

# Adoption of Practices by Subsidiaries and Institutional Interaction within Internationalised Small- and Medium-Sized Enterprises

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## Abstract:

- This study examines the “intra-organisational dynamics” of the adoption of internal practices by subsidiaries of internationalised small- and medium-sized enterprises (SMEs) from the perspective of institutional theory.
- Based on a survey of 149 foreign subsidiaries of Taiwanese SMEs, the findings show that parent-firm executives of SMEs who are deeply involved in subsidiary operations will assess strong pressure from their home-country institution to adopt internal standard practices within a subsidiary. However, subsidiary executives of SMEs who assess heavy pressure from the host-country institution will resist this adoption.
- When executives of SME parent firms and subsidiaries concurrently assess high pressure but from opposing sources, creating a case of “institutional interaction” within SMEs, the subsidiary will either partially adopt a limited but sufficient level of all internal practices or only adopt internal managerial practices while forgoing internal production practices.

**Keywords:** Internationalised SMEs · Institutional theory · Internal practices adoption

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## Introduction

For multinational enterprises (MNEs), the adoption of practices by various subsidiaries remains an interesting but insufficiently discussed management issue (Björkman et al. 2007). This issue requires attention from both researchers and managers because it affects the managerial performance of MNEs. However, the literature presents inconsistent conclusions. As some researchers of strategic human resource management (HRM) have argued (Edwards and Tempel 2010; Gupta and Govindarajan 2000; Szulanski 1996), an MNE should diffuse the “best practices” of one outstanding unit (generally from the parent firm) to other subsidiaries. Doing so can achieve consistency and excellence in management throughout the organisation. However, research on subsidiary initiatives has indicated that some diversity of practices within an MNE can benefit individual subsidiaries when they imitate leading local or global competitors to respond to conditions in a host country (Birkinshaw 1997; Edwards and Ferner 2004; Nohria and Ghoshal 1997). In addition to noting key endogenous factors, in response to Kostova et al. (2008), this study argues that an MNE considers multiple exogenous contexts in making its crucial decisions (including the adoption of internal practices by subsidiaries).

The multiple environments in which a subsidiary faces may result from the inherent heterogeneity of an MNE (Zellmer-Bruhn and Gibson 2006). Institutional theory argues that individuals in the same environment will adopt similar practices and thus become *isomorphic* together (Scott 1995). A subsidiary thus always faces pressures both to adopt standard practices within the MNE and to adopt practices that are popularised among competitors in a host country (Ferner and Varul 2000). In defining the term “institutional duality”, Kostova and Roth (2002) posited that a subsidiary executive must consider pressures originating from the two sets of institutions. Both institutions can influence the practices adoption of a subsidiary. The first source of pressure, based on the “institutional context” in a host country, urges a subsidiary to adopt localised practices, whereas the second source of pressure, derived from the “relational context” and aiming to link all affiliates within an MNE to the parent firm, pushes a subsidiary to adopt internally prevalent and standard practices.

Some questions remain about the two sources of pressure that have been identified for MNE subsidiaries. For example, the idea proposed by Kostova and Roth (2002) that a subsidiary can unilaterally decide which practices to adopt is accurate only among large and developed MNEs. It does not apply to small- and medium-sized enterprises (SMEs) as they internationalise (Edwards and Ferner 2004). Lacking efficient cross-border control and information systems, parent-firm executives of SMEs involve themselves deeply in subsidiary operations to ensure that their subsidiary prospers and thus benefits the parent firm (Collinson and Houlden 2005). In today’s world of globalisation, parent-firm executives can easily contact the subsidiary staff through advanced technologies and frequent business trips. As a result, they act as agents in a host country to supervise subsidiaries’ operations (Ferner and Varul 2000).

In addition, Kostova and Roth (2002) argued that due to far geographic distances, the influences of the home country on a subsidiary should be interpreted indirectly via the

relational context within an MNE. However, because SMEs generally operate few foreign affiliates, parent firms may lack the willingness and capability to build an intra-firm relational network to influence subsidiaries. Instead, they may directly impose the commands on the subsidiary to support the operation in the home country.

This study thus argues that executives at both the subsidiary and the parent firm are involved in decision making for the MNE subsidiary. We contend that the adoption of practices by the subsidiary is partially a result of the overlapping institutional effects of the host country and home country on an internationalised SME (Birkinshaw 1997). Therefore, the first question will be studied here: To what extent do the assessments by executives of SME parent firms and subsidiaries (regarding either host-country or home-country institutions) affect the SME subsidiary’s adoption of internal practices?

An institution is a dominant pattern of beliefs that leads an individual to behave in certain ways while inhibiting others (Scott 1995). Greenwood and Hinings (1996) noted the “intra-organisational dynamics” in the process of institutionalisation. This happens when different executives within an organisation recognise pressures from competing institutions and attempt to overcome opposing opinions to adopt a given practice. This study defines an “institutional interaction” as a case in which executives of an SME parent firm and its subsidiary assess pressures from opposing institutions. This leads to the investigation of our second question: How does the institutional interaction within an SME affect its subsidiary’s adoption of internal practices?

The likelihood that executives will perceive institutional pressure increases with major external changes such as deregulation (Slack and Hinings 1994). The heavy shifts in the social, economic, and political environments of Taiwan since 1990 (which were mostly characterised by deregulation) have compelled many Taiwanese SMEs to expand nearby into Southeast Asian countries and China that have also experienced dramatic changes in institutional environments during this period. Consequently, a Taiwanese SME faces great institutional pressures from both the home country and the host country when expanding abroad. This scenario is thus highly suitable for answering the questions posed in this study. Because Taiwan is famous for its thriving SMEs, this study also offers valuable and general implications for SME managers.

### Literature Review and Hypotheses

This section presents a review of the relevant literature and derives the hypotheses. Fig. 1 depicts the research framework of this study.

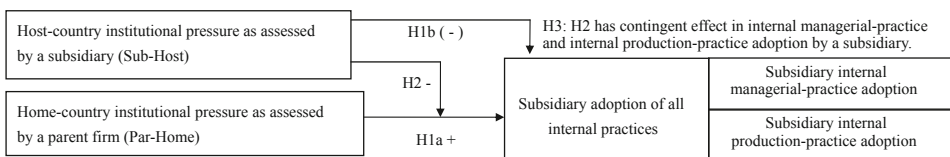


Fig. 1: The research framework

## SMEs and External Environments

SMEs are noted as being more susceptible than large-sized firms to the demands of stakeholders from external environments (Liesch and Knight 1999; Vachani 2005). Especially among SMEs in the manufacturing sector, production scheduling and workforce staffing appear to be the two primary activities that are generally based on strict legitimate restrictions and social expectations (Roth and O'Donnell 1996). Under such limitations, an internationalised SME may exhibit high compliance with official or unofficial requests within the environments on which its foreign operations depend. This is a situation consistent with the basic assumption of institutional theory.

## Institutional Theory and Adoption of Practices by Firms

Institutional theory argues that firms' practices result from values, norms, and beliefs originating in the context of an environment (i.e., an institution). Firms must conform to these values and beliefs to meet the expectations of most stakeholders if they hope to gain "legitimacy" within the institution in which their operations are rooted. Thus, a practice reflects the shared knowledge that has been approved and spread among most firms in an institution. Some practices that have been tested by many early adopters and are regarded as legitimate by key stakeholders will be broadly imitated by other late adopters (the so-called *isomorphism*) (Meyer and Rowan 1977; Scott 1995). Isomorphism is most evident, as firm decision makers recognise huge pressures and uncertainties due to changes in their institutional environment. New and old firms in an institution consider institutional pressures differently. On one hand, institutional pressures increase fears of early and quick failure in "new firms" (i.e., late adopters) and force them to collectively imitate popular practices to ensure their survival. Two sources of institutional pressures in particular caution the chance of firm failure. First, the "macro environment" comprises coercion by regulations, agencies, laws and public opinions to promote certain practices. Second, "inter-firm relationships" with suppliers, peers, customers, external stockholders, and professional unions enforce collective norms and impose mimetic imitations among firms with common linkages.

By contrast, institutional pressures lead "old firms" (that have been operating in an institution for a longer period of time) to insist on the continued use of internal extant practices (Zucker 1987). Given that internal practices may have contributed to firms' past successes, repeating extant practices becomes a safe and taken-for-granted choice if firms are very uncertain about the future and are eager to secure their survival. To maintain stable operations under unpredictability, some long-standing and legitimate internal practices will be diffused among most subunits. Inertia thus results in the subconscious adoption of internal standard practices, becoming a ceremonial means by which executives believe themselves to cope with dramatic external changes.

## Intra-Organisational Dynamics Within the Firm Institutionalisation Process

Although most institutional theory scholars have focused on the exogenous effects that contribute to isomorphism, Greenwood and Hinings (1996) introduced the idea of intra-

organisational dynamics within the institutionalisation process. They posited that institutionalisation is not a unified process for all organisations. Because an organisation must consider multiple institutions in a given period, internal members of each organisation compete against each other to determine the final direction of isomorphism. Internal members with similar individual benefits will join together to compete against other interest groups in deciding which practice to adopt. Through internal organisational politics, the most powerful interest group chooses to adopt a particular practice and wins rights in moving the organisation toward isomorphism. In particular, a fit exists between the complexity of the external environments faced by an MNE and the numbers of executives who attempt to respond to crucial environments (Zellmer-Bruhn and Gibson 2006). In a developed MNE, as Kostova and Roth (2002) assumed, a subsidiary executive may unilaterally direct an autonomous subsidiary's adoption of practices. On the contrary, two interest groups, *parent-firm executives* and *subsidiary executives*, can both be involved in the adoption of internal practices by a foreign subsidiary within an internationalised SME.

#### Institutional Preference of SME Parent-Firm Executives

In SMEs with underdeveloped formal administrative mechanisms, executives make strategic decisions (such as how to pursue international business opportunities) based on their personal judgments (Moen et al. 2004). The internationalisation of an SME is thus regarded as closely correlated with the personal experience, knowledge and cognitions of parent-firm executives (Madsen and Servais 1997). By visiting subsidiaries frequently, SME parent-firm executives promote their interests and thus have a strong, direct impact on subsidiary operations (Martinez and Rick 1989).

Parent-firm executives are significantly influenced by the home country. A parent firm with many years of experience operating in the home country (i.e., an old firm) will diffuse internal standard practices to its affiliates as a way to repeat past successful experiences outside of the home-country institution. Once an MNE is accustomed to complying with its home-country institution, the parent-firm executives will ask their subsidiaries to follow standard practices developed in the home country (similar to the phenomenon of "path dependence") (Guillén 2002). The fact that most parent-firm executives ask their foreign subsidiaries to adopt parent-firm HRM practices (which were historically imposed by the home-country government), even when it is not necessary for subsidiaries to do so (because a host-country government does not have such requirement), clearly supports this argument (Björkman and Lu 2001). Many elements of an MNE's organisational design also result from imitating the practices of past competitors in the home country (Guler and Guillén 2010).

In guiding their subsidiaries' operations, some SME parent-firm executives still make use of existing home-country supply chains or insist on serving home-country customers (Coviello and McAuley 1999; Egelhoff et al. 2000). Consequently, SME parent-firm executives take home-country concerns into account in overseeing subsidiary operations in host countries. MNEs prefer to disseminate a consistent business model among their foreign subsidiaries (O'Donnell 2000), and parent-firm executives may ask a subsidiary to adopt internal standard practices to achieve cross-border managerial efficiency and

consistency (Bae and Lawler 2000). To determine the extent to which internal standard practices should diffuse to subsidiaries, parent-firm executives may refer to crucial situations in the home country, where they have cultivated much knowledge of critical institutional pressures (Buck et al. 2003).

*Hypothesis 1a:* The greater the home-country institutional pressure that is assessed by an SME parent firm, the more likely the SME subsidiary is to adopt internal practices.

### Institutional Preference of SME Subsidiary Executives

SMEs are characterised as being less experienced than their larger competitors in the global market. They are also likely to establish flexible international operating strategies to reduce costs (Collinson and Houlden 2005). Therefore, SMEs will incrementally revise the value-added activities of their foreign subsidiaries in host countries based on feedback from external environments to adapt to dynamic changes in these host countries. An external orientation, resulting in a reactive subsidiary, may thus encourage an SME to depend more on, and to empower, subsidiary executives (Chetty and Blankenburg Holm 2000). An SME subsidiary executive must assist the parent firm via the exploration of new markets, crucial resources and key knowledge in the host country (Autio 2005; Park and Bae 2004). Therefore, the host-country institution is of vital importance for an SME subsidiary executive (Mu et al. 2007).

As a new player in the host country, huge institutional pressures from the host country indeed increase the fear of a subsidiary that its local operation will fail due to its “liability of foreignness”. Subsidiary executives thus prefer to adopt some popular local practices so that they can be accepted by local stakeholders (Meyer and Rowen 1977). The accepted rules of a host country will obviously affect numerous aspects of choosing a subsidiary practice (Davis et al. 2000), including standards used in local staffing, producing, and pricing policies (Newbury et al. 2003; Roth and O’Donnell 1996). Cheng and Yu (2008) found that potential customers in a host country can be a source of information about whether a subsidiary should consider a localised innovation. Strong links with local suppliers also contribute to developing a unique production practice by a subsidiary that is based on the local sourcing of unique components (Yu et al. 2006). Due to the deviation in norms and regulations among countries (Björkman and Lu 2001; Kostova and Roth 2002), the legitimate practices in a specific host country may be quite different from the standard practices internal to the MNE that follow the home country’s requirements.

Satisfying host-country customers indeed leads a subsidiary to adopt localised practices (Rosenzweig and Nohria 1994). Following the practices of the parent firm sometimes implies engaging in behaviours that are outdated and inappropriate in the eyes of picky customers in the host country. The successful use of localised marketing practices by a subsidiary to respond to demands from host-country customers can overcome competitive uncertainty in the host country. It reveals the authority delegated by the parent firm to subsidiary executives to ignore internal standard practices (Frost et al. 2002). This study thus hypothesises the following:

*Hypothesis 1b:* The greater the host-country institutional pressure that is assessed by an SME subsidiary, the less likely the SME subsidiary is to adopt internal practices.

In addition to host-country institutions, subsidiary executives also face an internal institution (i.e., the relational context) within the MNE (Kostova and Roth 2002). The presence of dependence on, trust in, and identification with the entire MNE will make a subsidiary more likely to adopt internal practices. Indeed, researchers have noted the tension between concerns for local conditions and the duty to help the parent firms' globalisation that is recognised by most MNE subsidiary executives (Chan and Holbert 2001; Vora et al. 2007). A subsidiary that is loyal to the MNE will introduce its internal practices to the host country (Ferner and Varul 2000). In the case of an SME, however, this study proposes that parent-firm executives directly help the foreign subsidiary to operate in the host country and in some ways replace the needs and effects of the relational context exerted on a subsidiary (Crick and Spence 2005).

#### Institutional Interaction Between the Parent Firm and Subsidiary

When both a parent-firm executive and a subsidiary executive concurrently assess strong institutional pressures from opposing sources (a case identified as *institutional interaction*), this study proposes that it is the SME parent-firm executive who has the final authority to determine the likelihood of adopting an internal practice in a subsidiary. The authority is based on the centralised decision making characteristic of most SMEs (Vachani 2005). However, a subsidiary executive essentially resists the adoption of internal practices because such an adoption symbolises an imposition by the parent firm on the subsidiary. The imposition may hamper the subsidiary's efforts to satisfy crucial stakeholders of the host country (Nohria and Ghoshal 1997; Rosenzweig and Nohria 1994). Therefore, parent-firm executives must incorporate subsidiary executives' assessments of pressures related to the host country into their judgments to finally decide on the alternative practice that a subsidiary should adopt.

As argued by Kostova et al. (2008), responding to the multiple institutional pressures coming from generally conflicting environments is not feasible for MNEs. Therefore, crucial internal actors should jointly determine the appropriate degree of adoption of internal practices to ensure that the adoption can be still viewed as being "acceptably legitimate" in the eyes of most members. Kostova and Roth (2002) conceptualised the complete adoption of a practice as consisting of two dimensions: *Implementation*, which reflects the essential and observable actions required for the adoption of the practice, and *internalisation*, which shows the heavy and advanced adoption that a subsidiary commits to an adopted practice. Because a subsidiary executive assessing high host-country institutional pressure will avoid completely adopting internal practices (as predicted by H1b), this study argues that the subsidiary can either "*implementing* all internal practices in a sufficient level" or "*internalising* in only a few internal practices" to face the institutional interaction. To gratify the institutional interests of both subsidiary executives and parent-firm executives, two *alternative* approaches to solve the remarking dilemma at SMEs are "tolerance" and "exchange".

First, institutional interaction may result in executives' mutual toleration of each other's institutional interests to arrive at an agreement by adopting an appropriate level of the entire internal practice system (Edwards and Tempel 2010). A subsidiary executive facing high institutional pressures from the host country will make demurs and communicate to a parent-firm executive when introducing internal practices (Nohria and Ghoshal 1997). In this case of mutual tolerance, this study firstly notes the "symbolic respect" among actors within an SME via *implementation* (Blumer 1969). *Implementation* is a general condition that quantifies the observable adoption of internal practices in a subsidiary. This can easily be evaluated by the parent firm. SME parent-firm executives may only *implement* every internal practice superficially but still apparently. This is similar to the idea of "ceremonial adoption". That is, maintaining the acceptable nominal percentage in the adoption of the legitimate practices without determining the real nature of such adoption (Meyer and Rowan 1977). To achieve symbolic respect in the eyes of both subsidiary and parent-firm executives, a subsidiary can *implement* a constrained and reduced, but still sufficient, subset of overall internal practices. Accordingly, we hypothesised as:

*Hypothesis 2:* When an SME subsidiary assesses strong host-country institutional pressure, the tendency of its parent firm to impose all internal practices on the SME subsidiary to cope with strong home-country institutional pressure will be weakened.

Second, the other (or more strategic) approach to coping with institutional interaction cases may be the exchange of interests between SME subsidiary executives and parent-firm executives. As Blau (1964) posited, relationships between two actors are formed by use of their subjective cost-benefit comparison of alternatives to work out a balance in their bilateral exchanges. Subsidiary executives analyse the value of each type of internal practice and reply to the parent firm. By selecting a few specific types of internal practices to adopt while forgoing the others, both subsidiary executives and parent-firm executives satisfy the considered institutional interests of either party. It helps a subsidiary to analyse the commitment it should devote to the few key types of internal practices (Edwards and Ferner 2004). When not *implementing* most internal practices, a subsidiary must profoundly *internalise* in the few selected internal practices to display its loyalty to the parent firms. A subsidiary may thus be quite disparate from the parent firm in most of internal practices but it *internalises* in the few selected internal practices with a relatively higher degree.

Evaluating *internalisation* in a subsidiary is more difficult than it is to evaluate *implementation* for the parent firms. MNEs usually consider the average situation among all affiliates to determine the freedom of a subsidiary to adopt a given type of practice (Björkman and Lu 2001). This study thus argues that parent firm will judge the type-by-type adoption commitment of each subsidiary by referring to the average situation among MNE affiliates. A subsidiary having a higher adoption status than other affiliates is apparent to its parent firm. Accordingly, a subsidiary will adopt one internal practice at a higher-than-average level to show its respect to the parent firm. Doing so helps the subsidiary to get permission granted by the parent firm to refuse adopting another internal practice (Kostova and Roth 2002).



In one way, a subsidiary will adopt certain types of internal practices that heavily rely on the knowledge and resources from the parent-firm executives, with the aim of satisfying the parent-firm executives' responses to the home-country institution (Björkman et al. 2007). Most literature has indicated that an SME subsidiary executive more readily accepts legitimate requests from the parent-firm executives to adopt similar managerial practices in the subsidiary to achieve internal consistency and efficiency. Administrative hierarchy designs, local employee recruitment policies, staff compensation systems, and other managerial practices for subsidiaries represent the internal controls used within an MNE. Accepting similar managerial practices and associated authorities from the parent firm demonstrates the loyalty of the subsidiary executive to the parent firm. A subsidiary may thus receive more supports from the parent firm (Kostova and Roth 2002).

Because an SME subsidiary may be constrained by limited resources in recruiting suitable employees for necessary job positions, it may not be able to set up a complete administrative hierarchy with enough managers. Cheng and Lin (2009) reported that Taiwanese SMEs frequently send expatriates to their foreign subsidiaries in an effort to replicate the parent firm's administrative systems. Subsidiaries of SMEs that relocate labour-intensive activities to developing countries to achieve low-cost operations face challenges in managing large numbers of local employees. As a result, their subsidiary executives may hope to leverage the extant managerial advantages of the parent firm and are encouraged to adopt a relatively higher degree of internal managerial practices among all MNE subsidiaries to *internalise* such adoption.

*Hypothesis 3a:* When an SME parent firm assesses strong home-country institutional pressure and its subsidiary assesses strong host-country institutional pressure, the SME subsidiary is more likely to adopt internal managerial practices.

In contrast, the literature on subsidiary roles posits that MNE parent-firm executives will rely on the opinions of subsidiary executives regarding certain local conditions (Rugman and Verbeke 2001). Particularly for a subsidiary operating in a dynamic developing country, subsidiary executives must cultivate valuable local knowledge to ensure the competences in the local market. The local knowledge to judge production conditions in a host country is most likely to be valued by SME parent-firm executives (Mu et al. 2007). For an SME goes international with a primary aim of enjoying the advantage of low production costs in a host country, it must design unique production practices to meet local conditions (Cheng and Lin 2009). Given the contingencies in local standards and the restrictions on on-site manufacturing, parent-firm executives should less insist on building a standardised production practice design among all subsidiaries. Yu et al. (2006) argued that most subsidiaries develop their own specialised local supply chains to address the unique challenges in the host country (resulting in fewer chances to adopt internal production practices). If the subsidiary executives express strong concerns to the host-country institution, parent-firm executives may be more relaxed about deferring to the judgment of the subsidiary executives over production matters than they would be with managerial issues. Accordingly, a subsidiary may be granted more freedom by the parent firm to adopt a relatively lower degree of internal production practices.

*Hypothesis 3b:* When an SME parent firm assesses strong home-country institutional pressure and its subsidiary assesses strong host-country institutional pressure, the SME subsidiary is less likely to adopt internal production practices.

## Methodology

### Data Collection

This study obtained data from both parent-firm executives and subsidiary executives using a mailed survey. As the study population, this study targeted foreign subsidiaries of Taiwanese SMEs (officially defined as firms with fewer than 200 employees). Questionnaires were mailed to 538 identified SMEs that were listed in the Member Directory of the Taiwan External Trade Development Council (TAITRA), a non-profit trade promotion organisation in Taiwan. An accompanying instruction letter offered explanations and definitions to help in filling out the questionnaire. The endorsement by the chairman of TAITRA was additionally noted to promote the study. Before delivering the survey, the researchers attended the members' annual meeting of the TAITRA to explain the significance of the research project to the attendees.

A single questionnaire with two divided answer sheets was mailed to the parent firm to collect responses separately from two key persons: The headquarters CEO and the subsidiary executive of a subsidiary (defined as an executive who takes most of the responsibility for the subsidiary's local operations). A subsidiary was defined in the survey instruction letter as a foreign affiliate with operating functions (e.g., marketing and production) located in Southeast Asian countries or China and excluding corporate representative offices. A subsidiary that the parent firm considered to be strategically important was selected by the CEO to meet at least one criterion representing subsidiary initiatives (Birkinshaw 1997): (1) Does the subsidiary build a superior capability to overcome the major competitors (can be either local or global ones) met in a host-country market (competency-building)? (2) Does the subsidiary help to exploiting internal resources efficiently (competency-exploiting)? and (3) Does the subsidiary contribute to capture the opportunities in the market of home country (market-capturing)? The parent firm then sent one answer sheet to the identified subsidiary. The parent firm finally combined the two answer sheets and sent them back to the researchers. Follow-up telephone and personal invitations to complete the survey, with the support of the TAITRA, were conducted.

Ultimately, a total of 149 copies containing detailed responses from both subsidiary executives and parent-firm executives were collected. Most of the sampled SMEs selected their strategic subsidiaries playing multiple strategic initiatives. A total of 82% (n=123) of the subsidiaries acted as competency-building roles, 71% of them employed competency-exploiting duties (n=106), and 69% of them (n=102) executed market-capturing functions. The categorisation indicates that the sampled subsidiaries are indeed important and strategic foreign subsidiaries for their parent firms.

A one-way ANOVA test was used to detect the non-response bias and revealed no significant difference between the top-third group and the lowest-third group of all samples

in terms of capital, age, and size (Armstrong and Overton 1977). Given that Harman's one-factor test for all questionnaire items shows that the eigenvalue of the first extracted factor in principal components analysis accounts for only 23.52% of the 69.05% cumulative variance for five extracted factors (Posakoff and Organ 1986), it is likely that the data do not suffer from high common-method-variance (CMV) bias.

The sampled firms were all manufacturers with subsidiaries operating in China and Southeast Asian countries. The sample profile showed that 45 firms were in the electronics and machinery industries (30.20%), 38 firms were in the textiles industry (25.50%), 34 firms were in the shoe-making industry (22.82%) and the remaining 32 firms operated in the food and chemical industries (21.48%). Some Taiwanese manufacturing SMEs have set up factories in their subsidiaries in Southeast Asian countries and China since the 1990s to reduce the costs of production so that they can compete in international markets (Cheng and Yu 2008).

## Measurements

### *Independent Variables*

This study made some effort to develop the measurements of independent variables given the insufficiency of clear operationalised constructs in the extant institutional theory literature. Dacin et al. (2002) encouraged institutional theory researchers to make more use of qualitative methods because the drivers of institutional pressures and the ways in which firms perceive such pressures may differ based on different settings between countries (Brouthers et al. 2002). Kostova and Roth (2002) also suggested that researchers should design more objective measures of institutional pressures obtained via interviews to executives. To practically measure how institutional pressure from either the home country or a host country is assessed by Taiwanese SME executives, the questionnaire was developed in three stages.

First, ten parent-firm executives and eight subsidiary executives of eight SMEs were interviewed to understand their most pressing concerns regarding the home-country and host-country environments, respectively. The subsidiary executives interviewed were all Taiwanese citizens expatriated from the parent firms who hope to closely monitor the foreign subsidiaries (Cheng and Lin 2009). The interview transcripts were condensed to generate unique institutional pressure profiles of Taiwanese SME executives. Second, based on a review of the literature (Scott 1995; Slack and Hinings 1994; Zucker 1987), most items generated from the interview transcripts were verified to be consistent with the conceptual definition of institutional pressure. Finally, the content validity of the scale was evaluated and revised by three professors at two universities in Taiwan (all of whom are specialists in SME topics) to ensure that the developed scale mirrored the actual constructs of interest (Hinkin and Tracey 1999).

Questionnaires were responded on a five-point Likert scale, with 1 indicating total disagreement and 5 indicating total agreement. Exploratory factor analysis (EFA) with principal components analysis and varimax rotation was applied to the collected data to generate constructs with eigenvalues greater than one. The Kaiser-Meyer-Olkin (KMO) analyses of the EFA results yielded an acceptable value of 0.72, and scale uni-dimen-

sionality was confirmed for all extracted factors (Venkatraman 1989). Cronbach's alpha calculations for all constructs with multiple items yielded values ranging from 0.73–0.87, indicating acceptable reliability (Robert and Wortzel 1979).

Two independent variables were tested (see Appendix A). For "host-country institutional pressures as assessed by a subsidiary (Sub-Host)", the five sources of pressures reported by subsidiary executives were the following: Legal restrictions defined by host-country laws, economic policy dynamics determined by the host country's government (two pressures related to the macro environment), uncertainties of local customer needs and tastes, possibilities of local supply shortages, and fierce local competitions (three pressures related to inter-firm relationships). These pressures raise a subsidiary's fear of early failure in a host country and enforce the subsidiary executive to follow local practices to satisfy stakeholders in the host country.

"Home-country institutional pressures as assessed by a parent firm (Par-Home)" were based on the following five sources of pressure as reported by headquarters executives in Taiwan: Firms' international operation restrictions imposed by Taiwan government, uncertainties caused by Taiwanese FDI policy dynamics (two pressures related to the macro environment), requests from Taiwanese professional investors to achieve high performance goals, difficulties of responding to customers in Taiwan, and threats from existing competitors in Taiwan (three pressures related to inter-firm relationships). All items reflect the concerns of parent-firm executives regarding operations in the home country. Executives may then cope with the uncertainty by repeating the parent firm's past experience through diffusing internal standard practices among MNE affiliates.

### *Dependent Variables*

Based on the pre-study interviews of ten parent-firm executives, this study identified seven practices that Taiwanese SMEs usually transfer among their affiliates: Quality control, monitoring, compensation, staffing, administrative hierarchy design, product design, and production automation. Given that subsidiary executives should pay most detail attention to the subsidiary's adoption of practices (Kostova and Roth 2002), the questionnaire asked the subsidiary executives to separately indicate the "nominal adoption percentage" and the "relative adoption degree" of the seven practices to enhance the validity of the measures (Roth and Donnell 1996). First, *nominal adoption percentage* reflects a subsidiary's *implementation* of all internal practices. Second, *relative adoption degree* mirrors the adoption status among MNE affiliates with which a subsidiary *internalise* in an internal practice. Measuring the dependent variable in two ways to reflect the reality in the firm, rather than only the perceptions of subsidiary executives, also reveals the triangulation (Mintzberg 1979).

First, each subsidiary executive indicated a numeral percentage value to which the subsidiary adopted the seven practices similar to those in Taiwanese parent firms. The values were then averaged to predict "subsidiary nominal *implementation* of overall internal practices". The values obtained range from 33.1–81.2%.

Second, a subsidiary executive revealed the relative adoption degree of internal practices of his/her subsidiary in comparison with other MNE affiliates based on a five-point Likert scale to mirror *internalisation* (Björkman and Lu 2001). The scale can clarify the

relative adoption status of each subsidiary within an SME. The EFA (KMO index=0.75) showed that the seven practices were divided into two constructs, named “subsidiary relative adoption of internal managerial practices” (reliability=0.84; including staffing, compensation, administrative hierarchy design, and monitoring) and “subsidiary relative adoption of internal production practices” (reliability=0.70; including quality control, production automation, and product design) (see Appendix B). Both categories of internal practices mirror the fact that most foreign subsidiaries of Taiwanese SMEs are manufacturing oriented and have the basic HRM function to manage the large numbers of local employees.

### *Control Variables*

The effects of some other related variables were also controlled. First, “ownership advantage” and “international experience”, which reflect the capability of a firm to expand internationally, were added to our model (Johanson and Vahlne 1977). An MNE’s “ownership advantage” was measured by the size (i.e., total number of employees) of the parent firm, the size of the subsidiary and the wholly-owned equity nature of the subsidiary (as a dummy). An MNE’s “international experience” was measured by the SME’s years engaging in FDI, the number of foreign subsidiaries, and the number of years operating in the host country (subsidiary operation years) (Agarwal and Ramaswami 1992; Delios and Beamish 2001). Second, the strategic role of a subsidiary was controlled for by three subsidiary initiatives (dummies for competency-building, competency-exploiting, and market-capturing, respectively). Third, the effect of the relational context within an SME (i.e., a subsidiary’s dependence on, trust in, and identification with the parent firm) was controlled for. Fourth, host-country institutional pressure as assessed by a parent firm (Par-Host) and home-country institutional pressure as assessed by a subsidiary (Sub-Home) were both controlled for based on the scales developed for the two independent variables.

## **Results and Discussion**

A hierarchical linear regression model was used for the data analyses. Table 2 lists the results of all regression models. The multicollinearity of each model was tested and was found not to be a serious problem, given that the VIF values of all variables were less than 1.76 in each model. The sequence of each variable’s entry into the model was as follows. First, only control variables were used for the base model. Second, pressure-related variables were entered for the partial model. Third, the interaction variable was incorporated into the full model. In the regression models presented, the adjusted R-square value of the partial model exceeded that of the base model, indicating increased explanatory power for the two independent variables.

Model 1B, in which “subsidiary nominal adoption of all internal practices” is regarded as the dependent variable, shows that Sub-Host is negatively associated with the dependent variable ( $\beta=-0.23$ ,  $p<0.01$ ), whereas Par-Home is obviously positive in the model ( $\beta=0.20$ ,  $p<0.01$ ) (as H1a and H1b assume). As Table 1 shows, parent-firm

**Table 1:** Means, standard deviations, and correlation coefficients

	Mean/SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 Size of the parent firm	117.5/35.8	1													
2 Size of the subsidiary	185.3/57.8	-0.05	1												
3 FDI experience in years	8.92/3.84	0.01	-0.08	1											
4 Number of subsidiaries	2.58/1.15	0.10	-0.18*	-0.10	1										
5 Subsidiary years	4.54/0.96	0.07	-0.10	0.17*	0.03	1									
6 Dependence	3.35/0.94	0.01	-0.11	0.17*	0.01	0.00	1								
7 Trust	4.33/0.54	0.07	0.10	0.10	-0.43**	0.06	0.16*	1							
8 Identification	2.88/0.92	-0.04	0.07	0.26**	0.08	-0.06	0.35**	0.07	1						
9 Par-Host	3.16/1.06	0.01	-0.12	-0.12	-0.16*	0.13	0.06	0.03	-0.17*	1					
10 Sub-Home	2.69/0.74	-0.04	-0.02	0.31**	0.12	0.07	0.23**	-0.01	0.49**	-0.20*	1				
11 Sub-Host	3.49/0.63	-0.06	0.01	-0.28**	-0.05	-0.17*	-0.10	-0.15	-0.46**	0.23**	-0.50**	1			
12 Par-Home	3.21/0.58	0.03	-0.03	-0.27**	0.14	-0.07	-0.03	-0.02	0.04	-0.13	-0.05	0.14	1		
13 Managerial adoption	2.93/0.69	0.04	0.14	0.09	-0.07	0.06	0.24**	0.05	0.31**	-0.05	0.23**	-0.26**	0.08	1	
14 Production adoption	2.81/0.91	0.02	-0.05	-0.38**	0.03	0.00	0.04	-0.05	0.13	-0.04	0.07	-0.17*	0.28**	0.42**	1
15 Overall adoption (%)	57.6/12.7	0.08	0.13	-0.23**	-0.08	0.12	0.19*	-0.12	0.36**	0.02	0.13	-0.24**	0.26**	0.21**	0.16*

\*p<0.05; \*\*p<0.01 (two-tailed tests)

**Table 2:** Results of all regression models

Dependent variable	Nominal adoption of all internal practices			Relative adoption of internal managerial practice	Relative adoption of internal production practice
	Model 1A	Model 1B	Model 1C	Model 2	Model 3
<i>Control variables:</i>					
<i>1. Ownership advantage</i>					
1.1 Size of the parent firm	0.06	0.06	0.07	0.05	0.07
1.2 Size of the subsidiary	-0.06	-0.04	-0.04	-0.10	0.14
1.3 Subsidiary equity nature	-0.07	-0.05	-0.07	-0.06	-0.05
<i>2. International experience</i>					
2.1 FDI experience in years	-0.35**	-0.36**	-0.36**	-0.57**	0.03
2.2 Number of subsidiaries	-0.11	-0.17*	-0.16 <sup>+</sup>	-0.14	0.12
2.3 Subsidiary years	0.17	0.14	0.14	0.12	0.13
<i>3. Subsidiary initiatives</i>					
3.1 Competency-building	0.13	0.09	0.06	0.11	-0.20*
3.2 Competency-exploiting	0.03	0.03	-0.01	0.04	-0.16
3.3 Market-capturing	0.22**	0.18*	0.14	0.14	0.01
<i>4. Relational context</i>					
4.1 Subsidiary dependence	0.10	0.14	0.13	0.07	0.10
4.2 Subsidiary trust	-0.06	-0.11	-0.08	-0.08	-0.02
4.3 Subsidiary identification	0.31**	0.15	0.15	0.11	0.15
<i>Independent variables:</i>					
5. Par-Host		-0.08	-0.07	-0.07	-0.02
6. Sub-Home		0.05	0.05	0.01	0.06
7. Sub-Host		-0.23**	-0.20**	-0.20**	-0.14 <sup>+</sup>
8. Par-Home		0.20**	0.21**	0.20**	0.14 <sup>+</sup>
9. Sub-Host × Par-Home			-0.17*	-0.12*	-0.23**
F value	3.35**	3.60**	3.80**	5.78**	2.65**
Adjusted R square	0.16	0.22	0.24	0.35	0.16

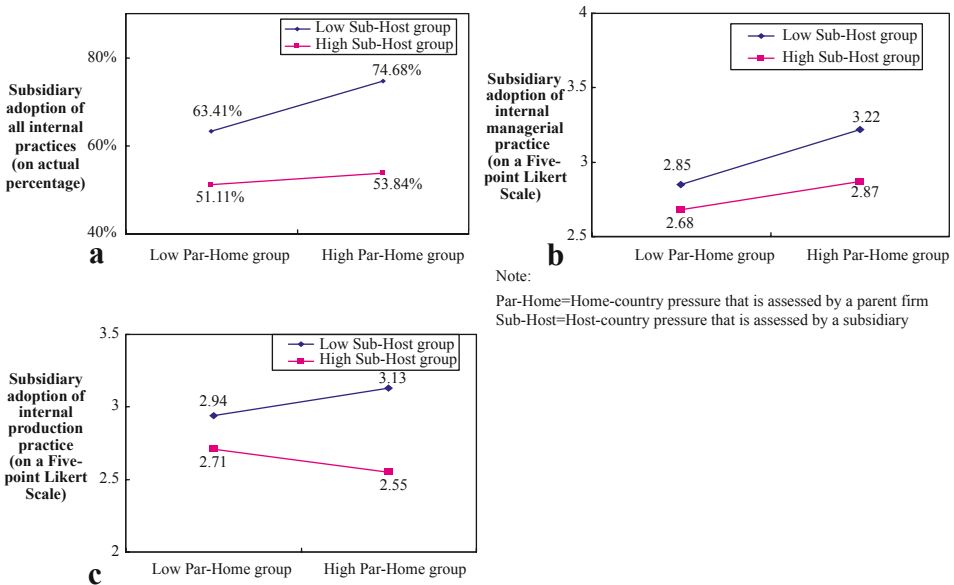
<sup>+</sup>p<0.1; \*p<0.05; \*\*p<0.01 (two-tailed tests)

executives report high pressures from both home-country and host-country institutions ( $Mean_{\text{par-host}} = 3.16$ ;  $Mean_{\text{par-home}} = 3.21$ ). Indeed, parent firms of Taiwanese SMEs (which mostly invest in developing countries) must cultivate close links with key host-country stakeholders (Yu et al. 2006). However, Par-Host is not significant in Model 1B ( $\beta = -0.07$ ,  $p > 0.1$ ). Given the significant and positive correlation between Par-Host and Sub-Host ( $r = 0.23$ ,  $p < 0.01$ ), the host-country institution seems to affect a subsidiary's adoption of practices more through indirect suggestions from subsidiary executives. Parent-firm

executives’ decisions to persuade the subsidiary to adopt internal practices account for dual pressures but are based on direct and indirect sources of information, respectively. Conversely, SME subsidiary executives report only high host-country pressure ( $Mean_{sub-host} = 3.49$ ;  $Mean_{sub-home} = 2.69$ ). Sub-Home is not significant in Model 1B ( $\beta = 0.05$ ,  $p > 0.1$ ) and has no obvious correlation with Par-Home ( $r = -0.05$ ,  $p > 0.1$ ). It supports the idea that the home country’s impact on SME subsidiaries is imposed exclusively by parent-firm executives.

Model 1 C shows a significant interaction effect between Sub-Host and Par-Home ( $\beta = -0.17$ ,  $p < 0.01$ ), which supports H2. The obviously negative correlation coefficients of Sub-Home/Sub-Host, Par-Host/Sub-Home, and Par-Home/Par-Host ( $r = -0.50$ ,  $-0.20$ , and  $-0.13$ , respectively) reveal the opposing nature of home-country and host-country concerns for MNE executives to consider. The study then divided all samples into four groups: the low Sub-Host/low Par-Home group; the low Sub-Host/high Par-Home group; the high Sub-Host/low Par-Home group; and the high Sub-Host/high Par-Home group. The mean values of the dependent variables for each group are plotted in Fig. 2. As shown in Fig. 2a, the line slopes of the two high Sub-Host groups are less steep than those of the low Sub-Host groups but are still positive. The result reveals that the institutional interaction case can weaken parent firms’ attempts to impose all of its internal practices on the subsidiary.

Model 2 treats “subsidiary relative adoption of internal managerial practices” as the dependent variable, and Model 3 regards “subsidiary relative adoption of internal production practices” as the dependent variable. Both models estimate significant negative interactions between Sub-Host and Par-Home. As Fig. 2b and Fig. 2c show, a subsidiary with high levels of both Sub-Host and Par-Home is still likely to adopt internal manage-



Note:  
 Par-Home=Home-country pressure that is assessed by a parent firm  
 Sub-Host=Host-country pressure that is assessed by a subsidiary

Fig. 2: The slope line of mean values for three dependent variables in different groups



rial practices ( $Mean_{\text{management-high}} = 2.87$  is significantly higher than  $Mean_{\text{management-low}} = 2.68$ ,  $F = 3.18$ ,  $p < 0.05$ ) but is less likely to adopt internal production practices ( $Mean_{\text{production-high}} = 2.55$  is significantly less than  $Mean_{\text{production-low}} = 2.71$ ,  $F = 3.78$ ,  $p < 0.05$ ). H3a and H3b are both supported. Facing institutional interaction, a subsidiary resorts to the higher-than-average adoption of internal managerial practice to satisfy its parent firm. In doing so, a subsidiary can have higher allowances than other MNE affiliates to design unique localised production practices.

Regarding the control variables, three interesting findings were obtained. First, “FDI experience” ( $\beta = -0.36$ ,  $p < 0.01$ ) and “numbers of foreign subsidiaries” ( $\beta = -0.17$ ,  $p < 0.05$ ) are significantly and negatively related to the subsidiary adoption of all internal practices in Model 1B. This finding indicates that an SME with more “international experience” is less likely to ask its foreign subsidiaries to accept internal standard practices. As an SME builds capacity and becomes proficient in the international markets, the parent firm will seek more diversified subsidiary-specific advantages within the intra-firm MNE network (Roth and Donnell 1996; Rugman and Verbeke 2001) rather than the efficiency that results from internal standardisation. Indeed, endogenous factors associated with MNE growth also influence subsidiary practice-adoption alternatives. Second, Model 1B reveals that a subsidiary that devotes itself to helping its parent firm to capture opportunities in the home country is more likely to adopt internal practices ( $\beta = 0.18$ ,  $p < 0.05$ ); however, Model 3 reveals that a subsidiary particularly contribute to its parent firm when launching into the host-country and international markets is less likely to adopt internal standard production practices ( $\beta = -0.20$ ,  $p < 0.05$ ). This finding indicates that the parent firm still considers the diversified strategic roles that are played by each subsidiary in determining their appropriate levels in adoption of internal practices. Finally, the “identification to the MNE” still significantly and positively impacts the dependent variable ( $\beta = 0.30$ ,  $p < 0.01$ ) in the base model (see Model 1A), but it becomes insignificant in the partial model (see Model 1B). This finding supports our assumption that the home-country institutional pressure assessed by a parent-firm executive can somewhat replace the relational-context effect in a subsidiary’s adoption of internal practices, especially in the case of internationalised SMEs.

## Conclusions and Implications

By incorporating the idea of “intra-organisational dynamics” into further research on *institutional duality* of MNEs (such research remains scarce in the literature) (Battisti and Iona 2009), some discussion points corresponding to the major findings, along with directions for future studies, are elaborated as follows.

First, this study supports the idea that a subsidiary complies with multiple institutions (environments) within an MNE (Kostova et al. 2008) but argues that the nature of this situation should be contingently defined. In particular, *institutional duality* for SMEs may indicate the dual environmental concerns related to the home country and host country (as assessed by both a subsidiary executive and a parent-firm executive) but not the institutional and relational contexts (as assessed only by a subsidiary executive) argued in extant literature. Subsidiary adoption of practices should partially relate to the institu-

tionalisation of an MNE, but the institutional profiles by which subsidiaries are influenced should be investigated in terms of the unique decision-making process of each MNE. Many different actors may be involved in this process (Björkman et al. 2007). This study thus postulates that the meaning of *institutional duality* should be further investigated for diversified MNEs with various strategy formulation styles.

Second, the findings indicate that both host-country and home-country institutions affect SME parent-firm executives in determining a subsidiary's adoption of internal standard practices, but through different mechanisms. On one hand, parent-firm executives directly assess environmental concerns in the home country and then take these messages into account during decision making (since they are more familiar with home-country institutions). Conversely, parent-firm executives may consider the pressure from the host-country institution as an indirect reference point with which to adjust their actions. Consequently, they simply incorporate their assessment regarding the host-country institution into that of their subsidiary executives to get the final judgements. The study argues that MNE executives collect messages from fragmented institutions and evaluate these environmental signals differently, which in turn leads to their diverse reaction styles (Scott 1995). Future studies should answer how a critical MNE actor responds to different institutions in the institutionalisation process.

Third, Taiwanese SMEs generally appoint expatriates from the parent firm as subsidiary executives (Cheng and Lin 2009), which is consistent with the findings of our pre-study interviews. However, the analysis of survey data showed that Taiwanese expatriates are less concerned with the home country in making decisions about the adoption of practices for the subsidiaries that they are in charge. International HRM scholars (Shaffer et al. 1999) indicate that expatriates focused on their subsidiary's operation will cultivate ties to the host country and then ignore commands from the parent firm to assist in the home country's operations (a case known as "assimilation to the host country"). Such a case becomes evident in SMEs, whose expatriates must energise the local operation and struggle to address the host country's concerns with their independent efforts. Lacking internal support from the parent firm, expatriates working in Taiwanese SMEs may thus become isomorphic to the host country's strong institutions (e.g., China). Scott (1995) proposed that organisational subunits face multiple and ambiguous institutions and that the internal actors may respond to institutions by their unique priority. Future studies may explore why and how SME expatriates change their institutional preferences from home country to host country.

Fourth, this study reveals the typical institutional interaction case within an SME, in which its subsidiary executive assesses high host-country institutional pressure and its parent-firm executive assesses high home-country institutional pressure, a typical *intra-organisational dynamics* example in the institutionalisation. Considering the opposing environmental concerns (i.e., negative correlations between assessments of institutional pressure from the home country and host country by SME executives) represents the compromising decision-making nature of MNEs. SME executives at a subsidiary and at the parent firm will mutually tolerate their individual institutional interests by nominally *implementing* a sufficient but limited level of overall internal practices in the subsidiary (e.g., about 50%). The superficial *implementation* of overall internal practices reflects an easy tool utilised by a subsidiary to cope with the internal controls from its parent firm.

Further qualitative studies should consider organisational politics to analyse the process by which different MNE actors mobilise power to jointly determine the acceptable nominal level of adopting internal practices.

Fifth, the findings also show that a subsidiary can *internalise* in only a few types of internal practices when facing the institutional interaction case. This reveals that the institutionalisation should create more internal inconsistency and thus should lead to diversity among affiliates within an MNE rather than similarity, as predicted by isomorphism (Chan and Holbert 2001). Unlike *implementation*, which only requires to nominally introducing internal practices in the subsidiary, the *internalisation* requires the subsidiary to spend large amounts of energy. By possessing a relatively higher adoption status among MNE affiliates in the few selected practices to better satisfy its parent firm, a subsidiary can be permitted to refuse adopting the rest of other internal practices. Institutional interaction thus enables subsidiaries to prepare diversified practice adoption profiles within the MNE. Kostova et al. (2008) posited that MNE affiliates face a broader range of choices concerning which practices to adopt and to what extent they should respond to each institution. Therefore, a subsidiary's adoption of practices may represent partial isomorphism to more than one institution and create a combination of diversified practices. Future studies should focus on the isomorphic (or de-isomorphic) nature of practice adoption when an MNE hopes to gain legitimacy from multiple institutions at the same time.

This study also offers some practical messages for MNE executives. A parent-firm executive should strategically adopt internal practices by carefully assessing information regarding the concerns of the host country that are borne by a subsidiary executive. Certain production practices that require more local judgment and account for more contingencies should be adopted to cope with local competition. When an internal managerial practice aiming to achieve efficiency and excellence is critical for the parent-firm executive, a subsidiary executive should also rapidly follow up to access globalised managerial advantages. Both of the crucial executives in MNEs should communicate their concerns regarding environmental conditions with each other to make appropriate joint decisions that will prosper the subsidiary.

For an SME, this study finds that its subsidiary may utilise both approaches (*implementing* sufficient internal practices or *internalising* in a few ones) in facing the institutional interaction. Due to its limited resource position and the urgent needs to respond to the host-country stakeholders, the concurrent use of both approaches may be less suitable for an SME subsidiary to better survive. Therefore, the conditions and priority of the contingent use of either approach should be detail elucidated based on the unique situation of each subsidiary. In a case that the joint use of both approaches is necessary, the process of such adoption should be carefully evaluated and executed.

## Limitations

First, the findings are derived from Taiwanese SMEs expanding to Southeast Asia and China. Future studies should focus on larger MNEs in other developed countries to reach more generalised conclusions. Second, this study only tests the possibility of a subsidiary to adopt its parent firm's practices. The likelihood of a subsidiary to adopt another

affiliate's internal practices (e.g., a mandate subsidiary) should be investigated further. The adoption of other types of internal practices should also be considered. Third, it is important to ask whether a subsidiary that adopts internal practices performs or survives better than another subsidiary that does not. Future studies should focus on performance issues, which are ignored in this study. Fourth, the small sample obtained via the survey methodology may cast doubt on the validity of the data. The measurement scale of *internalisation* must also be further tested, given that the situation of *internalisation* should not be indicated based on the only opinion of the subsidiary executive. An improved research design featuring multiple data sources should be considered in the future. Fifth, reference effects from other subsidiaries to promote given internal practices for each subsidiary should be further articulated.

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## Appendix A

**Table 3:** Measurements and exploratory factor analysis result for institutional-pressure related variables

<i>Questionnaire items</i> (based on a five-point Likert scale)	Sub-Host	Par-Home	Sub-Home	Par-Host
As a subsidiary executive, I always feel high pressure to meet the legal restrictions regarding the operations in the host country	0.698			
As a subsidiary executive, I always feel pressure to meet the frequent economic policy changes in the host country	0.645			
As a subsidiary executive, I always feel high pressure to satisfy the uncertain and diverse local customer needs and tastes	0.837			
As a subsidiary executive, I always feel high pressure to solve the shortage problem of local materials and labours supply	0.784			
As a subsidiary executive, I always feel high pressure to face the fierce competition from the local and international players	0.694			
As a headquarters executive, I always feel high pressure resulting from Taiwanese legal restrictions that interrupt my firm's international operation		0.783		
As a headquarters executive, I always feel high pressure to adapt to the uncertain and dynamic FDI policies implemented by Taiwanese government		0.930		
As a headquarters executive, I always feel high pressure to meet the requests from Taiwanese professional investors for performance and efficiency improvement		0.906		

**Table 3:** (continued)

<i>Questionnaire items</i> (based on a five-point Likert scale)	Sub-Host	Par-Home	Sub-Home	Par-Host
As a headquarters executive, I always feel high pressure to satisfy the demands of critical customers in Taiwan		0.891		
As a headquarters executive, I always feel high pressure to cope with the threats from major competitors in Taiwan		0.832		
As a headquarters executive, I always feel high pressure to meet the legal restrictions in the host country (of the identified subsidiary)			0.607	
As a headquarters executive, I always feel high pressure to meet the frequent economic policy changes in the host country (of the identified subsidiary)			0.682	
As a headquarters executive, I always feel high pressure to satisfy the uncertain and diverse local customer needs and tastes (of the identified subsidiary)			0.604	
As a headquarters executive, I always feel high pressure to solve the shortage problem of local materials and labours supply (of the identified subsidiary)			0.685	
As a headquarters executive, I always feel high pressure to face the fierce competition from the local and international players (of the identified subsidiary)			0.723	
As a subsidiary executive, I always feel high pressure resulting from Taiwanese legal restrictions that interrupt my firm's international operation				0.810
As a subsidiary executive, I always feel high pressure to adapt to the uncertain and dynamic FDI policies implemented by Taiwanese government				0.650
As a subsidiary executive, I always feel high pressure to meet the requests from Taiwanese professional investors for performance and efficiency improvement				0.904
As a subsidiary executive, I always feel high pressure to satisfy the demands of critical customers in Taiwan				0.932
As a subsidiary executive, I always feel high pressure to cope with the threats from major competitors in Taiwan				0.907

**Appendix B**

**Table 4:** Measurements and exploratory factor analysis result for the dependent variables

Part 1: The nominal percentage of adoption of internal practices by a subsidiary

1. Please estimate the actual percentage (from 0–100%) of your subsidiary’s staffing practices that are replicated from the parent firm in Taiwan
2. Please estimate the actual percentage (from 0–100%) of your subsidiary’s compensation practices that are replicated from the parent firm in Taiwan
3. Please estimate the actual percentage (from 0–100%) of your subsidiary’s administrative hierarchies that are replicated from the parent firm in Taiwan
4. Please estimate the actual percentage (from 0–100%) of your subsidiary’s monitoring practices that are replicated from the parent firm in Taiwan
5. Please estimate the actual percentage (from 0–100%) of your subsidiary’s quality-control practices that are replicated from the parent firm in Taiwan
6. Please estimate the actual percentage (from 0–100%) of your subsidiary’s production-automation practices are replicated from the parent firm in Taiwan
7. Please estimate the actual percentage (from 0–100%) of your subsidiary’s product design practices are replicated from the parent firm in Taiwan

*Note:* Values generated from the seven items are averaged as one variable to represent the nominal adoption of internal practices by a subsidiary

Part 2: The relative degree of adoption of internal practices by a subsidiary

<i>Questionnaire items</i> (based on a five-point Likert scale)	Adoption of internal managerial practice	Adoption of internal production practice
Among all affiliates within the entire company, my subsidiary adopts a relatively higher degree of staffing practices that are replicated from the parent firm in Taiwan	0.685	
Among all affiliates within the entire company, my subsidiary adopts a relatively higher degree of compensation practices that are replicated from the parent firm in Taiwan	0.880	
Among all affiliates within the entire company, my subsidiary adopts a relatively higher degree of administrative hierarchies that are replicated from the parent firm in Taiwan	0.847	
Among all affiliates within the entire company, my subsidiary adopts a relatively higher degree of monitoring practices that are replicated from the parent firm in Taiwan	0.804	
Among all affiliates within the entire company, my subsidiary adopts a relatively higher degree of quality-control practices that are replicated from the parent firm in Taiwan		0.879
Among all affiliates within the entire company, my subsidiary adopts a relatively higher degree of production-automation practices that are replicated from the parent firm in Taiwan		0.862
Among all affiliates within the entire company, my subsidiary adopts a relatively higher degree of product-design practices that are replicated from the parent firm in Taiwan		0.712

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