficient would be equal to 1. It follows that the *adaptation rate* equals (1 – the Lagged Misalignment coefficient); that is, smaller coefficients for the Lagged Misalignment variable indicate higher rates of adaptation (hence faster decrease in misalignment) while larger coefficients indicate lower rates of adaptation (i.e., slower adjustment). We employ two-tailed t-tests to allow detection of either boundary scenario (i.e., 0 or 1) (Nickerson & Silverman, 2003). We explored several avenues, including checking the normality of the residuals, to diagnose any autocorrelation issues that might arise from including a lagged dependent variable. We found no evidence of problematic autocorrelation. In addition, various alternative estimation approaches yielded robust findings. We present details of these tests and analyses in Appendix S2.

5 | RESULTS

5.1 | Descriptive statistics

In Table 1 we provide the descriptive statistics and the correlation matrix. The correlations between independent variables are moderate, suggesting that multicollinearity is not a problem.[9] Confirming this, the variance inflation factors are all below the accepted rule of thumb value of 10 (Neter et al., 1985) in the models we report and interpret.

[6] The GLS estimator has several benefits given our research question and model. First, it addresses heteroskedasticity and non-independence of error terms. Second, it is more efficient than OLS if autocorrelation might arise from including a lagged dependent variable (see our discussion on this below and in Appendix S2). Third, following our hypotheses, the random effects specification of the GLS estimator is efficient and allows us to specifically consider differences *across* parent firms (e.g., Certo et al., 2017)—namely, heterogeneity in adaptability between parents.

[7] As Haveman (1993) and Nickerson and Silverman (2003) pointed out, firms' adaptation rates, $dY(t)/dt$, cannot be directly observed and used as a dependent variable. Instead, they propose a reduced-form model like the one we employ here. This features terms that are directly observable and can be estimated with panel data to allow meaningful inference about adaptation rates based on the lagged dependent variable.

[8] Here, the Lagged Misalignment variable is lagged one period. However, we also explored two- and three-period lags. Comparing the fit of models with various lags indicated that the one-period lag is the most appropriate.

[9] Some correlations are predictably high (e.g., between parent size, parent profits, and parent cash). Removing any of the highly correlated variables (specifically parent size or parent profits in this case) from the model does not materially change the hypothesized results.

TABLE 1 Descriptive statistics and correlations.

	Variable	Mean	St. Dev.	1	2	3	4	5	6	7	8	9	10	11
1	Misalignment	23.737	20.017											
2	Lagged Misalignment	23.618	20.054	0.84										
3	Adaptation Experience	0.398	0.753	0.01	0.00									
4	Vicarious Adaptation Learning	27.131	28.823	−0.03	−0.03	0.15								
5	Parent Cash	0.055	0.177	−0.01	−0.03	−0.01	−0.02							
6	Subsidiary Age	14.593	7.446	−0.10	−0.08	0.25	0.12	−0.03						
7	Relative Size	0.165	0.658	−0.05	−0.07	−0.06	−0.10	0.10	−0.04					
8	Parent Profits	0.006	0.015	−0.02	0.00	0.00	−0.06	0.71	−0.06	0.16				
9	Parent Listed	0.901	0.299	−0.06	−0.03	0.04	0.00	0.09	0.06	0.05	0.11			
10	Parent Keiretsu Membership	0.661	0.473	0.06	0.07	−0.09	0.00	0.06	0.03	0.04	0.07	0.08		
11	Parent Debt–Equity Ratio	2.620	2.914	0.05	0.06	0.04	−0.02	−0.07	−0.03	−0.01	−0.10	−0.04	0.15	
12	Parent Size	0.465	1.062	0.00	0.00	−0.01	0.00	0.91	0.00	0.16	0.81	0.11	0.15	−0.03

Note: Number of observations = 1717.

Examination of the distribution of equity stakes shows that the values are broadly dispersed over the possible range of 1%–100%. Furthermore, the level of equity stake misalignment (*Misalignment*) appears normally distributed.

5.2 | Post-formation equity stake misalignment and adaptation

Table 2 reports partial-adjustment models to test our baseline prediction that adaptation occurs when equity stakes are misaligned. All models have considerable explanatory power (with $p = .000$). In a model without control variables (model 1), the coefficient of 0.754 for Lagged Misalignment is positive and different from both 0 ($p = .000$) and 1 ($p = .000$). This represents a considerable adaptation rate ($1 - \beta_1$) of 0.246.

In model 2, we introduce the full set of control variables. Before returning to the baseline effect, several control variables are worth mentioning. First, we note that subsidiary age is associated with lower misalignment, as indicated by a negative coefficient ($\beta = -0.118$, $p = .007$). Second, two indicators related with firm resources, parent profits and parent listed, are associated with less misaligned equity stakes parents ($\beta = -90.934$, $p = .005$ and $\beta = -0.889$, $p = .008$, respectively). In contrast, parent cash as such is not associated with lower misalignment ($\beta = 5.764$, $p = .186$). Most importantly, including the control variables does not substantially change the value of the Lagged Misalignment variable and the corresponding adaptation rate ($1 - \beta_1 = 0.248$). Furthermore, the adaptation rate remains different from both 0 ($p = .000$) and 1 ($p = .000$). Hence, models 1 and 2 both provide support for our baseline prediction and show that foreign parents adapt their equity stakes in subsidiaries to reduce the degree to which they are misaligned, but partially (within constraints). Furthermore, consistency in adaptation rates across models with and without control variables helps rule out the possibility that the results are driven by the inclusion of specific control variables. Importantly, these results also indicate that the misalignments we observe are not the result of unobserved heterogeneity. That is, if an equity stake which we deem to be misaligned was actually properly aligned given some unobserved characteristic, its lagged coefficient would not differ from 1 (Nickerson & Silverman, 2003).

In conclusion, this analysis demonstrates a considerable but bounded extent of fine-grained governance adaptation. Next, we turn to the analysis of the two hypothesized sources of heterogeneity in governance adaptability: learning, and then fungible slack resources.

5.3 | The facilitating role of learning from previous adaptations

First, we look at how the rate of adaptation varies with adaptation experience and vicarious adaptation learning (Hypotheses 1a and 1b). In models 3 and 4, we introduce each interaction term separately. In model 5, we include both interaction terms simultaneously.

Before discussing these effects, we note that in all models reported below the adaptation rate ($1 - \beta_1$) (at the means) remains different from both 0 ($p = .000$) and 1 ($p = .000$). Subsequently, we focus on differences in the adaptation rate under different conditions, knowing that the core finding about bounded adaptation remains in all scenarios.

In model 3, the interaction between Adaptation Experience and Lagged Misalignment is negative ($\beta = -0.046$, $p = .032$). Similarly, in model 4 the interaction between Vicarious Adaptation Learning and Lagged Misalignment is negative ($\beta = -0.002$, $p = .000$).

TABLE 2 Post-formation adaptation: The facilitating roles of adaptation experience and vicarious adaptation learning.

Variables		Model 1		Model 2		Model 3		Model 4		Model 5	
Constant		**6.087**		**9.771**		**9.399**		**9.139**		**8.892**	
		(0.514)	*[0.000]*	*(1.348)*	*[0.000]*	*(1.345)*	*[0.000]*	*(1.383)*	*[0.000]*	*(1.377)*	*[0.000]*
Relative Size				**0.287**		**0.289**		**0.361**		**0.356**	
				(0.468)	*[0.539]*	*(0.465)*	*[0.534]*	*(0.472)*	*[0.444]*	*(0.469)*	*[0.448]*
Subsidiary Age				**−0.118**		**−0.118**		**−0.122**		**−0.122**	
				(0.044)	*[0.007]*	*(0.044)*	*[0.007]*	*(0.044)*	*[0.006]*	*(0.044)*	*[0.006]*
Parent Profits				**−90.934**		**−91.692**		**−93.337**		**−93.727**	
				(32.452)	*[0.005]*	*(32.376)*	*[0.005]*	*(32.450)*	*[0.004]*	*(32.392)*	*[0.004]*
Parent Listed				**−2.889**		**−2.868**		**−3.127**		**−3.09**	
				(1.093)	*[0.008]*	*(1.084)*	*[0.008]*	*(1.109)*	*[0.005]*	*(1.101)*	*[0.005]*
Parent Keiretsu Membership				**0.916**		**0.875**		**0.996**		**0.956**	
				(0.755)	*[0.225]*	*(0.748)*	*[0.242]*	*(0.768)*	*[0.195]*	*(0.761)*	*[0.209]*
Parent Debt–Equity Ratio				**−0.036**		**−0.05**		**−0.047**		**−0.058**	
				(0.112)	*[0.748]*	*(0.112)*	*[0.653]*	*(0.114)*	*[0.677]*	*(0.113)*	*[0.608]*
Parent Size				**0.083**		**0.136**		**0.256**		**0.283**	
				(0.890)	*[0.926]*	*(0.885)*	*[0.878]*	*(0.898)*	*[0.776]*	*(0.894)*	*[0.751]*
Parent Cash				**5.764**		**5.501**		**5.094**		**4.937**	
				(4.356)	*[0.186]*	*(4.337)*	*[0.205]*	*(4.387)*	*[0.246]*	*(4.369)*	*[0.259]*
Adaptation Experience				**0.962**		**2.096**		**1.005**		**1.918**	
				(0.430)	*[0.025]*	*(0.684)*	*[0.002]*	*(0.433)*	*[0.020]*	*(0.693)*	*[0.006]*
Vicarious Adaptation Learning				**−0.005**		**−0.006**		**0.036**		**0.031**	
				(0.011)	*[0.663]*	*(0.011)*	*[0.545]*	*(0.015)*	*[0.018]*	*(0.015)*	*[0.044]*
Lagged Misalignment	*Baseline*	**0.754**		**0.752**		**0.771**		**0.795**		**0.806**	
		(0.016)	*[0.000]*	*(0.016)*	*[0.000]*	*(0.018)*	*[0.000]*	*(0.021)*	*[0.000]*	*(0.022)*	*[0.000]*

TABLE 2 (Continued)

Variables		Model 1		Model 2		Model 3		Model 4		Model 5	
Lagged Misalignment × Adaptation Experience	***H1a***					**−0.046**				**−0.037**	
						(0.021)	*[0.032]*			*(0.022)*	*[0.088]*
Lagged Misalignment × Vicarious Adaptation Learning	***H1b***							**−0.002**		**−0.002**	
								(0.001)	*[0.000]*	*(0.001)*	*[0.001]*
R-squared		0.698		0.701		0.700		0.701		0.701	
Wald Chi-squared		2220.3	*[0.000]*	2288.59	*[0.000]*	2342.65	*[0.000]*	2204.21	*[0.000]*	2252.51	*[0.000]*
Number of observations		1717		1717		1717		1717		1717	

Note: All models include year and subsidiary effects. Estimated coefficients are in bold. Standard errors are in parentheses. The *p*-values are between square brackets. All tests are two-tailed. *Interpretation of the Results*: (A) If the coefficient for the Lagged Misalignment variable is between 0 and 1 but statistically different from both 0 and 1, this indicates that Japanese parents adapt their misaligned equity stakes purposefully, but within constraints. If adaptation were unconstrained, parents would perfectly realign their equity stakes regardless of the degree of misalignment in the previous period. Hence, the coefficient for Lagged Misalignment (i.e., equity stake misalignment in the previous period) would be 0. In contrast, if the parent did not adapt its equity stake at all, the level of misalignment in the previous period would be a perfect predictor of misalignment in the subsequent period. Its coefficient would be equal to 1. Hence, smaller coefficients for the Lagged Misalignment variable indicate lower rates of adaptation (faster decrease in misalignment) while larger coefficients indicate lower rates of adaptation (slower adjustment). From the Lagged Misalignment coefficient, we can infer the adaptation rate, which equals (1 – Lagged Misalignment).

(B) Given the structure of our models, negative coefficients for the interaction terms indicate higher rates of adaptation (faster decrease in misalignment) while positive coefficients for the interaction terms indicate lower rates of adaptation (slower adjustment).

When both interactions are included together in a fuller specification (model 5), the effect of Adaptation Experience is smaller ($\beta = -0.037$, $p = .088$) and that of Vicarious Adaptation Learning remains strong ($\beta = -0.002$, $p = .001$). This is consistent with our premise that the two sources of behavioral experience—direct experience and vicarious learning—overlap as means of gaining adaptability. However, it appears that vicarious exposure, perhaps because it is more plentiful, is more robust.

To assess the *economic magnitude* of these findings, we compare the value of the adaptation rate at the mean levels of, respectively, Adaptation Experience and Vicarious Adaptation Learning with the value of the adaptation rate at one standard deviation above these mean levels. A one-standard deviation increase in Adaptation Experience is associated with a decrease in the magnitude of the Lagged Misalignment coefficient by 0.028 in model 5. This means a 14.3% higher adaptation rate (1 – Lagged Misalignment) with higher direct experience. Meanwhile, a one-standard deviation change in Vicarious Adaptation Learning is associated with a decrease in the magnitude of the Lagged Misalignment coefficient by 0.058 in model 5. This corresponds to an increase in the adaptation rate (1 – Lagged Misalignment) of 29.7% with higher vicarious learning.

In summary, these effects are substantial in economic terms as well as statistically. Specifically, they imply that vicarious learning, which leverages the opportunity to learn from others' behavior, makes a considerable difference to the rate of adaptation. This is consistent with Hypothesis 1b. There is also a noticeable effect of the firm's direct experience with adapting equity stakes in the host country, though its practical magnitude and *p*-value are more modest (i.e., more marginal support for Hypothesis 1a). Next, we turn to fungible slack resources—specifically, cash—as a contingency that may explain variation in these learning effects.

5.4 | Fungible slack resources as a contingency for the effects of learning

In Hypotheses 2a and 2b, we predict that a firm's fungible slack resources, in the form of cash, will help a parent firm to leverage its adaptation experience and its vicarious adaptation learning to adapt misaligned equity stakes more rapidly. We turn to this in Table 3. Although theoretically each is a two-way contingency, the structure of our models, where we depend on an interaction with the Lagged Misalignment variable to interpret the rate of adaptation, makes each a three-way effect empirically. To analyze differences while retrieving the respective adaptation rates, we use a sample-split approach. Following Nickerson and Silverman (2003), the split-sample approach makes it possible to ascertain the adaptation rate under different scenarios and is thus a suitable way to examine contingencies for the main adaptation effects documented above, while verifying in each scenario the dual condition that the adaptation rate differs both from 0 and from 1 (which is an important and quite unique feature of the model).

In Panel A of Table 3, we split the sample based on the median values of the Adaptation Experience and Parent Cash variables. Similarly, in Panel B of Table 3, we split the sample based on the median values of the Vicarious Adaptation Learning and Parent Cash variables. Splitting the sample this way allows for a more precise interpretation and comparison of the adaptation rates under different conditions of learning and cash, by making it possible to isolate

TABLE 3 Post-formation adaptation: Cash as a contingency for the effects of adaptation learning.

	Panel A: Adaptation experience splits							
	Model 6		Model 7		Model 8		Model 9	
Variables	**Low parent cash and low adaptation experience**		**High parent cash and low adaptation experience**		**Low parent cash and high adaptation experience**		**High parent cash and high adaptation experience**	
Constant	**9.852**		**8.749**		**5.646**		**13.360**	
	(1.983)	*[0.000]*	*(3.268)*	*[0.007]*	*(3.868)*	*[0.144]*	*(4.461)*	*[0.003]*
Relative Size	**−4.293**		**0.616**		**4.093**		**−0.614**	
	(2.011)	*[0.033]*	*(0.514)*	*[0.231]*	*(3.742)*	*[0.274]*	*(3.247)*	*[0.850]*
Subsidiary Age	**−0.181**		**−0.124**		**0.053**		**−0.206**	
	(0.085)	*[0.032]*	*(0.071)*	*[0.081]*	*(0.120)*	*[0.659]*	*(0.114)*	*[0.072]*
Parent Profits	**17.000**		**−53.480**		**−61.217**		**−149.460**	
	(319.790)	*[0.958]*	*(39.690)*	*[0.178]*	*(290.195)*	*[0.833]*	*(72.766)*	*[0.040]*
Parent Listed	**−2.176**		**−2.899**		**−0.159**		**−2.731**	
	(1.467)	*[0.138]*	*(3.036)*	*[0.340]*	*(3.276)*	*[0.961]*	*(3.812)*	*[0.474]*
Parent Keiretsu Membership	**−1.907**		**2.201**		**0.862**		**−1.757**	
	(1.326)	*[0.150]*	*(1.336)*	*[0.099]*	*(2.123)*	*[0.685]*	*(2.102)*	*[0.403]*
Parent Debt–Equity Ratio	**−0.062**		**−0.150**		**0.232**		**−0.191**	
	(0.153)	*[0.683]*	*(0.220)*	*[0.495]*	*(0.235)*	*[0.322]*	*(0.547)*	*[0.727]*
Parent Size	**35.372**		**0.147**		**−13.839**		**2.656**	
	(8.858)	*[0.000]*	*(0.628)*	*[0.815]*	*(13.938)*	*[0.321]*	*(0.931)*	*[0.004]*
Vicarious Adaptation Learning	**−0.013**		**−0.010**		**−0.019**		**0.044**	
	(0.018)	*[0.469]*	*(0.019)*	*[0.612]*	*(0.025)*	*[0.436]*	*(0.029)*	*[0.125]*
Lagged Misalignment	**0.742**		**0.761**		**0.775**		**0.717**	
	(0.028)	*[0.000]*	*(0.027)*	*[0.000]*	*(0.046)*	*[0.000]*	*(0.047)*	*[0.000]*

TABLE 3 (Continued)

Variables	Panel A: Adaptation experience splits							
	Model 6		**Model 7**		**Model 8**		**Model 9**	
	Low parent cash and low adaptation experience		**High parent cash and low adaptation experience**		**Low parent cash and high adaptation experience**		**High parent cash and high adaptation experience**	
R-squared	0.715		0.715		0.777		0.605	
Wald Chi-square	815.08	*[0.000]*	878.66	*[0.000]*	299.84	*[0.000]*	269.15	*[0.000]*
Observations	622		623		232		240	

Variables	Panel B: Vicarious adaptation learning splits							
	Model 10		**Model 11**		**Model 12**		**Model 13**	
	Low parent cash and low vicarious adaptation learning		**High parent cash and low vicarious adaptation learning**		**Low parent cash and high vicarious adaptation learning**		**High parent cash and high vicarious adaptation learning**	
Constant	**9.485**		**7.787**		**6.903**		**10.881**	
	(2.457)	*[0.000]*	*(3.267)*	*[0.017]*	*(2.189)*	*[0.002]*	*(4.103)*	*[0.008]*
Relative Size	**−4.177**		**0.149**		**−1.725**		**3.975**	
	(2.248)	*[0.063]*	*(0.497)*	*[0.765]*	*(2.401)*	*[0.473]*	*(1.925)*	*[0.039]*
Subsidiary Age	**−0.134**		**−0.123**		**−0.122**		**−0.148**	
	(0.123)	*[0.277]*	*(0.088)*	*[0.162]*	*(0.078)*	*[0.119]*	*(0.085)*	*[0.081]*
Parent Profits	**61.605**		**−173.546**		**−108.784**		**−62.951**	
	(308.098)	*[0.842]*	*(45.426)*	*[0.000]*	*(335.279)*	*[0.746]*	*(50.963)*	*[0.217]*
Parent Listed	**−3.296**		**−1.944**		**0.183**		**−2.207**	
	(1.846)	*[0.074]*	*(2.908)*	*[0.504]*	*(1.598)*	*[0.909]*	*(3.977)*	*[0.579]*
Parent Keiretsu Membership	**−2.239**		**1.039**		**0.482**		**−0.030**	
	(1.530)	*[0.144]*	*(1.378)*	*[0.451]*	*(1.324)*	*[0.716]*	*(1.790)*	*[0.987]*

TABLE 3 (Continued)

Variables	Panel B: Vicarious adaptation learning splits							
	Model 10		Model 11		Model 12		Model 13	
	Low parent cash and low vicarious adaptation learning		High parent cash and low vicarious adaptation learning		Low parent cash and high vicarious adaptation learning		High parent cash and high vicarious adaptation learning	
Parent Debt–Equity Ratio	**0.097**		**0.055**		**−0.141**		**−0.375**	
	(0.190)	*[0.610]*	*(0.275)*	*[0.842]*	*(0.160)*	*[0.380]*	*(0.307)*	*[0.221]*
Parent Size	**38.355**		**2.282**		**2.622**		**0.069**	
	(10.318)	*[0.000]*	*(0.706)*	*[0.001]*	*(9.335)*	*[0.779]*	*(0.766)*	*[0.929]*
Adaptation Experience	**0.246**		**−0.316**		**0.242**		**1.965**	
	(1.060)	*[0.817]*	*(0.906)*	*[0.727]*	*(0.727)*	*[0.740]*	*(0.811)*	*[0.015]*
Lagged Misalignment	**0.779**		**0.780**		**0.769**		**0.728**	
	(0.032)	*[0.000]*	*(0.030)*	*[0.000]*	*(0.029)*	*[0.000]*	*(0.034)*	*[0.000]*
R-squared	0.750		0.687		0.712		0.689	
Wald Chi-square	717.97	*[0.000]*	729.15	*[0.000]*	729.92	*[0.000]*	517.79	*[0.000]*
Observations	379		451		475		412	

Note: All models include year and subsidiary effects. Estimated coefficients are in bold. Standard errors are in parentheses. The *p*-values are between square brackets. All tests are conservatively two-tailed.

PANEL A: *Sample split approach*: Low Parent Cash and High Parent Cash refer respectively to values below the median and values above or equal to the median levels of Parent Cash. Low Adaptation Experience and High Adaptation Experience refer, respectively, to values below the median and values above or equal to the median levels of Adaptation Experience.

PANEL B: *Sample split approach*: Low Parent Cash and High Parent Cash refer respectively to values below the median and values above or equal to the median levels of Parent Cash. Low Vicarious Adaptation Learning and High Vicarious Adaptation Learning refer, respectively, to values below the median and values above or equal to the median levels of Vicarious Adaptation Learning.

Interpretation of the Results: See part (A) of the note at the bottom of Table 2.

the adaptation rates at the respective subsample means. To determine how different the coefficients are in various subsamples, we conduct Chow tests.

To test Hypothesis 2a, we are interested in contrasting the effect of adaptation experience on the parent's adaptation rate under varying conditions, that is, when the parent has low cash holdings versus when the parent has high cash holdings. We first compare the coefficients across the subsamples with, respectively, Low Cash and High Adaptation Experience (model 8), and High Cash and High Adaptation Experience (model 9). Following Hypothesis 2a, we expect higher rates of adaptation in the subsamples with High Cash and High Adaptation Experience. Indeed, when we compare the coefficients of the Lagged Misalignment variable, we find that the adaptation rate is statistically less (Chow test: $\chi^2 = 33.14$, $p = .000$) in model 8, where the Lagged Misalignment coefficient of 0.775 translates into an adaptation rate of 0.225 (which indicates relatively more stickiness), than in model 9, where the Lagged Misalignment coefficient of 0.717 means a higher adaptation rate of 0.283. In other words, higher levels of adaptation experience facilitate adaptation more when the parent has higher levels of cash.

In terms of *economic magnitude*, we observe that the adaptation rate is 25.8% higher in the subsample with higher cash than in the subsample with lower cash. This highlights that the differences we observe are substantive in practice.

Second, we compare the coefficients across the subsamples characterized by respectively Low Cash and Low Adaptation Experience (model 6), and Low Cash and High Adaptation Experience (model 8). This allows us to compare whether a firm's adaptation rate is higher, given greater experience, when the firm has low cash holdings. Since we predict that higher cash holdings will enable the use of experience and the firm lacks cash in these two subsamples, we expect the benefits of additional experience to be relatively limited in these two low-cash subsamples. Indeed, given that a parent has lower levels of cash, its adaptation rate is not statistically higher (Chow test: $\chi^2 = 0.84$, $p = .361$) when it has higher adaptation experience (model 8) than when it has lower adaptation experience (model 6).

Together, these results imply that adaptation experience accelerates adaptation more in the presence of cash, which is consistent with Hypothesis 2a. In addition, we note that at low cash, experience does not substantially affect the adaptation rate (and vice versa). This suggests a mutual interplay of experience and cash.

Our approach to testing Hypothesis 2b parallels that used to test Hypothesis 2a. Namely, we start by comparing the coefficients of the Lagged Misalignment variable in model 12 (Low Cash and High Vicarious Adaptation Learning) and model 13 (High Cash and High Vicarious Adaptation Learning). This reveals that adaptation is substantially more sluggish (Chow test: $\chi^2 = 5.98$, $p = .015$) in model 12 (a Lagged Misalignment coefficient of 0.769 representing an adaptation rate of 0.231) than in model 13 (a Lagged Misalignment coefficient of 0.728 meaning an adaptation rate of 0.272). Hence, vicarious adaptation learning accelerates adaptation more when the firm has higher levels of cash. In terms of *economic magnitude*, the adaptation rate is 17.7% higher in the subsample with higher levels of cash, given high vicarious learning. Again, this is substantive in practice.

Furthermore, we note that when a parent has low cash holdings, its adaptation rate is not statistically higher when it has high levels of vicarious adaptation learning (model 12) than when it has low levels of vicarious adaptation learning (model 10; Chow test: $\chi^2 = 0.52$, $p = .471$). As a set, these results are consistent with Hypothesis 2b and the latter comparison (and vice versa) further indicates a mutual interplay of cash and vicarious adaptation learning.[10]

To gain further insights into the role of fungible slack resources—specifically, cash—as a contingency on the effects of learning, we also test Hypotheses 2a and 2b using an alternative approach that does not involve splitting our sample into four subsamples yet builds on the distinction between the same four scenarios represented in the split-sample approach above. In brief, we create four binary variables that capture each possible configuration of cash and experience/learning above or below the median (e.g., low cash with high experience; high cash with high experience, etc.). Following the approach in Table 2, which allows the retrieval of the marginal effect of learning, we interact these dummies with the lagged misalignment variable. This allows us to see how the adaptation rate varies under different configurations of cash and adaptation experience in a combined model for the whole sample. We then repeat this analysis with sets of binary configurations that combine above versus below median vicarious adaptation learning and above versus below median cash. We detail this approach and report full results in Appendix A.1.

In the models that test Hypothesis 2a (panel A of Table A1), we see differences in the adaptation rate in line with our prediction. Namely, the adaptation rate is highest in the High Cash and High Experience configuration (0.359 in Model 17) and lower in every other category. Paralleling the main comparison we made with the split samples, the adaptation rates of the High Cash and High Experience configuration (0.359) is 76.8% higher than that of the Low Cash and High Experience configuration (0.203). This indicates that experience facilitates adaptation more when the parent has higher levels of cash.

In the models that test Hypothesis 2b, we observe similar patterns. Specifically, the adaptation rate is highest in the High Cash and High Vicarious Learning configuration (0.295 in Model 21). Comparing the adaptation rate of the High Cash and High Vicarious Learning configuration (0.295) with that of the Low Cash and High Vicarious Learning configuration (0.261), we observe that the former adaptation rate is 13.0% higher. That is, vicarious adaptation learning also facilitates adaptation more when the parent has higher levels of cash. Overall, this additional analysis provides further support in line with Hypotheses 2a and 2b with patterns of practical magnitudes of the effects that are comparable in magnitude across the two approaches.

5.5 | Robustness checks and additional analyses

We conducted a battery of tests to check the robustness of our findings and to gain additional insights, as reported in Data S1. First, we examined multiple specifications of the learning measures (summarized in Appendix S1). Besides establishing that the results are robust to various specifications of the adaptation experience and vicarious adaptation learning measures, these

[10]We follow existing work in including control variables, but not the variables on which the sample splits are based, in the estimation models (e.g., Barber & Diestre, 2022; Desender et al., 2016; Tandon et al., 2023). Since some studies include the variables used to split the sample as control variables (e.g., Toh & Ahuja, 2022), we checked the robustness of our findings including these variables. This yielded results consistent with those in our main analysis. Namely, we observe statistical differences in the adaptation rate when we, respectively compare models 8 and 9 (H2a: Chow test: $\chi^2 = 11.80$, $p = .001$), and models 12 and 13 (H2b: Chow test: $\chi^2 = 6.16$, $p = .013$). In contrast and as expected, there are no statistical differences when we respectively compare models 6 and 8 (H2a: Chow test: $\chi^2 = 2.27$, $p = .132$) and models 10 and 12 (H2b: Chow test: $\chi^2 = 0.23$, $p = .630$).

analyses confirmed that it is learning about adapting stakes, not the initial formation of a subsidiary, that matters. Second, we ran a set of diagnostics of any autocorrelation that might arise from using a lagged dependent variable, and ran robustness analyses with three alternative estimators (Appendix S2).

Third, we conducted additional analyses to exclude alternative explanations and gain additional insights (Appendix S3). In particular, we explored and were able to eliminate the alternative explanation that the effects observed are the result of isomorphic pressures to conform to other parent firms from the same country; rather, these analyses confirmed that vicarious learning is the relevant mechanism. We also repeated the main adaptation result while splitting the sample depending on whether the foreign parent had a higher or lower equity stake in the subsidiary than expected. Altogether, our main conclusions remain unchanged, notwithstanding some extra insights.

Fourth, we explored whether *Parent Profits*, which are an antecedent of funding capacity and thus a precursor to slack financial resources, helps a parent firm to leverage its adaptation experience and its vicarious adaptation learning to adapt a misaligned equity stake more rapidly. The results of this additional analysis are reported in Appendix S4. As discussed in further detail in this appendix, the results reveal that parent profits acts as a moderator for the effects of adaptation experience and vicarious adaptation learning. This largely parallels the contingency effect of cash that we observed testing Hypotheses 2a and 2b, albeit with less sharp evidence of a specific interplay of profits and adaptation experience than we found for cash and adaptation experience.[11]

6 | DISCUSSION

Setting up and maintaining governance arrangements that are aligned with the demands of the environment is critical to deploying investments and subsidiaries for an effective corporate strategy (Williamson, 1999). This is no straightforward task when the firm faces diverse and changing uncertainty conditions, as associated here with operating subsidiaries in various foreign countries. Under such circumstances, organized and purposeful adjustments become necessary for sustained competitive advantage (Barnard, 1938; Williamson, 1991). Yet extant literature has told us more about the performance consequences of governance misalignment, and to a lesser extent about rarer discrete governance mode shifts, than about the extent and determinants of fine-grained governance adaptation. By documenting the typical bounds to equity stake adaptation, and theorizing and testing the determinants of heterogeneity in adaptation rates, we establish three main research findings and contributions regarding governance adaptation from a strategic perspective.

First, we show that equity stake adaptation is common but that the typical rate of adaptation is intermediate, indicating neither stickiness that would preclude adaptation, nor frictionless flexibility. We thus redirect attention from the common presumptions of either stasis of misaligned governance (until selected out), or benign governance adaptation. Complementing work on adjustments in alliance contracts (Reuer & Ariño, 2002), our study points the way for a deeper understanding of adaptation *within* governance modes and thus extends research on discrete governance mode shifts. Furthermore, we document considerable variation in adjustment rates, meaning that adaptability is highly heterogeneous.

[11]We are grateful to Consulting Editor Constance Helfat for suggesting this supplemental analysis.

Second, in explaining such heterogeneity, we advance two predictions. One is that learning from past behavior is an essential antecedent guiding adaptability, and that such learning can be experiential or vicarious in origin. We find that both sources of learning are indeed substantive antecedents of governance adaptation. Interestingly, the vicarious effect is generally the stronger one. Although past research has exclusively considered direct experience as a determinant of expertise, both in arranging initial governance (e.g., Mayer & Argyres, 2004) and in making certain governance adaptations (e.g., Reuer et al., 2002), we show that there is great scope in learning vicariously to build governance abilities and general strategic adaptability. In addition, in modeling both sources of learning, we highlight the task and location specificity of effective learning (as also supported in robustness analyses reported in Appendix S1). We thus further redirect the governance adaptation literature away from an emphasis on general experience with forming subsidiaries (or contracts, etc.).

Third, given that learning may thus help diagnose and direct the adaptation of misaligned governance, our second prediction is that this effect is contingent on the firm possessing fungible (non-knowledge) slack resources, specifically cash. Indeed, we find that the effect of learning on the adaptation rate is contingent on the parent's cash resources. Interestingly, adaptation is maximized when both learning and cash are high, but learning absent cash is less effective, as is cash absent learning. This contrasts, again, with the past emphasis on experience as a stand-alone determinant of governance adaptation. We surmise that the interplay between fungible (financial) slack resources and learning—and perhaps more generally between funding capacity and learning, given the results about profits—will exist for other strategic choices that require idiosyncratic adjustments and commitments. For instance, this may extend to environmental and social goals (as other ESG factors) which are an increasingly salient part of firms' strategies; and to other domains of strategic adaptability such as in competitive positioning, corporate scope, innovation and (corporate) entrepreneurship, digitalization, and business models (e.g., Zajac et al., 2000). In particular, our study complements research into competitive adaptation after technological shocks (Argyres et al., 2019).

6.1 | Implications for further research

Based on our predictions and findings, we identify several avenues for future research. First, we recognize that our empirical context is specific. We study Japanese overseas subsidiaries. Although models of multinational corporation behavior such as in this study are not inherently specific to Japanese firms (see also Delios & Beamish, 1999; Hennart, 1991), future studies could verify our finding for other home countries. Similarly, we examine the automotive industry. This is a broad and diverse industry such that we can expect that our findings generalize reasonably well, but this would be interesting to verify with other industries. One general contextual consideration is that Japanese firms may have a comparatively long-term orientation (Dhanaraj & Beamish, 2004), something that may have been exacerbated as we examined a Japanese industry that was generally expanding during much of the study period. Interestingly, although a long-term orientation could encourage more attention to governance and its fine-grained adaptation, conversely it may discourage short-term adjustments; thus its net effect, and how this might compare with other context, remains an empirical question. Furthermore, our data allowed us to focus on fine-grained governance adjustments, but we did not examine the coarse governance mode shifts that much other research has examined, nor other dimensions of governance (such as contractual terms). In general, the propensity to make fine-grained governance adjustments versus governance mode shifts may vary across contexts and governance dimensions in interesting ways, although we expect that either form of adaptation stands to benefit from learning and slack resources.

Second, we examined how fast and under what conditions firms align their equity stakes given the local environment. However, some other factors may also drive governance adaptation (e.g., Lu & Hébert, 2005; Reuer & Ariño, 2002). For example, it would be interesting to explore how the risk preferences of decision-makers might affect adaptability. Triggering corporate events such as leadership changes and strategic reorientations are also an interesting topic (e.g., Schnatterly et al., 2021). In general, future research could examine the interplay among external and internal determinants of adaptation.

Third, the processes whereby firms become aware of governance misalignment require further attention. In principle, this may result from cognitive attention to the conditions around a subsidiary, including the institutional environment and peer firms' actions. Another possibility is that awareness results from performance feedback. Indeed, insofar as feedback is obtained from both changes in the organization's performance and from comparison with rivals (Cyert & March, 1992; Greve, 2003), this maps onto learning occurring both internally (experientially) and by reference to other firms (vicariously). Future studies of adaptability may thus consider both cognitive and behavioral channels, while recognizing that when it comes to performance feedback, firms may use both diverse reference points (Blettner et al., 2015) and diverse goals (Hu & Bettis, 2018).

Fourth, given the considerable literature about the detriments of misalignment, we expect that heterogeneity in adaptability will have strong consequences for firm and subsidiary performance. Thus, it would be interesting to examine the performance consequences of adjusting equity stakes. Importantly, our contribution should enable future research to compare fine-grained adaptation outcomes both with cases where no adaptation occurred (which is the common counter-factual in studies of organizational change) and with cases of shifts between governance modes (which is the common counter-factual in governance adaptation research).

Finally, given our findings, a relatively novel research direction involves examining the organizational *antecedents* of governance misalignment. This includes querying what prompts various subsidiaries and various parent firms to exhibit lesser or greater levels of misalignment in the first place, or to exhibit misalignment in a given direction (e.g., too high versus too low equity stakes). Such research could parse out underlying conditions that also help better identify subsequent adaptation and performance outcomes.

7 | CONCLUSION

Governance alignment and adaptability are central issues for strategy research (Nelson, 1991; Williamson, 1991). Whereas such misalignment has been studied mostly from the standpoint of performance detriments or discrete shifts between separate governance modes, we show that fine-grained adaptation toward better-aligned governance is common. Furthermore, variance in the rate of adaptation can be explained in a meaningful way. Thus, we explicate *heterogeneous adaptability*. We demonstrate the importance of experiential and (especially) vicarious learning as antecedents to adaptability, and of fungible slack resources—specifically, cash—in enabling such learning to be leveraged. We believe that our framework, combining learning as a source of guidance and slack resources as enabling factor, holds considerable promise for explaining not only adaptation in the presence of misaligned governance, but also other forms of strategic adaptation.

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DATA AVAILABILITY STATEMENT

The non-restricted parts of the data that support the findings of this study are available from the corresponding author upon reasonable request.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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APPENDIX A

A.1 | Calculating equity stake misalignment

In a study of 6472 Sino-foreign JVs formed between 1979 and 1996, Cuypers and Martin (2010) investigated the determinants of the equity distribution of JVs. Their model describes determinants of the optimal equity stake for a foreign investor. Specifically, they found a negative relationship between exogenously resolving sources of uncertainty and the foreign parent's stake in a JV. They showed that three exogenous sources of uncertainty matter: the level of exchange rate uncertainty, economic uncertainty, and local institutional uncertainty. They used a two-tailed Tobit model because their dependent variable, the foreign parent's equity stake, is bounded (between 1 and 99, in percentage terms).

Here we are interested in the degree of equity misalignment. To measure the degree of equity misalignment, we start from Cuypers and Martin's (2010) model to calculate the expected equity stake for each observation, and then compute the difference between the observed equity stake and the expected equity stake. In practice, this difference corresponds to the residual for each observation resulting from the model described below. Due to data constraints and minor differences in the empirical setting, our model differs marginally from Cuypers and Martin's (2010). Our model is:

$$\begin{aligned} \textit{Equity Stake}_i = {} & \beta_0 + \beta_1 \textit{Political Uncertainty}_i + \beta_2 \textit{Economic Uncertainty}_i \\ & + \beta_3 \textit{Legal/Regulatory Uncertainty}_i + \beta_4 \textit{Subsidiary Size}_i \\ & + \beta_5 \textit{Parent Size}_i + \beta_6 \textit{Parent Profitability}_i + \beta_7 \textit{Sales Activity}_i \\ & + \beta_8 \textit{Year Dummies}_i + \varepsilon_i \end{aligned}$$

TABLE A1 Determinants of equity stakes.

	DV: Equity stake	
Constant	**70.231**	
	(6.440)	*[0.000]*
Subsidiary Size (log)	**−5.237**	
	(0.471)	*[0.000]*
Parent Size (log)	**6.797**	
	(0.777)	*[0.000]*
Parent Profits	**−374.492**	
	(69.027)	*[0.000]*
Sales Activity	**10.503**	
	(1.543)	*[0.000]*
Political Uncertainty	**−13.891**	
	(3.328)	*[0.000]*
Economic Uncertainty	**−0.272**	
	(0.074)	*[0.000]*
Legal/Regulatory Uncertainty	**−7.161**	
	(1.248)	*[0.000]*
Log-likelihood	−13194.85	
Chi-squared	764.99	*[0.000]*

Note: The model includes year fixed effects. Estimated coefficients are in bold. Standard errors are in parentheses. The *p*-values are between square brackets. All tests are conservatively two-tailed.

where *Political Uncertainty*, *Economic Uncertainty*, and *Legal/Regulatory Uncertainty* are the three sources of exogenous uncertainty.[12] We control for the size of the parent and subsidiary, parent profits, and whether the subsidiary has any sales activities, and include year fixed effects. All three sources of uncertainty are negative as expected (with $p = .000$), and the overall model has considerable predictive power ($p = .000$). The results are presented below:

The absolute value of the difference between the expected value from the above model and the observed equity stake held by the Japanese parent in a given subsidiary represents Misalignment, which is our dependent variable in the rest of the study.

[12]The degree of *economic uncertainty* is measured using the *Euromoney* country risk index. This oft-used index measures the economic uncertainty of a country at a particular time on a scale from 0 to 100 based on credit (e.g., payment records), analytical (e.g., economic performance forecasts), and market indicators (e.g., access to capital) (Cuypers & Martin, 2010). It comprises a mix of market perception and objective measures. We capture the level of *political uncertainty* using Henisz' political hazards index (Henisz, 2000). This index is oft used and captures the extent to which a change in the preferences of any single branch of government can result in a change in government policy. It ranges from 0 (the lowest level of political uncertainty) to 1 (the highest level of political uncertainty). As a measure of *legal/regulatory uncertainty*, we use the component of the Economic Freedom of the World index (published by the Fraser Institute) that captures the level of uncertainty resulting from a country's legal/regulatory institutional framework (e.g., Cuypers & Martin, 2010). This index was recoded so that a higher score represents higher levels of legal/regulatory uncertainty.

APPENDIX B

B.1 | An alternative test of fungible slack resources as a contingency for the effects of adaptation learning

To test Hypotheses 2a and 2b further and to gain additional insights into the role of fungible slack resources—specifically, cash—as a contingency for the effects of adaptation learning, we created sets of binary variables that capture configurations of experience/learning and cash corresponding to the sample splits of Panel A (adaptation experience) and Panel B (vicarious adaptation learning) respectively, that is: (1) low cash and low experience/vicarious learning, (2) low cash and high experience/vicarious learning, (3) high cash and low experience/vicarious learning, and (4) high cash and high experience/vicarious learning.

Subsequently, we interacted these respective sets of binary variables with the lagged misalignment variable and estimated the coefficients, this time using the whole sample rather than the split sub-samples and thus extended the approach in Table 2. This allows us to see how the adaptation rate varies under different configurations of cash and experience/vicarious learning, respectively, by looking at how the adaptation rates compare to the baseline case. The low cash and low experience/vicarious learning configurations are the respective baselines in the results presented below. However, using any of the other possible baselines yields identical inferences regarding the adaptation rates. Specifically, the adaptation rate for a particular configuration of cash and experience/vicarious learning can be calculated by jointly considering the direct effect of the Lagged Misalignment variable and the interaction term with the dummy that captures that particular configuration (i.e., the adaptation rate $= 1 - [\beta\, \textit{Lagged Misalignment} + \beta\, \textit{Lagged Misalignment} \times \textit{Configuration Dummy}]$). Below Table B1, we provide an overview of the adaptation rates for each of the four possible configurations of cash and adaptation experience. Likewise, below Table B2 we provide an overview of the adaptation rates for each of the four possible configurations of cash and vicarious adaptation learning.

TABLE B1 Post-formation adaptation: Configurations of adaptation experience and cash.

Variables	Model 14		Model 15		Model 16		Model 17	
Constant	**9.909**		**9.728**		**9.303**		**9.197**	
	(1.337)	*[0.000]*	*(1.353)*	*[0.000]*	*(1.410)*	*[0.000]*	*(1.423)*	*[0.000]*
Lagged Misalignment	**0.752**		**0.753**		**0.780**		**0.780**	
	(0.016)	*[0.000]*	*(0.016)*	*[0.000]*	*(0.025)*	*[0.000]*	*(0.025)*	*[0.000]*
Relative Size	**0.288**		**0.334**		**0.280**		**0.317**	
	(0.467)	*[0.538]*	*(0.469)*	*[0.476]*	*(0.463)*	*[0.546]*	*(0.465)*	*[0.495]*
Subsidiary Age	**−0.116**		**−0.113**		**−0.124**		**−0.122**	
	(0.044)	*[0.008]*	*(0.044)*	*[0.011]*	*(0.044)*	*[0.004]*	*(0.044)*	*[0.006]*
Parent Profits	**−99.304**		**−90.986**		**−96.732**		**−90.363**	
	(31.641)	*[0.002]*	*(32.516)*	*[0.005]*	*(31.549)*	*[0.002]*	*(32.386)*	*[0.005]*
Parent Listed	**−2.744**		**−2.745**		**−2.686**		**−2.692**	
	(1.109)	*[0.013]*	*(1.109)*	*[0.013]*	*(1.097)*	*[0.014]*	*(1.097)*	*[0.014]*
Parent Keiretsu Membership	**0.732**		**0.904**		**0.697**		**0.846**	
	(0.740)	*[0.323]*	*(0.755)*	*[0.232]*	*(0.731)*	*[0.340]*	*(0.746)*	*[0.257]*
Parent Debt–Equity Ratio	**−0.042**		**−0.031**		**−0.050**		**−0.042**	
	(0.112)	*[0.708]*	*(0.113)*	*[0.780]*	*(0.111)*	*[0.652]*	*(0.112)*	*[0.706]*
Parent Size	**1.089**		**0.218**		**1.061**		**0.348**	
	(0.495)	*[0.028]*	*(0.900)*	*[0.809]*	*(0.491)*	*[0.031]*	*(0.894)*	*[0.697]*
Parent Cash			**5.084**				**4.178**	
			(4.377)	*[0.245]*			*(4.356)*	*[0.337]*
Adaptation Experience			**0.122**				**0.269**	
			(0.760)	*[0.872]*			*(0.758)*	*[0.722]*
Vicarious Adaptation Learning	**−0.005**		**−0.004**		**−0.005**		**−0.005**	
	(0.011)	*[0.624]*	*(0.011)*	*[0.679]*	*(0.011)*	*[0.607]*	*(0.011)*	*[0.639]*

TABLE B1 (Continued)

Variables	Model 14		Model 15		Model 16		Model 17	
High Cash and Low Experience Dummy	**−0.742**		**−0.681**		**−0.194**		**−0.167**	
	(0.767)	*[0.333]*	*(0.769)*	*[0.376]*	*(1.127)*	*[0.864]*	*(1.128)*	*[0.882]*
Low Cash and High Experience Dummy	**0.955**		**0.768**		**0.579**		**0.189**	
	(0.966)	*[0.323]*	*(1.405)*	*[0.584]*	*(1.517)*	*[0.703]*	*(1.832)*	*[0.918]*
High Cash and High Experience Dummy	**1.979**		**1.803**		**5.220**		**4.805**	
	(0.999)	*[0.048]*	*(1.419)*	*[0.204]*	*(1.502)*	*[0.001*	*(1.778)*	*[0.007]*
Lagged Misalignment	**0.752**		**0.753**		**0.780**		**0.780**	
	(0.016)	*[0.000]*	*(0.016)*	*[0.000]*	*(0.025)*	*[0.000]*	*(0.025)*	*[0.000]*
Lagged Misalignment × High Cash and Low Experience Dummy					**−0.020**		**−0.019**	
					(0.034)	*[0.552]*	*(0.034)*	*[0.576]*
Lagged Misalignment × Low Cash and High Experience Dummy					**0.016**		**0.017**	
					(0.047)	*[0.728]*	*(0.047)*	*[0.722]*
Lagged Misalignment × High Cash and High Experience Dummy					**−0.142**		**−0.140**	
					(0.048)	*[0.005]*	*(0.048)*	*[0.006]*
R-squared	0.701		0.701		0.702		0.702	
Observations	1717		1717		1717		1717	
Adaptation Rate for Low Cash and Low Experience					0.220		0.220	
Adaptation Rate for High Cash and Low Experience					0.240		0.239	
Adaptation Rate for Low Cash and High Experience					0.203		0.203	
Adaptation Rate for High Cash and High Experience					0.361		0.359	

Note: All models include year and subsidiary effects. Estimated coefficients are in bold. Standard errors are in parentheses. The *p*-values are between square brackets. All tests are conservatively two-tailed. Consistent with how the subsamples are split in the main analysis, Low Parent Cash and High Parent Cash refer, respectively, to values below the median and values above or equal to the median levels of Parent Cash. Low Adaptation Experience and High Adaptation Experience refer respectively to values below the median and values above or equal to the median levels of Adaptation Experience.

Interpretation of the Results: See part (A) of the note at the bottom of Table 2.

TABLE B2 Post-formation adaptation: Configurations of vicarious adaptation learning and cash.

Variables	Model 18		Model 19		Model 20		Model 21	
Constant	**10.472**		**10.272**		**8.820**		**8.665**	
	(1.370)	*[0.000]*	*(1.383)*	*[0.000]*	*(1.503)*	*[0.000]*	*(1.512)*	*[0.000]*
Lagged Misalignment	**0.752**		**0.754**		**0.826**		**0.827**	
	(0.016)	*[0.000]*	*(0.016)*	*[0.000]*	*(0.031)*	*[0.000]*	*(0.031)*	*[0.000]*
Relative Size	**0.277**		**0.331**		**0.323**		**0.369**	
	(0.465)	*[0.551]*	*(0.468)*	*[0.479]*	*(0.469)*	*[0.491]*	*(0.472)*	*[0.434]*
Subsidiary Age	**−0.115**		**−0.109**		**−0.126**		**−0.119**	
	(0.044)	*[0.010]*	*(0.045)*	*[0.015]*	*(0.045)*	*[0.005]*	*(0.045)*	*[0.008]*
Parent Profits	**−97.581**		**−87.940**		**−97.550**		**−88.781**	
	(31.591)	*[0.002]*	*(32.547)*	*[0.007]*	*(31.565)*	*[0.002]*	*(32.558)*	*[0.006]*
Parent Listed	**−2.866**		**−2.861**		**−2.945**		**−2.943**	
	(1.101)	*[0.009]*	*(1.102)*	*[0.009]*	*(1.113)*	*[0.008]*	*(1.113)*	*[0.008]*
Parent Keiretsu Membership	**0.685**		**0.882**		**0.727**		**0.907**	
	(0.738)	*[0.354]*	*(0.752)*	*[0.241]*	*(0.746)*	*[0.330]*	*(0.760)*	*[0.233]*
Parent Debt–Equity Ratio	**−0.057**		**−0.044**		**−0.065**		**−0.054**	
	(0.112)	*[0.612]*	*(0.112)*	*[0.693]*	*(0.113)*	*[0.562]*	*(0.113)*	*[0.633]*
Parent Size	**1.052**		**0.023**		**1.058**		**0.113**	
	(0.493)	*[0.033]*	*(0.898)*	*[0.979]*	*(0.496)*	*[0.033]*	*(0.903)*	*[0.900]*
Parent Cash			**6.031**				**5.559**	
			(4.360)	*[0.167]*			*(4.384)*	*[0.205]*
Adaptation Experience	**0.992**		**0.986**		**1.008**		**1.006**	
	(0.428)	*[0.021]*	*(0.430)*	*[0.022]*	*(0.430)*	*[0.019]*	*(0.432)*	*[0.020]*
Vicarious Adaptation Learning			**−0.001**				**−0.002**	
			(0.013)	*[0.933]*			*(0.013)*	*[0.861]*
High Cash and Low Vicarious Dummy	**−1.098**		**−1.089**		**1.080**		**1.047**	
	(0.882)	*[0.213]*	*(0.882)*	*[0.217]*	*(1.334)*	*[0.418]*	*(1.334)*	*[0.433]*
Low Cash and High Vicarious Dummy	**−1.267**		**−1.232**		**0.904**		**0.995**	
	(0.820)	*[0.122]*	*(0.939)*	*[0.189]*	*(1.262)*	*[0.474]*	*(1.360)*	*[0.464]*

TABLE B2 (Continued)

Variables	Model 18		Model 19		Model 20		Model 21	
High Cash and Low Vicarious Dummy	**−1.098**		**−1.089**		**1.080**		**1.047**	
	(0.882)	*[0.213]*	*(0.882)*	*[0.217]*	*(1.334)*	*[0.418]*	*(1.334)*	*[0.433]*
Low Cash and High Vicarious Dummy	**−1.267**		**−1.232**		**0.904**		**0.995**	
	(0.820)	*[0.122]*	*(0.939)*	*[0.189]*	*(1.262)*	*[0.474]*	*(1.360)*	*[0.464]*
High Cash and High Vicarious Dummy	**−0.633**		**−0.517**		**2.456**		**2.541**	
	(0.933)	*[0.498]*	*(1.021)*	*[0.612]*	*(1.389)*	*[0.077]*	*(1.457)*	*[0.081]*
Lagged Misalignment	**0.752**		**0.754**		**0.826**		**0.827**	
	(0.016)	*[0.000]*	*(0.016)*	*[0.000]*	*(0.031)*	*[0.000]*	*(0.031)*	*[0.000]*
Lagged Misalignment × High Cash and Low Vicarious Dummy					**−0.088**		**−0.087**	
					(0.041)	*[0.032]*	*(0.041)*	*[0.036]*
Lagged Misalignment × Low Cash and High Vicarious Dummy					**−0.087**		**−0.088**	
					(0.040)	*[0.027]*	*(0.040)*	*[0.026]*
Lagged Misalignment × High Cash and High Vicarious Dummy					**−0.124**		**−0.122**	
					(0.042)	*[0.003]*	*(0.042)*	*[0.004]*
R-squared	0.701		0.702		0.702		0.702	
Observations	1717		1717		1717		1717	
Adaptation rate for Low Cash and Low Experience					0.174		0.173	
Adaptation rate for High Cash and Low Experience					0.262		0.260	
Adaptation rate for Low Cash and High Experience					0.261		0.261	
Adaptation rate for High Cash and High Experience					0.297		0.295	

Note: All models include year and subsidiary effects. Estimated coefficients are in bold. Standard errors are in parentheses. The *p*-values are between square brackets. All tests are conservatively two-tailed. Consistent with how the subsamples are split in the main analysis, Low Parent Cash and High Parent Cash refer, respectively, to values below the median and values above or equal to the median levels of Parent Cash. Low Vicarious Adaptation Learning and High Vicarious Adaptation Learning refer, respectively, to values below the median and above or equal to the median levels of Vicarious Adaptation Learning.
Interpretation of the Results: See part (A) of the note at the bottom of Table 2.