Organizational Structure and Acculturation in Acquisitions: Perspectives of Congruence Theory and Task Interdependence

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A congruence model of organizational design suggests that the consistency among strategy, structure, and culture enhances organizational performance. In this study, the author attempts to understand which strategy-structure and strategy-culture contingencies facilitate superior postacquisition performance. From the perspective of task interdependence, the author argues that different acquisition strategies (i.e., unrelated, vertical, related) require different levels of headquarters centralization and interdivisional integration in the organizational structure, as well as different degrees of acculturation in the organizational culture. Based on input/output (I/O) analysis, the author develops theoretical measures for different acquisition strategies to test these arguments. The results from a two-stage model capture the author’s arguments by using a sample of 154 acquisitions in the Taiwanese electronics and information sector.

Keywords: acquisition integration; organizational structure; acculturation; performance

The acquisition–performance relationship assumes that the purpose of acquisitions is to improve performance (Cording, Christman, & King, 2008). Prior studies on this issue have addressed two sets of factors that affect acquisition performance. First, acquisition performance is proposed to depend largely on the acquirer’s acquisition strategy and the target’s resource characteristics (Makri, Hitt, & Lane, 2010) from the resource-based view.
of the firm. Second, successful acquisitions are argued to rely on effective organizational integration of both target and acquirer (Barkema & Schijven, 2008; Puranam, Singh, & Chaudhuri, 2009). The literature, however, neglects another factor, the collective effects of the firm’s acquisition strategy and organizational integration, which, as this study shows, may advance this study stream by adding new theoretical insights into the important issue of acquisition performance.

Although there is widespread agreement on the importance of firms’ acquisition integration decisions, whether or how these decisions affect acquisition performance remains unclear. For example, integration and resource reconfiguration are necessary for both target and acquirer to commercialize resources in a coordinated manner, yet the loss of autonomy that typically accompanies acquisition integration can be detrimental to the acquired firm’s capacity for continued innovation (Puranam & Srikanth, 2007). From an intermediate perspective, effects of acquisition integration decisions should be contingent on the acquirer’s acquisition strategy. As suggested by strategy-structure-performance studies (Hill, Hitt, & Hoskisson, 1992), acquisition strategy determines the level of acquisition integration because corporate strategy imposes operating requirements. For meeting these requirements, the administrative structure must provide an adequate climate. Based on Thompson’s (1967) theory of task interdependence, recent extensions of the present study have noted that related and vertical acquisitions enhance acquisition integration through reciprocal and sequential interdependent value chain activities, whereas unrelated acquisitions, relying on lower level of integration, can benefit from pooled interdependence (e.g., Aggarwal, Siggelkow, & Singh, 2011; Bailey, Leonardi, & Chong, 2010).

The ideas that acquisition performance can be influenced by proper strategy and integration choice, though theoretically reasonable, receive little empirical support and thus fail to predict performance. This failure can be derived from two research gaps in prior literature. First, effects of strategy and integration choice on acquisition performance are not simultaneously taken into consideration. Second, vertical, related, and unrelated acquisitions are not carefully differentiated. For the first gap, this study extends the prior literature on acquisition strategy and performance by including acquisition integration choice regarding organizational structure and acculturation processes. In response to the tension between potential benefits and risks associated with firms’ integration choices, I assess comparative perspective on the performance implication of different acquisition strategy. Specifically, I examine the fundamental arguments of the congruence model of organizational design (Tushman & Nadler, 1978), which focuses on the performance implications of the fit among firms’ acquisition strategy, structure, and acculturation (Hill et al., 1992). This study also recognizes that even though researchers account for the influences of strategy and integration, endogeneity is an important point that needs to be explained to understand the specific effects of each component on acquisition performance. If acquisition strategy influences both organizational integration and acquisition performance, a self-selection bias will occur and implications drawn from the analyses may be incorrect (e.g., Leiblein, Reuer, & Dalsace, 2002). Therefore, to explicitly explain the potential self-selection bias, I employ a series of two-stage designs that permit an integrative model capturing firms’ acquisition integration decisions as well as the strategic antecedents of these decisions and their performance implications. Regarding the second gap, I develop theoretical measures for different acquisition
strategies based on input/output (I/O) analysis. Compared to the SIC-based measures of related and unrelated diversification, this study contributes to the literature by introducing a vertical index for two reasons. One is that the strategic intention of vertical acquisition, different from that of related and unrelated acquisitions, concerns specialized investments, which in turn generate productivity gains for the acquirer (Kretschmer & Puranam, 2008). The other reason is to reduce classification errors by using the traditional SIC construct (Fan & Lang, 2000).

This study highlights the importance of aligning acquisition strategy with acquisition integration and controlling endogeneity bias in assessments of acquisition strategy, integration, and performance outcomes. The contribution of this article is twofold. Theoretically, I extend acquisition studies by means of including integration choice regarding organization structure and acculturation process and explaining the collective effects of firms’ strategy, structure, and acculturation on acquisition performance. Methodologically, I develop measures of acquisition type, derived from a detailed I/O analysis of 161 industries. The adoption of a two-stage model effectively eliminates the potential self-selection bias regarding endogenous selection of acquisition strategy and integration choice. This empirical study captures my arguments by using a sample of 154 acquisitions over 7 years in the Taiwanese electronics and information sector.

Literature Review

Postacquisition Integration and Performance in the Combined Firm

Postacquisition integration, the level of interaction and coordination between the target and acquiring firms (Larsson & Finkelstein, 1999), brings the combination of activities within a common organizational boundary following an acquisition. While interaction postures are conducive to leveraging tacit knowledge embodied in physical artifacts, coordination postures provide superior access to the explicit knowledge embodied in documents and procedures (Puranam & Srikanth, 2007). As firms are combined within the common administrative boundaries, acquirers can use common authority, incentives, and processes to enhance coordination and mutual adaptation to reduce operational costs (Datta, 1991).

Although little empirical literature (e.g., Puranam, Singh, & Zollo, 2006) has examined whether acquisition integration choice affects performance, numerous case studies have described the potential advantages and risks of integration. Moreover, it is argued that the acquired firms’ autonomy in structure and culture preserves tacit and socially embedded technologies (Grabner, 2004). However, as autonomy restricts effective coordination, it thus harms the acquirer in leveraging acquired firms’ technologies. Puranam and Srikanth (2007: 807), observing that “integration enhances coordination at the expense of autonomy,” identify two major effects in acquisition integration, namely, coordination effect and loss of autonomy effect. In general, the coordination effect occurs by means of minimizing functional redundancy and joining daily activities, which helps the acquirer leverage the target firm’s capability. Moreover, the coordination effect may enhance reciprocal predictability of both sides’ actions through daily interaction and further strengthen mutual adjustment and adaptation (Galbraith,
In addition to its effects on organizational structure, integration also shapes the informal processes (i.e., acculturation) that help to create organizational identity, common knowledge, and informal communication channels as well as bring the merging entity to cohesion. However, integration may also incur costs of “loss of autonomy effect” in several ways. First, the employees of the acquired firm may reduce their motivation and productivity after acquisition integration. Moreover, arguments from agency theory suggest that acquisition integration may weaken talented employees’ intrinsic motivation of participating in innovative activities because they are forced to cooperate in other colleagues’ tasks and therefore reduce their autonomy of concentrating on their own tasks. If free riding and agent opportunism further weaken the link between effort and reward, talented employees, especially those with hard-to-measure skills, could possibly leave (Kretschmer & Puranam, 2008). With regard to the acquired managers, as they lose their power and authority to make decisions, they may leave the merged organizations as well (Cartwright & Cooper, 1994). Ultimately, high turnover among the top management team and loss of human and social resources in the acquired firm will have a deleterious impact on acquisitions (Hambrick & Cannella, 1993). Also, as acquisition integration proceeds, the work practices in the acquired firm will change, which may also alter valuable organizational routines of the target firm and consequently leads to disruption (Puranam et al., 2009).

Organizational Structure and Performance in the Combined Firm

Chandler (1962) proposed that strategy–performance studies should emphasize the importance of implementation, for it determines whether a strategy results in superior performance. This model also suggests that firms should adopt different strategies in their life cycle to meet objectives of growth and profit. Thus, as firms diversify by acquisitions, superior performance is argued to be the outcome of establishing a correct fit between strategy and structure (Hill et al., 1992). Centralized multidivisional (CM-form) structure and decentralized multidivisional (M-form) structure are regarded as two classic organizational structures for achieving diversification strategy (e.g., Chandler, 1962; Harrison, Hitt, Hoskisson, & Ireland, 2001; Hoskisson, Hill, & Kim, 1993; Williamson, 1985). Based on Williamson’s (1985) study, a CM-form structure is multidivisional with high headquarters centralization and high interdivisional integration, whereas an M-form structure has low headquarters centralization and low interdivisional integration. Regarding divisional autonomy, the CM-form headquarters tend to constrain business-level strategies and operational decisions. In other words, the headquarters of CM-form firms are highly involved in operational activities of each division. As Hill et al. (1992) argue that related diversified firms should ensure resource sharing and skill transfer among the headquarters and divisions, a CM-form structure is thus suitable for related diversification (Hoskisson et al., 1993). In the M-form structure, the headquarters, on one hand, tend to delegate operational decisions to divisions. This extensive autonomy allows divisions to develop their own management systems and subcultures. On the other hand, the M-form headquarters must design appropriate incentive and control systems to supervise divisional performance and reallocate organizational resources to the most promising and expanding divisions. Such an M-form arrangement is argued to be appropriate for unrelated diversification (Hill et al., 1992).
Effects of Acculturation in the Combined Firm

Cultural integration, “the creation of positive attitudes toward the new organization and the emergence of a sense of shared identity and trust among organizational members” (Stahl & Voigt, 2008: 162), is argued to be the biggest challenge of acquisitions. As Larsson and Finkelstein (1999) have noted, the support from the acquired firm’s employees is contingent on proper cultural integration or the extent to which they perceive their culture to be compatible with the acquirer. Dissimilar or incompatible cultures may cause feelings of hostility and significant discomfort, which can hinder the acquired firm’s employees from committing to and coordinating with the acquirer. Besides, Stahl and Voigt (2008) argue that the execution of a well-designed cultural integration process is essential to minimize intercultural friction and capture expected acquisition gains.

The concept of acculturation was first introduced by Berry (1980), who studied the cultural integration process of individuals entering different ethnic or national cultures and afterward referred to acculturation as “the dual process of cultural and psychological change that takes place as a result of contact between two or more cultural groups and their individual members” (Berry, 2005: 698). Moreover, acculturation involves changes of social structure and cultural practices at the group level and changes of personal behavior at the individual level. Adopting Berry’s view of social anthropology, management researchers (e.g., Nahavandi & Malekzadeh, 1988) have proposed that postacquisition culture involves a dynamic tension between forces of cultural differentiation (the side of the acquired firm) and forces of organizational integration (the side of the acquirer). Larsson and Lubatkin (2001: 1574) further define acculturation in acquisitions as the “outcome of a cooperative process whereby the belief, assumptions and values of two previous independent work forces form a jointly determined culture” and find out that whether acculturation is achieved depends on how well the acquirer manages the acculturation process. This process also helps to explain pressures of conforming to the acquirer’s values and practices on the acquired employees, and reasons why the acquired employees tend to resist such cultural pressures. In addition, aspects of cultural integration, such as trust and mutual respect, will make capability transfer and resource sharing easier if a cultural integration is well executed (Berry, 2005). The acculturation process, nonetheless, is not always identical in all acquisition types. For example, in unrelated and vertical acquisitions where the domain and industry of two firms are dissimilar, the acquired firm is expected to maintain autonomous in culture, unaffected by the acquirer’s culture (Larsson & Finkelstein, 1999). As in related acquisitions, instead of having autonomy, acquired firms are expected to conform to the acquirer’s culture, for the acquirer believes that operating profits can be achieved through combination.

Theory and Hypotheses Setting

Task Interdependence Between Target and the Acquiring Firms

In avoidance of possible conflicts between target and acquirer, proper selection of acquisition integration regarding organizational structure and acculturation process is challenging for the acquirer (Puranam & Srikanth, 2007). As the execution of a well-designed
integration process depends on the nature of task interdependence between target and acquirer, the needed extent of integration in different types of task interdependence have been central to theories concerning how to organize the combined organization after acquisition (Kretschmer & Puranam, 2008). Interdependence, the “value of performing one activity depends on how another activity is performed” (Puranam et al., 2009: 315), is argued to affect people’s action by determining the necessary extent of interaction, consultation, and material exchange. Along these lines, task interdependence is defined as the manner in which divisions interact and depend on one another for resources and knowledge to accomplish their tasks (Bailey et al., 2010).

From a coordination perspective, information processing activities and decisions on allocating tasks among people enable mutual adaptation between acquiring and target individuals. As long as employees of both sides can reach agreement through communication, decision making, and task implementation, they can continue their respective tasks and believe that the other’s task will be aligned to their own. Integration in acquisition presents the extent to which the target’s functions are linked to or aligned with the equivalent functions of the acquirer (Zollo & Singh, 2004). Drawing on Thompson’s (1967) pioneering work, the required extent of integration relies on degrees of task interdependence and capability transfer necessary for acquisition implementation. The model of pooled, sequential, and reciprocal interdependence indicates different levels of integration required in acquisitions, in which reciprocal interdependence is suggested to require the highest degree of integration, whereas pooled interdependence requires the lowest (Puranam et al., 2009).

**Acquisition Strategy and Organizational Structure**

In an unrelated acquisition, work does not flow between acquired and acquiring firms. Even though working independently, the acquired firm, as one part of the combined organization, contributes to the common good of the organization. In other words, the acquired unit behaves as a self-contained division “to the extent and degree that the conditions for carrying out its activities are independent of what is done in the other organizational units” (March & Simon, 1958: 28). When divisions (the target firms) are self-contained, each division should have its own set of support functions and control systems (Chandler, 1962) because a centralized set of support functions and control systems cannot satisfy the needs of different product divisions. The benefits of unrelated acquisition are mainly gained through pooled interdependence, which requires only minimal integration. As few information processing activities and day-to-day coordination are demanded among self-contained units, unrelated acquisitions have the lowest need for coordinating efforts of both merged firms. This also allows the acquired firm to have considerable autonomy and frees top managers of the acquirer from being involved in the daily activities of the acquired firm.

Since unrelated acquisitions require high degrees of divisional autonomy and low degrees of coordination, an M-form structure is argued to be appropriate (Hill et al., 1992). Decentralized divisional managers, on one hand, are given autonomy by the headquarters for relevant operational decisions. On the other hand, the headquarters establish objective financial criteria for divisional performance, based on which each division is offered different
levels of incentive (Hill et al., 1992). On this competitive basis, the headquarters can thus adopt the least cost behavior and capital flow for high-yield uses. To conclude, an M-form structure in unrelated acquisitions avoids performance ambiguities and bureaucratic costs that hinder divisional and organizational performance. Thus,

Hypothesis 1a: The interaction between unrelated acquisition and the degree of headquarters centralization is negatively related to postacquisition performance.

Hypothesis 1b: The interaction between unrelated acquisition and the degree of interdivisional integration is negatively related to postacquisition performance.

Vertical acquisition strategy is based on sequential interdependence where resources flow unidirectionally from one division to the other (Hoskisson et al., 1993). This is a high level of interdependence because the merged division and the acquirer’s preexisting divisions exchange resources and depend on others to have a better performance. Vertical acquisitions often provide opportunity for the acquirer to integrate resources and knowledge across different value chain activities. As benefits of vertical integration come from reducing transaction costs (Williamson, 1985), building entry barriers, and enriching product portfolios, firms usually invest in specialized assets (e.g., physical and human resource specificities). These specialized investments typically increase the specialization of organizational subunits, indicating that different divisions take on different subsets of organizational tasks (Kretschmer & Puranam, 2008). Specialization here refers to the condition that employees become proficient at dealing with given assignments, whereas specialized assets refer to investments on specialized devices to reduce cost of production. In general, as the specialization of tasks progresses, the interdependency of the specialized parts increases. Moreover, divisions across different value chain activities need to be tightly integrated owing to the need of resources to flow from one operating division to the next (Thompson, 1967). A coordination effect of integration in vertically combined firms occurs when proper incentives are provided (Kretschmer & Puranam, 2008). For instance, reward schemes that emphasize coordination rather than divisional performance can lead to cooperative behavior across divisions. A coordination effect also arises through shared experience and culture, so that members of both combined firms are willing to cooperate and pursue the common goals of the organization. Loss of autonomy effect is contrarily slight in vertical acquisitions because of the fact that the acquirer needs managers of the acquired firm to operate the business, at least for a time, until the acquirer becomes familiar with the operations. More important, vertical acquisitions are less likely to incur layoffs of the acquired employees (Harrison et al., 2001).

In consideration of sequential interdependence in vertical integration, Child (1984) argues that centralization is necessary to achieve coordination. Within the combined firm, interdivisional coordination is facilitated by three centralized mechanisms: programming, hierarchy, and feedback (Galbraith, 1974; March & Simon, 1958). Programming involves interdivisional arrangement and agreement on what (e.g., standards and procedures) and when (e.g., plans and schedules) actions must be implemented. Hierarchical mechanisms (e.g., centralized authority) enhance coordination by ordering individuals tasks of coordination and informing them about how differently those interdependent actors should behave. When
daily programming is important, coordination mechanisms such as cross-divisional meetings and teamwork are necessary to provide feedback on an ongoing basis. Such daily feedback further enables mutual adjustment and adaptation across the target and acquirer. Thus, sequential interdependence in vertical acquisition encourages the headquarters to retain control over the target and adopt a CM-form structure.

**Hypothesis 2a:** The interaction between vertical acquisition and the degree of headquarters centralization is positively related to postacquisition performance.

**Hypothesis 2b:** The interaction between vertical acquisition and the degree of interdivisional integration is positively related to postacquisition performance.

Related acquisition strategy concerns the realization of economies of scope associated with reciprocal interdependence (Hoskisson et al., 1993). A coordination effect of integration between related combined firms can arise in two ways. First, in terms of inputs and outputs utilization of related activities, tangible (e.g., joint development of shared production) and intangible (e.g., knowledge transfer) interdependences between target and acquirer are exploited to achieve organizational tasks. Reciprocal interdependence tends to occur in a related combined organization with what Thompson (1967) has described intensive technologies, in which various products and services in combination are provided to its customers. Through interdivisional integration with sufficient coordination, related acquisitions can contribute to the acquirer’s goal of expanding its market to other related markets or product lines (Cording et al., 2008). Second, a coordination effect of a related acquisition may encompass all possible coordination effects of a vertical acquisition. For example, the design/manufacturing relationship (DMR), in which the purpose of sending designs to the manufacturing sector is to test whether these designs can be manufactured or need further modification, seems to be a sequential interdependence because products are typically manufactured after being designed. Nevertheless, from a broader perspective, DMR may be involved in new product development projects, in which not only design and manufacturing but also R&D and marketing have to be intensively coordinated in a reciprocal fashion. Moreover, each of these divisions will receive feedback from all the other divisions to manufacture a product fulfilling customer needs. In general, the reciprocal character can be considered as a higher order of interdependence, which encompasses a lower sequential interdependence.

The costs of loss of autonomy in related integration can be understood in two ways. First, firms of closely divisional interdependence may suffer from performance ambiguities (Harrison et al., 2001). Second, it is argued that takeover resistance is more likely to occur in related acquisitions. Because of high degrees of integration, functions of the acquired organization tend to be aligned or combined with the equivalent functions of the acquirer in related acquisitions (Zollo & Singh, 2004). It is thus likely that the acquirer might replace managers and lay off surplus employees. Because knowledge and experience are market and product specific, the success of market expansion usually depends on the retention of the target’s managers to understand how to integrate and coordinate the combined organization’s resources and subsequently turn them into new market opportunities (Cording et al., 2008). Given these costs from loss of autonomy, why do acquirers integrate related acquisitions instead of giving autonomy to related targets? Puranam et al. (2009) argue that gains from
coordination will outweigh costs from loss of autonomy if high levels of interdependence between tasks underlie the target’s and the acquirer’s capabilities. In general, successful related acquisitions require intense coordination and functional experts to enhance horizontal and vertical communication between divisions and headquarters. Moreover, the acquirers can also avoid the loss of autonomy effect by means of establishing a reward scheme, emphasizing interdivisional coordination instead of divisional performance, and retaining talented employees of the acquired firms. Thus, a CM-form structure meets the strategic requirements of a related acquisition: tightly coupled divisions controlled by the centralized headquarters.

**Hypothesis 3a:** The interaction between related acquisition and the degree of headquarters centralization is positively related to postacquisition performance.

**Hypothesis 3b:** The interaction between related acquisition and the degree of interdivisional integration is positively related to postacquisition performance.

**Acquisition Strategy and Postacquisition Acculturation**

In unrelated acquisitions, associated with pooled interdependence, the maintenance of autonomous operations and business practices should be emphasized in the acquired firms (Hitt, Hoskisson, Ireland, & Harrison, 1991). Regarding organizational culture, the acquired employees wish to preserve their own culture in unrelated acquisitions (Larsson & Finkelstein, 1999). Furthermore, managers in headquarters see themselves as supporters, intending to further facilitate the development and growth of the acquired firms. As a result, they tend to minimize interference over the unrelated acquired firms and show tolerance or respect toward multiculturalism, which refers to “the degree to which an organization values cultural diversity and is willing to tolerate and encourage it” (Nahavandi & Malekzadeh, 1988: 83). In addition to operation and business practices, the acquired firms are permitted to maintain their values of autonomy and independency, and only a low level of postacquisition acculturation is necessary. So,

**Hypothesis 4:** The interaction between unrelated acquisition and the degree of postacquisition acculturation is negatively related to postacquisition performance.

Firms vertically integrate because the division of labor and specialization of productive activities increase manufacturing productivity. In a vertically merged firm, divisions of sequential interdependence must devote themselves to corporate performance rather than divisional performance. Flexibility and cost advantages are achieved by combining design and manufacturing in all value chain activities. To cope with keen competition, vertical integration in manufacturing industries usually includes joint design and joint development functions to reduce the time spent on preparing for mass production. In this business model, head offices have to integrate their various operation processes and inside suppliers. Thus, gains of vertical integration cannot be realized without the help of the target’s and the acquirer’s managers. In addition to its impact on formal structure and systems of the merged unit, organizational integration also shapes informal processes by means of creating informal
communication channels and group identity, which helps to share values and transfer knowledge (Puranam et al., 2009). These informal influences may be strengthened if organizational integration also brings forth high degrees of interaction between the merging firms with a coordinated effort into the quality of interaction (Larsson & Finkelstein, 1999). Thus, a high degree of acculturation is required in vertical acquisition.

_**Hypothesis 5:**_ The interaction between vertical acquisition and the degree of postacquisition acculturation is positively related to postacquisition performance.

In related acquisitions, especially when the acquired unit offers supplementary capacities to the acquirer and possesses unique technical advantages, a high degree of integration will be necessary to promote divisional coordination and knowledge transfer within the new organization (Håkanson, 1995). Because of a lack of autonomy, activities of the acquired firm increasingly depend on operational and strategic decisions by the acquirer, which may accompany redirection and redefinition of missions and objectives as well as destroy the acquired firm’s previous identity and culture. A similar perspective by Larsson and Lubatkin (2001) also indicates that superior performance in related diversification over a prolonged period requires a strong and adaptive uniculture, in which managers should not only emphasize the uniqueness of employee values, norms, and rewards systems but also aim to achieve consistency in corporate goals, strategies, and practices among the acquiring and acquired firms. Consequently, the acquired firm is expected to be fully acculturated into the culture and practice of the dominant acquirer if target and acquirer have reciprocal interdependence (Cartwright & Cooper, 1994).

_**Hypothesis 6:**_ The interaction between related acquisition and the degree of postacquisition acculturation is positively related to postacquisition performance.

**Method**

**Possible Self-Selection Biases and the Two-Stage Analytic Technique**

This study investigates the impact of acquisition strategy and organizational integration on acquisition performance. Here the endogenous selection of acquisition type and organizational integration is important in acquisition performance studies (Shaver, 1998). If acquisition strategy influences both organizational integration and acquisition performance, a self-selection bias can occur and the analyses may lead to incorrect implications (Miller, 2006). As the typical sequence of acquisitions is that the acquirer (a) chooses the acquisition strategy and (b) determines the level of integration, the need for postacquisition integration is primarily bounded by the acquirer’s strategy (Datta, 1991). Since the firms are able to self-select the observed level of acquisition integration based on their performance-maximizing analyses, it is probable that the observed acquisition performance is conditional on acquisition type, which influences the acquirer’s choices regarding organization structure and acculturation process. To correct the potential self-selection biases, I employ a two-stage technique that contains a first-stage integration choice model and a second-stage performance model (Heckman, 1979). The two-stage models can be summarized
as reestimating regression coefficients by adding an adjustment term, the inverse Mills ratio, to the performance model. In this study, the intuition is to correct the estimates in the performance model by controlling for the tendency of the firm to select a choice of high acquisition integration (i.e., acquisition integration choice [high]).

Theoretically, one first estimates a first-stage probit model to introduce a selection equation and then calculates the inverse Mills ratio, which is introduced as a control variable in the second-stage regression analyses (Leiblein et al., 2002). Specifically, I estimate the most likely value for acquisition integration choice (high) for a given acquisition, using the probit model Prob(Yi = 1) = Φ(β'Xi), where Yi is the acquisition integration choice variable for the ith observation, Xi is a vector of characteristics surrounding the acquisition, β is a vector of estimated coefficients for the characteristics, and Φ(·) is the standard normal cumulative density function. The inverse Mills ratio (λji) is defined as λji = (ϕ (β'Xi)) / (Φ(β'Xi)) for observations that adopt a high level of acquisition integration (i.e., j = 1) and λji = −ϕ (β'Xi)/ ([1-Φ(β'Xi)]) for observations that do not select high acquisition integration (i.e., j = 0). In both cases, ϕ (·) is the standard normal probability density function. The two-stage models that introduce this correction of self-selection biases provide consistent and unbiased estimates of regression coefficients (Heckman, 1979).

Data Collection

I collected data at the financial, organizational, and industrial levels of acquisitions in the Taiwanese electronics and information industry. Corporate financial data were collected from the databases in Securities and Futures Commission, Ministry of Finance, Taiwan. Industrial data and I/O tables were obtained from the Directorate General of Budget, Accounting and Statistics, Taiwan. Organizational-level data were drawn from the top 1,000 Taiwanese electronics and information firms reported by China Credit Information Service, an authorized credit-rating company in Taiwan. In the research period (2002–2008), 397 of the top 1,000 firms had undertaken acquisition. Because sufficient time to complete postacquisition integration may be required (Puranam et al., 2006), and because the main point of this study is to examine the effects of integrating organizational structure and culture after acquisition, I thus define the acquisition year (t = 0) as the year that the acquisition happens, the preacquisition year (t = −1) as one year before the acquisition, and the postacquisition year (t = +1) as one year after the acquisition. Questionnaires that contain descriptions of organizational structure and acculturation after acquisition integration were distributed to general managers of these 397 target firms one year after the acquisition has completed (t = +1), and 154 were returned. Questionnaires were distributed to managers of target firms because only managers of acquired firms actually know how intensely the target firm is integrated with the acquirer. Data of unrelated/vertical/related acquisitions were collected and calculated from industry I/O tables, and control variables were collected from the acquirer’s data in databases.

Measures

Acquisition performance. Strategic management studies on diversification and acquisition performance have sought to refine the measures of performance. For
References


