

**The Effects of Challenge and Hindrance Stressors on Multinational
Corporations' Subsidiary Performance: The Role of Institutional
Dependence**

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The candidate confirms that the work submitted is his own and that appropriate credit has been given where reference has been made to the work of others.

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Abstract

An increasing number of multinational corporations (MNCs) have set up subsidiaries in emerging markets like China to implement their internationalisation strategy. Acknowledging the criticality of subsidiaries to corporations' global success, international business scholars have attempted to address the question concerning "how can the performance of multinational corporations' subsidiaries be enhanced?". In headquarters–subsidiary relations, as subordinate within the hierarchy of decision-making, subsidiaries are susceptible to the work responsibilities that are imposed on them by their headquarters. Yet, a review of the international business literature reveals that relationship studies have not captured performance outcomes of subsidiary job stressors stemming from their headquarters' demands (see table 2.1).

It is important to address this omission because subsidiary managers may substantially susceptible to imposed work stress. In the light of work on group/team-level stress effects, imposed stress can be experienced collectively by a subsidiary's top management team. Thus, the present study addresses a lacuna in research on the effects of subsidiary job demands within headquarters–subsidiary relationships.

Research data were collected through online (Qualtrics) survey with 238 Chinese manufacturing subsidiaries and the performance outcome of operating revenue was measured using secondary data from OSIRIS database. The respondents were acquired through phone calls and emails. The study results confirm that challenge stressors are positively, and hindrance stressors are negatively related to subsidiary top management team's work engagement. In turn, work engagement is positively linked to operating revenue and local responsiveness. Institutional dependence strengthens the link between challenge stressors and work engagement, but it weakens the association between work engagement and local responsiveness.

The current study makes several contributions to existing knowledge in international business. First, it addresses an important lacuna in this literature by unveiling that subsidiary top management teams face imposed stress emanating from the headquarters' demands and that this affects their work engagement and ultimately subsidiary performance. Second, the study explains inconsistent findings in the work on job stressors' outcomes in international business by showing that challenge and hindrance stress types have positive and negative outcomes, respectively. Third, this study is novel in developing an extensive model of the conditionalities of work stress outcomes, combining the three complementary theories of transactional stress, JD-R, and neo-institution.

From a managerial perspective, the present study suggests that MNCs should assess job stressors for subsidiary TMTs in terms of work challenges and hindrances that they encounter in working with/for headquarters. It is equivalently imperative for subsidiary managers to interpret institutional constituents' expectations to acquire and utilise valuable resources in host country. Finally, subsidiary managers must proactively explore and exploit knowledge and resources beyond meeting local institutional constituents' expectations in order to fast respond to local market changes. Hence, on the one hand, they must keep local institutional constituents satisfied, on the other hand, they should identify differences between institutional constituents' expectations and local market demands to be ambidextrous in terms of meeting expectations from different parties.

Keywords: Transactional theory of stress, Job demands-resources theory, Neo-institutional theory, Challenge stressors, Hindrance stressors, Work engagement, Institutional dependence, Operating revenue, Local responsiveness

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Chapter 1: Introduction

1.1 Introduction

This chapter provides an overview of the current dissertation. It begins with the research background and gaps in pertinent literature. It then specifies research aims and objectives. Thereafter, the desired contributions of this study to the extant literature are explained. This chapter finishes with a diagram outlining the thesis structure.

1.2. Research background and gaps

It has been long argued by multinational corporations (MNCs) theorists that foreign subsidiaries face disadvantages in a host country in comparison to domestic firms (Zaheer, 1995, Hymer, 1960/1976). This phenomenon has also been referred to as the “liability of foreignness” that is “the additional costs of doing business abroad that result in a competitive disadvantage for an MNE subunit” (1995: 342). Notwithstanding this weakness, as the foreign direct investment in emerging markets (e.g., China) substantially grows (Tian and Slocum, 2014), subsidiaries play an imperative role as their MNCs’ competitive advantages that lead to success in local markets (Andersson, Forsgren, and Holm, 2007).

Given the host-country disadvantages subsidiaries face and the strategic importance they attach to MNCs’ success, understanding what can improve and/or impede subsidiary performance has become an increasingly important research problem not only for international business scholars, but also for corporate executives and subsidiary managers of MNEs. Not only does such knowledge enrich the understanding of subsidiary management, but it also motivates business practitioners to develop strategies contributing to superior subsidiary performance.

Resonating with a big question for international business research “what determines the international success and failure of firms?” (Peng, 2004, p. 99), substantial studies have

accumulated to identify antecedents to foreign subsidiary performance. A number of studies emphasise that subsidiary performance variations can be determined by headquarters—subsidiary relational factors, such as headquarters’ control (Luo, Shenkar, and Nyaw, 2001), cooperation (Hewett and Bearden, 2001), network strength (Lee, 2010), subsidiary autonomy (Venaik, Midgley, and Devinney, 2005), and knowledge transfers (Ambos and Birkinshaw, 2010; Najafi-Tavani et al., 2018).

As subsidiaries are subordinate within the hierarchy of decision-making, the headquarters must delegate work and responsibilities to foreign subsidiaries (Gong, 2003). From occupational stress perspective, work stressors can differentially affect job performance through relevance to work motivation, depending on their types and/or levels (LePine, Podsakoff, and LePine, 2005). Despite the important associations between work stressors and performance, a review of the international business literature reveals that the performance effects of subsidiary work stressors stemming from headquarters’ demands have not yet been examined (see table 2.1 for review). Instead, the established work on subsidiaries focuses on the performance effects of environmental factors (e.g., Cui, Griffith, and Cavusgil, 2005) and subsidiary resources (Lee et al., 2008).

Such an omission is important as subsidiary managers, “especially those of higher ranks”, are “substantially exposed” to imposed stress (Lee et al., 2019, p.393). As per work on group/team-level stress effects (Reus and Rottig, 2009; Zhang, Benedetto, and Hoenig, 2009), imposed stress can be experienced collectively by a subsidiary’s top management team. There is reason to expect that the work pressure encountered by subsidiaries that receive assignments from headquarters may be acute in emerging market subsidiaries. As MNCs have been establishing subsidiaries in emerging economies as a key facet of their international development (Tian and Slocum, 2014), such markets are important: from a demand perspective, as in the coming decades they will see approximately two-thirds of

world GDP growth and with it increasing MNC operating revenues; and from a supply perspective, as local firms can now draw on local and global resources to innovate around customers' needs (Govindarajan and Ramamurti, 2011). As noted by a Chinese subsidiary executive in the pre-study interviews, "We [the top management team] clearly understand that the headquarters has fairly high expectations of our subsidiary. However, in the absence of their support, we just cannot make everything work as smoothly as they expect."

The international business literature on work stressors has focused on expatriation (Bader, Berg, and Holtbrügge, 2015; Shaffer, Singh, and Chen, 2013) and international joint ventures (IJV) management (Gong et al., 2001; Mohr and Puck, 2007). Yet, this stream of research has investigated individual rather than MNC issues. While expatriates' work stressors have been investigated in relation to their personal well-being (e.g., work adjustment), the IJV studies have focused on managers' stress relating to whom to serve due to the involvement of two or more partners from different national backgrounds (Mohr and Puck, 2007). Differently, the study of this thesis focuses on subsidiary top-management-team level work stressors and their effects on team-level work motivation and subsidiary-level performance, emphasising the performance effects of team-level work stressors in headquarters-subsidiary relation studies.

Furthermore, the current study is relevant to the issue that the extant studies have shown inconsistent findings on the work stressor-performance association; not only across stressors, but also for the same stressor (see table 2.4 for review). For instance, while some studies indicate a positive link between expatriates' role novelty and their adjustment performance (Kawai and Mohr, 2015; Morley and Flynn, 2003), others suggest a negative (Shaffer, Harrison, and Gilley, 1999; Kraimer and Wayne, 2004) or non-significant (Aryee and Stone, 1996; Shaffer, Singh, and Chen, 2013) association.

There are three possible explanations for these inconsistent results that suggest a need to identify boundary conditions that can influence the work stressors–performance association.

First, the organisational stress literature asserts that performance effects of work stressors depend upon their type as well as level. Work stressors can be differentiated into two kinds: challenge stressors and hindrance stressors (LePine et al., 2005). The former is defined as those job demands or role circumstances that require work effort but that can potentially promote growth and achievement; while the latter refers to those job demands or role circumstances that involve undesirable constraints that inhibit one’s ability to achieve valued goals or outcomes. High levels of challenge and hindrance stressors tend to be good and bad for performance, respectively. However, with few notable exceptions (Firth et al., 2014; Kawai and Mohr, 2015), prior international business studies have not included both types of work stressors.

Second, the work stressors–performance relationship is also dependent on contingencies. The international business literature has neglected stress mediation mechanisms that can motivate superior performance. By contrast, work engagement (i.e. the most studied well-being construct in the organisational stress literature) has been meta-analytically found to mediate the links of challenge–hindrance stressors and job performance (LePine et al., 2005; Cavanaugh et al., 2000). Work engagement refers to a positive, fulfilling, work-related state of mind characterised by vigour, dedication, and absorption (Schaufeli et al., 2002). Research has confirmed that challenges and hindrances only make a difference to positive consequences like work engagement (Crawford, LePine and Rich, 2010). This supports the unique role of work engagement in the challenge/hindrance stressors–performance associations.

As a source of motivation that helps managers operating overseas and/or across borders to focus on set goals and work tasks, work engagement has notable importance to MNC studies. Lazarova, Westman, and Shaffer's (2010) conceptual study on expatriates has positioned work engagement as an intermediate variable in the job demands–performance path. Although Lee et al. (2019) have provided empirical evidence for a negative association between subsidiary manager's stress and work engagement, they have not captured the effects of work engagement on performance. Therefore, the challenge–hindrance stressors antecedents of work engagement and the subsidiary performance effects of work engagement are both absent from the international business literature as the vast thrust of prior work is based on individuals and has not covered the entire relationship (see table 2.5). The conceptual study of the work engagement–performance link (Lazarova, Westman, and Shaffer, 2010) lacks empirical evidence that should be provided by further studies. The study in this thesis examines both the paths from challenge–hindrance stressors to work engagement, and that from work engagement to subsidiary performance. Such mediation relation is examined for robustness check (see section 5.4).

Third, a set of studies have considered the moderators for the association between work stressors and job outcomes in the contexts of expatriates and repatriates (e.g., Ren et al., 2013; Shaffer, Singh, and Chen, 2013; Bader, Berg, and Holtbrügge., 2015; Kawai and Mohr, 2015). They all asserted that job resources can buffer against the negative impacts of job demands on work outcomes. Still, Kawai and Mohr (2015) alone distinguished between expatriate work challenges and hindrances, observing that perceived support constructs buffer and boost their negative and positive effects on work outcomes, respectively. In the MNC context, Chinese subsidiaries' survival and success are significantly affected by the extent of their alignment with the Chinese institutional

environment, because it determines the way they acquire local critical resources (Redding and Witt, 2009). Notwithstanding the importance of institutional environment, due to the lack of studies on the work stressors in headquarters–subsidiary relations (Lee, 2019), the international business literature remains silent to if and how institutional dependence—an important characteristic of the Chinese institutional environment—affects the subsidiary top management teams that encounter work stressors imposed by working with/for their headquarters. It is crucial to advance the existing knowledge regarding headquarters–subsidiary relations because such connection is often plagued by serious problems that can impede subsidiary performance (Kostova, Nell, and Hoenen, 2018). Employing the perspective of challenge and hindrance stressors, the study in this thesis provides valuable insights into headquarters–subsidiary relationships and effects on subsidiary performance.

1.3. Research aims and objectives

As headquarters impose work responsibilities and duties to their overseas entities, these subsidiaries operate as the subordinate within the hierarchy of decision-making (Gong, 2003). Meanwhile, senior-level subsidiary managers are substantially exposed to the imposed stress (Lee et al., 2019). As per work on group/team-level stress effects (Reus and Rottig, 2009; Zhang et al., 2009), imposed stress can be collectively experienced by a subsidiary's top management team. From the institutional perspective, subsidiaries are not only exposed to pressures that arise from their headquarters (Kostova and Roth, 2002; Hillman and Wan, 2005), but also are pressurised to act in accordance to the major institutional constituents' expectations because they are dependent on them for critical resources (Gomez and Werner, 2004; Heugens and Lander, 2009). While subsidiaries must deal with both internal and external pressures to retain legitimacy or acquire critical

resources (Hannon, Huang, and Jaw, 1995), the interplay between these factors have not yet been examined in the context of subsidiary top management teams.

In addressing the omission of the challenge and hindrance stressors' performance effects on MNC subsidiaries, the aim of the study in this thesis is to investigate how and when these two types of work stressors faced by subsidiary top management teams can affect their work motivation of engagement, and how and when their work engagement can impact subsidiary performance. For constructs' operationalisation, this study draws upon the extant literature in the fields of organisational stress and MNC subsidiary performance to combine the *differentiated* job demands–resource (JD–R) theory (i.e. combination of transactional stress and JD–R theory) and the neoinstitutional theory.

The study focuses on subsidiary top management team's challenge and hindrance stressors, work engagement, institutional dependence and subsidiary performance (i.e. operating revenue and local responsiveness) that are apposite to the study's setting (cf. Katsikeas et al., 2016). It examines the two types of work stressors rather than a general type. The challenge-hindrance stressor framework states that challenge stressors can potentially promote learning and achievement, whereas hindrance stressors can thwart growth and achievement (Cavanaugh et al., 2000). These two types of work stressors have indeed been found differentially associated with work motivation and performance (LePine, Podsakoff, and LePine, 2005).

With a research sample of 238 Chinese subsidiaries of non-Chinese MNCs, the following research questions are addressed:

- How do challenge stressors and hindrance stressors affect subsidiary top management team's work engagement?

- How does subsidiary top management team's work engagement affect subsidiary performance in terms of operating revenue and local responsiveness?
- How does institutional dependence, as an important characteristic of the institutional environment in China, affect the association between challenge stressors and hindrance stressors and subsidiary top management team's work engagement?
- How does institutional dependence affect the relationship between subsidiary top management team's work engagement and subsidiary performance in terms of operating revenue and local responsiveness?

1.4. Research contributions

The current study makes several contributions to existing knowledge in international business. First, while the established literature stream on the outcomes of headquarters–subsidiary relationships has embraced a number of fruitful explanations (e.g., Ambos and Birkenshaw, 2010; Najafi-Tavani et al., 2018), the present study contributes to the limited work on subsidiary managers' work stress effects by showing that subsidiary top management teams face imposed stress emanating from the headquarters' demands and that this affects their work engagement and subsidiary performance. Surprisingly, the only work on subsidiary managers' stress effects (Lee et al., 2019) focuses on individual work engagement with no consideration of subsidiary performance. Such omission rules out the performance implications of work stressors from the MNC context and the current study addresses this important lacuna.

Second, the study explains inconsistent findings on work stressors' outcomes in international business literature with challenge and hindrance stressors. It confronts the traditional view of JD-R theory that job demands "tend to be inherently negative" (Ren et al., 2013, p.14). Extending previous studies applying challenge–hindrance framework

in expatriates' well-being (e.g., Kawai and Mohr, 2015), the current study serves as the first to apply this framework in subsidiary top management team's context. The results show that challenge and hindrance stress types have positive and negative outcomes, respectively. With these findings, the current study advances the existing knowledge regarding the performance effects of the different types of work stressors in the context of MNC subsidiaries and emphasises that the subsidiary's job demands from headquarters should be distinguished.

Third, this study is novel in developing an extensive model of the conditionalities of work stress outcomes. As noted by Ren et al. (2013), JD-R theory explains how general job demands and resources lead to positive and negative work outcomes, but it does not provide guidance for determining specific job demands and resources that should be captured by the model, due to the reason that job demands and resources are sensitive to work contexts. In addressing this issue, this study adopts challenge stressors and hindrance stressors from the transactional stress theory to be job demands in the model. With the addition of neoinstitutional theory, it argues that the environment of institutional dependence (i.e. the extent to which the subsidiary is dependent on local major institutional constituents for critical resources) can determine the extent to which challenge and hindrance stressors affect subsidiary top management team's work engagement, as well as to what extent subsidiary top management team's work engagement affects subsidiary performance. The results indicate that institutional dependence strengthens the link between challenge stressors and work engagement but weakens the association between work engagement and local responsiveness. As such, the contribution of this research is not limited to providing new insights on the performance outcomes of challenge and hindrance stressors in the context of MNC

subsidiaries; rather it sheds light on boundary conditions that strengthen or weaken these links.

1.5. Structure of the thesis

Table 1. 1. Thesis structure

Part I	Introduction and Literature Review	
	Chapter 1 Introduction	<ul style="list-style-type: none"> • Research background & gaps • Research aims and objectives • Research contributions • Outline of thesis
	Chapter 2 Literature review	<ul style="list-style-type: none"> • Determinants of MNC subsidiary performance • Theories of work stressors/job demands • Baseline theories for the current study • Key definitions of main constructs
Part II	Hypotheses Development	
	Chapter 3 Research model and hypotheses	<ul style="list-style-type: none"> • Main effects • Moderating effects • Model summary
Part III	Empirical study	
	Chapter 4 Research methodology	<ul style="list-style-type: none"> • Exploratory interviews • Quantitative stage • Quantitative analysis procedures
	Chapter 5 Data analysis and results	<ul style="list-style-type: none"> • Descriptive statistics • Data screening • Non-response bias • Reliability test • Measure assessment and purification • Reliability and validity • Common method bias • Endogeneity bias and hypotheses testing • Random selection bias
Part IV	Discussion and conclusions	
	Chapter 6 Discussions	<ul style="list-style-type: none"> • Discussion of findings • Theoretical implications of the study results • Managerial implications of the results • Limitations and directions for future studies

As Table 1.1 shows, this thesis is comprised of six chapters, including introduction, literature review, research model and hypotheses, methodologies, data analysis, and discussions.

1.6. Chapter summary

This chapter provides an overview of the present study. The research background coupled with research gaps in the pertinent literature were discussed. Then, research questions, aims, and study context were clarified. Following that, the research contributions were outlined. Table 1.1 in the last section of chapter one shows the structure of this thesis.

Chapter 2: Literature Review

2.1. Introduction

This chapter begins with a review of studies on MNC subsidiary performance, focusing on some prominent theories that have been applied and verifying that MNC subsidiary's job demands have been overlooked within the international business literature. Consequently, it confirms the important position of the current study that examines subsidiary job demands. Then, it continues to discuss the baseline theory for the current study and definitions main constructs.

2.2. Theories of MNC subsidiary performance

By reviewing the theories applied to study MNC subsidiary performance, this section serves to identify if subsidiary work stressors have been captured as an antecedent of subsidiary performance. The literature search started with a wide focus on determinants of MNC subsidiary performance and then moved more specifically onto headquarters-subsidiary relational factors. Papers published in the leading journals of business and management were reviewed, such as the *Journal of International Business Studies*, *Academy of Management*, and *Journal of World Business*. Table 2.1 shows the review of literature on MNC subsidiary performance. Previous studies were conducted to identify the antecedents of subsidiary performance based on a few theories, including the Institutional Theory, Environment–Strategy–Performance Theory, Resources-based View, and Motivation–Opportunity–Ability Theory. These theories are explained below.

Table 2.1. A review of literature on MNC subsidiary performance

Study	Sample	Methodology	Theory	Findings
Teng, Huang, and Pan (2017)	Wholly owned subsidiaries & IJVs	Panel dataset	Institutional theory	<ul style="list-style-type: none"> • MNE subsidiaries perform better when located closer to the country's business hub, but performed less well when located closer to the political hub.
Lazarova, Peretz, and Fried (2017)	Wholly owned subsidiaries	Survey	<ul style="list-style-type: none"> • Institutional theory • RBV 	<ul style="list-style-type: none"> • The negative relationship between HR autonomy and absenteeism is stronger due to low cultural and low institutional distance. • The positive relationship between HR autonomy and subsidiary performance is stronger due to low institutional distance between home and host country.
He, Zhang, and Wang (2015)	Wholly owned subsidiaries & IJVs	Secondary data	Institutional theory	<ul style="list-style-type: none"> • Market-seeking MNEs can achieve superior performance when host-country institutional environment is favourable and when the subsidiary has longer history in host country.
Cogin and Williamson (2014)	Wholly owned subsidiaries	Survey & secondary data	Institutional theory	<ul style="list-style-type: none"> • Environmental uncertainty strengthens the effects of the customization of HRM practices on subsidiary performance (i.e. financial performance and customer satisfaction).
Lee and Song (2012)	Wholly owned subsidiaries & IJVs	Secondary data	Institutional theory	<ul style="list-style-type: none"> • Favourable institutional change in host country has a positive effect on subsidiary performance.

Gaur, Delios, and Singh (2007)	Wholly owned subsidiaries	Secondary data	Institutional theory	<ul style="list-style-type: none"> • Institutional distance has a positive effect on subsidiary productivity. • Employees who are nationals of home country have a negative effect on subsidiary productivity.
Gaur and Lu (2007)	Wholly owned subsidiaries & IJVs	Secondary data	Institutional theory	<ul style="list-style-type: none"> • Institutional distance has a positive effect on subsidiary survival. • Parent host country experience has a positive effect on subsidiary survival.
Grewal, Chandrashekar, and Dwyer (2008)	Wholly owned subsidiaries	Survey	<ul style="list-style-type: none"> • Institutional theory • Environment-strategy-performance 	<ul style="list-style-type: none"> • Task munificence and institutional multiplicity are positively related to subsidiary performance magnitude. • Task dynamism and institutional dependence are negatively related to subsidiary performance magnitude. • The interplay between worldwide learning and institutional dependence has a positive effect on subsidiary performance magnitude.
Lee (2010)	Wholly owned subsidiaries & IJVs	Survey	<ul style="list-style-type: none"> • Environment-strategy-performance • RBV (Network) 	<ul style="list-style-type: none"> • Market turbulence and technological turbulence are positively related to market responsiveness. • While market turbulence is positively related to MNC network strength, technological turbulence is positively related to product innovation. • Market responsiveness and MNC network strength are positively related to subsidiary performance.

				<ul style="list-style-type: none"> • MNC network strength strengthens the effect of market responsiveness on subsidiary performance, but it weakens the effect of product innovation on subsidiary performance.
Cui, Griffith, and Cavusgil (2005)	Wholly owned subsidiaries	Survey	Environment-strategy-performance	<ul style="list-style-type: none"> • Both competitive intensity and market dynamism influence knowledge management capabilities. • There is a positive relationship between a subsidiary's knowledge management capabilities and its performance.
Luo and Park (2001)	Wholly owned subsidiaries & IJVs	Survey & Secondary data	Environment-Strategy-Performance	<ul style="list-style-type: none"> • MNC subsidiaries with the Analyzer orientation have the highest performance in China.
Hsu, Iriyama, and Prescott (2016)	Wholly owned subsidiaries	Survey panel dataset	RBV	<ul style="list-style-type: none"> • Sourcing from headquarters is most highly associated with subsidiary profitability when leverage mechanisms are developed.
Oehmichen and Puck (2016); JIM	Wholly owned subsidiaries & IJVs	Survey	RBV (dependence)	<ul style="list-style-type: none"> • Subsidiaries' external embeddedness and internal embeddedness have a positive effect on subsidiary performance.
Liu, Gao, Lu, and Lioliou (2016)	Wholly owned subsidiaries	Survey	RBV (dependence)	<ul style="list-style-type: none"> • Industry risks reduce the levels of subsidiary input localisation and marketing localisation, and thus negatively affect subsidiary performance. • Political risks have an insignificant impact on subsidiary input localisation and marketing localisation, but a

				positive direct impact on subsidiary performance.
Li and Lee (2015); JWB	Wholly owned subsidiaries & IJVs	Survey	RBV	<ul style="list-style-type: none"> Subsidiary capabilities have a positive effect on subsidiary performance.
Lee et al. (2014)	Korean business groups (chaebols)	Interview-based questionnaire	RBV	<ul style="list-style-type: none"> Certain combinations of innovative knowledge-transfer strategies have a positive effect on subsidiary performance.
Schleimer, Coote, and Riege (2014)	Wholly owned subsidiaries	Survey	RBV (knowledge)	<ul style="list-style-type: none"> Subsidiary processing capacity mediates the relationship between HQs' transfer capacity and strategy exploitation. Strategy exploitation is positively related to subsidiary performance. HQs' transfer capacity moderates the effects of subsidiary processing capacity on strategy exploitation.
Ciabuschi, Holm, and Martín (2014)	Wholly owned subsidiaries	Survey and interview	RBV (dependence)	<ul style="list-style-type: none"> External embeddedness is positively related to innovation-related subsidiary performance. Corporate embeddedness positively affects the subsidiary influence within the MNC network, which in turn, positively relates to performance. External embeddedness and corporate embeddedness are positively associated.
Li, Liu, and Thomas (2013)	Wholly owned subsidiaries	Survey	RBV	<ul style="list-style-type: none"> External embeddedness has a positive impact on specialised resources of both export- and local market-oriented multinational subsidiaries.

				<ul style="list-style-type: none"> • Internal embeddedness has a negative impact on specialized resources of both types of subsidiary. • Specialised resources have a positive effect on performance.
Gammelgaard et al. (2012)	Wholly owned subsidiaries	Survey	RBV (Network)	<ul style="list-style-type: none"> • Inter-organisational network, intra-organisational network, and autonomy are positively related to subsidiary performance.
Fang, Jiang, Makino, and Beamish (2010)	Wholly owned subsidiaries & IJVs	Secondary data	RBV (knowledge)	<ul style="list-style-type: none"> • Parent-firm technological and marketing knowledge has a positive effect on subsidiary performance.
Ambos and Birkinshaw (2010)	Wholly owned subsidiaries	Survey	RBV (attention)	<ul style="list-style-type: none"> • HQs' attention is positively related with subsidiary performance. • The interactions of subsidiaries' autonomy, inter-unit power and initiatives with HQs' attention increase subsidiary performance.
Wang, Tong, Chen, and Kim (2009)	Wholly owned subsidiaries & IJVs	Interviews & Survey	RBV	<ul style="list-style-type: none"> • Employing expatriates in the subsidiary enhances subsidiary performance.
Phene and Almeida (2008)	Wholly owned subsidiaries	Patent data	RBV	<ul style="list-style-type: none"> • The knowledge absorbed from the host country is positively related to subsidiary innovation. • Subsidiary capabilities (sourcing and combinative capability) have positive influence on subsidiary innovation (scale and quality).

Lee, Chen, Kim, and Johnson (2008)	Wholly owned subsidiaries & IJVs	Survey	RBV	<ul style="list-style-type: none"> • Knowledge transfer and network strength enhance new product outcomes. • Network strength and global market turbulence weaken the effect of knowledge transfer on new product outcomes. • Global technological turbulence strengthens the effect of knowledge transfer on new product outcomes.
Fang, Wade, Delios, and Beamish (2007)	Wholly owned subsidiaries	Secondary data	RBV	<ul style="list-style-type: none"> • Parent-firm internationalisation experience and technological knowledge have a positive effect on subsidiary performance.
Venaik, Midgley, and Devinney (2005)	Wholly owned subsidiaries	Survey	RBV	<ul style="list-style-type: none"> • Subsidiary autonomy has a positive effect on subsidiary performance.
Gong (2003)	Wholly owned subsidiaries & IJVs	Archival data	RBV	<ul style="list-style-type: none"> • A positive effect of expatriate staffing on subsidiary performance increases with cultural distance but decreases over time (years of operation).
Özsomer and Gençtürk (2003)	Wholly owned subsidiaries	Field interviews	RBV	<ul style="list-style-type: none"> • Headquarters' resources, subsidiary resources, and headquarters-subsidiary relational resources can affect subsidiary market-learning capability (exploration and exploitation). • Subsidiary market-learning capability can affect subsidiary performance. • Environmental turbulence can moderate the relationship between subsidiary

				market-learning capability and subsidiary performance.
Delios and Beamish (2001)	Wholly owned subsidiaries & IJVs	Survey	RBV	<ul style="list-style-type: none"> • Host country experience has a direct effect on subsidiary survival but a contingent relationship with profitability. • The entry mode moderated the nature of these relationships.
Fey and Björkman (2001)	Wholly owned subsidiaries	Survey	RBV	<ul style="list-style-type: none"> • Investment in HRM practices can significantly improve subsidiary performance.
Najafi-Tavani, Robson, Zaefarian, Andersson, and Yu (2018)	Wholly owned subsidiaries	Survey	AMO	<ul style="list-style-type: none"> • Knowledge transfer and absorptive capacity facilitate local responsiveness. • Shared values moderates positively and absorptive capacity negatively, the relationship between knowledge transfer and responsiveness. • Psychological safety strengthens the link between reverse knowledge transfer and local responsiveness.
Chang, Gong, and Peng (2012)	Wholly owned subsidiaries	Secondary data, survey & interviews	AMO	<ul style="list-style-type: none"> • Expatriate ability, motivation, and opportunity seeking are positively related to the knowledge received by the subsidiary. • Subsidiary absorptive capacity strengthens the indirect effects.

2.2.1. (Neo) institutional theory

Institutional theory focuses on the normative contexts within which subsidiaries operate (Bjorkman, Fey, and Park, 2007). Those MNC studies based on institutional theory have focused on the relationship between various institutional factors and subsidiary performance, such as institutional distance (Gaur, Delios, and Singh, 2007; Gaur and Lu, 2007), institutional multiplicity and institutional dependence (Grewal, Chandrashekar, and Dwyer, 2008) and favourable institutional change (Lee and Song, 2012).

In the literature on international management, most work is built upon the neoinstitutional theory that stems from the institutional theory. The neoinstitutional theory holds that organisational survival and success are determined by the extent of alignment with the institutional environment. Hence, organisations must comply with external institutional pressures (Kostova, Roth, and Dacin, 2008). The neoinstitutional theory is appropriate for the focus of the current study. The reason is that while the subsidiary tend to be requested by headquarters to adopt their practices as a job demand/task, its operations in the host market can be determined and influenced by the host country's institutional environment. The interplay between the internal work stressors and the external environment is worth investigating. Thus, based on the neoinstitutional theory, it can be suggested that the sole focus on subsidiary's internal job demands is insufficient and it is equivalently important to consider the institutional environment of the host country.

2.2.2. Environment-Strategy-Performance

The Environment–Strategy–Performance framework suggests that changes in environmental turbulence cause firms to adopt different strategies for achieving performance (Child, 1972; Porter, 1991; Tan and Litschert, 1994). In the international business literature, market responsiveness and product innovation are regarded as important strategic postures for subsidiary survival and growth (Porter 1991; Doz and

Prahalad, 1991). In order to survive, a foreign business must be fast at responding to local customers' needs and competitors' actions, stressing the importance of market responsiveness (Lee et al., 2009; Luo, 2001). Conversely, product innovation strategy depicts an organisation's long-term commitment to the creation of new products that cater to current and future needs (Li and Atuahene-Gima, 2001).

However, the E–S–P framework has been applied to focus on the external environment (e.g., market turbulence) instead of the internal environment. While providing insights into how subsidiaries can strategically react to market-related environment in the host country, this theory does not capture the internal work stressors within headquarters–subsidiary relations. Therefore, the E–S–P theory is considered inappropriate for the current study.

2.2.3. Resource-based view (RBV)

As a managerial framework, the resource-based view (RBV) can be used to determine the strategic resources a firm can exploit to achieve sustainable competitive advantage (Barney, 1991). MNC studies based on this view have investigated different types of resources that can facilitate subsidiary capabilities and performance. The results suggest that a few resources are associated with subsidiary performance, such as human resource management practices (Fey and Björkman, 2001), experiential learning via technological and marketing knowledge (Bhatti, Larimo, and Coudounaris, 2016), external embeddedness, and subsidiary influence (Ciabuschi, Holm, and Martín, 2014). Furthermore, Özsomer and Gençtürk (2003) have argued that parent-company resources (i.e. parent-management ethnocentrism, resource allocation mode), subsidiary resources (i.e. size, experience of subsidiary managers, track record, resource commitments), and parent-subsidiary relational resources (i.e. subsidiary autonomy, formalization, socialization of subsidiary employees) are related to subsidiary market-learning

capability (i.e. exploration and exploitation), which in turn, influences subsidiary performance.

Stemming from the RBV (Barney, 1991), the Knowledge-Based View (KBV) argues that organisations can be viewed as repositories of knowledge (Grant, 1996; Kogut and Zander, 1992). Advocates of the KBV consider MNCs as networks of organisations that can create and sustain competitive advantages by exploiting their ability to integrate and combine knowledge (Kogut and Zander, 1993, Almeida, Song, and Grant, 2002). In contrast to tangible resources, knowledge-based resources are intangible and are usually complex and hard to imitate, thus these resources can improve the firms' competitive advantages in the long run (Alavi and Leidner, 2001). Research has shown that technological and marketing knowledge can facilitate subsidiary superior performance (Fang et al., 2010). Knowledge sourced from headquarters can also improve subsidiary profitability. In addition to knowledge per se, headquarters' knowledge transfer capacity and recipient subsidiary's knowledge processing capacity can also explain the variations in subsidiary performance (Schleimer, Coote, and Riege, 2014).

Although those studies based on the RBV have found a variety of resources that can facilitate subsidiary performance, such theory has not captured the association between stress-related factors and performance. Although RBV is an important theory for studying subsidiary performance, it can not be used to identify the specific resources that subsidiaries require to deal with their work stressors. Therefore, the RBV is not regarded as a robust theory for the current study.

2.2.4. Motivation-Opportunity-Ability (MOA)

Another theory that has been applied to study MNC subsidiary performance is the motivation-opportunity-ability (MOA) theory. With its origins in management and

marketing (MacInnis, and Jaworski, 1989), the MOA framework has been increasingly applied to studies that examine antecedents and outcomes of knowledge transfers between firms (e.g., Reinholt, Pedersen, and Foss, 2011; Kim, Hur, and Schoenherr, 2015). For example, Najafi-Tavani et al. (2018) found that knowledge transfer (as opportunity) and subsidiary absorptive capacity (as ability) both facilitate local responsiveness performance. Shared values (as motivation and opportunity) positively and absorptive capacity negatively, moderates the relationship between knowledge transfer and local responsiveness. Chang, Gong, and Peng (2012) argued that expatriates' opportunity seeking and ability and motivation to transfer knowledge positively affect a subsidiary's profitability performance.

Notwithstanding the findings, the studies built upon MOA have specifically investigated the motivation-based, opportunity-based, and ability-based factors for why subsidiaries' activities facilitate or hinder their performance outcomes (e.g., Najafi-Tavani et al., 2018; Chang, Gong, and Peng, 2012). With this theory, the current study can not identify the constructs of stress factors in subsidiaries; thus, MOA is not suitable for the present research.

Table 2.2. A summary of the advantages and limitations of the main theories applied in MNC subsidiary performance studies

Theory	Advantage(s)	Limitation(s)	Applicability to the current study
Institutional theory	...provides a rich theoretical foundation for examining a wide range of critical issues that are essential for MNC research such as institutional profile, isomorphic pressures, legitimacy and liability of foreignness, and allows for theorising at multiple levels of analysis (Djelic and Quack, 2003).	Its ideas have been continuously and indiscriminately used, becoming increasingly basic and general (Kostova, Roth and Dacin, 2008). ...focuses on basic features of institutional environment.	Low: as it focuses on a wide variety of institutional issues
Neoinstitutional theory	...essentially holds that organisational survival or performance is determined by the extent of alignment with the institutional environment and emphasises the necessity of organisations' compliance with external institutional pressures (Kostova, Roth and Dacin, 2008).	Although this theory has been applied to discuss the outcomes of institutional pressure in terms of subsidiary dependence on headquarters or institutional constituents for critical resources (i.e. institutional dependence), it provides no specific constructs for subsidiary's work stressors/job demands in working with/for headquarters.	High: considering institutional dependence (i.e. subsidiary dependence on local institutional constituents for critical resources) that should be considered along with internal pressures (Tempel et al., 2006)

	...stresses the equivalent importance of subsidiary compliance with the intra-organisational and external institutional pressure due to dependence on them for critical resources (Tempel et al., 2006).		
Environment– Strategy– Performance framework	...suggests that changes in environmental turbulence lead a firm to adopt different strategies for the purpose of defending its competitive advantage and performance (Child, 1972; Porter, 1991; Tan and Litschert 1994). ...considers the threats and opportunities arising from external environments and the firm's strategies for them (Weick, 1979; Daft and Weick 1984).	While it focuses on how firms can develop strategies to deal with environmental turbulence, it provides no insight into the work pressure/stressors in headquarters–subsidiary relations.	Low: as it provides no specific construct for subsidiary work stressors or job demands
RBV	...suggests that the firm's resources and capabilities contribute to its superior	It leads to general conclusions and does not exclusively suggest resources that are	Low: as it focuses on a great variety of resources and provides no explanations

	performance (Barney, 1991; Conner, 1991; Teece, Pisano, and Shuen 1997).	particularly important to subsidiaries encountering a high level of work stressors.	regarding what specific resource is important to subsidiaries encountering work stressors
MOA	...suggests that ability, opportunity, and motivation lead to the firm's success and performance (Blumberg and Pringle, 1982; Campbell et al., 1993; Boxall and Purcell, 2003).	It has been applied to discuss knowledge sharing activities and does not provide insights into work stressors.	Low: as it mainly focus on the ability, opportunity, and motivation factors that facilitate subsidiary activities such as knowledge sharing, it shows no concern about work stressors or job demands.

Table 2.2 illustrates the advantages and limitations of those theories and how applicable they are to the current study of subsidiary's work stressors. As can be concluded from the table, only neoinstitutional theory is considered applicable to the present study because it highlights the institutional dependence (i.e. subsidiary dependence on local institutional constituents for critical resources) that should be investigated with subsidiary internal pressure (Tempel et al., 2006). Notwithstanding the focus on internal institutional environment, this theory provides no construct for the subsidiary's pressure to meet headquarters' demands. Furthermore, the other theories, such as RBV and MOA, do not exhibit specific concern regarding the issue of work stressors. Therefore, I decided to resort to the occupational stress literature for the purpose of identifying appropriate theory(ies) that can provide constructs for subsidiary work stressors/job demands and their effects.

Indeed, job demands have been largely studied in the occupational stress literature (see table 2.4). Across contexts such as the expatriation management (Kraimer and Wayne, 2004; Kawai and Mohr, 2015), services (Miao and Evans, 2013; Auh et al., 2016), and teaching (Tadić, Bakker, and Oerlemans, 2015), the extant stress studies have discussed important associations among work stressors, well-being and performance. Some important theories have been found and are discussed in the following section, including Job Demands–Control model, Job Demands–Resources Model, and Transactional Theory of Stress Model.

2.3. Theories of work stressors

2.3.1. Job Demands–Control (JD–C) Model

Karasek's (1979) JD–C model has been regarded as one of the most influential theories in the realm of occupational health psychology. This model demonstrates that a high level of job control attenuates the negative effects of work stress on well-being outcomes, such as depression, anxiety, heart disease, and irritable bowel syndrome, and improves employees' task compliance. The JD–C model has raised two main propositions. First, high job demands and low job control can cause high strain at work. Second, if there has high job control, the negative influence of job demands on work strain becomes weaker.

Recent studies show that job control (e.g., decision latitude) can moderate the effects of high job demands on health-related consequences (e.g., Wall et al., 1996; Marshall, Barnett, and Sayer, 1997; Van Yperen and Snijders, 2000). However, the model of JD–C is not regarded as suitable for the current study for two main reasons. First, the job demands in this model have been positioned as a unidimensional construct that does not reflect the complexities in them. Based on this model, it is difficult to identify the 'good' job demands from the 'bad' ones. Second, this model has been applied to examine the effects of job demands on individual-based consequences such as health issues (Karasek, 1979; Van Yperen and Snijders, 2000). Yet, the current study requires a theory that specifically focuses on the effects of job demands on issues beyond individual health (e.g., work performance).

2.3.2. Job Demands–Resources (JD–R) Model

The JD–R model assumes that all job factors can be classified in two general categories: job demands and job resources and can be applied to various occupational settings (Demerouti et al., 2001; Bakker, Demerouti, and Euwema, 2005; Bakker and Demerouti, 2007). Based on the JD–R theory, empirical evidence from multiple studies in various

occupational settings and countries supports that job demands are positively related to burnout, while job resources are positively related to work engagement (Bakker and Demerouti, 2007).

While research confirms that job resources also have a direct negative association with burnout (e.g., Bakker, Demerouti, and Schaufeli, 2003; Bakker, Demerouti, and Euwema, 2005), it provides mixed findings on the association between job demands and work engagement. In some cases, demands appear to be unrelated to work engagement (Schaufeli and Bakker, 2004) and in other cases, job demands are positively related to work engagement (Schaufeli, Taris, and Van Rhenen, 2008) and negatively related to work engagement (Sonnetag, 2003). Developing explanations for these ambiguous relationships is critical because research has shown that, as an important predictor of performance, work engagement is functionally different than other attitudes and motivational concepts (Rich, Lepine, and Crawford, 2010).

Given the unique functioning of work engagement (e.g., Auh et al., 2016; Lazarova, Westman, and Shaffer, 2010), it is reasonable to regard the ambiguous relationship between job demands and work engagement as a critical issue and thus, it should be addressed in the current study to advance knowledge regarding subsidiary work stressors. Based on the extant literature, it is likely for job demands to eventually turn out unrelated, positively or negatively related to subsidiary top management team work engagement. However, a shortcoming of the JD–R model is that it lacks a theory to explain those variations in demands-engagement link (Crawford, LePine and Rich, 2010). Therefore, the current study requires another theory to explain why job demands exhibit different associations with work engagement.

2.3.3. Transactional Theory of Stress Theory

According to the transactional theory of stress, as stressful situations, job demands are appraised in terms of their significance for well-being as either potentially challenging or threatening (Lazarus and Folkman, 1984). Based on this theory, through differentiating job demands into challenge stressors and hindrance stressors, studies have confirmed that the two types of work stressors have different associations with various work attitudes (e.g., work motivation, organisational commitment), behaviours and performance (LePine, Podsakoff, and LePine, 2005; Podsakoff, LePine, and LePine, 2007). In MNC context, the challenge–hindrance framework has been applied to examine the effects of challenge and hindrance stressors on expatriate’s personal well-being. For example, Firth et al. (2014) found only challenge stressors are positively related to work adjustment. In Kawai and Mohr’s (2015) study, challenge stressors positively affect job satisfaction, task performance and work adjustment, but hindrance stressors negatively influence job satisfaction and work adjustment.

The transactional of stress theory is important to the current study because it provides theoretical evidence for the different types of job demands, and it can be applied in company with the JD–R theory to address the important issue of ambiguous relationship between job demands and work engagement, which serves as an important predictor of job performance (Bakker and Demerouti, 2017).

Although the JD–R theory is dominated by general job demands, it is regarded as an important theoretical model for the present study. This is because the extant literature based on this theory has addressed an important issue, which is the ambiguous relationship between job demands and work engagement. According to the transactional theory of stress, if job demands are conceptualised two-dimensionally into challenge and

hindrance stressors, their distinctions can be featured by contrasting effects on work engagement (Crawford, LePine and Rich, 2010). Thus, the integration of JD–R theory and transactional theory so stress is considered functional in terms of identifying important constructs for the present study.

With the conclusion from section 2.2 being considered, the current study is suggested to be developed upon the JD–R, transactional theory of stress, and neoinstitutional theory. The first two theories enable me to identify constructs for job demands and their effects. Then, in addition to internal pressure, neoinstitutional theory inspires me to take into consideration the external institutional environment where subsidiaries operate. The section will focus on these three baseline theories for the present study to specifically identify the constructs.

Table 2.3. A summary of the main theories applied in job demands studies

Theory	Type of job demands	Outcomes of job demands	Limitation(s)
Job Demands–Control	General	Health-related issues (e.g., strain, depression, anxiety, heart disease)	...considers general job demands. ...focuses on the effects of job demands on individual health issues.
Job Demands–Resources	General	Burnout, Work engagement, Job performance	...focuses on general job demands (i.e. unidimensional construct). ...lacks theoretical explanations for the ambiguous relationship between job demands and work engagement (Crawford, LePine and Rich, 2010). ...has been applied at individual level rather than team level.
Transactional theory of stress	Two types: challenge and hindrance stressors	Work motivation, Work adjustment Job satisfaction, Organisational commitment Task performance	...has been applied largely at the individual level rather than the team level.

2.4. Baseline theories for the current study

2.4.1. Transactional theory of stress

According to the transactional stress theory (Lazarus and Folkman, 1984), stress can be defined as:

“An individual’s psychological response to a situation in which there is something at stake for the individual and where the situation taxes or exceeds the individual’s capacity or resources (LePine, LePine, and Jackson, 2004).”

The original definition of stress theory above was developed from an individual perspective. When applied in the team context, stress should be defined as the process whereby:

“certain environmental demands... evoke an appraisal process in which perceived demand exceeds resources and results in undesirable physiological, psychological, behavioural, or social outcomes” (Salas, Driskell and Hughes, 1996, p. 6).

Originally, the transactional theory of stress is discussed at the individual level, emphasising the psychological mechanisms of appraisal and coping in one’s stress process. Stressors are encountered, perceived and appraised by an individual, causing strain or one’s psychological, physical and behavioural responses to stress (Cooper et al., 2001). The primary appraisal of a situation involves the recognition that a stressor matters as a potential benefit or harm. In the second appraisal, one is then concerned with identifying or selecting the most appropriate and effective coping response to the specific stressor. If a work stressor is appraised as challenging and rewarding, a problem-solving method of coping with such stressor is likely to be adopted. However, if a stressor is perceived as negative and harmful, a passive coping approach may be employed, such as

avoidance that can lead to a decrease in work motivation and engagement (Dewe, Cox and Ferguson, 1993; LePine, Podsakoff, and LePine, 2005).

At team level, members of a team are believed to appraise and respond to stressful conditions in a homologous manner (Staw, Sandelands, and Dutton, 1981), predicting similar stress effects on teams and individuals (Pearsall, Ellis, and Stein, 2009). It has been argued that while stress coping originates in individual behaviours, the construct follows a composition model of emergence (see Kozlowski and Klein, 2000). By interacting with teammates and monitoring their activities, team members' behaviours converge and a collective coping strategy emerges. That is, while the content and meaning of the construct remain consistent, coping will exhibit shared team-level properties (Pearsall, Ellis, and Stein, 2009).

Notwithstanding this resemblance, studies of individual stress have outnumbered team stress. Such studies, on the one hand, have evidenced a negative association between some specific stress factors (e.g., role ambiguity and conflict) and job performance (Beehr et al., 2000), but on the other hand, they have shown positive relations between some stressors (e.g., workload and responsibility) and performance (e.g., Dollard et al., 2000; Sargent and Terry, 2000). An inverted U-shaped relation has also been found (Sullivan and Baghat, 1992). The transactional stress theory can be used to explain such inconsistent findings, featuring the challenge–hindrance stressor framework.

Specifically, Cavanaugh et al. (2000) conclude that work stressors can be distinguished into two groups, labelled as challenge stressors and hindrance stressors. The former type of work stressors refers to those stressful job demands that can potentially boost mastery, personal growth or future achievements. Examples of challenge stressors include heavy workload, time pressure, and high levels of responsibilities. Employees receiving such

job demands tend to perceive them as valuable opportunities to learn, accomplish, and demonstrate competences that deserve rewards (e.g., recognition and promotion). The latter type of stressors is appraised to thwart personal growth, learning, or goal achievements. Examples of work hindrances include role conflict, role ambiguity, organisational politics, red tape, and hassles. Such negative work stressors tend to be appraised by employees as constraints and obstacles that unnecessarily impede their goal attainment and rewards (Cavanaugh et al., 2000).

As the transactional stress theory argues, after a stressful event is appraised as being a challenge or hindrance, secondary appraisals focus on how to cope with the situation. As challenge demands are appraised as being potentially beneficial and controllable, employees who experience such demands are likely to resort to an active problem-solving coping style (e.g., through increasing effort intended to meet the demands). By contrast, hindrance demands are likely to result in a negative or avoidant style of coping (e.g., withdrawing from the situation, avoiding or procrastinating) because they reflect a negative situation where effort aimed at meeting expectations appears not to function (LePine, Podsakoff, and LePine, 2005).

Research has found that challenge stressors and hindrance stressors have different associations with various work attitudes, behaviours and performance. However, a great deal of the challenge–hindrance work has focused on the domestic, rather than the international business context, revealing the contrasting effects of challenge stressors and hindrance stressors on learning motivation, work motivation (LePine, Podsakoff, and LePine, 2005), job satisfaction, organisational commitment (Podsakoff, LePine, and LePine, 2007), and learning performance (LePine, LePine, and Jackson, 2004).

By contrast, international business literature based on the challenge–hindrance framework has only captured expatriates’ challenge stressors and hindrance stressors in relation to their personal well-being (see table 2.4 for review). Using longitudinal data collected from 70 expatriates, Firth et al. (2014) found only challenge stressors positively related to work adjustment. The results of Kawai and Mohr’s (2015) study of 125 expatriates in Germany indicated that challenge stressors positively affected job satisfaction, task performance and work adjustment, but hindrance stressors negatively influenced job satisfaction and work adjustment. However, such studies have focused on individual-level stress and well-being. In headquarters–subsidiary working relations, it is reasonable for subsidiary top management teams to collectively work on headquarters’ demands (cf. Reus and Rottig, 2009; Zhang, Di Benedetto, and Hoenig, 2009). In this respect, the present study is distinguished from the existing studies of expatriation issues as it specifically focuses on team-level work stressors. Examining team-level work stressors (and performance outcomes) provides a broader and more complete conception of team effectiveness and viability (e.g., Hackman, 1987; Kozlowski and Bell, 2003) and is also consistent with the increasing importance of teamwork (Pearsall, Ellis, and Stein, 2009).

Table 2.4. Empirical research on job/task stressors' outcomes in international business

Source	Unit of Analysis	Empirical Approach	Stressor Variable(s)	Dependent Variable(s)	Explanatory Mechanisms of Stressors		Key Findings
					Moderator(s)	Mediator(s)	
Naumann (1993)	Expatriates	Survey of 157 expatriates of U.S. firms assigned to China, Hong Kong, Taiwan, and Korea.	Role conflict; role ambiguity; skill variety; task identity; task significance	Intrinsic satisfaction; extrinsic satisfaction	--	--	Role ambiguity is negatively related to intrinsic and extrinsic job satisfaction. Skill variety is positively related to intrinsic and extrinsic job satisfaction. Task identity and task significance are positively linked to intrinsic satisfaction alone, while role conflict is not linked to either satisfaction type.
Aryee and Stone (1996)	Expatriates	Survey of 184 expatriates (e.g., representing the U.S. and Australia) based in Hong Kong	Role discretion; role conflict; role novelty; role clarity (work method clarity, performance criteria clarity, and scheduling clarity)	Work adjustment; job satisfaction; marital adjustment; quality of life	--	--	Role discretion is positively related to work adjustment, job satisfaction, and quality of life. Role conflict is negatively related to work adjustment. Role novelty has no significant effect on the outcomes. Work method clarity is positively related to work adjustment. Scheduling clarity is positively related to job satisfaction and quality of life. Performance criteria clarity is positively related to job satisfaction and marital adjustment. Work adjustment is positively related to job satisfaction.

Shaffer, Harrison, and Gilley (1999)	Expatriates	Survey of 452 expatriates of ten U.S. MNCs assigned to 45 countries	Job factors (role clarity, role discretion, role conflict, and role novelty)	Expatriate adjustment (work adjustment, interaction adjustment, and general adjustment)	Previous assignments; language fluency; hierarchical level; functional area; assignment vector	--	Role clarity is positively related to work adjustment and general adjustment. Role discretion is positively related to work adjustment and interaction adjustment. Role conflict is not significantly related to adjustment forms. Role novelty is negatively related to general adjustment. Some significant moderations are found for job factors to expatriate adjustment links. But role novelty outcomes are not moderated, and functional area does not serve as a moderator.
Gong et al. (2001)	IJVs	Survey of 265 CEOs of China-based IJVs	Role conflict; role ambiguity	Venture performance	--	--	Role conflict is positively associated with venture performance, but role ambiguity is not related to venture performance.
Kraimer and Wayne (2004)	Expatriates and their supervisors	Survey of 230 expatriates, assigned to 30 countries, and their supervisors (dyads) from three U.S. firms.	Role stressors (role ambiguity, role conflict, role novelty)	Expatriate adjustment; organizational commitment–parent; organizational commitment–foreign facility; task performance; contextual performance; intentions to finish assignment	--	Expatriate adjustment; organizational commitment–parent company; organizational commitment–foreign facility	Role ambiguity is negatively related to expatriate adjustment, commitment–parent company, and commitment–foreign facility. Role conflict has no significant links with these outcomes. Role novelty is negatively linked to expatriate adjustment. Both role ambiguity and role novelty have negative links to task performance. Expatriate adjustment is positively related to intentions to finish assignment. Commitment–foreign facility is positively linked to contextual

							performance. Thus, expatriate adjustment and commitment–foreign facility mediate some role stressor to outcome paths.
Mohr and Puck (2007)	IJVs	Survey of 41 General Managers of German–Indian IJVs in India	Inter-sender role conflicts	Job satisfaction; job stress; IJV performance	--	Job satisfaction; job stress	Role conflict is negatively associated with job satisfaction and positively related to job stress. Job stress is negatively related to IJV performance, whereas job satisfaction has no link. Job stress mediates the relation between role conflict and IJV performance.
Reus and Rottig (2009) ^a	IJVs	Meta-analysis, aggregating conflict and performance data from 13 independent samples	Partner conflict	IJV Performance	--	--	Partner conflict is negatively associated with IJV performance.
Ren et al. (2013)	Repatriates	Survey of 84 repatriated employees of five U.S. MNCs	Job demands (psychological contract breach regarding pay, career derailment, and perceived underemployment)	Career satisfaction	Job resources (perceived international assignment value to career (IAV-career) and firm (IAV-firm))	--	Psychological contract breach alone is negatively related to repatriate career satisfaction. This link is weaker for repatriates with high IAV-career. Contrastingly, IAV-career strengthens the (negative) link of career derailment and career satisfaction. The (negative) link of perceived underemployment and career satisfaction is strengthened by IAV-firm.

Shaffer, Singh, and Chen (2013)	Expatriates and their spouses	Survey of 78 expatriates (e.g., representing the U.S., Australia, and New Zealand) and their spouses based in Hong Kong	Work adjustment; role novelty	Expatriate pay satisfaction	Perceived assignment value	--	Work adjustment is positively related to expatriate pay satisfaction, while role novelty has no link. The work adjustment to pay satisfaction relationship is strengthened by perceived assignment value. The (negative) link of role novelty to pay satisfaction is strengthened by perceived assignment value.
Firth et al. (2014)	Expatriates	Longitudinal survey of 70 expatriates in the U.S., Canada, U.K., and Australia, of a single MNC	Challenge stressors; hindrance stressors	Initial work adjustment; work adjustment change; assignment satisfaction; premature return intention	--	Initial work adjustment	Challenge stressors has a positive effect on work adjustment change. Hindrance stressors has no effect on initial adjustment or adjustment change. Initial work adjustment does not mediate stressor links to work adjustment change. Work adjustment change positively and negatively predicts assignment satisfaction and premature return intentions, respectively.
Bader, Berg, and Holtbrügge (2015)	Expatriates	Survey of 121 expatriates of U.S. or European MNCs assigned to 36 terrorism-affected countries	Perceived general stress	Expatriate performance	POS	--	Perceived general stress is negatively related to expatriate performance. POS attenuates the negative link of general stress and expatriate performance.

Kawai and Mohr (2015)	Expatriates	Survey of 125 Japanese expatriates based in Germany	Hindrancer stressor (role ambiguity); challenge stressor (role novelty)	Job satisfaction; task performance; work adjustment	Perceived organizational support (POS); perceived supervisor support (PSS)	--	Role ambiguity is negatively related to job satisfaction and work adjustment, but not task performance. Role novelty is positively related to job satisfaction and work adjustment, but not task performance. POS attenuates the negative link of role ambiguity and work adjustment and strengthens the positive link of role novelty and job satisfaction. PSS positively moderates the positive links of role novelty with job satisfaction and work adjustment.
Lee et al. (2019)	Subsidiary managers	Survey of 643 managers of 60 subsidiaries in South Korea, of MNCs from 11 countries	Acculturative stress	Work engagement	--	--	Acculturative stress is negatively related to work engagement.

Note: ^a The empirical studies included in this meta-analysis are excluded from the table for parsimony reasons

A notable study on interfirm relationships (e.g., buyer-supplier network) has found the negative path from team-level stressors (i.e. role ambiguity and role conflict) and supply chain performance (Dong, Ju and Fang, 2016). At organisational level, such hindrance-based stressors impede performance as management teams face difficulties in fulfilling their responsibilities (Dong, Ju and Fang, 2016). However, this work has only examined role ambiguity and role conflict that are classified as hindrance stressors according to the transactional stress theory. As the team-level stressors have not yet been applied to headquarters-subsidary relationships but have been constructed as a unidimensional factor by buyer-supplier relationship scholars, it is vital and novel to develop and apply the two-dimensional stressors framework to the context of subsidiary top management teams.

The extant studies based on the transactional theory of stress have inspired the present study to consider some critical research issues. While a great deal of research focuses on individual-level stress (e.g., LePine, LePine, and Jackson, 2004; Rodell and Judge, 2009; Webster, Beehr, and Love, 2011), study of team-level stress is scarce. An exemption is Pearsall, Ellis, and Stein (2009) that examines the effects of challenge and hindrance stressors on team-level behavioural, cognitive, and affective outcomes. Specifically, results from 83 teams working on a command and control simulation show that challenge demands are positively associated with team performance and transactive memory, whereas hindrance demands are negatively related to team performance and transactive memory, and positively related to psychological withdrawal.

In line with Pearsall, Ellis, and Stein (2009), the current study intends to extend the model to the subsidiary TMT level. There are several reasons why it is vital and appropriate to do it. First, team-level constructs stem from individual cognitions and behaviours. The processes of the primary and secondary appraisal are fundamental to a multi-level

homologous framework that contains isomorphic constructs and functionally equivalent associations (Morgeson and Hofmann, 1999; Kozlowski and Klein, 2000). Subsidiary top management teams, like individuals, perceive situational demands based on their potential benefits or threats. Likewise, subsidiary TMTs appraise the stressful situation as an opportunity for growth and mastery (i.e. challenge) or a potential barrier to their goal achievements (i.e. hindrance). As stress appraisals are embedded in the social context of the team, group members will process environmental stimuli in a relatively consistent manner (Hobfoll, 2001; Drach-Zahavy and Freund, 2007). When subsidiary TMT members interact and share their perceptions, their appraisals converge with others to make sense of emergent and unfamiliar demands. Through analyses and discussions of work tasks in relation to their impacts on future development, subsidiary TMT members can reach similar cognitive appraisals and determine teamwork directions (cf. Gump and Kulik, 1997). Ultimately, they will engage in collective coping behaviours.

Second, when faced with challenge stressors, subsidiary TMTs may appraise the situation as an opportunity and manage it with active problem-solving and increased effort. The interdependent nature of the team encourages members to work together to solve problems. For example, through purposeful discussions, subsidiary TMT members work strategically together to develop solutions and maintain high motivation (cf. Chen and Kanfer, 2006). Conversely, when faced with hindrance stressors, subsidiary TMTs tend to respond by avoiding their tasks and team responsibilities. Once subsidiary TMT members start to retreat from team tasks, other members will become increasingly aware of their behaviour (cf. Kozlowski and Klein, 2000), leading to a shared reliance on avoidant coping. Therefore, it is likely that within subsidiary top management teams, members' negative response is mirrored in others. However, as it is unrealistic for them to make no problem-solving effort, the prominent issue in the stressful situations in this

case should be the potential decrease in their work motivation and how it affects the organisational outcomes they are responsible for.

As the extant studies have examined the effects of the two types of job demands on work-related outcomes (e.g., Cavanaugh et al., 2000; Wallace et al., 2009; LePine, Podsakoff, and LePine, 2005), considerably less research attention has been dedicated to the differentiation of work stressors in international business contexts. Specifically, research on IJV's work stressors has examined the relationship between partner conflict (Reus and Rottig, 2009), role conflict, role ambiguity (Gong et al., 2001), job stress (Mohr and Puck, 2007) and IJV performance, without distinguishing between the two types of work stressors. Likewise, in buyer-supplier relationships, research has focused on either the 'good stressor' (Solomon et al., 1985) or the 'bad stressor' (Goolsby, 1992; Dong, Ju and Fang, 2016).

Furthermore, research in cross-national contexts that is based on the challenge-hindrance stressors has mostly examined their associations with expatriates' work adjustment, job satisfaction or task performance (e.g., Firth et al., 2014; Kawai and Mohr, 2015; Kraimer and Wayne, 2004). Still, no prior study has yet been conducted to investigate job demands in the headquarters-subsidary relationships from the subsidiary TMTs' perspective. It is important to fill this lacuna as subsidiary TMTs have a collective responsibility for headquarters' job demands and thus experience high pressures whilst working with the headquarters. While LePine, Podsakoff, and LePine (2005) found the solid and contrasting effects of challenge demands and hindrance demands on motivation and performance, these links lack empirical evidence in headquarters-subsidary relationships context. Therefore, the transactional theory of stress alone is not enough to finalise the research model. For further developing the conceptual framework, in line with Breevaart and Bakker (2018), the present study integrates the challenge-hindrance stressors

framework from the transactional stress theory and the job demands–resources (JD–R) theory. The next section will specify the baseline models for the JD–R theory.

2.4.2. The Job Demands–Resources Theory

The JD–R theory emphasises that work environment influences the degree of employees' work energy, enthusiasm and dedication (Demerouti et al., 2001). Despite that every occupation may have its own specific risk factors associated with motivation and job stress, these factors can be classified in two general categories that are applicable to various occupational settings: job demands and job resources (Bakker and Demerouti, 2007; Bakker, Demerouti, and Schaufeli, 2003). Job demands refer to those physical, social, or organisational aspects of the job that require sustained physical or mental effort and are therefore associated with certain psychological costs such as exhaustion. Such job demands may include workload, time pressure, and difficult physical environments. Job resources refer to those aspects of the job that are functional in achieving work goals, stimulating personal growth and development, and reducing job demands and their associated physiological and psychological costs. Such job resources may include job control, opportunities for development, participation in decision making, task variety, feedback, and work social support (Bakker and Demerouti, 2007).

2.4.2.1. Job demands and work engagement

While the JD–R theory suggests the job demands can generally cause strain (e.g., exhaustion, anxiety), it provides no conclusion for the path from job demands to positive outcomes such as work engagement (Bakker and Demerouti, 2017). In the international business literature, limited research has investigated job demands, showing mixed findings on the job demands-work engagement association (see table 2.5 for review). Lee et al. (2019) examine the effects of subsidiary manager's acculturative stress on their work engagement. While acculturation is regarded as a job requirement for subsidiary

managers to adapt to host country identities, its stress has a negative impact on work engagement and can be caused by perceived cultural identity incongruence. With a sample of global R&D engineers in two Finland-based MNCs, Nurmi and Hinds (2016) shows that the perceived demand of job complexity positively affects work engagement. Conceptually, Lazarova, Westman and Shaffer (2010) argue that while expatriates' job demands are negatively related to their work adjustment, adjustment and work engagement are positively associated.

The mixed findings on the job demands-work engagement link can be explained by the challenge-hindrance stressors framework. The "positive" and "negative" work stressors tend to be differentially associated with work engagement but can both increase strain (LePine, Podsakoff, and LePine, 2005). Therefore, work engagement is selected rather than strain to specifically advance the existing knowledge regarding the two types of work stressors in international business literature.

Table 2.5. A review of literature on the antecedents and outcomes of work engagement

Source	Unit of Analysis	Empirical Approach	Predictors of Work Engagement	Consequences of Work Engagement	Moderator(s)	Summary of Key Findings
Lee et al. (2019)	Subsidiary managers	643 survey responses	Acculturative stress	-	-	Acculturative stress has a negative effect on work engagement.
Menguc et al. (2017)	Healthcare service employees	800 survey responses	<ul style="list-style-type: none"> • Self-efficacy (personal resource) • Job autonomy (job resource) 	Customer service performance	<ul style="list-style-type: none"> • Performance-focused climate (organizational demand) • Service failure recovery climate (organizational resource) 	Performance-focused climate strengthens the positive effect of self-efficacy on engagement. It also weakens the positive effect of job autonomy on engagement. Service failure recovery climate weakens the positive effect of self-efficacy on engagement.
Auh et al. (2016)	Bank service employees	485 survey responses	<ul style="list-style-type: none"> • Supervisor close monitoring • Supervisor customer service feedback • Burnout due to supervisor 	Customer service performance	<ul style="list-style-type: none"> • Power distance orientation/Submissiveness 	Employees with high PDO feel less disengagement despite burnout due to their supervisors.
Nurmi and Hinds (2016)	Global R&D engineers in	78 interviews and 515	<ul style="list-style-type: none"> • Perceived job complexity 	-	-	Perceived job complexity and learning opportunities positively affect

	two Finland-based MNCs and experts and managers of a labour union	survey responses	<ul style="list-style-type: none"> • Learning opportunities 			engagement, innovation, and satisfaction.
Miao and Evans (2013)	Salespeople	223 survey responses	<p>Challenge demands:</p> <ul style="list-style-type: none"> • Outcome control • Activity control <p>Job stress:</p> <ul style="list-style-type: none"> • Role ambiguity • Role conflict 	Salesperson performance	Capability control (Job resource)	The interaction between outcome control and capability control has a positive effect on job engagement. Outcome control and activity control have a positive interactive effect on selling effort but negative interactive effects on adaptive selling behaviour and role clarity.
Crawford, LePine, and Rich (2010)	Meta-analysis		<ul style="list-style-type: none"> • Challenge demands • Hindrance demands • Resources 	-	-	Challenge demands are positively associated with engagement, and hindrance demands are negatively associated with engagement.
Rich, LePine, and Crawford (2010)	Firefighters and their supervisors	245 survey responses	<ul style="list-style-type: none"> • Value congruence • Perceived organizational support 	<ul style="list-style-type: none"> • Task performance • Organizational citizenship behaviour 	-	Engagement mediates relationships between value congruence, POS, and core self-evaluations, and two

			<ul style="list-style-type: none"> • Core self-evaluations 			job performance outcomes: task performance and OCB.
Lazarova, Westman, and Shaffer (2010)	Conceptualisation (expatriate context)		<ul style="list-style-type: none"> • Adjustment (predicted by demands and resources) • Resources 	<ul style="list-style-type: none"> • Performance 	-	Demands are negatively related to adjustment, and resources are positively related to adjustment. Resources and adjustment are positively related to engagement. Engagement has a positive effect on performance.
Salanova, Agut, and Peiro (2005)	Employees of service units (hotel front desks and restaurants)	Survey responses from 342 employees and 1,140 customers	Organizational resources	<ul style="list-style-type: none"> • Service climate • Employee performance • Customer loyalty 	-	Organizational resources have a positive effect on work engagement, which in turn positively affects service climate. Service climate has a positive effect on employee performance, which in turn predicts customer loyalty.

By contrast, a large amount of research has examined the association between job demands and work engagement within domestic occupational settings. Likewise, mixed findings exist. For instance, Schaufeli and Bakker (2004) conclude that job demands predict work engagement. However, Schaufeli, Taris, and Van Rhenen (2008) found that the job demand of time pressure (e.g., having to work fast) is positively related to work engagement. With a sample of 147 public service employees in Germany, Sonnentag (2003) found that the job demand of situational constraints (e.g., missing or outdated information) is negatively related to work engagement, while the demand of time pressure is not associated with engagement. Based on the sample of 714 Dutch employees, Xanthopoulou et al. (2007) show that the job demands of emotional dissonance and organisational changes are negatively associated with work engagement, whereas the demand of heavy workload is positively related to engagement.

A possible reason for the mixed findings on the relationship between job demands and work engagement across different contexts is that the traditional JD–R model does not take account of the differences in job demands with respect to the way they are appraised (Cavanaugh et al., 2000). With the addition of challenge–hindrance framework, Crawford, LePine, and Rich (2010) meta-analytically show that challenge demands have a positive relationship with work engagement, whereas hindrance demands are negatively related to work engagement. Likewise, LePine, Podsakoff, and LePine (2005) support the challenge–hindrance distinction by showing that the two types of job demands are differentially related to work motivation. Later studies thus have reached a conclusion that it is vital to link both work challenges and hindrances to positive outcomes (e.g., work engagement) (Crawford, Rich and LePine, 2010; Tadić, Bakker and Oerlemans, 2015). In terms of negative effects, the two types of job demands do not differ much in their associations with strain and burnout (Crawford, Rich and LePine, 2010).

It is also notable that the available work on the job demands-work engagement is mainly developed for individual-level analysis rather than teams. An exception is Tims, Bakker, and Derks (2013) that found at the team level, challenge demands are positively related to team work engagement, while hindrance demands are not associated with team work engagement. Although this study has no focus on international business context (i.e. a sample of 54 teams from an occupational health services company in Netherlands), the task interdependence nature of team work (Marks et al., 2005) suggests the applicable value of team-level constructs across work contexts, such as the international business context of headquarters–subsidiary relationships that the current study attempts to investigate.

2.4.2.2. Work engagement and performance

The JD–R theory proposes that work motivation has a positive impact on job performance, while job strain has a negative effect on job performance (Bakker and Demerouti, 2017). Specifically, engaged employees possess the energy and enthusiasm to perform well because their motivation keeps them being goal-oriented and staying focused on work responsibilities and tasks. Experimental studies show that engaged individuals perform better on demanding tasks because they can focus all their attention to the work (Hopstaken et al., 2015; Hopstaken et al., 2016). There is a large amount of research in various domestic contexts supporting the notion that work engagement facilitates job performance, including service employees (Menguc et al, 2017; Auh et al., 2016; Miao and Evans, 2013; Salanova, Agut, and Peiró, 2005), engineers (Nurmi and Hinds, 2016) and firefighters (Rich, Lepine, and Crawford, 2010).

By contrast, in the international business setting, the work engagement-performance link has received little attention. Lazarova, Westman, and Shaffer (2010) only conceptualised this relationship within expatriates' context. Although another study has examined the

effects of subsidiary managers' acculturative stress on their work engagement, it has ruled out the path from work engagement to organisational performance (Lee et al., 2019).

While the available work focuses on how individual work engagement predicts (individual) job performance, Tims, Bakker, and Derks (2013) found evidence for a positive association between team-level work engagement and team performance. Notwithstanding, in the international business literature, the association between team-level work engagement and organisational outcomes has been under researched.

As the associations among challenge stressors, hindrance stressors, work engagement and performance have been evidenced across domestic occupational settings (e.g., LePine, Podsakoff, and LePine, 2005; Bakker and Demerouti, 2017), it is reasonable to apply those constructs to the context of subsidiary top management teams. They are also derived from individual cognitions and behaviours and expose shared patterns of stress appraisal and coping responses (cf. Pearsall, Ellis, and Stein, 2009). Specifically, it is argued that challenge stressors can positively, and hindrance stressors can negatively affect subsidiary TMT work engagement, which in turn, predicts subsidiary performance. However, studies on challenge–hindrance stressors in the international business contexts have only focused on expatriates' individual well-being at the such as work adjustment and/or job satisfaction (e.g., Firth et al., 2014; Kawai and Mohr, 2015).

There are two main reasons for the present study to investigate challenge and hindrance stressors in relation to work engagement and subsidiary performance. First, it is suggested that solid and true relationships exist among the 'differentiated' job demands and work engagement (Crawford, LePine, and Rich, 2010). The relationship between challenge–hindrance stressors and work engagement need to be examined in subsidiary top management team contexts, which is not yet completed. Second, research has

demonstrated that work engagement is a unique factor that has functional relationships with more distal criteria that differ from various other job attitudes and motivational concepts. For example, Rich, Lepine, and Crawford (2010) show that work engagement is distinguished from job satisfaction, job involvement, intrinsic motivation, task performance, and citizenship behaviour in terms of exclusively mediating the indirect relations between proposed antecedents and performance.

In line with prior studies on challenge–hindrance demands (Lazarus and Folkman, 1984; Macey and Schneider, 2008; Crawford, LePine and Rich, 2010), this study predicts that subsidiary TMTs confronted with challenge demands emanating from headquarters are likely to feel more confident that their work efforts will assist them in successfully meeting headquarters’ demands and achieving meaningful and desirable growth and/or gains that are worth the discomfort (e.g., strain) and additional work efforts. Therefore, challenge demands can increase their willingness to invest time and energy in efforts to overcome challenging tasks, resulting in dedication to work along with an active problem-solving style of stress coping. In contrast, hindrance demands may trigger employees’ negative emotions and a passive, emotion-focused style of stress coping that are associated with withdrawal and a reduction in work engagement. This is because MNC subsidiary top managers may hold the belief that their efforts to deal with hindrances may fail and cause a waste of energy and resources.

2.4.2.3. Boosting and buffering effect of job resources

JD–R theory also proposes the interactive effects of job demands and resources on employee well-being. On the one hand, the boosting hypothesis posits that the combination of high job demands and high job resources can promote work motivation and work-related well-being (Bakker et al., 2010). Research has found that job resources particularly boost employee work engagement when challenging job demands are high

(Van den Broeck et al., 2010; Bakker and Demerouti, 2014). Consistently, Tadić, Bakker, and Oerlemans (2015) found that challenging demands can particularly predict schoolteachers' work engagement when job resources are available, such as social support from colleagues and performance feedback.

On the other hand, the buffering hypothesis posits that the costs associated with high job demands are lower for employees who have enough job resources, because they enable efficient coping (Bakker, Demerouti, and Euwema, 2005). Research has shown that job resources can attenuate the costs or negative effects of job demands on work-related well-being (Van den Broeck et al., 2010). For instance, Tadić, Bakker, and Oerlemans (2015) found that when job resources are high, the negative effects of hindrance job demands on teachers' positive affect and work engagement become weaker.

As the JD–R model has been applied in various domestic contexts, the findings are complex and inconsistent. Focusing on two challenge demands as independent variables, Miao and Evans (2013) show that challenge demands and job resources have positive interactive effects on salespeople's work engagement, while suppressing hindrance demands and that they have a negative interactive effect on hindrance demands. The results also suggest that two different challenge demands have a positive interactive effect on selling effort but a negative interactive effect on adaptive selling behaviour and role clarity. Adopting a hindrance demand (i.e. supervisor close monitoring) as the independent variable, Auh et al. (2016) found that service employees with high personal resources experience less disengagement regardless of the feelings of burnout.

Menguc et al. (2017) regard personal resources and job resources as predictors of service employees' work engagement and customer service performance. The results show that organisational demands strengthen the positive effect of personal resource on work

engagement, but they weaken the positive effect of job resource on engagement. Surprisingly, organisational resources weaken the positive effect of personal resources on work engagement. This study has revealed the intricacies of the interaction between job demands, personal resources, and job resources, which are considerably context specific. The extant research adopting the JD–R theory is scant in cross-national contexts compared to domestic work. Lazarova, Westman, and Shaffer (2010) only conceptualises job demands and resources to predict expatriates' work adjustment, which in turn, affects work engagement and performance. In this study, resources are positioned as an antecedent to work adjustment and engagement. Ren et al. (2013) focuses on the effects of interaction between job demands and resources on repatriate career satisfaction. Although a recent study has found that perceived organisational support attenuates the negative effect of hindrance demands on expatriates' work adjustment and strengthens the positive effect of challenge demands on their job satisfaction, it is constructed on role theory rather than the JD–R (Kawai and Mohr, 2015). Furthermore, these studies focus on individual-level job demands instead of team-level counterparts. Thus, it is notable that the international business literature still lacks evidence concerning the intersection between job demands and resources from the perspective of MNC subsidiary top management team.

The JD–R model is an integrated, stress-based theory that can explain how job demands and resources result in work-related outcomes. Through the application of this theory in the MNC subsidiary context, the present study attempted to investigate how job demands and resources affect subsidiary top management teams' work motivation and subsidiary performance. However, the JD–R model does not provide any guidance for selecting the key inputs (i.e. specific variables of job demands or resources). It fails to specify what job demands and resources should be investigated, because they may be unique to certain

work situations or contexts (Ren et al., 2013). With the transactional stress theory, challenge stressors and hindrance stressors have been identified as the constructs of job demands for the present study. Nevertheless, another theory (i.e. neoinstitutional theory) is required to explain the contingencies that can affect the effects of job demands encountered by subsidiary top management teams.

2.4.3. Neoinstitutional theory: institutional dependence

Institutional dependence can be defined as the extent to which subsidiary operations are dependent on host country institutional constituents, such as the government, professional associations, consumer bodies, and the general public, for critical resources (Grewal, Chandrashekar, and Dwyer). According to the neoinstitutional (i.e. new institutionalism) theory, organisational survival (and performance) can be influenced by the extent of alignment with the institutional environment; hence, organisations are subject to external institutional pressures. To be regarded as legitimate, they must conform to relevant institutional expectations (Scott, 1995; Morgan and Kristensen, 2006). Indeed, for a foreign MNC, doing business in China involves challenges because of the specific characteristics of the Chinese business system (Redding and Witt, 2009; Witt, 2010), emphasising the specific roles and behaviour on the part of the government and the broader institutional setting. According to Zhang and Zhang (2014), the socialist market-economy system in China requires organisations not only to engage in market-related strategies to achieve success, but also to pursue political strategies to establish and maintain a healthy relation with the Communist-Party-led government authorities (Lawton and Rajwani, 2015; Zhang, Zhao, and Ge, 2016; Wang et al., 2017).

In the light of institutional environment, a few studies have applied the institutional theory to the MNC context (e.g., Tina-Dacin, Goodstein, and Richard-Scott, 2002; Djelic and Quack, 2003). These studies have revealed various factors that can shape organisational

behaviours and performance, such as the institutional distance (Busenitz, Gomez and Spencer, 2000), institutional change (Hoskisson et al., 2000), institutional constraints (Child and Tsai, 2005), legitimacy, dependence and dynamics between host countries and MNCs (Zaheer and Mosakowski, 1997). Furthermore, a few authors identify subsidiary management knowledge of the local institutional environment as an important resource (Geppert, Williams, Matten, 2003; Kristensen and Zeitlin, 2005). They argue that, as “interpreters” of the local environment, subsidiary managers can derive resources from their role experience for headquarters’ management who may have difficulty in understanding it. In the meanwhile, given the pivotal role of major local constituents enforced by the Chinese business system (Redding and Witt, 2009), subsidiaries may be highly dependent on those institutional constituents for critical resources (e.g., legitimacy).

Notwithstanding the impact of host country institutions, some extant studies have mainly focused on the dependence of subsidiaries on their headquarters for resources such as investment funds, technological and managerial knowledge, without linking to the local institutional environment (Kostova, 1999; Kostova and Roth, 2002). Based on the neoinstitutional theory, the relationship between subsidiary management and local institutional environment is equally important. Subsidiaries may for example be dependent on their local context for developing and sustaining superior performance and for accumulating and creating knowledge and expertise (Tempel et al., 2006). Consequently, studies have explained subsidiary’s management responses to institutional demands, emphasising that the higher institutional dependence perceived by the subsidiary, the more likely the management team would conform to satisfy the institutional constituents’ demands (i.e. acquiescence response) (Grewal and Dharwadkar, 2002). The response of acquiescence has been argued to be associated with a variety of

advantages for organisations, including the increased prestige, stability, legitimacy, social support, internal and external commitment, access to resources, attraction of personnel, and invulnerability to questioning (DiMaggio and Powell, 1983; Meyer, Rowan and Scott, 1983; Zucker, 1988).

Associating the host country environment with subsidiary strategies and performance, Grewal, Chandrashekar and Dwyer (2008) found that the positive effects of worldwide learning strategy on subsidiary performance are strengthened by a high level of institutional dependence. As it makes learning from higher dependence environments beneficial, subsidiaries are likely to employ a high involvement approach to managing institutional expectations. Besides, learning from the environment can be used advantageously to manage local institutional constituents' demands. Notwithstanding, the literature remains silent to how the institutional environment impacts subsidiary top management teams that encounter (internal) job demands emanating from headquarters, given that some demands (i.e. challenge stressors) represent for learning and growth opportunities for subsidiaries while the others (i.e. hindrance stressors) may impede them from learning and growing.

Consequently, the present study integrates the *differentiated* JD–R model (i.e. the combination of transactional stress theory and JD–R theory) and the neoinstitutional theory to investigate following questions:

- How do challenge stressors and hindrance stressors affect subsidiary top management team's work engagement?
- How does subsidiary top management team's work engagement affect subsidiary performance in terms of operating revenue and local responsiveness?

- How does institutional dependence, as an important characteristic of the institutional environment in China, affect the association between challenge stressors and hindrance stressors and subsidiary top management team's work engagement?
- How does institutional dependence affect the relationship between subsidiary top management team's work engagement and subsidiary performance in terms of operating revenue and local responsiveness?

2.5. Key definitions of main constructs

2.5.1. Challenge and hindrance stressors

Stress, in general, can be defined as process set into motion when stressors in the environment tax or exceed an individual's resources (Lazarus and Folkman, 1984). In teams, stress can be defined as the process whereby "*certain environmental stressors... evoke an appraisal process in which perceived demand exceeds resources and results in undesirable physiological, psychological, behavioural, or social outcomes*" (Salas, Driskell, and Hughes, 1996, p. 6).

As a main source of stressful feelings, work stressors refer to environmental events in the workplace that require an individual to initiate an adaptive response of some kind (Kahn and Byosiere, 1992; Sonnentag and Frese, 2002). The extant studies have differentiated between two types of work stressors (Crawford, LePine, and Rich, 2010; LePine, Podsakoff, and LePine, 2005). Table 2.6 presents the definitions of challenge stressors and hindrance stressors adopted from some extant studies.

Table 2.6. Definitions of challenge and hindrance stressors

Author(s)	Level of analysis	Definitions of challenge stressors	Definitions of hindrance stressors
Cavanaugh et al. (2000)	Individual	Work-related stressors or circumstances that, although potentially stressful, have associated potential gains for individuals.	Work-related stressors or circumstances that tend to constrain or interfere with an individual's work achievement and that do not tend to be associated with potential gains for the individual.
Tadić, Bakker, and Oerlemans (2015); LePine, Podsakoff, and LePine (2005)	Individual	Work tasks and conditions that require effort and energy, but efficient dealing with them can result in growth, learning, and goal attainment.	Work tasks and conditions that require effort and energy, but do not have the growth potential.
Podsakoff, LePine, and LePine (2007)	Individual	Job stressors that cost effort but that potentially promote personal growth and achievement of the employees.	Job stressors that involve excessive or undesirable constraints that interfere with or inhibit an individual's ability to achieve valued goals.
Pearsall, Ellis, and Stein (2009)	Team	Work-related stressors or circumstances that, although potentially stressful, have associated gains for individuals.	Work-related stressors or circumstances that tend to constrain or interfere with an individual's work achievement, which do not tend to be associated with potential gains of the individual.
LePine et al. (2016)	Individual	Job stressors that present the potential for personal growth and rewards.	Job stressors that do not present the potential for personal growth and rewards

			and may thwart growth or gains.
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As table 2.6 shows, regardless of the level of analysis (i.e. individual-level or team-level construct), the two types of work stressors maintain their contrasting associations with overall growth, learning, achievement or gains and rewards. Specifically, challenge stressors hold the potential to promote growth, development and goal attainment, whereas hindrance stressors can potentially thwart these valued outcomes.

Following Cavanaugh et al. (2000) and Podsakoff, LePine, and LePine (2007), challenge stressors in the present study are defined as those work-related stressors that require effort and energy but can lead to growth, learning, and goal attainment of a focal subsidiary TMTs in their working relationship with headquarters. Examples of challenge stressors include workload, time pressure, high levels of responsibility. Then, hindrance stressors are defined as those work stressors presenting excessive or undesirable constraints that can interfere with or inhibit a subsidiary TMT's ability to achieve valued outcomes while working with/for headquarters. Examples of hindrance stressors include role ambiguity, role conflict, and administrative hassles.

2.5.2. Motivation: work engagement

Work engagement has originally been defined as the harnessing of organisation members' selves to the work roles by which the organisation members employ and express themselves physically, cognitively, and emotionally (Kahn, 1990). More recently work engagement has been defined as a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption (Schaufeli et al., 2002). From team-work perspective, team work engagement refers to a shared, positive and fulfilling, motivational emergent state of work-related well-being (Costa, Passos, and Bakker, 2014).

Following Costa, Passos, and Bakker (2014), subsidiary TMT work engagement is defined as a focal subsidiary TMT's shared positive, fulfilling, motivational emergent state of work-related well-being.

2.5.3. Institutional dependence

Institutional environments are characterised by the rules and requirements to which organisations must conform to receive legitimacy and social support (Grewal and Dharwadkar, 2002). Due to perceptions of foreignness, MNCs are confronted with the pressure to deal with expectations and requirements in institutional environments. Specifically, various constraints are imposed on MNC subsidiary operation by host country institutional constituents, including the government, professional associations, customer bodies, and the general public (Rosenzweig and Singh 1991). As a result, MNC subsidiary operations can be dependent on those local institutional constituents for critical resources, funds, or the simple way to do business (Grewal, Chandrashekar, and Dwyer, 2008).

In the present study, institutional dependence is regarded as an opportunity for MNC subsidiaries to obtain access to pools of local resources, while they endeavour to meet local constituents' expectations. Following Grewal, Chandrashekar, and Dwyer (2008) and Pfeffer and Salancik (1978), institutional dependence in this study is defined as the extent to which MNC subsidiary operations are dependent on Chinese institutional constituents, including the government, professional associations, consumer bodies, and the general public, for critical resources.

2.5.4. Subsidiary performance: operating revenue and local responsiveness

One of the subsidiary performance outcomes the present study measures is subsidiary operating revenue (i.e. key indicator of financial performance). Following Ali, Ng, and Kulik (2014), operating revenue is defined as the income generated from a focal subsidiary's primary business activities. The other performance outcome in this study is local responsiveness. As customers' needs within and across country markets can constantly and unpredictably change, subsidiaries' ability to respond continuously to emerging opportunities and threats has become a prerequisite for the success of multinational companies (MNCs) (Lee, Chen, and Lu, 2009; Morris, Hammond, and Snell, 2014). A challenge to MNCs' efforts to successfully manage international operations is that their strategic leverage is moving from global business efficiency to market responsiveness. Local responsiveness is therefore regarded as an important performance outcome for research, which refers to the extent to which an organisation can address customer-related and competitor-related changes in a timely way (Katsikeas, Leonidou, and Morgan, 2000; Homburg, Grozdanovic, and Klarmann, 2007). Consistent with Najafi-Tavani et al. (2018) and Luo (2001), local responsiveness in MNC subsidiary context is defined as the degree of a focal subsidiary's rapid responses to changes in market needs of host country.

2.6. Chapter summary

This chapter provided a comprehensive review of the pertinent literature. It starts with a literature review of studies on determinants of MNC subsidiary performance, highlighting some key theories that have been used. The review confirmed that subsidiary job stressors have not yet been examined by international business scholars. Thereafter, the transactional theory of stress and the JD-R model, and the neoinstitutional theory were discussed to be the fundamental models for the present study. Then, main constructs of

the current study were defined. The next chapter will further elaborate on specific propositions.

Chapter 3: Research Model and Hypotheses

3.1. Introduction

This chapter discusses the hypotheses of this thesis that consist of four direct effects (i.e. the effects of challenge stressors on work engagement, hindrance stressors on work engagement, work engagement on operating revenue, work engagement on local responsiveness) and four interaction effects (i.e. the moderating effects of institutional dependence on the relationship between challenge stressors and work engagement, hindrance stressors and work engagement, work engagement and operating revenue, work engagement and local responsiveness). Thereafter, the conceptual model is exhibited, followed by a summary of research hypotheses.

3.2. Main effects

3.2.1. The effects of challenge stressors and hindrance stressors on subsidiary TMT work engagement

As challenge stressors tend to be appraised as having the potential to promote growth or gains, they are inclined to trigger positive work attitudes and an active or problem-solving style of coping (e.g., strategizing, increases in work effort) (Crawford, LePine, and Rich, 2010). Those who encounter challenging stressors should be more willing to invest themselves in responses to such stressors because they may feel more confident and secure that the effort they expended will enable them to successfully address the stressors, and they are likely to perceive the pertinent opportunity for growth as meaningful and desirable (LePine, Podsakoff, and LePine, 2005). For instance, facing a high level of job responsibility, people may feel that if they work harder to meet this demand, they will accomplish tasks and potentially receive formal recognition (Crawford, LePine, and Rich, 2010). This is consistent with the established view that challenging situations can promote work motivation and engagement because employees hold the belief that their investment

of time and energy will lead to valued outcomes (Erez and Isen, 2002; May, Gilson, and Harter, 2004).

The similar effects of challenge stressors hold in working teams. When faced with challenge stressors, because team members appraise the situation as an opportunity for growth and manage with active problem-solving and increased work effort, the interdependent nature of the team will lead them to share the focus on solving problems (Pearsall, Ellis, and Stein, 2009). They are likely to allocate more work effort to develop solutions and maintain high levels of motivation (Chen and Kanfer, 2006). Consistently, the present study argues that if subsidiary top management teams encounter challenge stressors, they will appraise the situation as an opportunity of learning and growth and respond to such work stressor with a problem-focused coping strategy. Specifically, subsidiary TMT members will increase the effort allocated to performing their individual and collective duties assigned by the headquarters (c.f. LePine, Podsakoff, and LePine, 2005). They will also actively discuss the problem and possible solutions and reach their team-level goals. Their increased collective motivation is demonstrated by such adaptive responses as coordinating efforts and assisting teammates (c.f. Chen and Kanfer, 2006). Subsidiary TMT members will also remain mentally engaged in their duties and attempt to accomplish a shared, challenging mission (c.f. Pearsall, Ellis, and Stein, 2009). Therefore, it is convincing that as subsidiary TMTs can identify the potential benefits of learning and achievement in challenge-based work stressors, they are motivated to accomplish challenging tasks and manage problems, and it can be posited that:

H1: There is a positive association between challenge stressors and subsidiary TMT work engagement.

As hindrance stressors tend to be appraised as having the potential to impede growth or gains, they are likely to result in negative work attitudes and a passive style of stress coping (e.g., withdrawing from the situation, decreases in work efforts) (LePine, Podsakoff, and LePine, 2005). Those who experience hindrance stressors should be less willing to invest themselves to deal with work hindrances because they may perceive that they are unable to successfully deal with these stressors (Crawford, LePine, and Rich, 2010). As exploiting resources for the purpose of coping with these stressors may impede people from attaining meaningful outcomes, they tend to have little motivation to manage these stressors and, thus, adopt a more passive or disengaging coping style to deal with work hindrances (Kahn, 1990). This is consistent with the view that people are less cognitively and emotionally engaged when they encounter obstacles in work such as lacking information regarding what is expected of them or not having what they need to conduct work (Harter, Schmidt, and Hayes, 2002). Furthermore, because hindering situations may threaten the satisfaction of needs for competence, relatedness, and autonomy, it can weaken internal motivation (Deci et al., 2001; Meyer and Gagné, 2008). As the efforts to deal with these hindrances and obstacles are perceived to be futile, people encountering hindrance stressors are less willing to invest time and energy to directly tackle issues and will resort to a passive or emotion-focused style of coping that reflects decreased engagement (Crawford, LePine, and Rich, 2010).

In working teams, hindrance stressors should exhibit similar effects. As team members appraise a situation as harmful or meaningless, they will tend to respond by avoiding their individual task and team responsibilities (Pearsall, Ellis, and Stein, 2009). As team members become increasingly aware of their teammates' retreat behaviours from tasks and the breakdown of team interaction, they tend to reinforce their own response by employing a shared reliance on avoidance coping (Kozlowski and Klein, 2000). This

process is abetted by the notion of emotional contagion, through which team members interdependently share emotional signals and affective states (Hatfield, Cacioppo, and Rapson, 1994; Ilies, Wagner, and Morgeson, 2007). As team members respond to work hindrances with a passive or avoidance-based coping, this response is likely to be mirrored in other members (Pearsall, Ellis, and Stein, 2009).

Holding a consistent view, the present study argues that, in the context of MNC subsidiaries, if subsidiary TMT members encounter hindrance stressors, they will appraise the situation as negative and constraining. Then, teams tend to respond to hindrance stressors with an avoidant style of coping and reduced commitment (c.f. LePine, Podsakoff, and LePine, 2005). Team members are likely to disengage from team interactions and responsibilities while they focus more on dealing with their independent duties (c.f. Driskell and Salas, 1991; Hinsz, Tindale, and Vollrath, 1997). As hindrance stressors may be regarded by subsidiary TMTs as obstacles to their goal achievement decreasing team members' expectations that their efforts to meet headquarters' stressors will work, they can decrease team motivation (c.f. Pearsall, Ellis, and Stein, 2009). Hence, it is posited that:

H2: There is a negative association between hindrance stressors and subsidiary TMT work engagement.

3.2.2. The effects of subsidiary TMT work engagement on subsidiary performance

3.2.2.1. Subsidiary TMT work engagement and operating revenue

The positive link between team-level work engagement and superior team performance has received increasing research attention (e.g., Tims, Bakker, and Derks, 2013; Torrente et al., 2012). Based on the happy-productive worker hypothesis (Fisher, 2003), like individuals, engaged teams tend to have high productivity and performance (e.g.,

Christian, Garza, and Slaughter, 2011; Demerouti and Bakker, 2006; Tims, Bakker, and Derks, 2013). In alignment with this view, the present study argues that, in the context of MNC subsidiaries, the highly engaged subsidiary TMTs should also possess the energy and enthusiasm to perform well because motivation can keep them goal-oriented and focused on the work tasks (c.f. Bakker and Demerouti, 2017).

One of the prominent advantages a subsidiary may benefit from—with its highly engaged top management team—can be high operating revenue. As an indicator of financial performance, MNC subsidiary operating revenue has been found to be a key performance outcome of its employees' motivation (Fey et al., 2009). Motivation has also been identified as a primary building block of successful task performance (Boxall and Purcell, 2003). Furthermore, research has identified motivation as a prerequisite for the occurrence of crucial business routines (e.g., knowledge transfer) that can facilitate subsidiary financial returns (Chang, Gong, and Peng, 2012). Therefore, highly engaged employees should have the motivation to share and exploit knowledge for the purpose of boosting financial revenue. Based on this view and the important role of top management teams in developing a subsidiary's capabilities to facilitate its performance (Nielsen, 2010), it is reasonable to suggest that, if subsidiary TMTs are highly engaged in work, they have the motivation to actively develop strategies by exploring and exploiting available knowledge so as to improve financial performance and thus, they are likely to make significant contributions to the firm's operating revenue. Accordingly, it is hypothesised that:

Hypothesis 3: Subsidiary TMT work engagement is positively associated with subsidiary operating revenue.

3.2.2.2. Subsidiary TMT work engagement and local responsiveness

The present study also argues that the benefits of subsidiary TMT work engagement should not be limited to financial performance. Due to constant and unpredictable changes in markets within and across countries, subsidiaries' ability to respond continuously to emerging opportunities and threats has become a prerequisite for the success of multinational companies (Luo, 2001; Lee, Chen, and Lu, 2009; Morris, Hammond, and Snell, 2014). In order to successfully address local market changes, there is reason to suggest that subsidiary TMTs work engagement is essential. Specifically, on the one hand, highly engaged subsidiary TMTs tend to actively learn and utilise relevant market knowledge transferred from the organisation they are embedded in (e.g., headquarters) (c.f. Jiang et al., 2016; Rui, Zhang, and Shipman, 2016). On the other hand, highly engaged subsidiary TMTs also dedicate themselves to interpreting local cultures, behaviours, and institutions to acquire knowledge regarding local markets (Najafi-Tavani et al., 2018). Therefore, highly engaged subsidiary TMTs are expected to be more dedicated to addressing local market needs and changes and are more responsive to emerging opportunities and threats in local markets. Accordingly, it is hypothesised that:

Hypothesis 4: Subsidiary TMT work engagement is positively associated with subsidiary local responsiveness performance.

3.2.3. Moderating role of institutional dependence

One of the main disadvantages of subsidiaries is that they face liability of foreignness owing to unfamiliarity with the political, cultural, and economic aspects of foreign markets (Buckley and Casson, 1975). Such shortage of local knowledge and resources makes it difficult for subsidiaries to interpret local cultures, behaviours, and institutions (Mezias et al., 2002). Nevertheless, foreignness also creates advantages for subsidiaries

(Yildiz and Fey, 2012). Through appropriate firm-level actions, subsidiaries are adept at managing the consequences of foreignness (Edman, 2016).

Such “appropriate actions” are highly subject to the institutional environment of the host country. Institutional environments are characterised by multiple stressors such as the rules and requirements to which organisations must conform to receive legitimacy and social support (Grewal and Dharwadkar, 2002). An important consequence of these stressors is the institutional dependence (Rosenzweig and Singh, 1991). While it is essential for MNC subsidiaries to acquire critical resources in the host country, institutional dependence determines if they can do so and therefore takes on even greater significance for subsidiary operations and management (Kostova and Zaheer, 1999). In Chinese business system, it is highly reasonable for subsidiaries to rely heavily on major institutional referents for critical resources (Redding and Witt, 2009). For the purpose of securing resource access and reducing idiosyncrasies, subsidiaries must endeavour to meet local constituents’ expectations (Pache and Santos, 2010; Meyer, Rowan and Scott, 1983).

While the present study has argued for a positive association between challenge stressors and subsidiary TMT work engagement, there are reasons to suggest that such positive link is conditioned by institutional dependence. On the one hand, research has regarded the management knowledge of local institutional stressors as an important resource for subsidiaries (Ferner, 2000; Geppert, Williams, and Matten, 2003; Kristensen and Zeitlin, 2005). Such knowledge resources should assist subsidiary TMTs to develop capabilities that are necessary for coping with challenging work tasks. Furthermore, as “interpreters” of the local environment, subsidiary TMTs can educate their headquarters’ management teams with the knowledge derived from their role experience (c.f. Kristensen and Zeitlin, 2005). Research has also confirmed that subsidiaries benefit more significantly from

learning when the level of institutional dependence is high (Grewal, Chandrashekar, and Dwyer, 2008).

On the other hand, the access to local critical resources (Rosenzweig and Singh, 1991) secured by subsidiary TMTs that have been responsive to institutional constituents' expectations may enhance their capabilities of operating business that is required by headquarters. For instance, subsidiary TMT's dedication to overcoming challenges (e.g., time pressure and workload) can be stronger if they acknowledge that they are entitled to local resources (e.g., favourable policies) that can assist them in solving problems. Therefore, it is hypothesised that:

H5: Institutional dependence strengthens the positive effect of challenge stressors on subsidiary TMTs work engagement.

The present study also argues that institutional dependence can condition the relationship between hindrance stressors and subsidiary TMT work engagement. Essentially, MNC subsidiaries must learn from host country environments to generate valuable knowledge and competitive advantages (Frost, 2001; Frost, Birkinshaw and Ensign, 2002). When the level of institutional dependence is high, it is essential for subsidiaries to interpret local environment to address institutional constituents' expectations for the purpose of acquiring critical resources and avoiding negative consequences (e.g., legitimate issues) (Pache and Santos, 2010; Meyer, Rowan and Scott, 1983). The knowledge derived from such experience of addressing institutional constituents' expectations should be useful to subsidiary TMTs as it contains details regarding what is expected of subsidiaries (Ferner, 2000; Geppert, Williams, and Matten, 2003; Kristensen and Zeitlin, 2005).

Furthermore, subsidiary TMTs may transfer such knowledge to headquarters, which provides an opportunity for them to learn and discuss the specific tasks that should be

accomplished by the subsidiary for the local market priority (Najafi-Tavani et al., 2018). As the subsidiary's understanding of work priorities improves, they are more likely to stay focused on work. With such knowledge, notwithstanding work hindrances such as role ambiguity and role conflict, subsidiaries TMTs must remain dedicated to performing work that is either requested by institutional constituents or updated through discussions with headquarters about the work situation. This can enhance their ability to manage work barriers of ambiguous and/or incompatible information regarding what they should do and to remain engaged in work. In this respect, the negative influence of hindrance stressors on subsidiary TMT work engagement can be attenuated by high institutional dependence. Therefore, it is hypothesised that:

H6: Institutional dependence mitigates the negative effects of hindrance stressors on subsidiary TMT work engagement.

It has been argued that there is a positive association between subsidiary TMT work engagement and subsidiary operating revenue. However, due to liability of foreignness, subsidiaries may be unfamiliar with the political, cultural, and economic issues within foreign markets (Buckley and Casson, 1975) and experience difficulties in interpreting local cultures, behaviours, and institutions (Mezias et al., 2002). Thus, they may rely on local institutional constituents for critical resources (Grewal and Dharwadkar, 2002). Hence, work motivation per se may not be enough to predict financial performance.

When institutional dependence is high, subsidiaries must respond to institutional constituents' expectations to obtain resources that can support local business operations (Grewal and Dharwadkar, 2002). As institutional stressors convey messages regarding what is expected of subsidiaries, the management knowledge of these stressors may serve to help subsidiary TMTs identify prominent opportunities and threats within host country

(Kristensen and Zeitlin, 2005). With such knowledge, subsidiaries TMTs may become more capable of developing primary business projects that are considered locally appropriate or preferred. As organisational learning perspective suggests, subsidiaries can proactively reduce ambiguity of the new environment by interpreting and acting on the information and signals they receive from the environment (Yuan, Pangarkar and Wu, 2016). Based on this view, because institutional stressors specify the expected behaviours of subsidiaries in host country, subsidiaries can utilise such knowledge to develop strategies for facilitating local operations.

Because of having addressed institutional stressors, the access to local critical resources such as favourable policies and opportunities for development acquired by subsidiary TMTs can further enhance their capabilities of operating business (Rosenzweig and Singh, 1991). Therefore, in the presence of high institutional dependence, the positive influence of subsidiary TMT work engagement on operating revenue should be stronger because it facilitates the team with knowledge and resources that can boost local operations (e.g., legitimacy, opportunities for development). Therefore, it is proposed that:

H7: Institutional dependence can strengthen the positive effects of subsidiary TMTs work engagement on subsidiary operating revenue.

MNC subsidiaries can proactively reduce the ambiguities regarding the new environment through interpreting and acting on the information and signals they receive from the environment (Yuan, Pangarkar and Wu, 2016). In high institutional dependence environments, such information and signals regarding the environment tend to be conveyed by institutional stressors and subsidiaries must comply with these expectations to acquire critical resources as well as avoid punishment such as ban on operations (Pfeffer and Salancik, 1978). Consumer bodies and general publics of the host country

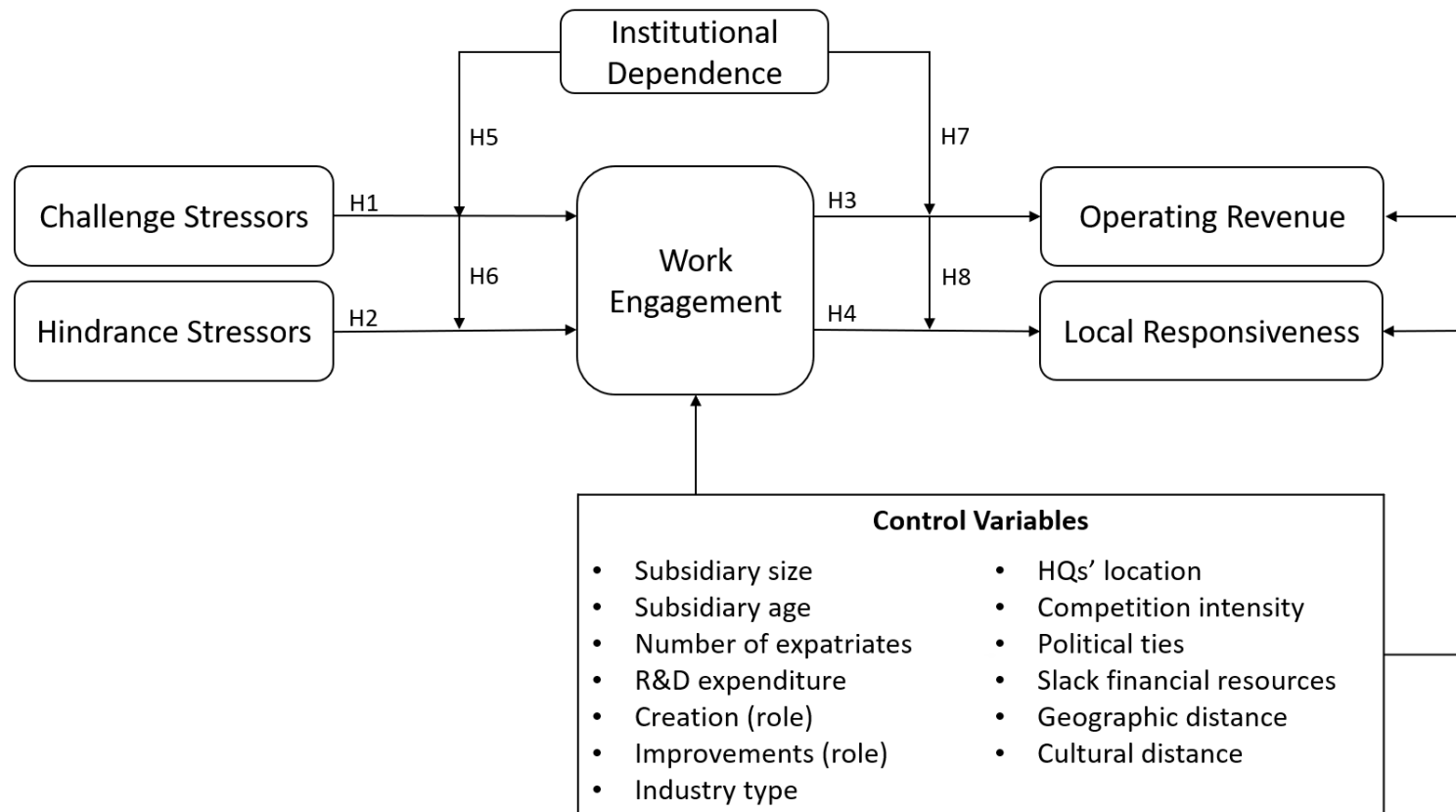
constitute one of the major sources of institutional stressors for MNC subsidiaries (Rosenzweig and Singh, 1991).

In alignment with the view, those stressors specific to host country market can be instrumental in reducing subsidiaries' perceived ambiguity of local market needs (Yuan, Pangarkar and Wu, 2016). Specifically, they provide subsidiary TMTs with valuable information regarding local marketplace that can assist them to develop effective strategies in response to emerging and changing needs. With such knowledge, their responsive strategies should be in alignment with institutional constituents' values and thus are highly likely to be approved or supported for operation. Furthermore, the access to local critical resources such as favourable policies (Rosenzweig and Singh, 1991) can enhance their capabilities and probability of successfully addressing local market changes and needs. With this knowledge, in high institutional dependence environment, highly engaged subsidiary TMTs can have stronger capabilities of addressing local market changes, thereby resulting in superior local responsiveness performance. Therefore, our proposition is that:

H8: Institutional dependence can strengthen the positive effect of subsidiary TMTs work engagement on subsidiary local responsiveness.

3.3. Model summary

Figure 1. Conceptual model



3.4. Chapter summary

In this chapter, the development of hypotheses was discussed and was followed by the research model in Figure 1. The summary of hypotheses is presented by table 3.1. Four propositions focus on direct effects and the other four hypotheses address the interactive effects.

Table 3.1. Summary of the developed hypotheses

Hypothesised path	Predicted path
H1: Challenge Stressors → Work engagement	Positive
H2: Hindrance Stressors → Work engagement	Negative
H3: Work Engagement → Operating Revenue	Positive
H4: Work Engagement → Local Responsiveness	Positive
H5: Challenge Stressors X Institutional Dependence → Work Engagement	Positive
H6: Hindrance Stressors X Institutional Dependence → Work Engagement	Positive
H7: Work Engagement X Institutional Dependence → Operating Revenue	Positive
H8: Work Engagement X Institutional Dependence → Local Responsiveness	Positive

Chapter 4: Methodology

4.1. Introduction

This chapter discusses the research design, questionnaire design and administration, sampling, and the procedures of data collection. Scale properties and measure items are presented. It finishes by detailing the specific quantitative data analysis procedures for the study's hypotheses testing.

4.2. Research methodology

In order to address the research objectives, this study employed both qualitative interviews and a quantitative survey (Neuman, 2010). The conceptual framework was depicted by Figure 1. The research methodology adopted for this research benefits from the strengths of both qualitative and quantitative approaches. The pre-study interview was conducted to confirm the existence of challenge and hindrance stressors faced by subsidiary top management teams that had not yet been investigated. Based on prior work stressors research in other occupational settings (e.g., expatriation), it is considered that the two types of work stressors are also worth examination in subsidiary TMT context. Then, in line with the existing research on work stressors (e.g., Kawai and Mohr, 2015), the quantitative approach of questionnaire was employed to examine the hypothesised relations. Thus, despite that the challenge and hindrance stressors can be researched across different occupational settings, it is still valuable to find out what specific work stressors are faced by subsidiary top management teams and the potential benefits and/or harms they may result.

4.2.1. Exploratory interviews

Creswell (2003) suggested that when few empirical studies have been conducted on the subject matter, a qualitative approach is an appropriate research method to further explore it. Indeed, the effects of challenge stressors and hindrance stressors in headquarters-subsi-

relationships have not yet been captured by the extant international business literature; thus, it is appropriate and imperative to investigate this issue through qualitative lens. This approach enables the researcher to understand if and what specific challenge and hindrance work stressors exist within the MNC subsidiaries based on the interviewees' explanations regarding their own managerial expertise and experiences while working with/for headquarters.

The qualitative stage involves interviews with senior managers of separate subsidiaries in the People's Republic of China. The prominent aim of these interviews is to confirm if subsidiary managers are affected by challenge and hindrance job stressors while working with/for the headquarters and potential effects of such stressors. Initially, twenty subsidiary managers were contacted by phone for willingness to participate. Over the phone, they were provided with general information regarding the main research purpose. Interviewees were also assured that their responses will remain anonymous and will be treated in the strictest confidence. A final number of five subsidiary managers agreed to participate. The researcher verified email addresses with interviewees, because the questions would be emailed to them and were expected to be returned within two weeks. Interview questions were presented in both English and Mandarin. Each interviewee was provided with adequate time and privacy to address the questions. Eventually, all responses were returned within two weeks after being emailed to interviewees.

The coding process was straightforward based on key words such as "workload", "pace", "time pressure", "responsibilities", "complexity" among others. These key words can be easily interpreted in interview scripts. The coding was checked twice for no differences. The coded responses are presented by table 4.1. The results have addressed some important issues

the current study focuses on. Firstly, the working relationship with headquarters has been regarded as stressful to almost all subsidiary managers. As explained by a Chinese subsidiary executive, “We [the top management team] feel that the headquarters has fairly high expectations of our subsidiary and we just cannot make everything work as soon as they expect”. Further, some other factors have been suggested as causes of tension, such as insufficient support from headquarters, headquarters’ expectations and standards, goals incongruity, (lack of) communication, lack of autonomy, supervision, and perception gaps or disagreement. Secondly, there are both positive and negative stressors in the headquarters–subsidiary relationship. As noted by an executive, “I would say [the top management team face] rapid pace of work and time pressure. For example, the HQs once had a project for us to carry out, but we received the work details from them on a Friday night. We had very limited time to prepare so we had to make some employees work extra hours at the weekend”. Meanwhile, this manager claims that “We [the top management team] often experience the trouble of red tape. Our HQs is rigorous about our subsidiary's budget. We need their approval for holding costly events such as training sessions or client reception arrangement or hospitality”. Thirdly, in some cases, work stress can positively affect subsidiary managers’ work motivation and performance. According to the interviewees, “It [Stress] pushes us [the top management team] to work harder and learn more about what we [the team] do not yet know. We [The team] look for resources that we don’t have”. Eventually, “We [the top management team] get more and more experienced so that we [the team] can do our jobs better”. Taken altogether, the preliminary interviews have confirmed that research propositions regarding challenge and hindrance stressors in headquarters–subsidiary relationships are an important issue and are thus worth investigating.

Table 4.1. Coded interview responses

Questions	Translated Responses	Coded Categories
<ul style="list-style-type: none"> Reasons why the relationship with headquarters is or is not stressful 	<p>Biotec: Our relationship with the HQs is <u>stressful</u> since we cannot get <u>timely or enough support from headquarters</u> when we need their assistance. We feel that the <u>HQs has fairly high expectations</u> of our subsidiary. However, in the absence of their support, we just cannot make everything work as smoothly as they expect. Then we must go a long way to come up with some solutions or try to communicate with them.</p>	<p><u>Insufficient support from HQs,</u> <u>HQs' expectations & standards,</u> <u>HQs' & subsidiary's goals,</u></p>
	<p>Nestlé: Our subsidiary is mainly responsible for the production and sales of Nestlé's food and beverages. Most of the time we can accomplish the <u>HQs' and our subsidiary's goals</u>. We also <u>discuss with our HQs</u> what we may not be able to achieve. Therefore, our relationship with the HQs is normally not too problematic.</p>	<p><u>Communication with HQs,</u> <u>Autonomy,</u></p>
	<p>Ortho: Our relationship with headquarters is <u>stressful but not too stressful</u>. This is because we are aware of the <u>importance of high-quality communication</u> and we always try to <u>maintain good communication with HQs</u>. Monthly meetings are held in order that the HQs knows what exactly is going on in our local markets. We often <u>present to them</u> what is happening or what has already happened to different markets in China and highlight our findings. Besides, VPs from HQs sometimes <u>travel to China to meet us</u>.</p>	<p><u>Supervision,</u> <u>Perception gaps (and disagreements)</u></p>
	<p>R.Bosch: We have our own <u>power and rights</u> when developing business in the local market. Instead of being monitored or controlled, we feel encouraged to work as a representative of the entire corporation. The HQs regularly <u>supervise and guide our work</u>. When they see a problem, they just <u>communicate with us</u>. Most of the time, their <u>instructions are useful</u></p>	

enough to help us identify some potential problems in our work. Therefore, working with/for them is not very stressful.

TI: I think this relationship is stressful. Because of the acquisition, TI Automotive Shanghai now is a subsidiary affiliated with its headquarters in the U.S.A. (U.K. earlier). Influenced by capitalism, the HQs is strongly concerned with the capital chain. All our subsidiary's commercial projects must be at least as good as the standards set by the HQs and all investment plans must be approved by them. However, due to differences in national and marketing conditions between U.S.A. and China., we tend to hold different attitudes and concerns when making decisions. For example, the HQs focuses on high-profit outcomes and those strategic goals that have already been set, whereas we find it more important to make decisions in accordance with the present situation in Chinese market and have a flexible plan for the subsidiary's future development. Due to a desire for self-achievement, it is common now for some employees to quit work and move to another company (e.g., our competitor). However, the HQs doesn't really understand some situation here in China. Here is another example. Recently, we have received a proposal from one of our partners that could earn us an annual profit as high as one hundred million RMB. The problem is that they can only pay us at an annual basis for ten years. Such case has received the HQs' disagreement. If we take this opportunity, we can easily meet the HQs' requirements regarding our performance. However, the HQs is more concerned that the payment by instalments may negatively affect our capital chain. It is reasonable that the HQs has some requirements on our subsidiary's performance. However, in some cases, the HQs does not approve of the plans that we consider are beneficial to our subsidiary.

<ul style="list-style-type: none"> Do any of the following factors cause stress in the relationship with your headquarters and, if so, how? Stimuli such as heavy workload, fast pace of work, time pressure, task complexity, accountability and responsibility <p><i>Note: We followed LePine et al. (2016) to measure challenge and hindrance work stressors' items, so for this qualitative study we asked if these items cause stress (i.e. if they exist in subsidiary context).</i></p>	<p>Biotec: I would say rapid pace of work and time pressure (e.g., work schedules). For example, the HQs once had a project for us to carry out, but we received the work details from them on a Friday night. We had very limited time to prepare so we had to make some employees work extra hours at the weekend.</p> <p>Nestlé: I don't think any of these factors does. Fast pace of work can be adjusted by better time management and higher flexibility. Also, they are a part of my job and I am used to them, so they don't seem stressful to me.</p> <p>Ortho: Because the Chinese market is one of the most rapid developing markets, HQs values our subsidiary's performance. The high expectation is stressful to our teams. We often hear from headquarters about what they expect us to achieve. Sometimes it happens exactly when we are trying to handle multiple major projects. This gives us a lot of stress. We do not want our business to fail.</p> <p>R.Bosch: The KPI (Key Performance Indicator) expected to be achieved by our subsidiary can affect the way we work (e.g., heavy workload). In the local market, consumers' preferences are changeable, and the number of competitors can never be underestimated. It is common that our market share goes up and down. Recently, our competitors have been working with some of the most popular TV programs to advertise their products.</p> <p>TI: <u>All of them do.</u> Our subsidiary has heavy workload with a high level of responsibility for production and marketing in Chinese market. A lot of work is time consuming and some employees are required to work extra hours at a regular basis. Due to time pressure, sometimes we have no choice but to outsource work. In addition to the local business, we also receive assignments from the HQs with time limits, such as internal training and development plan.</p>	<p>Fast pace of work, Time pressure, Accountability & responsibility, Workload, Complexity</p>
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<ul style="list-style-type: none"> • Do any of the following factors cause stress in the relationship with your headquarters and, if so, how? • Constraints such as administrative hassles (red tape), role ambiguity, role conflict, resource inadequacies, interpersonal conflict, and organizational politics <p><i>Note: We followed LePine et al. (2016) to measure challenge and hindrance work stressors' items, so for this qualitative study we asked if these items cause stress (i.e. if they exist in subsidiary context).</i></p>	<p>Biotec: We often experience the trouble of red tape. Our HQs is rigorous about our subsidiary's budget. We need their approval for holding costly events such as training sessions or client reception arrangement/hospitality. Doing business in China involves building social connections with local potential partners. Some contracts were signed at dinner table. However, our application cannot always get reviewed by the HQs in time because sometimes the HQs' personnel in charge is out of office. It leaves us helpless since we do not have their approval to spend money on events. For example, due to this problem, we once held a training event for our local agents and the hospitality was simple (not good enough). We think it was bad since we 'lost faces'. It has a negative influence on our cooperation with them.</p>	<p>Red tape, Resources inadequacies, Role ambiguity, Role clarity, Role conflict</p>
	<p>Nestlé: <u>Yes, they do.</u> I think there are three reasons. First, when the markets keep growing fast but our supplies cannot catch up with them, we feel pushed or coerced by the HQs' requirements into struggling. This is stressful. Second, due to local/regional differences, we don't possess the resources that they think we were supposed to have. Third, sometimes our work details do not seem clear enough and their strategies make us stressed.</p>	
	<p>Ortho: Our duties are clear. We know what we should do and are responsible for. However, we receive a lot of expectations from our headquarters. They need us to report a lot from past performance to future (plans). I do think sometimes we spend a lot of time in preparing report documents and presentations. However, good report makes everyone happy and if they are happy, we are happy, too.</p>	
	<p>R.Bosch: The system of business administration in our organisation is complex, denoted by a variety of time-consuming procedures or paperwork. Sometimes, it is also hard to avoid</p>	

	<p>doing work beyond my responsibility. For example, sometimes it is necessary to look after the affairs my colleague is responsible for when he is out of office for a while.</p>	
	<p>TI: All quoted prices must be approved by the HQs. It takes at least two or three weeks to hear from them. However, some clients do not like to wait and if we keep them doing so, they may just go to our competitors. In China, it is very important to develop and maintain a great relationship with pertinent personnel so that things can just get so much easier. The HQs thinks that we only need to be professional and it makes no sense to treat our local clients or partners to dinners and gifts. However, it is worth noting that doing business in China is different from that in western countries. If we don't socialise in this way, our competitors would do it anyway. Then we may lose the battle from the beginning. The HQs also has strictly regulated that we must not give important information to others if they offer us free and nice things.</p>	
<ul style="list-style-type: none"> Is there such a thing as positive stress in the relationship, or is it always negative? 	<p>Biotech: Both positive and negative. Usually, it is negative.</p> <p>Nestlé: Overall, it is positive. Our main directions and goals are the same as theirs, which makes it acceptable to have some stressful issues in our relationship with them. The existence of this kind of stress keeps us interacting with each other in order that it can be alleviated. For</p>	<p>Positive stress,</p> <p>Negative stress,</p> <p>Both positive and negative (stress)</p>

	<p>example, in our subsidiary, we must stay connected and have the common and shared spirit. In the meanwhile, we try to maintain a good communication with the HQs.</p> <p>Ortho: We keep a frequent contact with HQ and report to HQ monthly. There might be some stress when things do not go well as scheduled. But the stress HQs puts in the relationship is positive and push our local business to grow faster. It pushes us to work harder and take challenges. I always tell my colleagues to love challenges. We know that our company is very important to the whole MNC's success and we are supposed to feel stressed. In an old Chinese saying, we say 'Neng Zhe Duo Lao'. We should get used to the feelings of stress because they come along with our unique responsibility for the business here in China. I would assume I'm already in trouble if I don't see any stressful things.</p> <p>R.Bosch: If it comes to the stress itself, I think it is negative. I don't feel a high level of stress in the relationship between our subsidiary and the HQs since this relationship has been efficient. It means that we are good at discussing problems with each other, which leaves no chance for them to get worse. Then some potential stressful outcomes can be deterred.</p> <p>TI: I think it is negative. As a subsidiary, we must overcome a lot of stressful work stressors. A high-quality relationship with the HQs is very important to us. We need their understanding and support, which saves time and effort. However, as soon as there is something wrong with this relationship, we turn helpless and anxious. It is commonly agreed that the development of our subsidiary is critical to the success of the entire corporation and we deserve their support. Therefore, the problems in this relationship can negatively affect us.</p>	
<ul style="list-style-type: none"> • How do you evaluate the stress in 	<p>Biotec: This stress has both positive and negative influence. I think that, stressful problems can inspire us to think of solutions, increasing personal initiative. However, if we still fail to</p>	<p>Beneficial stress, Detrimental stress</p>

<p>the relationship with your headquarters? Does this stress benefit or impede your subsidiary's growth and development?</p>	<p>solve problems even after trying different methods, or if there is a lack of timely support from the HQs, the stress can worsen and cause a negative influence on the business opportunities for our company. That is, when we have problems and get no support from the HQs (i.e. budget), we have no choice but to be parsimonious (especially when organising events for our local partners). This may seem like we are not taking them seriously.</p>	
	<p>Nestlé: I think that the stress is only temporary. We have geographical and cultural differences with the HQs, and it is very reasonable to have some issues that deserve attention and resolution. Therefore, it is beneficial to our subsidiary because we get to understand them more and more and vice versa. It's good for our development as we learn. Furthermore, we have the same directions.</p>	
	<p>Ortho: The stress is beneficial to our local market performance. We perform better under stress because we are aware of our weaknesses. If we are good enough, for example, we know everything about our local market, we should not be afraid when they make a request. So, it pushes us to work harder and learn more about what we do not yet know. We look for resources that we don't have. And I clearly understand that to those from headquarters if we perform well (higher market share), they will be pleased.</p>	
	<p>R.Bosch: If there is a problem, we must take measures to solve it. I think, when this is done, our subsidiary can grow in a better way. Therefore, it is beneficial to us if there is a moderate level of stress in our work (not too much).</p>	
	<p>TI: I think the stress itself is negative and harmful, which is an indicator of the existence of problems. Problems affect the development of our company, but they are also a part of our work. It is important to see and treat them in a correct way. It is also necessary to think of the ways to successfully address the issues. Face up to problems and try to solve them. Then I</p>	

	<p>think benefits will come. Besides, while making effort to solve problems, our experience accrues. We can pick up more knowledge and skills. For example, we try to communicate with HQs more often and tell them the reasons why we do this or that. Make it clear what consequences will happen if it is not done this way. By doing it, the HQs will get to understand more about our views. Hence, the way in which we handle the stress or solve the problems is very important to the well-being of our subsidiary.</p>	
<ul style="list-style-type: none"> How do you usually feel when you experience stress in the relationship with your headquarters? Do you feel more energetic or exhausted by work? 	<p>Biotec: In this case, I usually feel exhausted because the feelings of strain just bother me. However, I think problems always need to be solved and it does no good if we escape. Moreover, as a leader, I should not negatively affect other people in the company with my own bad emotions. I am a professional and I must motivate them to work hard, especially when problems visit. After all, if our subsidiary does not perform well, we lose our face.</p> <p>Nestlé: I feel more exhausted at present, since the HQs requirements are challenging. However, I think we will sort them out sooner or later.</p> <p>Ortho: When things do not go well, we sometimes feel exhausted and frustrated. It only takes a short time for us to get back to normal. The more the stress is, the more energetic we are. I always try to develop the team spirit in our company because I think it is very important when we have difficulties. I value the power of group. If we work hard together, we can solve all problems. This is also why we have two big group vacations every year. We have some team-building activities. People get to know more about each other and become happier when working together. When we feel like a big family, we can really enjoy working together to solve issues. It is great to solve problems with people you particularly enjoy working with.</p> <p>R.Bosch: I usually feel more willing/happier to think about how we should react to the problems. The HQs encourages us to communicate or discuss with them once we find</p>	<p>Feelings of exhaustion.</p> <p>Feelings of motivation</p>

	<p>something wrong. I think, when we have problems, we should not think about them in a negative way. Instead, we should have positive attitudes so that the HQs can see our strengths. I also realise that this is a good opportunity to prove our capabilities and develop my personal leadership style. That is, when I am leading our staff to work hard together, I feel that it is so right and I'm doing a great job.</p>	
	<p>TI: I usually get headache when I deliberate over the potential reasons for problems. This is also accompanied by some negative thoughts and emotions. However, it doesn't sacrifice my intention to solve the problems or stop them from worsening. It is after discussing with my colleagues when I feel much better. I would say this stress can be turned into power.</p>	
<ul style="list-style-type: none"> • What do you usually do to cope with stress in the relationship with your headquarters? Do you just try to solve problems or avoid them? 	<p>Biotech: It all depends. I would try thinking of some methods to solve the problems and then discuss with my colleagues to decide which one would work the best or find out, if possible, new methods. We also understand that solving problems is the only choice we have. We must solve problems. Once it is done, good things will come, too. As a subsidiary, we cannot turn a blind eye to problems or treat them in the most negative manner. Otherwise, the consequences are detrimental to both the HQs and us. Therefore, we follow the absolute principle—solve problems—rather than escape.</p> <p>Nestlé: I usually tell them about my concern, trying to solve the problem. I also think about what I can do and what I should do, if there is any, I just do it. I make sure that I have good reasons to support my opinions. That's all I can do at this stage. After all, it is still the HQs that decides.</p> <p>Ortho: We absolutely solve problems when there is issue in business. Escaping is not the right way. Escaping from problems does not benefit our company at all. It also leaves problems unsolved forever. To be honest, I think the only way to get rid of problems we have is to</p>	<p>Problem solving</p>

	<p>work on them. The headquarters can give us advice, but it is us that can fix the problems. So instead of waiting, we solve problems as soon as we can.</p> <p>R.Bosch: Definitely try to solve problems. I don't like to cover the problems or avoid them. What we are responsible for here in China is a fast-growing and increasingly competitive market. In order to benefit from those opportunities in this market, we must improve our subsidiary performance by both solving problems and taking challenges.</p> <p>TI: Above all, I discuss issues inside the company to figure out why, who, and how. Why did the problems happen? Who should be responsible for them? How can we solve the problems? Then, we try to communicate with the HQs to get their understanding and support. We tell them about our ideas and why we think so. We also make it clear that we will do our best to solve the problems and we (may) need their help. Therefore, we take an active part in solving problems. Otherwise, we get nothing but more and more troubles.</p>	
<ul style="list-style-type: none"> • What do you think are the consequences of coping with stress in the relationship with your headquarters? Are there any positive outcomes? 	<p>Biotech: If problems get successfully solved, they would certainly bring <u>good results.</u> For example, our subsidiary can have the access to more resources and higher levels of flexibility, which in turn, result in better operations. However, to be honest, what is happening now is not pleasant. Even if we have tried several times to communicate with the HQs about the problem (i.e. late approval of applications), we still have not seen their efforts to improve the pertinent process. Due to this issue, we once even failed to pay our local agents on time, which affected our professionalism. Although it is reasonable that the HQs is highly concerned with the usage of funding, it indeed causes us some inconvenience and unnecessary burdens. I think the process is not good enough and it certainly requires improvement.</p>	<p>Positive outcomes: Resources, Flexibility, Better operations, Team spirit, Work experience, Job performance, Issues prevention, Learning, Business knowledge, Relationship satisfaction with HQs, HQs' support, Feelings of</p>

<p>Nestlé: Our subsidiary can become more united. We also pick up a simpler way to deal with problems. While attempting to solve problems, we get more and more experienced and we can do our jobs better. Besides, in a similar situation, we are better at detecting issues.</p>	<p>excitement and motivation, Cooperation with HQs.</p>
<p>Ortho: We will let the HQ know our troubles and difficulties and ask for advice from HQ, especially big problems. HQ will find more resources to support us. Then we can find the right way to maintain our good performance. We can always collect new things after solving problems and next time a similar problem comes up, we smile and solve it. We also mark the problems down for future references and discuss with our HQ.</p>	<p>Negative outcomes: Business failure, Inconvenience and unnecessary burdens.</p>
<p>R.Bosch: There're some positive results, which depend on methods. When we are solving problems, we get to know more and more about our own business. From a psychological perspective, we become more confident and willing to work for/with the entire corporation. For example, I would feel that our relationship with the HQs is great and even if there are more problems coming to us, we can still manage to solve them. I also feel that the HQs' support will always be accessible and useful. Then can just throw myself into work. There seems no psychological burden at all.</p>	
<p>TI: I think our relationship with the HQs has been improved after solving the problems. I feel more like a "family". It also makes me more excited about working with them. I would agree with it more that problems are opportunities. When there is a new problem, I would be more willing to discuss it with the HQs. In the meanwhile, we can learn how to deter the similar problems from happening again or how to solve them if they do show up again. There is an increase in capabilities, I think.</p>	

	<p>Nestlé: The unity inside our subsidiary is very necessary. We must make sure that our employees would love to align themselves with the company. Our people are also the foundation for our sustainable development in China.</p>	
	<p>Ortho: Both network and the help/guidance from HQ are important to us. We have our own partners in China (e.g. MSL Group) and working with them keeps us learning. Sometimes things just get so much easier when working with these local partners. In addition, the understanding and support from our HQ are also important. Sometimes we need more time and more budget to come up with business strategies and when they show understanding and support, things just get so much easier.</p>	
	<p>R.Bosch: I think human resources are very important to us. “Our people first”, meaning that we prioritise our employees’ well-being and capabilities. Our employees can directly determine if our goals can be achieved or if our tasks can be accomplished in a highly professional manner. The initiatives of our people also hold the key to the identification, resolution, and prevention of problems facing our subsidiary. Therefore, we put a great emphasis on the recruitment and career development of talents in the long run. For example, we offer internships and apprenticeship programs with competitive payment. Besides reviewing online applications, we visit universities in China. We care about the future and we insist that our people shape our future.</p>	
	<p>TI: Network is very important to our subsidiary. Our local partners in China give us a lot of help. We consider it necessary to build and maintain a good relationship with them. However, we do not have enough freedom to conduct activities for network. In this case, we need more understanding and support from our HQs regarding the way we interact with our local partners and clients (i.e. autonomy).</p>	

4.2.2. Quantitative stage

Based on the theoretical background in chapter two, the conceptual framework of the present study was developed. In addition, the qualitative approach (i.e. interview) was employed to confirm the meaningfulness of the research model. The findings suggest that both challenge and hindrance stressors are faced by subsidiary top management teams while working with/for their headquarters. Furthermore, the two types of work stressors have influence on their work well-being as well as organisational performance. This confirms that work stressors are worth studying across occupational settings and the research concern about the two types of work stressors in headquarters-subsidary relationships has pragmatic implications.

Pertinent hypotheses were developed. Following this, the quantitative stage was designed to conduct a large-scale survey to test proposed hypotheses. The quantitative method refers to the approach in which:

“The investigator primarily uses post-positivist claims for developing knowledge (i.e. cause and effect thinking, reduction to specific variables and hypotheses and questions, use of measurement and observation, and the test of theories), employs strategies of inquiry such as experiments and surveys, and collects data on predetermined instruments that yield statistical data” (Creswell, 2003, p. 18).

This approach is also characterised as *“seeking the facts/causes of social phenomena”*, *“objective”*, *“verification oriented”*, *“reductionist”*, *“hypothetico-deductive”*, *“outcome oriented”*, *“reliable”* and *“generalisable”* (Oakley, 1999, p. 156). Therefore, the quantitative approach is instrumental in theory testing (Creswell, 2003). Within this approach,

survey administration is the most widely used research method of inquiry (Desai and Potter, 2006).

The quantitative stage of this research consisted of three main phases. In Phase 1, we developed an English version of questionnaire, which was then translated to Mandarin via a native-speaker translator. The Mandarin version was then back-translated Mandarin by another native-speaker translator to make sure the original meanings were retained. Both translators were experts in the subject matter this survey focused on. In the next phase, we pre-tested the questionnaire with five academic experts to ensure face validity and content clarity. We revised the questionnaire based on their feedback. The last stage involved administering the questionnaire using Qualtrics survey tool, which generates a link to online survey and records survey responses. The final survey was presented in Mandarin, or in English in cases where the informant was non-Chinese and requested the English version. It was used to collect data for hypotheses testing of this study.

4.2.2.1. Research sample

The unit of analysis in this research is wholly owned manufacturing subsidiaries' senior managers in China who work for their overseas headquarters and who are highly knowledgeable about the work stressors within the relationship. Research has suggested that the entry mode (i.e. being wholly owned or joint-ventured) can significantly affect subsidiary performance (Chang, Chung, and Moon, 2013). Because of the affiliation to two (or more) parent firms, joint-ventured subsidiaries tend to receive job stressors from more sources than their wholly owned counterparts. With this fact, the research sample of this study is those wholly owned subsidiaries established in China.

The present study focuses on senior-level teams because such senior executives and their teams are an important determinant of organisational success (Certo et al., 2006). Furthermore, according to the interviews, subsidiary top management teams regularly receive job stressors from headquarters. As this research focuses on the effects of subsidiary job stressors in headquarters–subsidiary relations, it is appropriate to collect data directly from subsidiary TMTs who are more familiar with and responsible for job demands emanating from headquarters.

Meanwhile, the current research model was tested within the context of manufacturing industries in China. This country is a desirable setting for studying wholly owned subsidiaries (Li, Yang, and Yue, 2007), and one of the largest recipients of foreign direct investment (Guillén, 2003). Indeed, manufacturing subsidiaries' performance in China has attracted substantial research attention (Li, Yang, and Yue, 2007; Zhang, Benedetto, and Hoenig, 2009; Najafi-Tavani et al., 2018).

The manufacturing industry is regarded as a suitable setting to this research for two reasons. First, China has become one of the most important and popular foreign manufacturing locations for foreign companies (Guillén, 2003). Second, there are major differences between manufacturing sectors and others, such as the services. Manufacturing subsidiaries are prone to higher dependence on internal sources of knowledge (i.e. headquarters and peer subsidiaries) for knowledge development (Yamin, 1999). For example, manufacturing subsidiaries need highly codified knowledge from the headquarters to make tangible products (Koch and Strotmann, 2008). The working relationship between the headquarters and subsidiaries in this context is complex and is worth investigating. Therefore, the

manufacturing industry serves as an appropriate setting for studying job stressors in headquarters-subsidary relationships.

4.2.2.2. Survey administration

The researcher adopted online survey technique to collect data for this study. The online survey has been identified as an efficient method of data collection, through which respondents are invited to fill out the questionnaire by simply visiting a website (Baruch and Holtom, 2008). Web-based survey is also an efficient, faster, and cheaper method to collect data compared to paper-based survey (Dillman, 2007). Some other advantages of online surveys include flexible design and format, more respondent-related information such as location and responses progress (e.g., number of questions a respondent has answered), and faster and easier data entry (Granello and Wheaton, 2004). Thus, this survey technique is considered as a more effective data collection method for the present study.

Specifically, the online survey for this research was administered with Qualtrics, which is an online data collection panel. It enabled the investigator to administer questions, create customised survey weblinks, and monitor response progress in a convenient manner. Qualtrics is increasingly employed for quantitative research purposes (Eggers et al., 2013).

4.2.2.3. Sampling and data collection procedures

We identified a random sample of 1,000 wholly owned manufacturing subsidiaries located in the PRC with overseas headquarters. The details regarding these firms (e.g., contact, demographics) were garnered by using OSIRIS database, which is a commercially available financial database provided by Bureau van Dijk and includes nearly 70,000 companies (subsidiaries and headquarters) in the world. OSIRIS is regarded as one of the most comprehensive sources of data on listed companies (Shao, Kwok, and Guedhami, 2010), and

is increasingly used in international business research (e.g., Chakrabarti, Singh, and Mahmood, 2007; Rugman, Oh, and Lim, 2012; Hu, Cui, and Aulakh, 2019). Data access was acquired using a valid OSIRIS account. Then, the investigator downloaded the database that contained the information regarding over 10,000 subsidiaries.

Initially, the investigator contacted the key informant at each Chinese subsidiary by phone to introduce the main purpose of this research and arrange to send the weblink to online survey in requested language (Mandarin or English version) by email. Meanwhile, a survey link was customised for each subsidiary that agreed to participate in the survey. In this manner, the investigator was able to identify each subsidiary and to match it with the corresponding financial data from OSIRIS (i.e. subsidiary operating revenue). Additionally, in ensuring that the questionnaires were completed by subsidiary top managers, we randomly telephoned 30 respondents to check with them, and the results alleviated our concern.

Following this procedure, the entire process of data collection took a total of four months and 238 usable responses were finally received, which imply an effective response rate of 23.8%. The respondents came from subsidiaries of different MNCs whose core business was operated in various manufacturing sub-sectors: 54.6% electronics, computers and transportation, 21.4% FMCG, 5.5% clothing and textiles, 13% petroleum, chemicals and plastics and 5.5% metal manufacturing. Those subsidiaries' sizes ranged widely from as low as 110 to as high as 8,000. Their overseas headquarters were located around the world: with 91 in Asia, 89 in Europe, and 58 in North America.

4.2.2.4. Response rate enhancement

Due to the survey length and the sampled respondents' busyness, investigators need to take measures to ensure a higher likelihood of responses (Dillman, Sinclair, and Clark, 1993). For

the present study, the investigator attempted to increase the response rate using techniques suggested by research methodologists. First, for enhancing its credibility, the researcher stressed the sponsoring institutional in the questionnaire's covering letter. The affiliation of the investigator was also highlighted in the covering letter (Diamantopoulos and Schlegelmilch, 1996), coupled with the logo of the University of Leeds Business School. Moreover, the principle investigator's name, contact details and position were presented in the covering letter of the questionnaire.

Additionally, in the covering letter, the investigator emphasised the strict confidentiality in treating each respondent's answers, following Diamantopoulos and Schlegelmilch's (1996) methodology. Respondents were also assured that their responses would only be used for academic purposes in alignment with the University's ethical guidelines.

It has been suggested that the response rate of research can be increased by means of rewards and incentives that expedite respondents' participation (Bruvold, Comer, and Rospert, 1990). This is applicable to busy professional informants. The respondents were informed that an aggregated feedback coupled with an executive summary would be provided for them after the investigator finished the study. As subsidiary top managers tend to have high levels of workload and job responsibility, the investigator decided to motivate respondents by another means. Following Nederhof's (1983) advice, a monetary incentive was employed to increase the response rate. Specifically, the investigator offered each respondent a Starbucks e-coupon. It also serves as a thank-you note for participation. The final response rate of 23.8% indicates the effectiveness of the data collection techniques used by the investigator.

4.2.2.5. Scale properties

The investigator adopted the Likert scales to measure the main constructs of the research framework (i.e. challenge stressors, hindrance stressors, work engagement, institutional dependence, and subsidiary local responsiveness), except subsidiary operating revenue. Likert scales are appropriate to this study as they measure the extent to which respondents agree or disagree with the construct items. It is usually easy for respondents to understand the Likert-scaled items (Malhotra and Birks, 2007). For this advantage, Likert scales are widely applied and regarded as valid and reliable.

However, measurement scales and items are prone to potential random or non-random errors. For instance, a single item with too many choices for respondents to choose from may increase the possibility for response errors (Lozano, Arenas, and Sánchez, 2008). In dealing with this potential issue, a maximum of seven-point Likert scale was proactively applied to the measurement in this study, following the advice by Hair et al. (2010). Seven-point Likert scales are widely used in business research (e.g., Eisingerich, Auh, and Merlo, 2014, McFarland et al., 2016). Moreover, the reliability of constructs was another subject of concern. According to Hair et al. (2010), at least four items should be used to measure each construct to address the concern regarding reliability. Therefore, apart from subsidiary operating revenue that was measured using objective data, all constructs in this research were tested with a minimum of four items.

4.2.2.6. Measurements

The investigator drew from pre-existing, multi-item scales to operationalise the constructs of theoretical interest in this study (see table 4.2), except for the subsidiary operating revenue that was measured with financial figures from OSIRIS database. In order to contextualise the

non-objective items, minor changes were applied to the wording in some items. The measures were reflective and used a seven-point, Likert-type response format (e.g., 1= “strongly disagree”, 7= “strongly agree”; 1= “never”, 7= “always”).

We measured challenge stressors and hindrance stressors with 20 items (10 items for each type of stressors) validated in prior studies (e.g., LePine et al., 2016; Cavanaugh et al., 2000; LePine, LePine and Jackson, 2004). Our items expanded upon previous measures to focus on headquarters-subsidary relationships. Challenge stressors included job stressors such as workload, work pace, time pressure, task complexity, task multiplicity, accountability, and responsibility (e.g., “Having to work very hard to meet the headquarters’ stressors”, “Having high levels of responsibility for meeting the headquarters’ stressors”). Hindrance stressors consisted of stressors such as administrative hassles, role ambiguity, role conflict, resource inadequacies, interpersonal conflict, and organizational politics (e.g., “Bureaucratic constraints/red tape in working with the headquarters”, “Conflicting instructions and expectations from the headquarters”). We asked subsidiary managers to indicate the frequency of the 20 stressful stressors in working with headquarters, using a 7-point Likert scale ranging from 1 for “Never” to 7 for “Always”.

Work engagement was measured using nine items adapted from Costa, Passos and Bakker (2014), which were previously developed by Schaufeli et al. (2002). Due to a focus on group-level work engagement, this 7-point Likert scale (1-Never, 7-Always) was used to capture the degree of collective feelings experienced by subsidiary top-management teams whilst working with their headquarters.

Institutional dependence was measured with five items adapted from Grewal, Chandrashekar, and Dwyer (2008). Based on a seven-point Likert scale (1-Strongly disagree, 7-Strongly agree), this construct measures the extent to which a subsidiary relies on those major institutional constituents in host country such as the government, professional associations, customer bodies and the general public for successful operations.

Two different subsidiary performance outcomes were measured in this study, namely, operating revenue and local responsiveness. We obtained data on subsidiary operating revenue from OSIRIS database, which is a commercially provided database that has been used in prior international business research (e.g., Celo and Chacar, 2015). With regards to local responsiveness, following Najafi-Tavani et al. (2018), we adapted a four-item scale from Homburg, Grozdanovic, and Klarmann (2007) to measure the subsidiary's speed in responding to changes in local market. Respondents were asked to indicate to which extent they agree or disagree with statements about local responsiveness based on a seven-point Likert scale (1-Strongly disagree, 7-Strongly agree). Table 8 shows the measurement items.

Table 4.2. Constructs and measures

Item	Measure	Adapted from
	Challenge Stressors	LePine et al. (2016);
CD_01	Having to complete a lot of work assigned by the headquarters	Cavanaugh et al. (2000);
CD_02	Having to work very hard to meet the headquarters' stressors	LePine, LePine, and
CD_03	Time pressure in working with the headquarters	Jackson (2004)
CD_04	Having to work at a rapid pace to complete all our tasks	

- CD_05** Performing complex tasks assigned by the headquarters
- CD_06** Having to use a broad set of skills and abilities to work with the headquarters
- CD_07** Having to balance several projects at once
- CD_08** Having to multitask our assigned projects
- CD_09** Having high levels of responsibility for meeting the headquarters' stressors
- CD_10** A high level of accountability for the headquarters' stressors

Hindrance Stressors

LePine et al. (2016);

- HD_01** Administrative hassles in working with the headquarters
Cavanaugh et al. (2000);
- HD_02** Bureaucratic constraints (i.e. red tape) in working with the headquarters
LePine, LePine, and
- HD_03** Conflicting instructions and expectations from the headquarters
Jackson (2004)
- HD_04** Unclear job tasks assigned by the headquarters
- HD_05** Conflicting requests from headquarters
- HD_06** Inadequate resources to accomplish tasks assigned by the headquarters
- HD_07** Conflict with the headquarters
- HD_08** Disputes with the headquarters
- HD_09** Office politics between your subsidiary and the headquarters
- HD_10** Other members of this MNC (e.g. sister subsidiary) receiving underserved rewards or promotions from the headquarters

Work Engagement

Costa, Passos and Bakker

- WE_01** At our work, we feel bursting with energy (2014);
- WE_02** At our work, we feel strong and vigorous.

WE_03	We are enthusiastic about our job in this subsidiary.	Schaufeli et al. (2002)
WE_04	Our job in this subsidiary inspires us.	
WE_05	When we arrive at work in the morning, we feel like starting to work.	
WE_06	We feel happy when we are working intensely in this subsidiary.	
WE_07	We are proud of the work that we do in this subsidiary.	
WE_08	We are immersed in our work in this subsidiary.	
WE_09	We get carried away when we are working in this subsidiary.	

Institutional Dependence

ID_01	Our Chinese subsidiary operations are highly dependent on the institutional constituents.	Grewal, Chandrashekar, and Dwyer (2008);
ID_02	Success of our subsidiary rests on favourable Chinese national, state, and municipal government policies.	Grewal and Dharwadkar (2002)
ID_03	The success of our subsidiary in China depends on the institutional constituents.	
ID_04	Keeping our Chinese institutional constituents happy is a critical objective.	
ID_05	Institutional constituents play an important role in our industry	

Local Responsiveness

LR_01	Our subsidiary responds rapidly if something important happens with regard to its customers and competitors.	Najafi-Tavani et al. (2018);
LR_02	Our subsidiary quickly implements its planned activities with regard to customers and competitors.	Homburg, Grozdanovic, and Klarmann (2007)

LR_03 If customer- and competitor-related activities do not lead to the desired effects, our subsidiary is fast at changing them.

LR_04 Our subsidiary quickly reacts to fundamental changes with regard to its customers and competitors.

The study used a few control variables. First, it measured and controlled for subsidiary characteristics such as subsidiary age, subsidiary size (natural logarithm of the number of employees), number of expatriates in the top management team (natural logarithm), and R&D expenditure (in tens of million U.S. dollars). Second, it controlled for competition intensity and political ties. Competition intensity was adapted from Auh and Menguc (2005) and measured using a one-item, 7-point Likert scale (1 - Strongly disagree, 7 - Strongly agree). Following Sheng, Zhou and Li (2011), political ties were measured based on a four-item, 7-point Likert scale (1 - Strongly disagree, 7 - Strongly agree). Slack financial resources were measured with a four-item, 7-point Likert scale (from 1-Strongly disagree to 7-Strongly agree) adapted from Troilo, De Luca, and Atuahene-Gima (2014) and Atuahene-Gima (2005).

Third, it developed a set of dummy variables to control for subsidiary role, industry type, and region of headquarters. Subsidiary role dummies capture whether the subsidiary has a major focus on creation or improvements. Industry sector dummies differentiate between (1) FMCG, (2) clothing and textiles, (3) petroleum, (4) chemicals and plastics, and (5) metal manufacturing. Region of origin dummies indicate whether the headquarters is in (1) Asia, (2) Europe, or (3) North America.

Fourth, it also controlled for geographic distance and cultural distance between the subsidiary and its headquarters. Geographic distance was measured in 1,000 km. Cultural distance was

measured by aggregating only power distance and long-term orientation from Hofstede's (1980) original dimensions of culture, as these two dimensions are more relevant to subsidiary context compared to others such as masculinity/femininity and individualism/collectivism (Choi and Contractor, 2016).

In order to ensure that the questionnaire was completed by eligible respondents, this study also measured the knowledgeable ability about the headquarters-subsidary working relationship and share of foreign ownership. Two items were used to measure knowledgeable ability: (1) My knowledge about our subsidiary's relationship with the headquarters is..., and (2) My confidence in answering the questions in this survey is... (on a scale from 1 = very low to 7 = very high). As the respondents were expected to come from wholly owned subsidiaries, the share of foreign ownership must be 100%.

4.3. Quantitative data analysis procedures

Various analysis techniques were used by the investigator for the purpose of statistical testing. First, descriptive analysis was conducted to identify missing data and to evaluate data normality. Details of such analysis are exhibited in section 5.2. Following the advice provided by Venkatraman (1989), prior to hypothesis testing, two different analyses were conducted, namely the Exploratory Factor Analysis (EFA) and Confirmatory Factor analysis (CFA).

Then, model fit was checked against various fitness indices, including the Comparative Fit Index (CFI), Normed Fit Index (NFI), Non-Normed Fit Index (NNFI), Incremental Fit Index (IFI), Root Mean Square Error of Approximation (RMSEA), Standardized Root Mean Square Residual (SRMR) and the Chi-square statistics. Through this method, it is possible to assess if the research model is sufficiently fit (Hu and Bentler, 1999).

Finally, the Structural Equation Modelling (SEM) has been widely accepted as an approach to hypotheses testing (Bagozzi and Yi, 2012). However, this data analytical method has some limitations. For instance, the model identification can be adversely affected by the levels of model complexity. In addition, SEM technique is sensitive to sample size, which may cause result bias that mislead researchers in interpretations. SEM is also prone to error variances in data that have a negative influence on results (Reinartz, Haenlein, and Henseler, 2009, Hair et al., 2012).

Considering the limitations of SEM, and a few moderated hypotheses coupled with control variables, the investigator of this study adopted Hierarchical Moderated Regression (HMR) analysis for the purpose of testing hypotheses. HRM method has been applied in prior international business research (e.g., Najafi-Tavani et al., 2018). It is advantageous in terms of helping scholars to: (a) examine associations between multiple independent variables and a dependent variable, (b) analyse how the inputs of predictors and interaction terms affect the model, and (c) test theoretically based hypotheses (Petrocelli, 2003).

4.4. Chapter summary

Initially, the preliminary interviews and the quantitative stage of the study were explained. Then, details of sampling, survey administration, measurement and scaling items, data collection procedures, and data analysis techniques were discussed. The next chapter will focus on data analysis and results.

Chapter 5: Data Analysis and Findings

5.1. Introduction

This chapter focuses on the results of the data analysis. It begins with the descriptive statistics regarding the research sample and the main constructs. Then, data screening techniques, non-response bias, and constructs' reliability are discussed. For purifying measures and examining the reliability and validity of the data, the following section elaborates on the exploratory factor analysis and confirmatory factor analysis. Then, convergent validity, composite reliability and discriminant validity, and common method bias are explained. Thereafter, the chapter ends with the results of hypotheses testing and random selection bias.

5.2. Descriptive statistics

5.2.1. Sample profile

The sample of this study consisted of 238 wholly owned manufacturing subsidiaries based in the People's Republic of China (PRC) with overseas headquarters. The average years of operation of the sample (i.e. subsidiary age) is 9.42 years. The sample firms are in major Chinese cities, such as Shanghai (34.9%), Beijing (13%), Suzhou (8.4%), Shenzhen (5.5%), Guangzhou (5.5%), Tianjin (2.9), Wuhan (2.9%), Xiamen (2.5%); and some other Chinese cities (24.4%). The results also indicate that the sample has an average size of 711 employees and the sample average sales volume is 20,910.48 (in thousand US dollars). Table 5.1 displays the descriptive statistics for sample demographics.

Table 5.1. Descriptive statistics

Variable	Frequency	Percentage
Subsidiary age		
Less than 10 years	161	67.6
11-20	65	27.3
21-30	12	5.1

Subsidiary size		
100-500	165	69.3
501-1000	50	21
1001-1500	0	0
1501-2000	14	5.9
Over 2000	9	3.8
Subsidiary location		
Shanghai	83	34.9
Beijing	31	13
Suzhou	20	8.4
Guangzhou	13	5.5
Others	91	38.2
Number of expatriates in TMTs		
1-5	170	71.4
6-10	64	26.9
More than 10	4	1.7
R&D expenditures		
(in million US\$)		
Less than 30	145	60.9
31-60	53	22.3
61-90	25	10.5
91-120	10	4.2
More than 120	5	2.1
Subsidiary role		
Creation	64	26.9
Improvements	154	64.7
Industry type		
Electronics, Computers & Transportation	130	54.6
FMCG	51	21.4
Clothing and Textiles	13	5.5

Petroleum, Chemicals & Plastics	31	13
Metal Manufacturing	13	5.5
Headquarters' location		
Asia	91	38.2
Europe	89	37.4
North America	58	24.4

5.2.2. Descriptive statistics regarding the main constructs

Table 5.2 shows the descriptive features of the main constructs. Respondents were asked to reflect the frequencies of work-related items in working with the headquarters (i.e. challenge and hindrance stressors) on a 7-point Likert scale (1=Never, 7=Always). The results suggest that the mean scores of the ten items of challenge stressors range from 4.03 to 4.69, and the mean scores of the ten items of hindrance stressors range from 3.54 to 4.23.

This table also shows the descriptive statistics regarding the work engagement (measured on a 7-point Likert scale: 1 = Never, 7 = Always). The results suggest that the mean scores of the nine items of this variable range from 4.25 to 4.80. Local responsiveness was measured with four items on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). As the table illustrates, the mean scores of the four items of local responsiveness range from 4.16 to 4.86. Institutional dependence was measured based on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). The results from table 5.2 suggest that the mean scores of the five items of institutional dependence range from 3.94 to 4.63.

Table 5.2. Descriptive statistics for main constructs and items

Constructs and items	Response Scale (%)							Scale Descriptive	
	Never							Always	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	Mean	S.D.
Challenge stressors									
CS_1	8.4	9.2	19.7	26.9	13.9	13.4	8.4	4.03	1.66
CS_2	2.5	8.8	18.1	21.8	18.1	20.2	10.5	4.47	1.58
CS_3	2.5	8.0	18.5	24.8	19.7	17.2	9.2	4.40	1.52
CS_4	2.1	6.3	17.2	26.5	19.3	17.2	11.3	4.52	1.50
CS_5	2.9	6.7	18.1	31.9	18.1	16.8	5.5	4.28	1.41
CS_6	5.0	7.1	19.3	24.4	19.7	17.2	7.1	4.27	1.55
CS_7	2.9	9.7	17.2	24.8	16.8	17.2	11.3	4.40	1.60
CS_8	3.8	8.4	17.6	27.3	17.2	15.1	10.5	4.33	1.57
CS_9	2.5	8.4	16.8	23.1	20.2	17.2	11.8	4.49	1.57
CS_10	3.4	5.5	13.4	23.5	21.0	16.8	16.4	4.69	1.60

Constructs and items	Response Scale (%)							Scale Descriptive	
	Never							Always	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	Mean	S.D.
Hindrance stressors									
HS_1	9.7	15.1	18.1	26.1	12.2	10.9	8.0	3.81	1.71
HS_2	3.8	10.5	18.5	26.5	18.5	11.8	10.5	4.23	1.58
HS_3	3.8	13.0	19.7	25.6	13.9	15.1	8.8	4.13	1.61
HS_4	7.1	18.9	19.7	20.6	14.7	12.2	6.7	3.80	1.68
HS_5	8.4	18.9	13.4	26.9	12.6	13.0	6.7	3.82	1.70
HS_6	9.7	16.4	16.8	24.4	14.3	13.4	5.0	3.78	1.67
HS_7	12.6	17.6	16.0	19.7	15.1	11.8	7.1	3.71	1.79
HS_8	14.7	19.3	18.1	15.5	16.4	9.2	6.7	3.54	1.79
HS_9	9.7	16.0	18.1	24.4	17.2	9.2	5.5	3.73	1.63
HS_10	11.8	16.0	17.6	26.9	14.7	8.4	4.6	3.61	1.62

Constructs and items	Response Scale (%)							Scale Descriptive	
	Never							Always	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	Mean	S.D.
Work Engagement									
WE_1	4.6	7.1	18.5	31.5	12.6	17.6	8.0	4.25	1.54
WE_2	1.3	8.4	21.0	16.8	21.4	22.7	8.4	4.50	1.51
WE_3	2.9	7.6	17.6	26.9	16.4	19.3	9.2	4.41	1.53
WE_4	3.4	11.8	19.7	18.5	21.0	15.5	10.1	4.29	1.62
WE_5	5.0	15.5	15.1	16.4	18.1	16.8	13.0	4.29	1.78
WE_6	7.6	8.8	14.3	23.5	16.8	18.5	10.5	4.31	1.72
WE_7	2.1	5.9	14.7	19.7	19.3	21.4	16.8	4.80	1.58
WE_8	1.3	8.4	18.5	16.0	20.6	25.2	10.1	4.62	1.54
WE_9	4.2	9.7	18.9	22.3	20.2	12.6	12.2	4.31	1.63

Constructs and items	Response Scale (%)							Scale Descriptive	
	Strongly Disagree			Strongly Agree				Mean	S.D.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)		
Local Responsiveness									
LR_1	9.2	12.2	17.2	16.0	16.8	17.6	10.9	4.16	1.83
LR_2	1.7	8.8	11.8	20.6	21.0	24.4	11.8	4.71	1.54
LR_3	3.8	6.7	12.6	16.8	24.8	25.6	9.7	4.68	1.56
LR_4	2.5	6.3	8.8	21.8	20.2	26.1	14.3	4.86	1.54

Constructs and items	Response Scale (%)							Scale Descriptive	
	Strongly Disagree			Strongly agree				Mean	S.D.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)		
Institutional Dependence									
ID_1	7.1	11.8	22.7	19.7	18.9	16.8	2.9	3.94	1.57
ID_2	4.6	10.5	19.7	21.4	22.3	18.1	3.4	4.14	1.51
ID_3	8.8	11.8	14.3	19.7	21.8	19.7	3.8	4.08	1.66
ID_4	5.9	7.6	12.6	23.9	17.6	25.6	6.7	4.44	1.61
ID_5	4.2	6.7	12.2	18.1	26.1	23.5	9.2	4.63	1.56

5.3. Data screening

Data screening can effectively assist a researcher in identifying specific low-quality response patterns (DeSimone, Harms and DeSimone, 2015). The quality control of measurement data is an important task and therefore, prior to data analysis, it is necessary for the investigator to examine the data in this study and identify issues such as missing data, potential outlier, normality and multicollinearity (Hair et al., 2010).

5.3.1. Missing values

According to Hair et al. (2010), researchers must ensure that results of analysis are not affected by missing data. In the present study, prior to data collection, the investigator made all survey questions compulsory with the survey administration system in order to avoid missing data. All submitted survey responses were expected to be fully completed. However, due to the length of the questionnaire, the investigator expected to receive some incomplete questionnaires that were still recorded by the survey administration system.

As is recommended by Hair et al. (2010), questionnaires can have a maximum of 10% missing data and those with more than 10% of missing value should be deleted. In order to make sure that the missing values do not affect this study, the investigator observed each case and found that 29 questionnaires had considerable missing data. Therefore, the investigator deleted these incomplete questionnaires from the dataset.

5.3.2. Identifying outliers

An outlier refers to an extreme value that is significantly different from other values in data and can negatively affect the multivariate analysis results (Hair et al., 2010). It is difficult to determine if outliers are advantageous or disadvantageous. They should be evaluated within the context of analysis (Hair et al., 2010). In this respect, beneficial outliers can reflect some aspects of the research sample that are not detectable in a normal

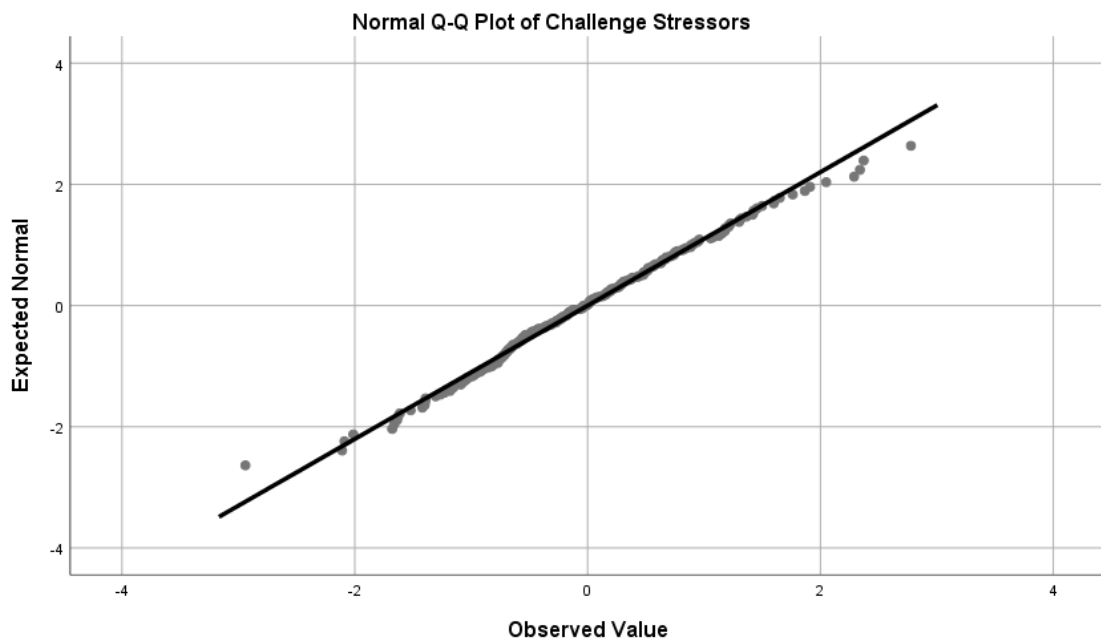
case. Harmful outliers, by contrast, can adversely affect the results of data analysis as they fail to reflect the characteristics of the sample population (Hair et al., 2010). Thus, it is important to identify potential outliers in data and prevent them from adversely affecting the results of data analysis. In doing so, the investigator followed two steps.

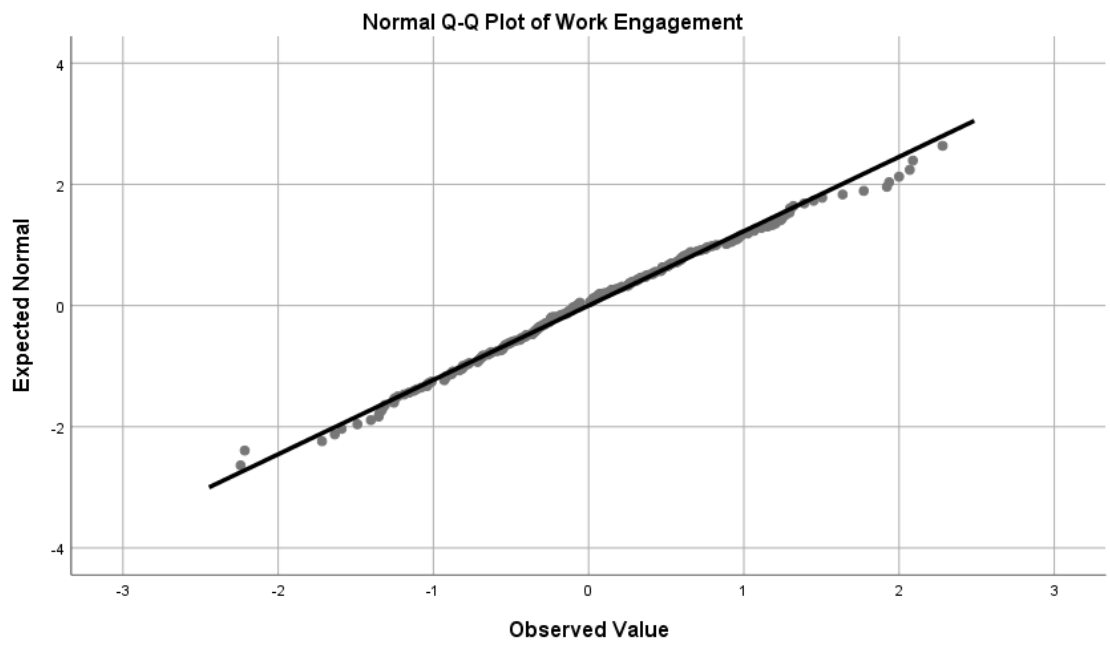
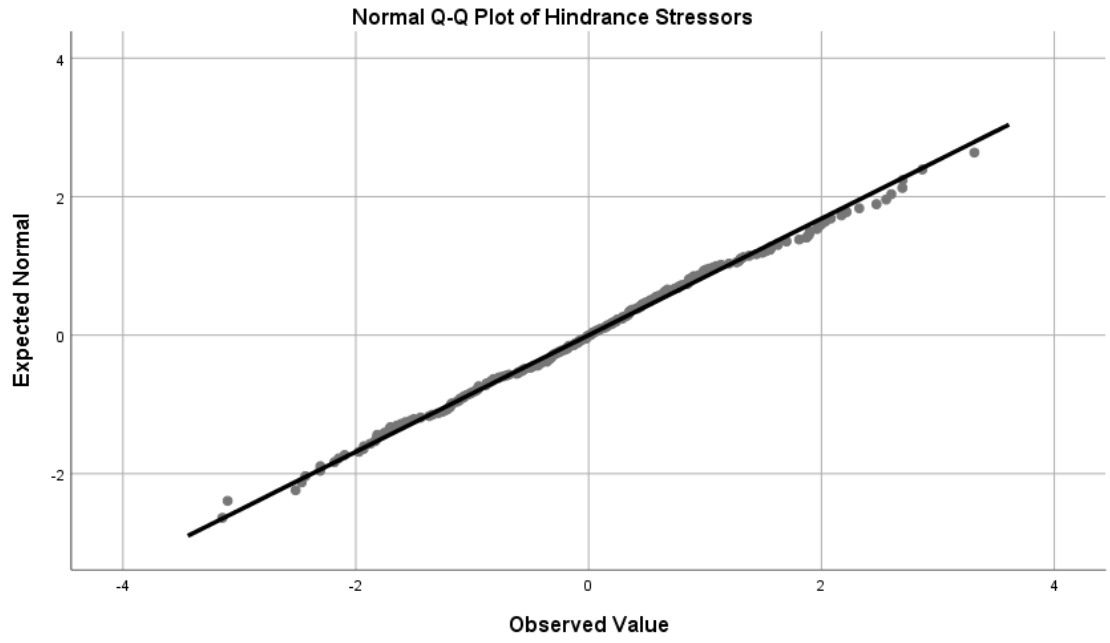
The first was to identify those respondents who filled the survey carelessly by selecting the same response for all items to finish it as soon as possible. In order to detect these low-quality responses, the researcher calculated the standard deviation scores for all items in each case. The lowest value of the computed standard deviation was 0.61, which is above the threshold of 0.50 (Hair et al., 2010). In this respect, the investigator's concerns about careless responses were eliminated.

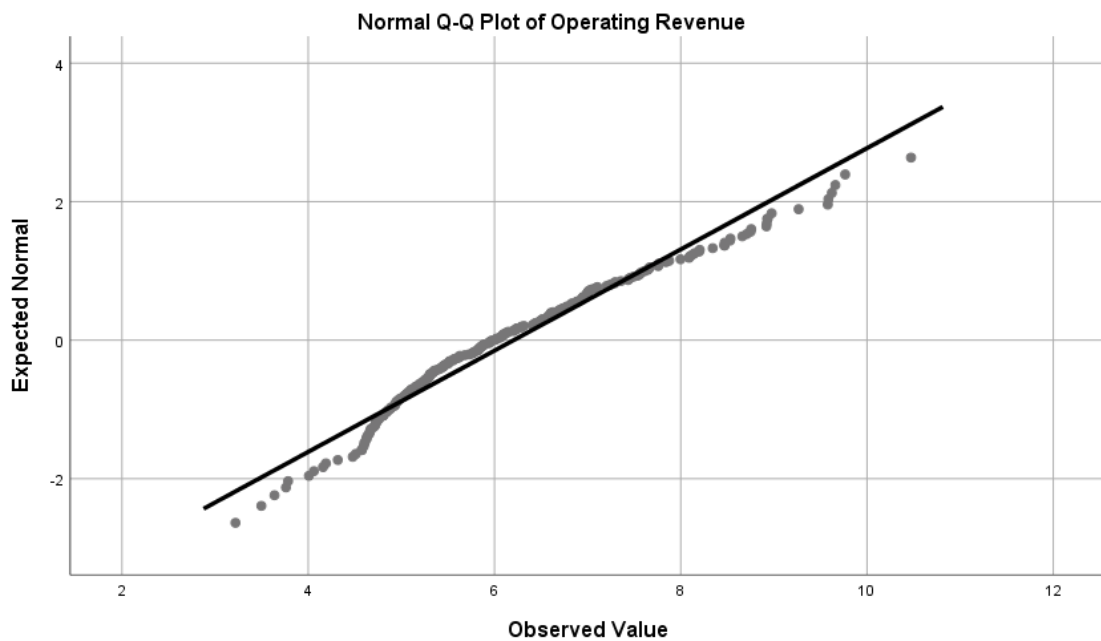
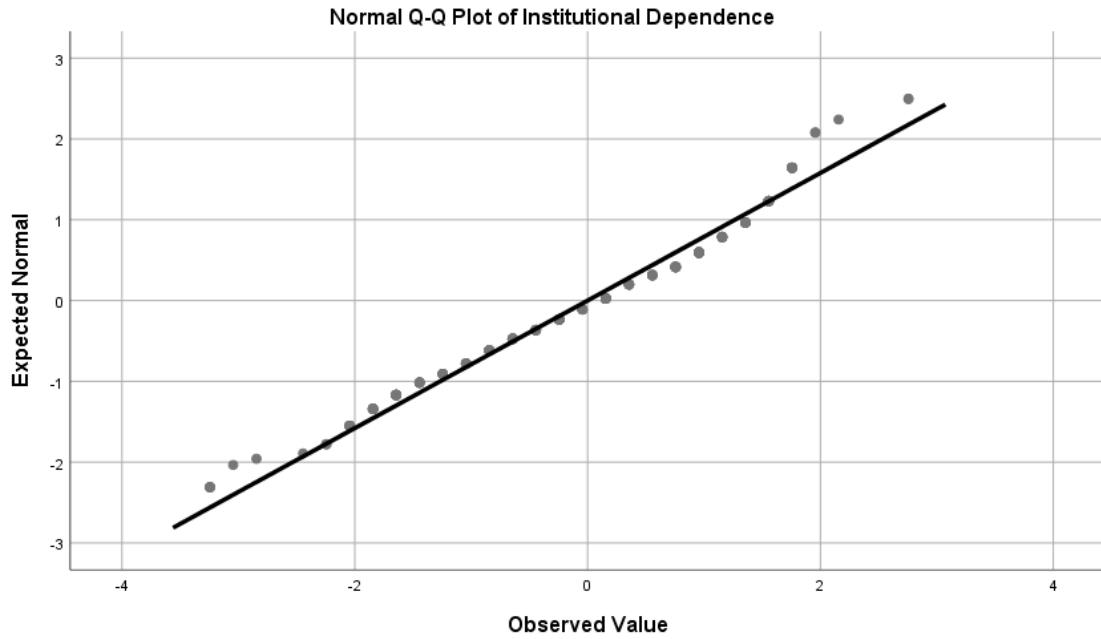
Second, as there are more than two variables in the analysis of this study, an objective measure should be adopted to examine the multidimensional position of each case (Hair et al., 2010). Specifically, Mahalanobis D^2 was calculated for each case. In this method, each case's distance from the mean centre of all cases was evaluated. However, this method only provides a single value for each case and is unable to show which variables cause the distance. Mahalanobis D^2 was calculated by the investigator using SPSS 23. Then, considering the degree of freedom (i.e. the number of variables), the investigator also computed the cumulative probabilities of a value from the χ^2 distribution, which were less than the Mahalanobis D^2 values. If a case's probabilities value is lower than the conservative threshold of 0.001, it is regarded as an outlier. In this study, as the minimum value of the computed probabilities was 0.0023, no outlier was detected.

5.3.3. Normality

Normality refers to the similarity of the distributions of a variable to the normal distribution (Hair et al., 2010). If the distribution of the data is substantially different from the normal distribution, it is not possible to compute t and F statistics for multiple regression analysis. Normality can be examined either univariately or multivariately. Following the suggestion of Hair et al. (2010), the investigator examined the univariate normality for each item. This method is considered adequate as multivariate normality test is sensitive and difficult to examine (Cohen et al., 2003). In testing normality of the data, the investigator created normal probability-probability (p-p) plot for each variable. As the diagrams show below, the normal probability plots show strongly linear patterns. There are only minor deviations from the line fit to the points on each probability plot. Therefore, it can be concluded that the normal distribution appears to be a good model for these research data.







5.3.4. Multicollinearity

Lack of multicollinearity is another fundamental assumption of multivariate analysis, which refers to “*the extent to which a variable can be explained by the other variables in the analysis*” (Hair et al., 2010, p. 91). Multicollinearity exists when two or more of the independent variables in a regression equation are highly correlated (O'Rourke, Hatcher, and Stepanski, 2005, Hair et al., 2010). As the degree of multicollinearity increases, the

investigator may find it more difficult to interpret any statistical effects in the multivariate analysis. In order to examine the problem of collinearity, a bivariate correlation test between all measured items of the constructs was conducted. A correlation value above the cut-off point of 0.9 is regarded as an index of collinearity with harmful effects (Hair et al., 2010). In this study, the investigator found all correlation scores below the threshold as the highest value was 0.61 (see table 5.7). According to this result, the collinearity issue is not problematic to this data analysis.

5.4. Non-response bias

Non-response bias refers to “*the bias that exist when respondents to a survey are different from those who did not respond in terms of demographic or attitudinal variables*” (Sax, Gilmartin, and Bryant, 2003, p. 411). Non-response bias occurs when there is a considerable difference regarding some characteristics between the research participants and those who did not participate in the research, such as demographic information. To examine the non-response bias in this study, the investigator compared the *location* and *industry type* of responding and non-responding subsidiaries by t-test analyses. The results suggested that this study is not affected by serious non-response bias.

5.5. Reliability test

Reliability is concerned with how consistently a variable or a set of variables can measure as originally intended (Hair et al., 2010). In this study, the researcher adopted the conventional measure of Cronbach’s alpha (α) to test the constructs’ reliabilities (Nunnally, 1967). Table 5.3 shows the results of reliability test, including the Cronbach’s alpha coefficients (α) of the constructs and the reliability values if items are removed. As it exhibits, the Cronbach’s alpha (α) coefficients of all constructs are above the cut-off point of 0.7, suggesting that the variables used in this study are reliable. Furthermore, no

substantial increase in the Cronbach's alpha (α) value would occur if any item gets removed.

Table 5.3. Reliability test

Construct	Items	Cronbach's alpha (α)	Cronbach's alpha if item <i>deleted</i>
Challenge Stressors	CS_1	0.873	0.869
	CS_2		0.855
	CS_3		0.861
	CS_4		0.859
	CS_5		0.864
	CS_6		0.861
	CS_7		0.859
	CS_8		0.857
	CS_9		0.859
	CS_10		0.862
Hindrance Stressors	HS_1	0.892	0.893
	HS_2		0.881
	HS_3		0.879
	HS_4		0.878
	HS_5		0.876
	HS_6		0.879
	HS_7		0.881
	HS_8		0.881
	HS_9		0.879
	HS_10		0.882
Work Engagement	WE_1	0.891	0.877
	WE_2		0.872
	WE_3		0.876
	WE_4		0.871
	WE_5		0.876
	WE_6		0.889
	WE_7		0.881
	WE_8		0.880
	WE_9		0.889
Institutional Dependence	ID_1	0.860	0.846
	ID_2		0.817
	ID_3		0.821
	ID_4		0.824
	ID_5		0.845
Local Responsiveness	LR_1	0.839	0.814

LR_2	0.776
LR_3	0.782
LR_4	0.813

5.6. Measure assessment and purification

As the constructs of this study are based on multiple measurement items and are analysed with multivariate tests, the researcher utilised factor analysis techniques for the purpose of item reduction. Factor analysis can help researchers examine and analyse the complexity patterns of multidimensional relationships (Hair et al., 2010). In order to purify the items of this study, the investigator used two item-reduction approaches: Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA).

5.6.1. Item selection through EFA

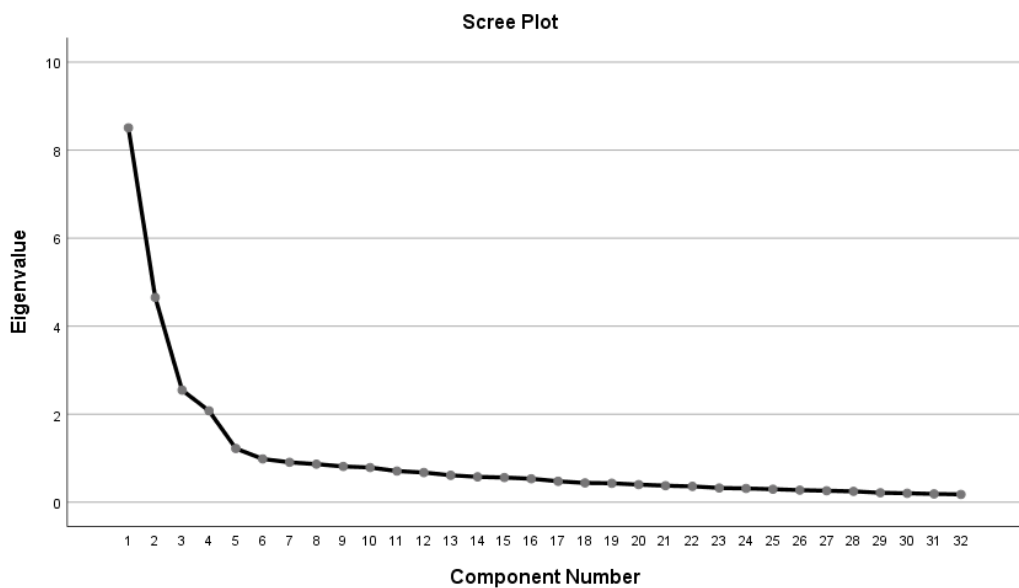
With Exploratory Factor Analysis (EFA), researchers can detect any cross-loading items (Hair et al., 2010). An EFA was performed on a total of 38 items for such purpose. Specifically, a total of five factors were inspected, including challenge stressors (CS), hindrance stressors (HS), work engagement (WE), institutional dependence (ID) and local responsiveness (LR).

The researcher selected Principal Component Analysis as the extraction method and Promax Rotation as the rotation method. Seven factors were initially extracted from the analysis, suggesting the problem of cross-loading items. As Hair et al. (2010) suggested, the threshold factor loading value was 0.5 and those lower than 0.4 should be excluded from the report. Following this advice, the researcher decided to remove items whose factor loading values were under 0.4. Those eliminated factors include CS1, CS2, CS10, HS1, HS2 and WE9.

Finally, in line with the investigator's expectations, 5 factors were extracted from the analysis, which explained 65.29% of the cumulative variance in the data. The results also

showed that the Kaiser-Meyer-Olkin (KMO) value was 0.878, which is regarded as a measure of sampling adequacy and should be higher than the threshold of 0.5 (Hair et al., 2010). In addition, the Bartlett's test of Sphericity value was significant (X^2 (df = 496) = 3959.098; $P < 0.001$). These results suggest that the sample size for factor analysis was adequate and that it was appropriate to conduct the analysis. Figure 2 exhibits the scree plot of the conducted EFA test.

Figure 2. Scree plot



Furthermore, as table 5.4 shows, all factor loadings are above the cut-off point of 0.5 (Hair et al., 2010), with the lowest loading value at 0.578. No cross-loading was identified.

Table 5.4. Factor loadings (EFA)	Items	Component				
		1	2	3	4	5
Challenge Stressors	CS_3	0.663				
	CS_4	0.732				
	CS_5	0.742				
	CS_6	0.615				
	CS_7	0.750				
	CS_8	0.791				
	CS_9	0.578				
Hindrance Stressors	HS_3		0.661			
	HS_4		0.761			
	HS_5		0.798			
	HS_6		0.775			
	HS_7		0.765			
	HS_8		0.783			
	HS_9		0.730			
Work Engagement	WE_1			0.668		
	WE_2			0.750		
	WE_3			0.748		
	WE_4			0.782		
	WE_5			0.772		
	WE_6			0.774		
	WE_7			0.678		
	WE_8			0.659		
Institutional Dependence	ID_1				0.785	

	ID_2	0.789
	ID_3	0.787
	ID_4	0.734
	ID_5	0.723
Local Responsiveness	LR_1	0.648
	LR_2	0.779
	LR_3	0.699
	LR_4	0.675

Note1: Extraction Method: Principal Component Analysis.

Note2: Rotation Method: Promax with Kaiser Normalization.

Note3: Rotation converged in 6 iterations.

5.6.2. Item selection through CFA

Confirmatory Factor Analysis (CFA) can assist researchers in evaluating and determining the constructs, variables' measures and the existing interrelationships (Hair et al., 2010). It can also be used as an approach for researchers to examine constructs' reliability and validity (Shaw and Shiu, 2002). Critically, the CFA enables scholars to decide whether their theoretical structures are supported by empirical findings.

Following Hair et al (2010), the CFA technique was used by the investigator to purify constructs' measurement, to calculate convergent, discriminant and nomological validity and to ensure that there are no cross-loadings and uncorrelated errors. The investigator conducted the CFA using Maximum Likelihood (ML) method with the sample size of $n = 238$ by AMOS 24.

According to Hair et al. (2010), acceptable factor loadings should be above the threshold of 0.5 at significant levels. In this study, the initial outcomes showed that some items failed to meet this criterion. Consequently, the investigator decided to exclude indicators whose factor loadings were less than 0.5 from the model. These items included CS_3, CS_4, CS_5, CS_9, HS_3, HS_9, HS_10, WE_6, WE_7 and WE_8. Although this has reduced the number of items for challenge stressors to three (i.e. CS_6, CS_7, CS_8), it is still acceptable (Hair et al., 2010) and the new reliability value for this variable is $\alpha = 0.76$. Furthermore, it has significantly improved the AVE from below threshold to above it (i.e. AVE = 0.54). Table 5.5 demonstrates the factor loadings of the measurement model.

Hair et al. (2010) recommended that CFI index should be above 0.90 and RMSEA value should be lower than 0.08. SRMR values above 0.1 indicate problems with model fit. In addition, the result of $\frac{\chi^2}{d.f.}$ is expected to be lower than 3 to be regarded as a good fit. After removing all aforementioned factors, the results indicated a good fit of the measurement

model: X^2 (d.f. = 195) = 244.089; $\frac{x^2}{d.f.} = 1.25$; Root Mean Square Error of Approximation (RMSEA) = 0.03; Comparative Fit Index (CFI) = 0.98; Incremental Fit Index (IFI) = 0.98; Non-Normed Fit Index (NNFI) = 0.91; Standardised Root Mean Square Residual (SRMR) = 0.04. Therefore, it is concluded that the measurement model generates a satisfactory fit.

Table 5.5. Factor loadings (CFA)

Reflective scale names and items	Item loading λ	t-value
Challenge Stressors		
CS_6	0.713	10.29
CS_7	0.815	9.396
CS_8	0.680	*
Hindrance Stressors		
HS_4	0.741	10.533
HS_5	0.875	10.056
HS_6	0.734	9.738
HS_7	0.655	9.409
HS_8	0.606	*
Work Engagement		
WE_1	0.786	9.657
WE_2	0.889	8.941
WE_3	0.795	9.306
WE_4	0.700	9.162
WE_5	0.618	*
Institutional Dependence		
ID_1	0.663	9.644
ID_2	0.869	7.888
ID_3	0.761	8.251
ID_4	0.828	8.828
ID_5	0.662	*
Local Responsiveness		
LR_1	0.738	9.234
LR_2	0.789	8.669
LR_3	0.792	8.490
LR_4	0.710	*

* Fixed item

5.7. Reliability and validity

Convergent validity refers to the extent to which “*two measures of the same concept are correlated*”, while discriminant validity is defined as the extent to which “*two conceptually similar concepts are distinct*” (Hair et al., 2010, p. 124). The convergent and discriminant validity, along with the reliability of the constructs in this study were examined. Specifically, for testing the convergent validity and reliability, the investigator computed the Average Variance Extracted (AVE) and Composite Reliability (CR) scores. AVE reflects the extent to which the items of a construct have consistency with each other (Bagozzi and Yi, 1988). Composite Reliability (CR) refers to the extent to which all items consistently reflect and measure the same factor (Hair et al., 2010).

Table 5.6 presents the AVE and CR scores of the constructs. All the constructs’ AVE scores are above the threshold of 0.50. In addition, all constructs’ CR scores are above the 0.70 benchmark. Accordingly, the results provide support for the convergent validity and reliability of the constructs in this study.

Table 5.6. Convergent validity and composite reliability (AVE and CR)

Construct	AVE	CR
Challenge Stressors	0.54	0.78
Hindrance Stressors	0.53	0.85
Work Engagement	0.58	0.87
Institutional Dependence	0.58	0.87
Local Responsiveness	0.57	0.84

Discriminant validity is concerned with the extent to which two similar constructs are distinct and are not highly associated (Malhotra and Birks, 2007). To evaluate discriminant validity, the investigator verified that the square root of the AVE for each certain construct is higher than the correlations of that construct with all other constructs in the research model (Fornell and Larcker, 1981; Najafi-Tavani et al., 2018). The results in table 5.7 provide support for the discriminant validity of this study (all square root scores of AVE are bold and underlined).

Table 5.7. Descriptive Statistics

Construct	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Challenge stressors	<u>0.73</u>														
2. Hindrance stressors	0.06	<u>0.73</u>													
3. Work engagement	0.50**	-0.14*	<u>0.76</u>												
4. Institutional dependence	0.34**	0.04	0.41**	<u>0.76</u>											
5. Operating revenue	0.35**	-0.03	0.64**	0.31**	<u>NA</u>										
6. Local responsiveness	0.49**	-0.14*	0.62**	0.56**	0.40**	<u>0.75</u>									
7. Subsidiary age	-0.03	-0.03	-0.10	-0.09	-0.08	-0.13	<u>NA</u>								
8. Subsidiary size	0.10	-0.02	0.17**	0.05	0.29**	0.07	-0.06	<u>NA</u>							
9. Number of expatriates	0.06	0.05	0.20**	-0.01	0.14*	-0.01	0.07	0.15*	<u>NA</u>						
10. R&D expenses	0.12	0.08	0.12	0.08	0.11	0.11	-0.01	-0.08	-0.05	<u>NA</u>					
11. Subsidiary role (creation)	0.04	0.01	0.23**	0.07	0.14*	0.06	0.02	0.20**	0.12	0.07	<u>NA</u>				
12. Subsidiary role (improvements)	0.04	0.03	0.20**	0.18**	0.14*	0.14*	-0.06	-0.09	0.05	-0.04	0.21**	<u>NA</u>			
13. Industry sector (FMCG)	0.07	-0.01	0.01	0.03	-0.04	0.01	0.06	0.04	0.11	0.20**	-0.04	-0.002	<u>NA</u>		
14. Industry sector (C&Ts)	0.09	-0.01	-0.06	0.02	0.04	-0.01	0.04	-0.06	0.02	-0.12	-0.05	-0.06	-0.13	<u>NA</u>	
15. Industry sector (P,C&Ps)	-0.11	0.01	-0.03	0.07	-0.15*	0.08	-0.17**	-0.06	-0.12	-0.02	-0.06	-0.04	-0.20**	-0.09	<u>NA</u>
16. Industry sector (E,C&T)	0.06	0.01	0.14*	-0.04	0.16*	-0.03	0.02	0.05	-0.01	-0.05	0.10	0.04	-0.57**	-0.26**	-0.43**
17. Industry sector (MM)	-0.19**	-0.003	-0.21**	-0.08	-0.09	-0.07	0.04	-0.03	-0.01	-0.11	-0.01	0.04	-0.13	-0.06	-0.09
18. HQs' origin (Asia)	-0.02	-0.03	0.08	-0.08	0.02	-0.06	-0.03	0.09	-0.08	-0.17**	0.04	0.07	-0.30**	-0.11	-0.02
19. HQs' origin (Europe)	-0.002	-0.01	-0.08	0.08	0.01	0.02	-0.04	-0.12	0.03	0.09	-0.05	-0.06	0.13	0.12	0.09
20. HQs' origin (North America)	0.03	0.08	-0.003	0.002	-0.02	0.05	0.08	0.06	0.06	0.09	0.05	-0.01	0.20**	-0.01	-0.07
21. Political ties	0.50**	-0.09	0.53**	0.53**	0.35**	0.34**	-0.11	0.12	0.03	0.12	0.12	0.14*	0.11	-0.01	0.02
22. Competition intensity	0.32**	0.02	0.50**	0.44**	0.35**	0.49**	0.06	0.22**	0.18**	-0.08	0.17*	0.03	-0.06	-0.01	-0.01
23. Slack financial resources	0.44**	0.03	0.51**	0.41**	0.34**	0.51**	-0.10	0.10	0.14*	0.06	0.10	0.13	0.06	-0.09	-0.01
24. Geographic distance	0.05	0.07	-0.08	0.06	-0.04	0.06	0.05	-0.05	0.08	0.16*	-0.03	-0.08	0.29**	0.12	0.01

25. Cultural distance	0.09	0.06	-0.10	-0.03	-0.06	-0.01	0.10	-0.02	0.01	0.23**	-0.04	-0.14*	0.05	0.07	0.10
Mean	4.47	3.82	4.45	4.25	6.20	4.60	2.68	6.60	1.51	6.63	0.78	0.79	0.21	0.05	0.13
S.D.	1.13	1.23	1.23	1.27	1.37	1.33	0.87	1.24	0.75	2.13	0.42	0.41	0.41	0.23	0.34

Construct	16	17	18	19	20	21	22	23	24	25
16. Industry sector (E,C&T)	<u>NA</u>									
17. Industry sector (MM)	-0.26**	<u>NA</u>								
18. HQs' origin (Asia)	0.25**	0.12	<u>NA</u>							
19. HQs' origin (Europe)	-0.22**	0.01	-0.60**	<u>NA</u>						
20. HQs' origin (North America)	-0.05	-0.14*	-0.44**	-0.44**	<u>NA</u>					
21. Political ties	-0.05	-0.11	-0.05	-0.01	0.06	<u>NA</u>				
22. Competition intensity	0.09	-0.06	0.003	-0.05	0.05	0.43**	<u>NA</u>			
23. Slack financial resources	0.04	-0.09	-0.05	-0.04	0.11	0.64**	0.48**	<u>NA</u>		
24. Geographic distance	-0.24**	-0.13*	-0.32**	0.35**	0.66**	0.04	0.02	0.08	<u>NA</u>	
25. Cultural distance	-0.13*	-0.01	-0.56**	0.32**	0.28**	-0.07	-0.03	-0.01	0.61**	<u>NA</u>
Mean	0.55	0.05	0.37	0.37	0.24	4.48	4.60	4.49	8.66	0.17
S.D.	0.50	0.23	0.49	0.49	0.43	1.33	1.51	1.27	0.61	0.21

Note:

Bold and underlined numbers on the diagonal show the square root of the AVEs.

** . Correlation is significant at the 0.01 level (2-tailed)

* . Correlation is significant at the 0.05 level (2-tailed)

FMCG= Fast-moving consumer goods, C&Ts= Clothing and textiles, P,C&Ps= Petroleum, chemicals and plastics, E,C&T= Electronics, computers and transportation, MM= Metal manufacturing

The industry sectors above all belong to manufacturing industry. Alternatively, standardized industry code can be applied.

5.8. Common method bias

A few scholars have identified the potential deleterious effects of method bias on research quality (e.g., Bagozzi and Yi, 1990, Podsakoff, LePine and LePine, 2003, Malhotra, Schaller, and Patil, 2017). Specifically, they raised concerns about the Common Method Bias (CMB), which stem from common method variance that refers to “*variance that is attributable to the measurement method rather than to the construct of interest*” (Podsakoff, LePine and LePine, 2003, p. 879). It is likely for researchers to be misled by the results of analyses that are based on the effects of common method bias.

In this study, as the investigator collected cross-sectional data with a few subjective measures, common method bias can likely be a problem. In order to limit such bias *ex ante*, the researcher used recommended methods in research design (Podsakoff et al., 2003). First, the investigator guaranteed the confidentiality of data to all informants and their anonymity for reducing evaluation apprehension. Second, the investigator placed different construct items within general topics rather than separate sections and ensured that measurements for independent and dependent variables were presented in a counterbalanced order. Further, the investigator used objective data for one of the dependent variables (i.e. operating revenue), following the advice by Rindfleisch et al. (2008). Via these approaches, the relationships between main constructs appeared more difficult for respondents to predict.

Then, two *ex post* tests were conducted to assess the extent to which CMB affected the study results. One of them was the common factor test, which allows all items to load on both the theoretical constructs and an unmeasured latent (method) factor (Podsakoff et al., 2003). Using structural equation modelling, this test focused on direct effects and multi-item construct measures (Robson, Katsikeas, and Bello, 2008). In this method, the

investigator estimated the impact of CMB by testing out the direct effects of challenge stressors, hindrance stressors, work engagement, and institutional dependence on local responsiveness.

This structural model was tested twice, including and excluding the method factor. The standardized path coefficients in the baseline model for the direct paths from the independent variables to local responsiveness were as follows: challenge stressors ($\beta = 0.61, p < 0.001$), hindrance stressors ($\beta = -0.15, p < 0.05$), work engagement ($\beta = 0.75, p < 0.001$), and institutional dependence ($\beta = 0.65, p < 0.001$). Coefficients for the same paths in the second model that included the method factor were 0.60 ($p < 0.001$), -0.14 ($p < 0.05$), 0.70 ($p < 0.001$), 0.64 ($p < 0.001$), and 0.74 ($p < 0.001$), respectively. The stability of the coefficients across the two models suggested that these paths were not explained by CMB.

The other test performed was a marker variable test, which used the second-smallest positive correlation between the constructs ($r = 0.01$ for the correlation between subsidiary role-creation and hindrance stressors) as an estimate of the marker variable (Malhotra, Kim, and Patil, 2006). Then, the investigator computed the CMB-adjusted correlations for all possible pairs of constructs using the following two formulae.

$$(1) r_A = \frac{r_u - r_m}{1 - r_m}$$

$$(2) t_{\frac{\alpha}{2}, n-3} = \frac{r_A}{\sqrt{\frac{(1-r_A^2)}{(n-3)}}}$$

Where:

r_A = the adjusted correlations

r_u = the uncorrected correlations

r_m = the marker variable

n = sample size

Uncorrected and CMV-adjusted correlations are shown in table 5.8. As the table displays, the new adjustment had no influence on the significance of any correlations. This result further eased the investigator's concerns about CMB being problematic to this study.

Table 5.8. Correlations and CMV-correlations

Construct	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Challenge stressors	1	0.05	0.49**	0.33**	0.43**	0.34**	0.48**	-0.04	0.09	0.05	0.11	0.03	0.03	0.06	0.08	-0.12
2.Hindrance stressors	0.06	1	-0.15*	0.03	0.02	-0.04	-0.15*	-0.04	-0.03	0.04	0.07	0.00	0.02	-0.02	-0.02	0.00
3.Work engagement	0.50**	-0.14*	1	0.40**	0.61**	0.64**	0.62**	-0.11	0.16**	0.19**	0.11	0.22**	0.19**	0.00	-0.07	-0.04
4.Institutional dependence	0.34**	0.04	0.41**	1	0.40**	0.30**	0.56**	-0.10	0.04	-0.02	0.07	0.06	0.17**	0.02	0.01	0.06
5.SFR (control variable)	0.44**	0.03	0.61**	0.41**	1	0.33**	0.66**	-0.11	0.09	0.13*	0.05	0.09	0.12	0.05	-0.10	-0.11
6.Operating revenue	0.35**	-0.03	0.64**	0.31**	0.34**	1	0.39**	-0.09	0.28**	0.13*	0.10	0.13*	0.13*	-0.05	0.03	-0.16*
7.Local responsiveness	0.49**	-0.14*	0.62**	0.56**	0.66**	0.40**	1	-0.14	0.06	-0.02	0.10	0.05	0.13*	0.00	-0.02	0.07
8.Subsidiary age	-0.03	-0.03	-0.10	-0.09	-0.10	-0.08	-0.13	1	-0.07	0.06	-0.02	0.01	-0.07	0.05	0.03	-0.18**
9.Subsidiary size	0.10	-0.02	0.17**	0.05	0.10	0.29**	0.07	-0.06	1	0.14*	-0.09	0.19**	-0.10	0.03	-0.07	-0.07
10.Number of expatriates	0.06	0.05	0.20**	-0.01	0.14*	0.14*	-0.01	0.07	0.15*	1	-0.06	0.11	0.04	0.10	0.01	-0.13
11.R&D expenditure	0.12	0.08	0.12	0.08	0.06	0.11	0.11	-0.01	-0.08	-0.05	1	0.06	-0.05	0.19**	-0.13	-0.03
12.Creation (Role)	0.04	0.01	0.23**	0.07	0.10	0.14*	0.06	0.02	0.20**	0.12	0.07	1	0.20**	-0.05	-0.06	-0.07
13.Improvements (Role)	0.04	0.03	0.20**	0.18**	0.13	0.14*	0.14*	-0.06	-0.09	0.05	-0.04	0.21**	1	-0.012	-0.07	-0.05
14.Sector-FMCG (dummy)	0.07	-0.01	0.01	0.03	0.06	-0.04	0.01	0.06	0.04	0.11	0.20**	-0.04	-0.002	1	-0.14	-0.21**
15.Sector-C&Ts (dummy)	0.09	-0.01	-0.06	0.02	-0.09	0.04	-0.01	0.04	-0.06	0.02	-0.12	-0.05	-0.06	-0.13	1	-0.10

Construct	17	18	19	20	21	22	23	24	25
1.Challenge stressors	0.05	-0.20**	-0.03	-0.01	0.02	0.49**	0.31**	0.04	0.08
2.Hindrane stressors	0.00	-0.01	-0.04	-0.02	0.07	-0.20**	0.18*	0.06	0.05
3.Work engagement	0.13*	-0.22**	0.07	-0.09	-0.01	0.63**	0.49**	-0.09	-0.11
4.Institutional dependence	-0.05	-0.09	-0.09	0.07	-0.01	0.53**	0.43**	0.05	-0.04
5.SFR (control variable)	0.03	-0.10	-0.06	-0.05	0.10	0.64**	0.47**	0.07	-0.02
6.Operating revenue	0.15*	-0.10	0.01	0.00	-0.03	0.34**	0.34**	-0.05	-0.07
7.Local responsiveness	-0.04	-0.08	-0.07	0.01	0.04	0.64**	0.49**	0.05	-0.02
8.Subsidiary age	0.01	0.03	-0.04	-0.05	0.07	-0.10	0.05	0.04	0.09
9.Subsidiary size	0.04	-0.04	0.08	-0.13	0.05	0.11	0.21**	-0.06	-0.03
10.Number of expatriates	-0.02	-0.03	-0.09	0.02	0.05	0.02	0.17**	0.07	0.00
11.R&D expenditure	-0.06	-0.12	-0.18**	0.08	0.08	0.11	-0.09	0.15*	0.22**
12.Creation (Role)	0.09	-0.02	0.03	-0.06	0.04	0.11	0.16*	-0.04	-0.05
13.Improvements (Role)	0.03	0.03	0.06	-0.07	-0.02	0.13*	0.02	-0.09	-0.15*
14.Sector-FMCG (dummy)	-0.60**	-0.14	-0.31**	0.12	0.19**	0.10	-0.07	0.28**	0.04
15.Sector-C&Ts (dummy)	-0.27**	-0.07	-0.12	0.11	-0.02	-0.02	-0.02	0.11	0.06

Construct	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
16.Sector-P,C&Ps (dummy)	-0.11	0.01	-0.03	0.07	-0.10	-0.15*	0.08	-0.17**	-0.06	-0.12	-0.02	-0.06	-0.04	-0.20**	-0.09	1
17.Sector-E,C&T (dummy)	0.06	0.01	0.14*	-0.04	0.04	0.16*	-0.03	0.02	0.05	-0.01	-0.05	0.10	0.04	-0.58**	-0.26**	-0.43**
18.Sector-MM (dummy)	-0.19**	-0.003	-0.21**	-0.08	-0.09	-0.09	-0.07	0.04	-0.03	-0.02	-0.11	-0.01	0.04	-0.13	-0.06	-0.09
19.Asia HQ Origin (dummy)	-0.02	-0.03	0.08	-0.08	-0.05	0.02	-0.06	-0.03	0.09	-0.08	-0.17**	0.04	0.07	-0.30**	-0.11	-0.02
20.Europe HQ Origin (dummy)	-0.002	-0.01	-0.08	0.08	-0.04	0.01	0.02	-0.04	-0.12	0.03	0.09	-0.05	-0.06	0.13	0.12	0.09
21.NA HQ Origin (dummy)	0.03	0.08	-0.003	0.002	0.11	-0.02	0.05	0.08	0.06	0.06	0.09	0.05	-0.01	0.20**	-0.01	-0.07
22.Political Ties	0.50**	-0.18*	0.63**	0.53**	0.64**	0.35**	0.64**	-0.11	0.12	0.03	0.12	0.12	0.14*	0.11	-0.01	0.20
23.Competition Intensity	0.32**	0.19*	0.50**	0.44**	0.48**	0.35**	0.50**	0.06	0.22**	0.18**	-0.08	0.17*	0.03	-0.06	-0.01	-0.01
24.Geographic Distance	0.05	0.07	-0.08	0.06	0.08	-0.04	0.06	0.05	-0.05	0.08	0.16*	-0.03	-0.08	0.29**	0.12	0.01
25.Cultural Distance	0.09	0.06	-0.10	-0.03	-0.01	-0.06	-0.01	0.10	-0.02	0.01	0.23**	-0.04	-0.14*	0.05	0.07	0.10

Construct	17	18	19	20	21	22	23	24	25							
16.Sector-P,C&Ps (dummy)	-0.44**	-0.10	-0.03	0.08	-0.08	0.19	-0.02	0.00	0.09							
17.Sector-E,C&T (dummy)	1	-0.27**	0.24**	-0.21**	-0.06	-0.06	0.08	-0.25**	-0.14*							
18.Sector-MM (dummy)	-0.26**	1	0.11	0.00	-0.15*	-0.12	-0.07	-0.14*	-0.02							
19.Asia HQ Origin (dummy)	0.25**	0.12	1	-0.62**	-0.45**	-0.06	-0.01	-0.54**	-0.68**							
20.Europe HQ Origin (dummy)	-0.22**	0.01	-0.60**	1	-0.45**	-0.01	-0.02	0.34**	0.31**							
21.NA HQ Origin (dummy)	-0.05	-0.14*	-0.44**	-0.44**	1	0.05	0.04	0.66**	0.27**							
22.Political Ties	-0.05	-0.11	-0.05	-0.01	0.06	1	0.42**	0.03	-0.08							
23.Competition Intensity	0.09	-0.06	0.003	-0.05	0.05	0.43**	1	0.01	-0.04							
24.Geographic Distance	-0.24**	-0.13*	-0.52**	0.35**	0.66**	0.04	0.02	1	0.61**							
25.Cultural Distance	-0.13*	-0.01	-0.66**	0.32**	0.28**	-0.07	-0.03	0.61**	1							

Note: Figures below the diagonal show the correlation scores and figures above the diagonal are the adjusted-CMV correlations.

5.9. Results and hypotheses testing

5.9.1. Endogeneity bias

Endogeneity bias are concerned with the issue that a predictor can correlate with the residuals in a model (Zaefarian et al., 2017). In this regard, the effects of both the predictor and the unobserved variables that are related to the predictor can affect the computed coefficient estimates. Thus, the results will not reveal the true values and can mislead scholars to make invalid inferences and conclusions (Zaefarian et al., 2017, Ullah, Akhtar, and Zaefarian, 2018).

Prior research has suggested that job resources are negatively associated with job stressors because they can reduce job stressors and the associated physiological or psychological costs (Schaufeli and Bakker, 2004), and are also positively related to employee work engagement (Menguc et al., 2017). The moderators in this study may thus directly affect the levels of challenge or hindrance stressors experienced by subsidiary TMTs as well as their work engagement.

In order to correct such potential endogeneity effects, the investigator followed Hamilton and Nickerson (2003) and utilised a residual-based three-stage least square (3SLS) regression approach. The 3SLS method has been increasingly used in international business and strategy studies (Mudambi, Pedersen, and Andersson, 2014; Poppo, Zhou, and Li, 2016; Najafi-Tavani et al., 2018).

In the first stage, challenge stressors (CS) were regressed on institutional dependence (ID) to obtain their residuals, which partials out some direct influence of these variables on the challenge stressors construct. This procedure was repeated on hindrance stressors (HS) and work engagement (WE) to obtain their residuals:

$$CS = \alpha_0 + \alpha_1 ID + \zeta \quad (1)$$

$$HS = \beta_0 + \beta_1 ID + \zeta \quad (2)$$

$$WE = \gamma_0 + \gamma_1 ID + \zeta \quad (3)$$

The results of the first stage (Eq. 1) suggest that challenge stressors are positively related to institutional dependence ($\beta = 0.194, p < 0.01$). For Eq. (2), hindrance stressors are not significantly related to institutional dependence ($\beta = 0.029, p > 0.10$). For Eq. (3), work engagement is positively related to institutional dependence ($\beta = 0.189, p < 0.01$). These results suggest that the residual-based 3SLS model a suitable approach to correct potential endogeneity effects. In the second stage, the investigator obtained the residuals for challenge stressors, hindrance stressors and work engagement, respectively, using Equations (4), (5) and (6):

$$CS_{\text{residual}} = CS - CS_{\text{predicted}} \quad (4)$$

$$HS_{\text{residual}} = HS - HS_{\text{predicted}} \quad (5)$$

$$WE_{\text{residual}} = WE - WE_{\text{predicted}} \quad (6)$$

5.9.2. Regression analysis and results

Next, the indicators of challenge stressors and hindrance stressors were replaced with the obtained residuals (i.e. CS_{residual} and HS_{residual}). In the third stage, work engagement was firstly regressed on institutional dependence and control variables (Model 1). Then the other variables were added sequentially: the residuals of challenge stressors and hindrance stressors (Model 2); the interaction between CS_{residual} and institutional dependence (Model 3); the interaction between HS_{residual} and institutional dependence (Model 4). Finally, work engagement was regressed on all variables (Model 5). The set of the models is specified as follows:

$$\text{Model 1: Work Engagement} = \beta_0 + \beta_1 (ID) + \beta_{\text{controls}} + \zeta$$

$$\text{Model 2: Work Engagement} = \beta_0 + \beta_1 (\text{CS}_{\text{residual}}) + \beta_2 (\text{HS}_{\text{residual}}) + \beta_3 (\text{ID}) + \beta_{\text{controls}} + \zeta$$

$$\text{Model 3: Work Engagement} = \beta_0 + \beta_1 (\text{CS}_{\text{residual}}) + \beta_2 (\text{HS}_{\text{residual}}) + \beta_3 (\text{ID}) + \gamma_1 (\text{CS}_{\text{residual}} \times \text{ID}) + \beta_{\text{controls}} + \zeta$$

$$\text{Model 4: Work Engagement} = \beta_0 + \beta_1 (\text{CS}_{\text{residual}}) + \beta_2 (\text{HS}_{\text{residual}}) + \beta_3 (\text{ID}) + \gamma_1 (\text{HS}_{\text{residual}} \times \text{ID}) + \beta_{\text{controls}} + \zeta$$

$$\text{Model 5: Work Engagement} = \beta_0 + \beta_1 (\text{CS}_{\text{residual}}) + \beta_2 (\text{HS}_{\text{residual}}) + \beta_3 (\text{ID}) + \gamma_1 (\text{CS}_{\text{residual}} \times \text{ID}) + \gamma_2 (\text{HS}_{\text{residual}} \times \text{ID}) + \beta_{\text{controls}} + \zeta$$

Where CS = challenge stressors, HS = hindrance stressors, and ID = institutional dependence.

In a separate test, operating revenue was firstly regressed on institutional dependence and control variables (Model 1). Then, the other variables were added sequentially, including residuals of work engagement (i.e. $\text{WE}_{\text{residual}}$) (Model 2) and the interaction term between $\text{WE}_{\text{residual}}$ and institutional dependence (Model 3). The same procedure was repeated using local responsiveness as the dependent variable. In order to reduce possible collinearity between the main and interaction effects, the interaction terms was computed using the mean-centred values of pertinent independent variables. The set of the models is specified as follows:

$$\text{Model 1a: Operating Revenue} = \beta_0 + \beta_1 (\text{ID}) + \beta_{\text{controls}} + \zeta$$

$$\text{Model 1b: Local Responsiveness} = \beta_0 + \beta_1 (\text{ID}) + \beta_{\text{controls}} + \zeta$$

$$\text{Model 2a: Operating Revenue} = \beta_0 + \beta_1 (\text{WE}_{\text{residual}}) + \beta_2 (\text{ID}) + \beta_{\text{controls}} + \zeta$$

$$\text{Model 2b: Local Responsiveness} = \beta_0 + \beta_1 (\text{WE}_{\text{residual}}) + \beta_2 (\text{ID}) + \beta_{\text{controls}} + \zeta$$

Model 3_a: Operating Revenue = $\beta_0 + \beta_1 (WE_{\text{residual}}) + \beta_2 (ID) + \gamma_1 (WE_{\text{residual}} \times ID) + \beta_{\text{controls}} + \zeta$

Model 3_b: Local Responsiveness = $\beta_0 + \beta_1 (WE_{\text{residual}}) + \beta_2 (ID) + \gamma_1 (WE_{\text{residual}} \times ID) + \beta_{\text{controls}} + \zeta$

Where WE = work engagement and ID = institutional dependence.

The results of analyses show that challenge stressors are positively related to work engagement (Model 2: $\beta = 0.16, p < 0.01$; Model 5: $\beta = 0.16, p < 0.01$), whereas hindrance stressors are negatively related to work engagement (Model 2: $\beta = -0.09, p < 0.05$; Model 5: $\beta = -0.11, p < 0.05$). Work engagement is positively related to both operating revenue (Model 2: $\beta = 0.46, p < 0.01$; Model 3: $\beta = 0.45, p < 0.01$) and local responsiveness (Model 2: $\beta = 0.14, p < 0.01$; Model 3: $\beta = 0.14, p < 0.01$).

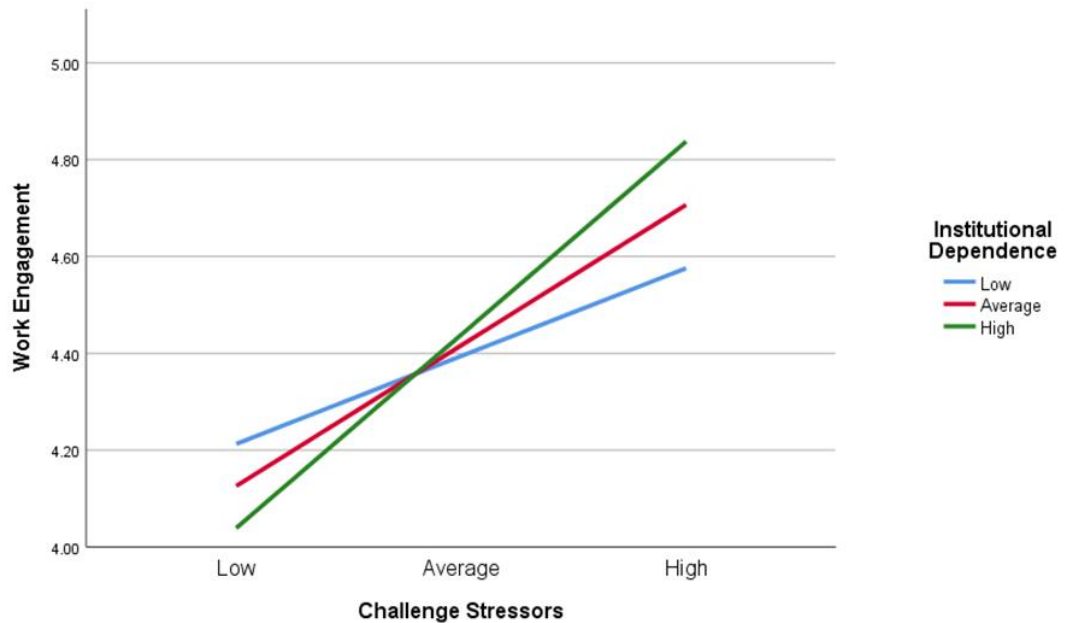
Providing support for H₅ assertion, the results show that the interaction between challenge stressors and institutional dependence is positively associated with work engagement (Model 3: $\beta = 0.14, p < 0.01$; Model 5: $\beta = 0.14, p < 0.05$). However, the results do not uphold H₆, since Model 4 and Model 5 provide no support for the moderating effect of institutional dependence on the link between hindrance stressors and work engagement (Model 4: $\beta = 0.02, p > 0.10$; Model 5: $\beta = 0.02, p > 0.10$). The interaction of work engagement and institutional dependence is not significantly associated with subsidiary operating revenue (Model 3: $\beta = 0.06, p > 0.10$). Thus, H₇ is rejected. Contrary to H₈ prediction, the interaction effect of work engagement and institutional dependence is negatively associated with subsidiary local responsiveness (Model 3: $\beta = -0.10, p < 0.05$). Table 5.9 and 5.10 show the results of regression analyses and Figure 3 illustrates the significant moderation findings.

	Dependent variable: work engagement									
	Model 1		Model 2		Model 3		Model 4		Model 5	
	B	SE	B	SE	B	SE	B	SE	B	SE
<i>Predictors</i>										
CS _{Residual}			0.16**	0.06	0.16**	0.06	0.16**	0.06	0.16**	0.06
HS _{Residual}			-0.09*	0.05	-0.11*	0.05	-0.09*	0.05	-0.11*	0.05
ID	0.04	0.06	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05
<i>Interactions</i>										
CS*ID					0.14**	0.03			0.14**	0.03
HS*ID							0.02	0.04	0.02	0.04
<i>Control Variables</i>										
Subsidiary age	-0.04	0.07	-0.04	0.07	-0.03	0.06	-0.04	0.07	-0.03	0.06
Subsidiary size	0.04	0.05	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Creation (role)	0.08 [†]	0.15	0.08 [†]	0.14	0.07	0.14	0.08 [†]	0.14	0.07	0.14
Improvements (role)	0.09*	0.15	0.09*	0.14	0.10*	0.14	0.10*	0.14	0.10*	0.14
Number of expatriates	0.11*	0.08	0.11*	0.08	0.09*	0.07	0.11*	0.08	0.09*	0.07
R&D expenditure	0.10*	0.03	0.10*	0.03	0.10*	0.03	0.10*	0.03	0.10*	0.03
Sector-FMCG	-0.04	0.16	-0.04	0.15	-0.05	0.15	-0.04	0.15	-0.05	0.15
Sector-Clothing and Textiles	-0.03	0.26	-0.03	0.25	-0.02	0.25	-0.03	0.25	-0.02	0.25
Sector-Petroleum, Chemicals and Plastics	-0.05	0.18	-0.05	0.17	-0.04	0.17	-0.05	0.17	-0.04	0.17
Sector-Metal Manufacturing	-0.15**	0.25	-0.15**	0.24	-0.15**	0.24	-0.15**	0.25	-0.15**	0.24
Asia HQ origin	-0.18	0.68	-0.18	0.67	-0.20	0.65	-0.18	0.66	-0.20	0.65
Europe HQ origin	-0.25	0.65	-0.25	0.63	-0.25	0.62	-0.25	0.63	-0.24	0.62
North America HQ origin	-0.24	0.72	-0.24	0.70	-0.24	0.69	-0.24	0.70	-0.24	0.69
Competition Intensity	0.19**	0.05	0.19**	0.05	0.18**	0.05	0.19**	0.05	0.18**	0.05
Slack financial resources	0.28**	0.06	0.28**	0.06	0.29**	0.06	0.28**	0.06	0.29**	0.06
Geographic distance	-0.06	0.45	-0.06	0.43	-0.08	0.42	-0.06	0.43	-0.08	0.42

Cultural distance	0.01	0.36	0.01	0.35	0.01	0.34	0.01	0.35	0.01	0.35
Political ties	0.26**	0.23	0.26**	0.22	0.26**	0.22	0.26**	0.22	0.25**	0.22
Highest VIF	1.97		1.97		1.98		1.99		1.99	
F	14.60**		14.98**		15.29**		14.25**		14.57**	
Adjusted R²	0.52		0.55		0.57		0.55		0.57	
Cohen's f² for effect size	1.27		1.46		1.56		1.46		1.56	
<p><i>Note:</i> CS = Challenge Stressors, HS = Hindrance Stressors, ID = Institutional Dependence Residuals for both CS and HS are used in line with residual-based 3SLS approach. ** p < 0.01, * p < 0.05, †p < 0.1 (two-tailed test, n = 238)</p>										

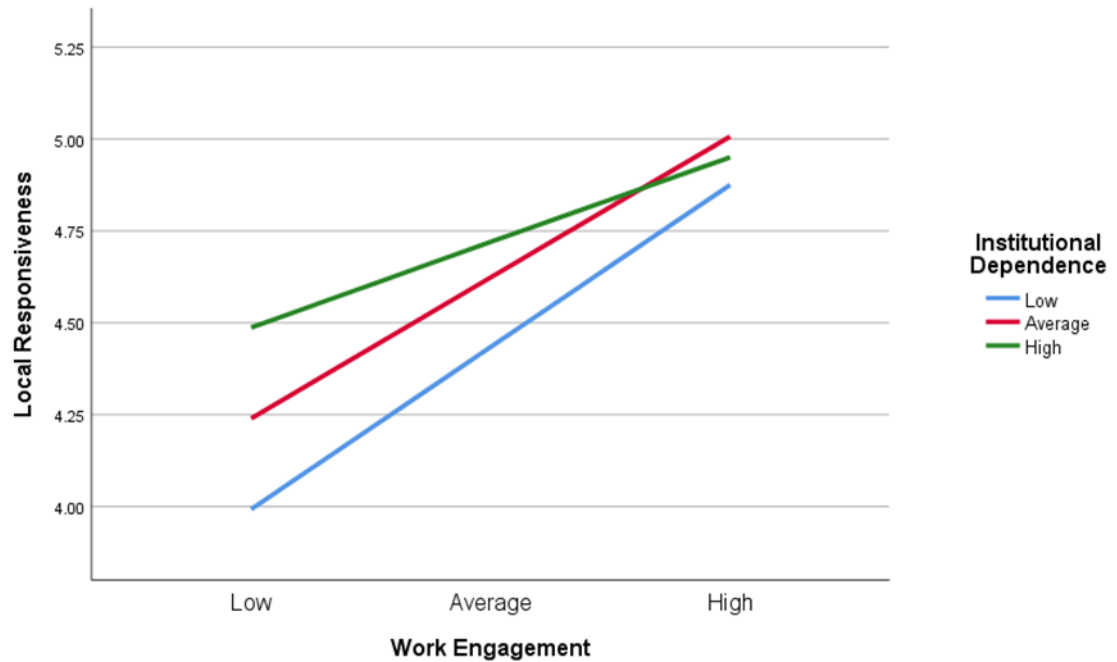
	Dependent Variables											
	Operating Revenue						Local Responsiveness					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
<i>Predictors</i>												
WE _{Residual}			0.46**	0.08	0.45**	0.08			0.14**	0.06	0.14**	0.06
ID	0.12 [†]	0.08	0.12*	0.06	0.13*	0.06	0.15**	0.53	0.15**	0.05	0.15**	0.05
<i>Interaction</i>												
WE X ID					0.06	0.04					-0.10*	0.04
<i>Control Variables</i>												
Subsidiary age	-0.06	0.09	-0.06	0.08	-0.06	0.08	-0.04	0.06	-0.04	0.06	-0.04	0.06
Subsidiary size	0.25**	0.07	0.25**	0.06	0.25**	0.06	-0.01	0.05	-0.01	0.05	-0.01	0.05
Creation (role)	-0.04	0.20	-0.04	0.17	-0.04	0.17	-0.05	0.14	-0.05	0.14	-0.05	0.13
Improvements (role)	0.11 [†]	0.20	0.11*	0.17	0.11*	0.17	0.04	0.14	0.04	0.14	0.05	0.13
Number of expatriates	0.06	0.11	0.06	0.09	0.06	0.09	-0.07	0.07	-0.07 [†]	0.07	-0.06	0.07
R&D expenditure	0.16*	0.04	0.16**	0.03	0.16**	0.03	0.06	0.03	0.06	0.03	0.05	0.03
Sector-FMCG	-0.13*	0.21	-0.13*	0.18	-0.13*	0.18	-0.05	0.15	-0.05	0.15	-0.05	0.14
Sector-Clothing and Textiles	0.06	0.36	0.06	0.30	0.05	0.30	0.01	0.25	0.01	0.24	0.01	0.24
Sector-Petroleum, Chemicals and Plastics	-0.17**	0.25	-0.17**	0.20	-0.17**	0.20	0.03	0.17	0.03	0.17	0.02	0.17
Sector-Metal Manufacturing	-0.06	0.35	-0.06	0.29	-0.06	0.29	0.04	0.24	0.04	0.24	0.03	0.23
Asia HQ origin	-0.04	0.94	-0.04	0.78	-0.05	0.78	0.19	0.65	0.19	0.64	0.19	0.63
Europe HQ origin	0.46	0.90	0.46 [†]	0.75	0.44 [†]	0.75	0.15	0.63	0.15	0.61	0.12	0.60

NA HQ origin	0.51	0.99	0.51*	0.83	0.49†	0.83	0.09	0.69	0.09	0.68	0.07	0.67
Competition Intensity	0.16*	0.07	0.16**	0.06	0.16**	0.06	0.15**	0.05	0.15**	0.04	0.15**	0.04
Slack financial resources	0.15*	0.09	0.15*	0.07	0.14*	0.08	0.28**	0.06	0.28**	0.06	0.28**	0.06
Geographic distance	-0.59*	0.62	-0.59*	0.51	-0.58*	0.51	0.10	0.43	0.10	0.42	0.12	0.42
Cultural distance	0.002	0.50	0.002	0.42	-0.004	0.42	0.01	0.35	0.01	0.34	0.01	0.34
Political ties	0.02	0.31	0.02	0.26	0.02	0.26	0.41**	0.22	0.41**	0.21	0.40**	0.21
Highest VIF	1.97		1.97		1.99		1.97		1.97		1.99	
F	5.52**		12.34**		11.87**		21.76**		22.49**		21.13**	
Adjusted R²	0.27		0.49		0.49		0.63		0.65		0.65	
Cohen's f² for effective size	0.48		1.14		1.16		1.90		2.08		2.16	
<p><i>Note:</i> WE = Work Engagement, ID = Institutional Dependence Residual for WE is used in line with residual-based 3SLS approach. ** p < 0.01, * p < 0.05, †p < 0.1 (two-tailed test, n = 238)</p>												

Figure 3. Plots of moderating effects**a) Challenge stressors and institutional dependence on work engagement**

The Johnson-Neyman value for this moderation effect was acquired using SPSS Process. As the diagram shows, when there is a high level of institutional dependence (vs. low), the positive association between challenge stressors and work engagement is stronger. This result suggests that high dependence on institutional constituents for critical resources can be beneficial as subsidiary top management teams meet their expectations to acquire knowledge and resources. Specifically, this can enhance the team's abilities and positive expectancy that the effort expended to deal with challenging tasks will lead to desired outcomes. In this respect, they are motivated to respond to challenge stressors in problem-solving style.

b) Work engagement and institutional dependence on local responsiveness



As the diagram shows, in high institutional dependence compared to low, the positive association between work engagement and local responsiveness becomes weaker. This finding suggests that although institutional dependence provides critical resources for subsidiaries, the costs can be high in terms of responding to changes in local market. High institutional dependence does not guarantee that subsidiaries can exploit resources for addressing local market changes, and instead, it can adversely affect the efficacy of work engagement towards local responsiveness performance.

Table 5.9 and 5.10 also present the highest variance inflation factor (VIF) for each regression model. As the highest VIF in across all models is 1.99, which is below the cut-off point of 10, we conclude that multicollinearity is not an issue. Additionally, the investigator computed Cohen's f^2 to find out our regression models' effect size, following the equation (7) provided by Cohen et al. (2003):

$$f^2 = \frac{R^2}{(1-R^2)} \quad (7)$$

The results suggest that the effect sizes for the regression models range from 1.27 to 1.56 (see table 5.9), from 0.48 to 1.16, and from 1.90 to 2.16 (see table 5.10), corresponding to R^2 in pertinent models. Considering that the cut-off f^2 value is 0.35, it is concluded that the study results have a considerably large effect size (Cohen et al., 2003).

5.9.2. Random selection bias

Notwithstanding the investigator's effort to correct any potential endogeneity bias with three-stage least square (3SLS) regression, the study results were likely susceptible to the self-selection bias. In addressing such concern, the investigator conducted further statistical analyses to assess the existence of endogeneity associated with the predictors in this study being choice variables that not randomly assigned across the sample (Hamilton and Nickerson, 2003).

5.9.2.1. Three-way interactions

Specifically, the investigator re-estimated the final models with three-way interactions. First, the Model 5 in table 5.9 was tested with the addition of two three-way interaction terms, which were CS*ID*Number of Expatriates and HS*ID*Number of Expatriates. Number of expatriates was previously used in the main analyses as control variable. At this stage, work engagement was modelled as follows:

$$\text{Work Engagement} = \beta_0 + \beta_1 (\text{CS}_{\text{residual}}) + \beta_2 (\text{HS}_{\text{residual}}) + \beta_3 (\text{ID}) + \beta_4 (\text{NOExpats}) + \gamma_1 (\text{CS}_{\text{residual}} \times \text{ID}) + \gamma_2 (\text{HS}_{\text{residual}} \times \text{ID}) + \gamma_3 (\text{CS}_{\text{residual}} \times \text{ID} \times \text{NOExpats}) + \beta_{\text{controls}} + \zeta$$

The results suggest that the overall pattern of significance did not change in the new model (CS: $\beta = 0.15$, $p < 0.01$; HS: $\beta = -0.12$, $p < 0.01$; CS*ID: $\beta = 0.10$, $p < 0.05$; HS*ID: $\beta = 0.01$, $p > 0.10$). Moreover, the three-way interaction terms were not significant ($\beta = -0.13$, $p > 0.10$; and $\beta = -0.07$, $p > 0.10$, respectively).

Then, the investigator re-examined the two final models (Model 3) in table 5.10 with the addition of a three-way interaction term (i.e. WE*ID* Number of Expatriates). In this method, operating revenue and local responsiveness were remodelled as follows, respectively:

$$(1) \text{ Operating Revenue} = \beta_0 + \beta_1 (\text{WE}_{\text{residual}}) + \beta_2 (\text{ID}) + \beta_3 (\text{NOExpats}) + \gamma_1 (\text{WE}_{\text{residual}} \times \text{ID}) + \gamma_2 (\text{WE}_{\text{residual}} \times \text{ID} \times \text{NOExpats}) + \beta_{\text{controls}} + \zeta$$

$$(2) \text{ Local Responsiveness} = \beta_0 + \beta_1 (\text{WE}_{\text{residual}}) + \beta_2 (\text{ID}) + \beta_3 (\text{NOExpats}) + \gamma_1 (\text{WE}_{\text{residual}} \times \text{ID}) + \gamma_2 (\text{WE}_{\text{residual}} \times \text{ID} \times \text{NOExpats}) + \beta_{\text{controls}} + \zeta$$

The results show that the significance level did not change in the new model where the operating revenue is the dependent variable (WE: $\beta = 0.47$, $p < 0.01$; WE*ID: $\beta = -0.01$, $p > 0.10$). The three-way interaction was not significant ($\beta = 0.09$, $p > 0.10$). Likewise, in the model where local responsiveness is the dependent variable, the overall pattern of significance did not change (WE: $\beta = 0.14$, $p < 0.01$; WE*ID: $\beta = -0.10$, $p < 0.05$). The three-way interaction was not significant ($\beta = -0.07$, $p > 0.10$). The findings alleviate concern that self-selection sources of endogeneity bias are a problem in this study.

5.9.2.2. Mediation tests

Following Zhao, Lynch, and Chen's (2010) suggestions, the researcher also employed MacKinnon, Lockwood, and Williams's (2004) bootstrapping-based test to examine mediation effects. Specifically, with AMOS the investigator computed the estimate and confidence intervals (CI) for the indirect effects of challenge stressors and hindrance stressors on subsidiary operating revenue and local responsiveness through work engagement. The results indicate that both challenge stressors and hindrance stressors have an indirect relationship with subsidiary operating revenue performance through work engagement (challenge stressors: $\gamma = 0.270$, $p < 0.001$, 95% bootstrap CI [0.196, 0.363]; hindrance stressors: $\gamma = -0.076$, $p < 0.05$, 95% bootstrap CI [-0.138, -0.011]).

Likewise, challenge stressors and hindrance stressors both are associated with local responsiveness via work engagement (challenge stressors: $\gamma = 0.218$, $p < 0.001$, 95% bootstrap CI [0.145, 0.299]; hindrance stressors: $\gamma = -0.062$, $p < 0.05$, 95% bootstrap CI [-0.119, -0.011]). The direct effects of challenge stressors on operating revenue ($\gamma = 0.096$, ns) and local responsiveness ($\gamma = 0.333$, $p < 0.001$) along with the direct effects of hindrance stressors on operating revenue ($\gamma = 0.028$, ns) and local responsiveness ($\gamma = -0.117$, $p < 0.05$) were also tested. These findings together provide statistical evidence for indirect-only mediation in the relationship between the two types of work stressors and operating revenue, and for complementary mediation in their relationship with local responsiveness. Thus, it can be concluded that work engagement mediates the relationship between the challenge–hindrance stressors, operating revenue and local responsiveness.

5.10. Chapter summary

This chapter reported the study results. It started with providing descriptive statistics and screening the data through inspecting the missing values, outliers, normality, multicollinearity, and non-response bias. Next, the reliability of constructs was examined, and measure purifications based on EFA and CFA were implemented. Thereafter, AVE and CR scores were computed for testing convergent validity, discriminant validity and composite reliability. The results of the CMV-correlation scores confirmed no problem with discriminant validity and common method bias. Then, for hypothesis testing, 3SLS regression technique was employed because it could effectively deal with the potential endogeneity bias. Finally, a three-way-interaction procedure and mediation test were used to determine if the results are vulnerable to the random-selection bias. The conclusion was that the results were consistent with the ones from the original regression in hypothesis testing.

Chapter 6: Discussion

6.1. Introduction

As the final part of this thesis, the present chapter discusses the research findings. It begins with an overview discussion of the results. Thereafter, theoretical and managerial implications of the thesis are explained. Finally, drawing on the research limitations, directions for future studies are recommended.

6.2. Discussion of findings

Based on the transactional theory of stress, JD–R theory, neoinstitutional theory, and a sample of 238 Chinese subsidiaries of non-Chinese MNCs, the present study attempts to address the following research questions:

- Do challenge stressors and hindrance stressors differentially affect subsidiary top management team's work engagement?
- How does subsidiary top management team's work engagement affect subsidiary performance in terms of operating revenue and local responsiveness?
- How does institutional dependence, as an important characteristic of the institutional environment in China, affect the association between challenge stressors and hindrance stressors and subsidiary top management team's work engagement?
- How does institutional dependence affect the relationship between subsidiary top management team's work engagement and subsidiary performance in terms of operating revenue and local responsiveness?

The research questions are addressed with the study results. The findings are discussed below, including the effects of challenge stressors and hindrance stressors on subsidiary TMT work engagement, the effects of work engagement on subsidiary operating revenue, the effects of work engagement on subsidiary local responsiveness, the moderating effects

of institutional on the relationship between challenge stressors and work engagement, hindrance stressors and work engagement, work engagement and operating revenue, work engagement and local responsiveness, respectively.

6.2.1. The effects of challenge stressors and hindrance stressors

Based on the transactional theory of stress (LePine, Podsakoff, and LePine, 2005; Cavanaugh et al., 2000) and JD–R theory (Bakker, Demerouti, and Schaufeli, 2003; Tadić, Bakker and Oerlemans, 2015), the present research has proposed that challenge stressors are positively associated with work engagement, whereas hindrance stressors are negatively related to it. Consistent with the extant literature on challenge–hindrance stressors (e.g., Crawford, LePine, and Rich, 2010; Breevaart and Bakker, 2018), the present study provides evidence for these propositions in the context of MNC subsidiaries.

In alignment with Crawford, LePine, and Rich (2010), the current study's findings reinforces the criticality of distinguishing between the two types of work stressors in terms of resolving inconsistencies in relationships between work stressors and engagement. Specifically, challenge stressors, as they have a potential to promote growth and achievement (Cavanaugh et al., 2000), can motivate subsidiary TMTs to expend greater work effort. Conversely, hindrance stressors, as they tend to thwart opportunities for subsidiary TMTs to grow or achieve valued outcomes (Cavanaugh et al., 2000), can reduce subsidiary TMT's willingness to invest time and energy in efforts to overcome obstacles.

The findings also indicate that true relationships exist between work stressors and engagement, even though some research has supposed there are none (Schaufeli and Bakker, 2004). While no prior study has investigated the relationship between challenge–hindrance stressors and work engagement in the context of MNC subsidiaries, the current

study provides evidence that, subsidiary TMTs confronted with challenge stressors emanating from headquarters feel more confident that their work effort will assist them in successfully meeting job stressors and in achieving desirable growth, which are worth the discomfort associated with additional work effort (LePine, Podsakoff, and LePine, 2005). Challenge stressors can increase their willingness to invest time and energy in efforts to overcome challenging tasks. In contrast, hindrance stressors trigger subsidiary TMT's negative work attitudes and a reduction in work engagement, due to the belief that their efforts to deal with hindrances may cause a failure and waste of energy and resources (Cavanaugh et al., 2000).

The study results are consistent with the pre-study interview of which the aim is to identify if challenge and hindrance stressors exist in subsidiary TMTs' work. As noted by a Chinese executive, "The existence of this kind of stress [challenge stressors] keeps us interacting with each other in order that it can be alleviated. For example, in our subsidiary, we [the top management team] must stay connected and have the common and shared spirit. In the meanwhile, we try to maintain good communication with the headquarters". Meanwhile, although the interviewees have not explicitly addressed the negative effects of hindrance stressors on their team's work engagement, they have mentioned some negative emotions and attitudes that can harm their work motivation, such as "exhaustion", "frustration", "helplessness", and "anxiety".

6.2.2. The effects of work engagement on subsidiary performance

Research on expatriation management has conceptualised work engagement as the mediator of the job stressors–performance association (Lazarova, Westman, and Shaffer, 2010). Furthermore, studies have revealed that work engagement has positive consequences at the individual and organisational levels (Harter, Schmidt, and Hayes, 2002; Schaufeli and Bakker, 2004). Notwithstanding, the empirical evidence regarding

the work engagement-performance linkage is absent from the context of headquarters–subsidiary relationships. It is crucial to advance the knowledge regarding headquarters–subsidiary relations because such connection is often plagued by serious problems that can impede subsidiary performance (Kostova, Nell, and Hoenen, 2018). In addressing this issue, the present study posits that subsidiary TMTs work engagement is positively associated with two subsidiary performance outcomes: operating revenue and local responsiveness.

In line with hypotheses, the study results confirm that subsidiary TMTs work engagement facilitates both subsidiary operating revenue and local responsiveness. Engaged employees tend to feel more inspired, energetic, and enthusiastic about their work (Salanova, Agut, and Peiró, 2005) and are more dedicated to performing their job responsibilities and duties (Menguc et al., 2017), resulting in high task performance and organisational citizenship behaviour (Rich, LePine, and Crawford, 2010). Furthermore, engaged employees within a team are more likely to interact with each other to develop a collective and shared pattern of positive behaviour, which influences team success (Morgeson and Hofmann, 1999; Marks, Mathieu, and Zaccaro, 2001). Consistently, results from the pre-study interviews support the positive influence of work engagement on performance. For instance, as noted by a Chinese executive, “While attempting to solve problems, we [the top management team] get more and more experienced and we can do our jobs better”.

Drawing on the arguments and results discussed above, the present study concludes that the more highly engaged subsidiary TMTs are, the more likely they are to contribute to achievement and maintenance of financial performance. Moreover, engaged subsidiary TMTs are also motivated and dedicated to performing their job responsibilities and duties

to address local market needs in a timely and effective manner, enhancing this non-financial performance.

6.2.3. The moderating role of institutional dependence

The neoinstitutional theory suggests that organisational survival and performance are determined by the extent of alignment with the institutional environment. Thus, organisations are subject to external institutional pressures and can be highly dependent on local institutional constituents for critical resources (DiMaggio and Powell, 1991; Scott, 1995; Morgan and Kristensen, 2006). The findings of the present study show that in Chinese business environment, institutional dependence can strengthen the effect of challenge stressors on subsidiary TMT work engagement. When institutional dependence is high, MNC subsidiaries rely heavily on major institutional referents in host country for critical resources and they endeavour to meet their stressors to acquire such resources and to avoid negative consequences (Meyer, Rowan and Scott, 1983; Pache and Santos, 2010). The local resources and opportunities subsidiary managers obtain in responding to institutional expectations are considered to profusely enhance their abilities to cope with work challenges and to manage host country operations, which escalates the possibility of them being dedicated to working harder to solve problems. Due to the focus on work stressors, this result provides different explanation concerning the benefits of institutional dependence compared to the finding of Grewal, Chandrashekar, and Dwyer (2008) that institutional dependence strengthens the positive effects of subsidiary learning on performance.

Notwithstanding, the study provides no statistical evidence for the moderating effect of institutional dependence on the relationship between hindrance stressors and work engagement. A possible reason is that, although resources stemming from institutional dependence environment can provide subsidiary TMTs with the necessary power to

conduct successful operations, they might not help them cope with work hindrances if level of effort is not directly related to meeting the hindrance stressors that are beyond the teams' control. Accordingly, it is conceivable that the teams' inability to directly cope with hindrance stressors is likely to result in an appraisal that any additional effort to reduce or cope with the stressor is futile and that they don't regard an association between work effort and meeting the stressors (Wallace et al., 2009). Therefore, resources alone in high institutional dependence cannot not promote subsidiary TMTs' capabilities to manage work hindrances such as role ambiguity and role conflict.

The investigator hypothesised that institutional dependence can strengthen the effect of work engagement on subsidiary operating revenue. However, the results provide no support for this notion. One possible explanation is that, notwithstanding the rewards of meeting local institutional constituents' expectations such as institutional support and business opportunities that are advantageous to subsidiary local operations, subsidiary TMTs must be able to exploit such resources for boosting financial performance. Prior research has evidenced the importance of subsidiary capability of resources exploitation (i.e. absorptive capacity) (Gupta and Govindarajan, 2000; Najafi-Tavani et al., 2018). Thus, institutional dependence alone fails to guarantee that the engaged subsidiary TMTs would significantly contribute to the firm's financial performance. Although resources stemming from institutional dependence can help subsidiary TMTs to improve local business operations, their financial returns may be determined by some other factors, such as how they are exploited and if they induce additional costs.

This study posits that institutional dependence can positively moderate the relationship between work engagement and local responsiveness. Surprisingly, the results indicate that institutional dependence weakens this association, which is contrary to the investigator's prediction. As the degree of institutional dependence increases, the positive association

between work engagement and local responsiveness becomes weaker. A possible explanation is that institutional constituents' expectations may convey inaccurate and contradictory information regarding local market needs especially when they are changeful. Satisfying institutional constituents' expectations does not necessarily guarantee the success in meeting local stressors. It is possible that subsidiaries must compromise local market needs while attempting to address other institutional expectations, particularly when the stressors are conflicting. Indeed, a few studies have suggested that subsidiaries confronted with conflicting institutional expectations often experience more difficulties acquiring and/or maintaining legitimacy with its local environment and adopt other responses than simple (non-) compliance (Kostova and Roth, 2002; Durand and Jacqueminet, 2015; Nell, Puck, and Heidenreich, 2015). With this knowledge, it is plausible that in the presence of high institutional dependence, subsidiaries TMTs facing conflicting institutional requirements have more difficulties in rapidly and effectively responding to local market changes

6.3. Contributions and implications

6.3.1. Theoretical contributions

This study offers several implications for theory. First, following the transactional stress theory (Cavanaugh et al., 2000) and JD-R theory (Bakker and Demerouti, 2017), the present work provides evidence that subsidiary TMTs challenge stressors are positively associated with their work engagement, whereas TMTs hindrance stressors are negatively related to work engagement. This finding confirms the importance of distinguishing between the two types of work stressors when examining subsidiary TMTs work motivation and subsidiary performance.

The challenge–hindrance stressor distinction provides a valid theoretical rationale for the inconsistent findings on the relationship between stress and workplace outcomes (LePine, LePine, and Jackson, 2004). Specifically, based on the differentiated job stressors model (Crawford, LePine, and Rich, 2010) in subsidiary TMT context, this study has uniqueness and it concludes that challenge stressors can increase subsidiary TMT work engagement by triggering their positive work attitudes that motivate them to dedicate more work effort, whereas hindrance stressors can reduce subsidiary TMT work engagement by demotivating them to expend additional work effort to meet uncontrollable and harmful job stressors.

Second, while the available organisational stress studies have largely assessed individual-level well-being (Bakker and Demerouti, 2017), the current study is based on team-level analysis. Specifically, it focuses on subsidiary top-management-team level work stressors, work engagement and subsidiary-level performance. Moreover, despite the importance of engaged employees to job performance and organisational citizenship behaviour (Rich, LePine, and Crawford, 2010), the work engagement-performance link remains overlooked in the international business literature. The present study addresses this omission by providing empirical evidence that subsidiary TMTs work engagement is an important predictor of both operating revenue and local responsiveness performance.

Third, this study contributes to the international business literature by revealing boundary conditions under which challenge stressors and hindrance stressors affect subsidiary TMTs work engagement. The international business literature has mainly focused on the influence of institutional dependence on firms' responses to institutional pressure (e.g., conformity) (DiMaggio and Powell, 1983; Clemens and Douglas, 2005). Institutional dependence has then been found to prompt the positive benefits from MNC subsidiaries' worldwide learning strategies (Grewal, Chandrashekar, and Dwyer, 2008). This study

provides a novel perspective that the resources stemming from institutional dependence such as legitimacy, opportunities for learning and favourable policies have an impact on subsidiary TMTs work motivation when confronted with high job stressors. The results indicate that institutional dependence strengthens the link between challenge stressors and work engagement but weakens the association between work engagement and local responsiveness. As such, the contribution of this research is not limited to providing new insights on the performance outcomes of challenge and hindrance stressors in the context of MNC subsidiaries; rather it sheds light on boundary conditions that strengthen or weaken these links.

6.3.2. Managerial implications

Through a managerial lens, this study offers important implications for how MNCs can go about facilitating subsidiary financial and local responsiveness performance. This study suggests that challenge stressors positively, and hindrance stressors negatively affect subsidiary TMTs work engagement, which in turn, predicts superior operating revenue and local responsiveness performance. These results imply that job stressors should not be regarded as a unidimensional phenomenon affecting MNC subsidiary TMTs work motivation and subsidiary performance. Instead, MNCs should assess job stressors for subsidiary TMTs in terms of challenges and hindrances that they may encounter in working with/for headquarters. Further, on the one hand, challenge stressors should not be eliminated given their positive influence on work engagement. On the other hand, hindrance stressors such as role ambiguity and role conflict should be proactively resolved to attenuate their negative impacts on subsidiary TMTs and organisational performance.

Because the results show that the positive effect of challenge stressors on work engagement can be strengthened by institutional dependence, it is important for managers to possess positive attitudes toward local institutional constituents' expectations. It is equivalently imperative for subsidiary managers to interpret those stressors in a way that valuable knowledge and resources regarding the host country can be absorbed and utilised. It is worth investing more time and effort in studying institutional expectations through team discussions.

Finally, it is important for MNC executives to understand that, while engaged subsidiary TMTs endeavour to improve subsidiary performance, a high level of institutional dependence can attenuate the positive effects of work engagement and local responsiveness performance. Learning from institutional requirements and satisfying them are not enough for work dedication to serve local markets. Subsidiary managers must proactively explore and exploit more knowledge and resources beyond institutional expectations in order to rapidly and effectively respond to local market stressors. Hence, on the one hand, they must keep local institutional constituents satisfied, on the other hand, they must be able to identify those differences between institutional constituents' expectations and specific local market stressors and become more ambidextrous at meeting both stressors.

6.4. Limitations and directions for future research

Although the present study provides novel insights into the differential effects of challenge stressors and hindrance stressors on subsidiary TMT work engagement and the association between work engagement and operating revenue and local responsiveness, as well as into the moderating effects of institutional dependence, it has some limitations that provide interesting avenues for further studies. The first limitation concerns the cross-sectional nature of the study. It would be interesting to investigate how challenge stressors

and hindrance stressors affect subsidiary TMTs work engagement, how work engagement predicts subsidiary performance, and how internal and external resources condition these links in the long term. For instance, it is valuable to test how changes in challenge stressors and hindrance stressors affect work engagement using experimental and/or longitudinal designs.

Second, this study tested subsidiary TMT-level challenge and hindrance stressors using subjective evaluations based on their perceptions. Further studies may need to include an objective measure such as the number of assignments a subsidiary TMT receives from headquarters weekly or monthly and the average amount of time allotted to an assignment. Third, this study focuses solely on the relationship between job stressors and work engagement. It may lead to more comprehensive knowledge if future research can include work engagement and emotional exhaustion in the same picture. Besides, some other motivation-based variables such as commitment and flourishing should be considered (Bakker and Demerouti, 2017). Fourth, this study is built upon on the integration of challenge–hindrance stressor framework, JD–R theory and neoinstitutional theory. Job resources, in MNC context, involve a broader set of variables that are worth examination. Other perspectives, such as subsidiary autonomy, resource allocation mode (Özsomer and Gençtürk, 2003), absorptive capacity (Najafi-Tavani et al., 2018), local embeddedness (Andersson, Björkman, and Forsgren, 2005), and business or political ties (Sheng, Zhou, and Li, 2011) may also advance the understanding of the boundary conditions for the stressors-motivation-performance links, if any available theory can be used to justify the uniqueness of specific resources in this context.

Finally, although this study focuses on the direct effects of challenge stressors and hindrance stressors on work engagement, it is likely for job stressors to act as moderators (e.g., Sonnentag et al., 2012). Further research may find it interesting to examine if and

how the two types of work stressors can strengthen or weaken the link between resources and work engagement and the association between work engagement and subsidiary performance.

6.5. Chapter summary

This chapter started with a summative discussion about the findings of the current study. Specifically, the findings on the direct and interactive effects were discussed. Then, theoretical and managerial implications of the thesis have were argued. Finally, the limitations of the study were outlined and directions for future research were proposed.

References

- Ali, M., Ng, Y.L. and Kulik, C.T., 2014. Board age and gender diversity: A test of competing linear and curvilinear predictions. *Journal of Business Ethics*, 125(3), pp.497-512.
- Ambos, B. and Mahnke, V., 2010. How do MNC headquarters add value?. *Management International Review*, 50(4), pp.403-412.
- Ambos, T.C. and Birkinshaw, J., 2010. Headquarters' attention and its effect on subsidiary performance. *Management international review*, 50(4), pp.449-469.
- Andersson, U., Forsgren, M. and Holm, U., 2002. The strategic impact of external networks: subsidiary performance and competence development in the multinational corporation. *Strategic management journal*, 23(11), pp.979-996.
- Andersson, U., Forsgren, M. and Holm, U., 2015. Balancing subsidiary influence in the federative MNC: A business network view. In *Knowledge, Networks and Power* (pp. 393-420). Palgrave Macmillan, London.
- Andersson, U., Björkman, I. and Forsgren, M., 2005. Managing subsidiary knowledge creation: The effect of control mechanisms on subsidiary local embeddedness. *International Business Review*, 14(5), pp.521-538.
- Aryee, S. and Stone, R.J., 1996. Work experiences, work adjustment and psychological well-being of expatriate employees in Hong Kong. *International Journal of Human Resource Management*, 7(1), pp.150-164.
- Atuahene-Gima, K., 2005. Resolving the capability–rigidity paradox in new product innovation. *Journal of marketing*, 69(4), pp.61-83.

Auh, S., Menguc, B., Spyropoulou, S. and Wang, F., 2016. Service employee burnout and engagement: the moderating role of power distance orientation. *Journal of the Academy of Marketing Science*, 44(6), pp.726-745.

Auh, S. and Menguc, B., 2005. Balancing exploration and exploitation: The moderating role of competitive intensity. *Journal of business research*, 58(12), pp.1652-1661.

Almeida, P., Song, J. and Grant, R.M., 2002. Are firms superior to alliances and markets? An empirical test of cross-border knowledge building. *Organization Science*, 13(2), pp.147-161.

Alavi, M. and Leidner, D.E., 2001. Knowledge management and knowledge management systems: Conceptual foundations and research issues. *MIS quarterly*, pp.107-136.

Baruch, Y. and Holtom, B.C., 2008. Survey response rate levels and trends in organizational research. *Human relations*, 61(8), pp.1139-1160.

Bagozzi, R.P. and Yi, Y., 1988. On the evaluation of structural equation models. *Journal of the academy of marketing science*, 16(1), pp.74-94.

Bagozzi, R.P. and Yi, Y., 2012. Specification, evaluation, and interpretation of structural equation models. *Journal of the academy of marketing science*, 40(1), pp.8-34.

Birkinshaw, J., Holm, U., Thilenius, P. and Arvidsson, N., 2000. Consequences of perception gaps in the headquarters–subsidiary relationship. *International Business Review*, 9(3), pp.321-344.

Birkinshaw, J., Hood, N. and Jonsson, S., 1998. Building firm-specific advantages in multinational corporations: the role of subsidiary initiative. *Strategic Management Journal*, 19(3), pp.221-242.

- Baum, J.A. and Shipilov, A.V., 2006. 1.2 Ecological Approaches to Organizations. *The SAGE Handbook of Organization Studies*, p.55.
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17, 99–120
- Bader, B., Berg, N. and Holtbrügge, D., 2015. Expatriate performance in terrorism-endangered countries: The role of family and organizational support. *International Business Review*, 24(5), pp.849-860.
- Bakker, A.B. and Demerouti, E., 2017. Job stressors–resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, 22(3), p.273.
- Bakker, A.B., Schaufeli, W.B., Leiter, M.P. and Taris, T.W., 2008. Work engagement: An emerging concept in occupational health psychology. *Work & stress*, 22(3), pp.187-200.
- Bakker, A.B., Demerouti, E. and Euwema, M.C. (2005), “Job resources buffer the impact of job stressors on burnout”, *Journal of Occupational Health Psychology*, Vol. 10, pp. 170-80.
- Bakker, A.B. and Demerouti, E., 2008. Towards a model of work engagement. *Career development international*, 13(3), pp.209-223.
- Bakker, A.B. and Demerouti, E., 2007. The job stressors-resources model: State of the art. *Journal of managerial psychology*, 22(3), pp.309-328.
- Bakker, A., Demerouti, E. and Schaufeli, W., 2003. Dual processes at work in a call centre: An application of the job demands–resources model. *European Journal of work and organizational psychology*, 12(4), pp.393-417.

- Bai, T., Du, J. and Solarino, A.M., 2018. Performance of foreign subsidiaries “in” and “from” Asia: A review, synthesis and research agenda. *Asia Pacific Journal of Management*, 35(3), pp.607-638.
- Breevaart, K. and Bakker, A.B., 2018. Daily job stressors and employee work engagement: The role of daily transformational leadership behavior. *Journal of occupational health psychology*, 23(3), p.338.
- Bhatti, W.A., Larimo, J. and Coudounaris, D.N., 2016. The effect of experiential learning on subsidiary knowledge and performance. *Journal of Business Research*, 69(5), pp.1567-1571.
- Bouquet, C., Morrison, A. and Birkinshaw, J., 2009. International attention and multinational enterprise performance. *Journal of International Business Studies*, 40(1), pp.108-131.
- Boxall, P. and Purcell, J. (2003), *Strategy and Human Resource Management*, Palgrave Macmillan, Basingstoke.
- Björkman, I., Fey, C.F. and Park, H.J., 2007. Institutional theory and MNC subsidiary HRM practices: evidence from a three-country study. *Journal of International Business Studies*, 38(3), pp.430-446.
- Bartlett, C.A. and Ghoshal, S., 2002. *Managing across borders: The transnational solution*. Harvard Business Press.
- Beehr, T.A., Jex, S.M., Stacy, B.A. and Murray, M.A., 2000. Work stressors and coworker support as predictors of individual strain and job performance. *Journal of Organizational Behavior*, 21(4), pp.391-405.

Blumberg, M. and Pringle, C.D., 1982. The missing opportunity in organizational research: Some implications for a theory of work performance. *Academy of management Review*, 7(4), pp.560-569.

Bruvold, N.T., Comer, J.M. and Rospert, A.M., 1990. Interactive effects of major response facilitators. *Decision Sciences*, 21(3), pp.551-562.

Busenitz, L.W., Gomez, C. and Spencer, J.W., 2000. Country institutional profiles: Unlocking entrepreneurial phenomena. *Academy of Management journal*, 43(5), pp.994-1003.

Buckley, P.J., Casson, M. and Pearce, R.D., 1975. *Tests of a Theory of the Multinational Enterprise*. University of Reading, Department of Economics.

Chatterjee, S. and Wernerfelt, B., 1991. The link between resources and type of diversification: Theory and evidence. *Strategic management journal*, 12(1), pp.33-48.

Chakrabarti, A., Singh, K. and Mahmood, I., 2007. Diversification and performance: evidence from East Asian firms. *Strategic Management Journal*, 28(2), pp.101-120.

Ciabuschi, F., Holm, U. and Martín, O.M., 2014. Dual embeddedness, influence and performance of innovating subsidiaries in the multinational corporation. *International Business Review*, 23(5), pp.897-909.

Ciabuschi, F., Dellestrand, H. and Kappen, P., 2011. Exploring the effects of vertical and lateral mechanisms in international knowledge transfer projects. *Management International Review*, 51(2), pp.129-155.

Cavanaugh, M.A., Boswell, W.R., Roehling, M.V. and Boudreau, J.W., 2000. An empirical examination of self-reported work stress among US managers. *Journal of applied psychology*, 85(1), p.65.

Campion, M.A., 1988. Interdisciplinary approaches to job design: A constructive replication with extensions. *Journal of applied psychology*, 73(3), p.467.

Campion, M.A., Medsker, G.J. and Higgs, A.C., 1993. Relations between work group characteristics and effectiveness: Implications for designing effective work groups. *Personnel psychology*, 46(4), pp.823-847.

Campion, M.A. and Thayer, P.W., 1985. Development and field evaluation of an interdisciplinary measure of job design. *Journal of applied psychology*, 70(1), p.29.

Campbell, J. P., McCloy, R. A., Oppler, S. H., & Sager, C. E. 1993. A theory of performance. In N. Schmitt, W. C. Borman, and associates (Eds.), *Personnel selection in organizations*: 35-69. San Francisco:Jossey-Bass.

Cantwell, J. (1994). The relationship between international trade and international production. In D. Greenway & L. A. Winters (Eds.), *Surveys in international trade*. Oxford: Blackwell.

Certo, S.T., Lester, R.H., Dalton, C.M. and Dalton, D.R., 2006. Top management teams, strategy and financial performance: A meta - analytic examination. *Journal of Management studies*, 43(4), pp.813-839.

Chan, C.M., Isobe, T. and Makino, S., 2008. Which country matters? Institutional development and foreign affiliate performance. *Strategic Management Journal*, 29(11), pp.1179-1205.

Chang, Y.Y., Gong, Y. and Peng, M.W., 2012. Expatriate knowledge transfer, subsidiary absorptive capacity, and subsidiary performance. *Academy of Management Journal*, 55(4), pp.927-948.

Chang, S.J., Chung, J. and Moon, J.J., 2013. When do wholly owned subsidiaries perform better than joint ventures?. *Strategic Management Journal*, 34(3), pp.317-337.

Celo, S. and Chacar, A., 2015. International coherence and MNE performance. *Journal of International Business Studies*, 46(5), pp.620-628.

Child, J. (1972). 'Organizational structure, environment and performance: The role of strategic choice, *Sociology*, 6, pp. 1-22.

Child, J. and Tsai, T., 2005. The dynamic between firms' environmental strategies and institutional constraints in emerging economies: Evidence from China and Taiwan. *Journal of Management studies*, 42(1), pp.95-125.

Choi, J. and Contractor, F.J., 2016. Choosing an appropriate alliance governance mode: The role of institutional, cultural and geographical distance in international research & development (R&D) collaborations. *Journal of International Business Studies*, 47(2), pp.210-232.

Christian, M.S., Garza, A.S. and Slaughter, J.E., 2011. Work engagement: A quantitative review and test of its relations with task and contextual performance. *Personnel psychology*, 64(1), pp.89-136.

Clegg, J., Lin, H.M., Voss, H., Yen, I.F. and Shih, Y.T., 2016. The OFDI patterns and firm performance of Chinese firms: The moderating effects of multinationality strategy and external factors. *International Business Review*, 25(4), pp.971-985.

Clemens, B. and Douglas, T.J., 2006. Does coercion drive firms to adopt 'voluntary' green initiatives? Relationships among coercion, superior firm resources, and voluntary green initiatives. *Journal of Business Research*, 59(4), pp.483-491.

Cui, A.S., Griffith, D.A. and Cavusgil, S.T., 2005. The influence of competitive intensity and market dynamism on knowledge management capabilities of multinational corporation subsidiaries. *Journal of International Marketing*, 13(3), pp.32-53.

Cohen, W.M. and Levinthal, D.A., 1990. Absorptive capacity: A new perspective on learning and innovation. *Administrative science quarterly*, 35(1), pp.128-152.

Cohen, M.A., Ho, T.H., Ren, Z.J. and Terwiesch, C., 2003. Measuring imputed cost in the semiconductor equipment supply chain. *Management Science*, 49(12), pp.1653-1670.

Conroy, K.M. and Collings, D.G., 2016. The legitimacy of subsidiary issue selling: Balancing positive & negative attention from corporate headquarters. *Journal of World Business*, 51(4), pp.612-627.

Conner, K.R., 1991. A historical comparison of resource-based theory and five schools of thought within industrial organization economics: do we have a new theory of the firm?. *Journal of management*, 17(1), pp.121-154.

Costa, P.L., Passos, A.M. and Bakker, A.B., 2014. Team work engagement: A model of emergence. *Journal of Occupational and Organizational Psychology*, 87(2), pp.414-436.

Creswell, J.W., 2003. *Research Design: Qualitative. Quantitative, and mixed methods*.

Claver-Cortés, E., Pertusa-Ortega, E.M. and Molina-Azorín, J.F., 2012. Characteristics of organizational structure relating to hybrid competitive strategy: Implications for performance. *Journal of Business Research*, 65(7), pp.993-1002.

Crawford, E.R., LePine, J.A. and Rich, B.L., 2010. Linking job demands and resources to employee engagement and burnout: a theoretical extension and meta-analytic test. *Journal of applied psychology*, 95(5), p.834.

- Cooper, C.L., Cooper, C.P., Dewe, P.J., O'Driscoll, M.P. and O'Driscoll, M.P., 2001. *Organizational stress: A review and critique of theory, research, and applications*. Sage.
- Chen, G. and Kanfer, R., 2006. Toward a systems theory of motivated behavior in work teams. *Research in organizational behavior*, 27, pp.223-267.
- Daft, R.L. and Weick, K.E., 1984. Toward a model of organizations as interpretation systems. *Academy of management review*, 9(2), pp.284-295.
- Dierickx, I. and Cool, K., 1989. Asset stock accumulation and sustainability of competitive advantage. *Management science*, 35(12), pp.1504-1511.
- Dewe, P., Cox, T. and Ferguson, E., 1993. Individual strategies for coping with stress at work: A review. *Work & Stress*, 7(1), pp.5-15.
- DeSimone, J.A., Harms, P.D. and DeSimone, A.J., 2015. Best practice recommendations for data screening. *Journal of Organizational Behavior*, 36(2), pp.171-181.
- De Lange, A.H., Taris, T.W., Kompier, M.A., Houtman, I.L. and Bongers, P.M., 2003. "The very best of the millennium": longitudinal research and the demand-control-(support) model. *Journal of occupational health psychology*, 8(4), p.282.
- De Vente, W.O.M. and Olf, M., 2003. Van Amsterdam JG. Kamphuis JH. Emmelkamp PM. Physiological differences between burnout patients and healthy controls: blood pressure, heart rate, and cortisol responses. *Occup Environ Med*, 60, pp.54-61.
- DeSarbo, W.S., Anthony Di Benedetto, C., Song, M. and Sinha, I., 2005. Revisiting the Miles and Snow strategic framework: uncovering interrelationships between strategic types, capabilities, environmental uncertainty, and firm performance. *Strategic management journal*, 26(1), pp.47-74.

Demerouti, E., Bakker, A.B., Nachreiner, F. and Schaufeli, W.B., 2001. The job stressors-resources model of burnout. *Journal of Applied psychology*, 86(3), p.499.

Demerouti, E. and Bakker, A.B., 2006. Employee well-being and job performance: Where we stand and where we should go. *Occupational health psychology: European perspectives on research, education and practice*, 1, pp.83-111.

Delios, A. and Beamish, P.W., 2001. Survival and profitability: The roles of experience and intangible assets in foreign subsidiary performance. *Academy of Management journal*, 44(5), pp.1028-1038.

Deci, E.L., Ryan, R.M., Gagné, M., Leone, D.R., Usunov, J. and Kornazheva, B.P., 2001. Need satisfaction, motivation, and well-being in the work organizations of a former eastern bloc country: A cross-cultural study of self-determination. *Personality and social psychology bulletin*, 27(8), pp.930-942.

Diamantopoulos, A. and Schlegelmilch, B.B., 1996. Determinants of industrial mail survey response: A survey-on-surveys analysis of researchers' and managers' views. *Journal of Marketing Management*, 12(6), pp.505-531.

Djelic, M.-L. & Quack, S. 2003. Governing globalization? Bringing institutions back in. In M.-L. Djelic & S. Quack (Eds.), *Globalization and institutions: Redefining the rules of the economic game*: 1-14. Cheltenham, UK: Edward Elgar

Dillman, D. A. (2007). *Mail and Internet surveys: The tailored design method* (2nd ed., 2007 update). Hoboken, NJ: John Wiley & Sons.

Dillman, D.A., Sinclair, M.D. and Clark, J.R., 1993. Effects of questionnaire length, respondent-friendly design, and a difficult question on response rates for occupant-addressed census mail surveys. *Public opinion quarterly*, 57(3), pp.289-304.

- DiMaggio, P.J. and Powell, W.W., 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American sociological review*, pp.147-160.
- Doz, Y.L. and Prahalad, C.K., 1991. Managing DMNCs: A search for a new paradigm. *Strategic Management Journal*, 12(S1), pp.145-164.
- Doz, Y.L., Bartlett, C.A. and Prahalad, C.K., 1981. Global Competitive Pressures and Host Country Stressors Managing Tensions in MNCs. *California Management Review*, 23(3), pp.63-74.
- Dollard, M.F., Winefield, H.R., Winefield, A.H. and De Jonge, J., 2000. Psychosocial job strain and productivity in human service workers: a test of the demand-control-support model. *Journal of occupational and organizational psychology*, 73(4), pp.501-510.
- Dong, M.C., Ju, M. and Fang, Y., 2016. Role hazard between supply chain partners in an institutionally fragmented market. *Journal of Operations Management*, 46, pp.5-18.
- Driskell, J.E. and Salas, E., 1991. Group decision making under stress. *Journal of Applied Psychology*, 76(3), p.473.
- Dutta, D.K. and Beamish, P.W., 2013. Expatriate managers, product relatedness, and IJV performance: A resource and knowledge-based perspective. *Journal of International Management*, 19(2), pp.152-162.
- Durand, R. and Jacqueminet, A., 2015. Peer conformity, attention, and heterogeneous implementation of practices in MNEs. *Journal of International Business Studies*, 46(8), pp.917-937.

Dyer, J.H. and Singh, H., 1998. The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of management review*, 23(4), pp.660-679.

Drach-Zahavy, A. and Freund, A., 2007. Team effectiveness under stress: A structural contingency approach. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 28(4), pp.423-450.

Eisenberger, R., Huntington, R., Hutchison, S. and Sowa, D., 1986. Perceived organizational support. *Journal of Applied psychology*, 71(3), p.500.

Eisingerich, A.B., Auh, S. and Merlo, O., 2014. Acta non verba? The role of customer participation and word of mouth in the relationship between service firms' customer satisfaction and sales performance. *Journal of Service Research*, 17(1), pp.40-53.

Erez, A. and Isen, A.M., 2002. The influence of positive affect on the components of expectancy motivation. *Journal of Applied psychology*, 87(6), p.1055.

Edman, J., 2016. Reconciling the advantages and liabilities of foreignness: Towards an identity-based framework. *Journal of International Business Studies*, 47(6), pp.674-694.

Eggers, F., Kraus, S., Hughes, M., Laraway, S. and Snyckerski, S., 2013. Implications of customer and entrepreneurial orientations for SME growth. *Management Decision*.

Fang, Y., Wade, M., Delios, A. and Beamish, P.W., 2013. An exploration of multinational enterprise knowledge resources and foreign subsidiary performance. *Journal of World Business*, 48(1), pp.30-38.

Fang, Y., Jiang, G.L.F., Makino, S. and Beamish, P.W., 2010. Multinational firm knowledge, use of expatriates, and foreign subsidiary performance. *Journal of Management Studies*, 47(1), pp.27-54.

Fang, Y., Wade, M., Delios, A. and Beamish, P.W., 2007. International diversification, subsidiary performance, and the mobility of knowledge resources. *Strategic Management Journal*, 28(10), pp.1053-1064.

Firth, B.M., Chen, G., Kirkman, B.L. and Kim, K., 2014. Newcomers abroad: Expatriate adaptation during early phases of international assignments. *Academy of Management Journal*, 57(1), pp.280-300.

Fey, C.F. and Björkman, I., 2001. The effect of human resource management practices on MNC subsidiary performance in Russia. *Journal of international business studies*, 32(1), pp.59-75.

Fey, C.F., Morgulis-Yakushev, S., Park, H.J. and Björkman, I., 2009. Opening the black box of the relationship between HRM practices and firm performance: A comparison of MNE subsidiaries in the USA, Finland, and Russia. *Journal of International Business Studies*, 40(4), pp.690-712.

Ferner, A., 2000. The underpinnings of 'bureaucratic' control systems: HRM in European multinationals. *Journal of Management Studies*, 37(4), pp.521-540.

Foss, N. J. (1999). The Use of Knowledge in Firms. *Journal of Institutional and Theoretical Economics*, 155(3), 458–486.

Fox, S., Spector, P.E. and Miles, D., 2001. Counterproductive work behavior (CWB) in response to job stressors and organizational justice: Some mediator and moderator tests for autonomy and emotions. *Journal of vocational behavior*, 59(3), pp.291-309.

- Fornell, C. and Larcker, D.F., 1981. Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), pp.39-50.
- Fried, Y. and Ferris, G.R., 1987. The validity of the job characteristics model: A review and meta-analysis. *Personnel psychology*, 40(2), pp.287-322.
- Frost, T.S., Birkinshaw, J.M. and Ensign, P.C., 2002. Centers of excellence in multinational corporations. *Strategic Management Journal*, 23(11), pp.997-1018.
- Frost, T.S., 2001. The geographic sources of foreign subsidiaries' innovations. *Strategic Management Journal*, 22(2), pp.101-123.
- Gaur, A.S. and Lu, J.W., 2007. Ownership strategies and survival of foreign subsidiaries: Impacts of institutional distance and experience. *Journal of management*, 33(1), pp.84-110.
- Gaur, A.S., Delios, A. and Singh, K., 2007. Institutional environments, staffing strategies, and subsidiary performance. *Journal of Management*, 33(4), pp.611-636.
- García-Cabrera, A.M. and García-Soto, M.G., 2012. Organizational commitment in MNC subsidiary top managers: antecedents and consequences. *The International Journal of Human Resource Management*, 23(15), pp.3151-3177.
- Grayson, K. (2007, October). Friendship versus business in marketing relationships. *Journal of Marketing*, 71, 121–139.
- Granello, D.H. and Wheaton, J.E., 2004. Online data collection: Strategies for research. *Journal of Counseling & Development*, 82(4), pp.387-393.

Gong, Y., Shenkar, O., Luo, Y. and Nyaw, M.K., 2001. Role conflict and ambiguity of CEOs in international joint ventures: A transaction cost perspective. *Journal of Applied Psychology*, 86(4), p.764.

Gong, Y., 2003. Subsidiary staffing in multinational enterprises: Agency, resources, and performance. *Academy of Management journal*, 46(6), pp.728-739.

Gammelgaard, J., McDonald, F., Stephan, A., Tüselmann, H. and Dörrenbächer, C., 2012. The impact of increases in subsidiary autonomy and network relationships on performance. *International Business Review*, 21(6), pp.1158-1172.

Geppert, M., Williams, K. and Matten, D., 2003. The social construction of contextual rationalities in MNCs: an Anglo-German comparison of subsidiary choice. *Journal of Management Studies*, 40(3), pp.617-641.

Grewal, R. and Dharwadkar, R., 2002. The role of the institutional environment in marketing channels. *Journal of marketing*, 66(3), pp.82-97.

Grewal, R., Chandrashekar, M. and Dwyer, F.R., 2008. Navigating local environments with global strategies: A contingency model of multinational subsidiary performance. *Marketing Science*, 27(5), pp.886-902.

Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17, 109–122.

Gupta, A.K. and Govindarajan, V., 2000. Knowledge flows within multinational corporations. *Strategic management journal*, 21(4), pp.473-496.

Govindarajan, V. and Ramamurti, R., 2011. Reverse innovation, emerging markets, and global strategy. *Global Strategy Journal*, 1(3-4), pp.191-205.

- Gomez, C. and Werner, S., 2004. The effect of institutional and strategic forces on management style in subsidiaries of US MNCs in Mexico. *Journal of Business Research*, 57(10), pp.1135-1144.
- Gump, B.B. and Kulik, J.A., 1997. Stress, affiliation, and emotional contagion. *Journal of personality and social psychology*, 72(2), p.305.
- Guillén, M.F., 2003. Experience, imitation, and the sequence of foreign entry: Wholly owned and joint-venture manufacturing by South Korean firms and business groups in China, 1987–1995. *Journal of International Business Studies*, 34(2), pp.185-198.
- Goolsby, J.R., 1992. A theory of role stress in boundary spanning positions of marketing organizations. *Journal of the Academy of Marketing Science*, 20(2), pp.155-164.
- Hamilton, B.H. and Nickerson, J.A., 2003. Correcting for endogeneity in strategic management research. *Strategic organization*, 1(1), pp.51-78.
- Hair, J. F., Black, W. C., Babin, B. J., and Anderson, R. E. (2010). *Multivariate Data Analysis: A Global Perspective*, 7th Edition. New Jersey: Pearson Educational Inc.
- Hackman, J.R. and Oldham, G.R., 1975. Development of the job diagnostic survey. *Journal of Applied psychology*, 60(2), p.159.
- Harzing, A.W., 2001. Of bears, bumble-bees, and spiders: The role of expatriates in controlling foreign subsidiaries. *Journal of World Business*, 36(4), pp.366-379.
- Harter, J.K., Schmidt, F.L., and Hayes, T.L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology*, 87, 268-279.

Hannon, J.M. and Jaw, B.S., 1995. International human resource strategy and its determinants: The case of subsidiaries in Taiwan. *Journal of international business studies*, 26(3), pp.531-554.

Hatfield, E., Cacioppo, J., & Rapson, R. L. (1994). *Emotional contagion*. New York, NY: Cambridge University Press.

Häusser, J.A., Mojzisch, A., Niesel, M. and Schulz-Hardt, S., 2010. Ten years on: A review of recent research on the Job Demand–Control (-Support) model and psychological well-being. *Work & Stress*, 24(1), pp.1-35.

Halbesleben, J.R. and Buckley, M.R., 2004. Burnout in organizational life. *Journal of management*, 30(6), pp.859-879.

Heugens, P.P. and Lander, M.W., 2009. Structure! Agency!(and other quarrels): A meta-analysis of institutional theories of organization. *Academy of management journal*, 52(1), pp.61-85.

Henderson, A.D., 1999. Firm strategy and age dependence: A contingent view of the liabilities of newness, adolescence, and obsolescence. *Administrative Science Quarterly*, 44(2), pp.281-314.

Hunt, S. D. (2000). *A General Theory of Competition*. Thousand Oaks, CA: Sage.

Higgins, E.T., 1997. Beyond pleasure and pain. *American psychologist*, 52(12), p.1280.

Hinsz, V.B., Tindale, R.S. and Vollrath, D.A., 1997. The emerging conceptualization of groups as information processors. *Psychological bulletin*, 121(1), p.43.

Hobfoll, S.E., 2001. The influence of culture, community, and the nested-self in the stress process: advancing conservation of resources theory. *Applied psychology*, 50(3), pp.337-421.

Hobfoll, S.E., 1989. Conservation of resources: A new attempt at conceptualizing stress. *American psychologist*, 44(3), p.513.

Hochwarter, W.A., Laird, M.D. and Brouer, R.L., 2008. Board up the windows: The interactive effects of hurricane-induced job stress and perceived resources on work outcomes. *Journal of Management*, 34(2), pp.263-289.

Hopstaken, J.F., Van Der Linden, D., Bakker, A.B. and Kompier, M.A., 2015. A multifaceted investigation of the link between mental fatigue and task disengagement. *Psychophysiology*, 52(3), pp.305-315.

Hopstaken, J.F., van der Linden, D., Bakker, A.B., Kompier, M.A. and Leung, Y.K., 2016. Shifts in attention during mental fatigue: Evidence from subjective, behavioral, physiological, and eye-tracking data. *Journal of Experimental Psychology: Human Perception and Performance*, 42(6), p.878.#

Hoskisson RE, Eden L, Lau CM, Wright M. 2000. Strategy in emerging economies. *Academy of Management Journal*, 43: 249–267.

Homburg, C., Grozdanovic, M. and Klarmann, M., 2007. Responsiveness to customers and competitors: the role of affective and cognitive organizational systems. *Journal of Marketing*, 71(3), pp.18-38.

Hofstede, G., 1980. Culture and organizations. *International Studies of Management & Organization*, 10(4), pp.15-41.

Humphrey, S.E., Nahrgang, J.D. and Morgeson, F.P., 2007. Integrating motivational, social, and contextual work design features: a meta-analytic summary and theoretical extension of the work design literature. *Journal of applied psychology*, 92(5), p.1332.

Hu, L.T. and Bentler, P.M., 1999. Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal*, 6(1), pp.1-55.

Hewett, K. and Bearden, W.O., 2001. Dependence, trust, and relational behavior on the part of foreign subsidiary marketing operations: implications for managing global marketing operations. *Journal of marketing*, 65(4), pp.51-66.

Hillman, A.J. and Wan, W.P., 2005. The determinants of MNE subsidiaries' political strategies: Evidence of institutional duality. *Journal of International Business Studies*, 36(3), pp.322-340.

Hu, H.W., Cui, L. and Aulakh, P.S., 2019. State capitalism and performance persistence of business group-affiliated firms: A comparative study of China and India. *Journal of International Business Studies*, 50(2), pp.193-222.

Ito, J.K. and Brotheridge, C.M., 2003. Resources, coping strategies, and emotional exhaustion: A conservation of resources perspective. *Journal of Vocational Behavior*, 63(3), pp.490-509.

Ilies, R., Wagner, D.T. and Morgeson, F.P., 2007. Explaining affective linkages in teams: individual differences in susceptibility to contagion and individualism-collectivism. *Journal of applied psychology*, 92(4), p.1140.

Jaques, E. (1956). *Measurement of responsibility*. London: Tavistock Institute.

Jansen, J.J., Van Den Bosch, F.A. and Volberda, H.W., 2005. Managing potential and realized absorptive capacity: how do organizational antecedents matter?. *Academy of management journal*, 48(6), pp.999-1015.

- Jex, S.M., 1998. *Stress and job performance: Theory, research, and implications for managerial practice*. Sage Publications Ltd.
- Jiang, X., Bao, Y., Xie, Y. and Gao, S., 2016. Partner trustworthiness, knowledge flow in strategic alliances, and firm competitiveness: A contingency perspective. *Journal of business research*, 69(2), pp.804-814.
- Keupp, M.M., Palmié, M. and Gassmann, O., 2012. The strategic management of innovation: A systematic review and paths for future research. *International Journal of Management Reviews*, 14(4), pp.367-390.
- Kraimer, M.L. and Wayne, S.J., 2004. An examination of perceived organizational support as a multidimensional construct in the context of an expatriate assignment. *Journal of management*, 30(2), pp.209-237.
- Kawai, N. and Mohr, A., 2015. The Contingent Effects of Role Ambiguity and Role Novelty on Expatriates' Work-related Outcomes. *British Journal of Management*, 26(2), pp.163-181.
- Kawai, N. and Strange, R., 2014. Subsidiary autonomy and performance in Japanese multinationals in Europe. *International Business Review*, 23(3), pp.504-515.
- Kahn, R.L. and Byosiére, P., 1992. *Stress in organizations*.
- Kahn, W.A., 1990. Psychological conditions of personal engagement and disengagement at work. *Academy of management journal*, 33(4), pp.692-724.
- Katsikeas, C.S., Morgan, N.A., Leonidou, L.C. and Hult, G.T.M., 2016. Assessing performance outcomes in marketing. *Journal of Marketing*, 80(2), pp.1-20.

Katsikeas, C.S., Leonidou, L.C. and Morgan, N.A., 2000. Firm-level export performance assessment: review, evaluation, and development. *Journal of the Academy of Marketing Science*, 28(4), pp.493-511.

Karasek Jr, R.A., 1979. Job stressors, job decision latitude, and mental strain: Implications for job redesign. *Administrative science quarterly*, pp.285-308.

Karasek, R.A. and Theorell, T., 1990. Healthy work: Stress, productivity, and the reconstruction of working life. *Basic Books, New York*.

Karanika-Murray, M., Duncan, N., Pontes, H.M. and Griffiths, M.D., 2015. Organizational identification, work engagement, and job satisfaction. *Journal of Managerial Psychology*, 30(8), pp.1019-1033.

Khanna, T. and Rivkin, J.W., 2001. Estimating the performance effects of business groups in emerging markets. *Strategic management journal*, 22(1), pp.45-74.

Khanna, T. and Palepu, K., 1997. Why focused strategies may be wrong for emerging markets. *Harvard business review*, 75(4), pp.41-43.

Kraimer, M.L. and Wayne, S.J., 2004. An examination of perceived organizational support as a multidimensional construct in the context of an expatriate assignment. *Journal of Management*, 30(2), pp.209-237.

Kim, K.Y., Pathak, S. and Werner, S., 2015. When do international human capital enhancing practices benefit the bottom line? An ability, motivation, and opportunity perspective. *Journal of International Business Studies*, 46(7), pp.784-805.

Kim, H., Hur, D. and Schoenherr, T., 2015. When buyer-driven knowledge transfer activities really work: A motivation–opportunity–ability perspective. *Journal of Supply Chain Management*, 51(3), pp.33-60.

Kim, Y.C., Lu, J.W. and Rhee, M., 2012. Learning from age difference: Interorganizational learning and survival in Japanese foreign subsidiaries. *Journal of International Business Studies*, 43(8), pp.719-745.

Kessler, R.C., Turner, J.B. and House, J.S., 1988. Effects of unemployment on health in a community survey: Main, modifying, and mediating effects. *Journal of social issues*, 44(4), pp.69-85.

Kogut, B. and Zander, U., 1992. Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization science*, 3(3), pp.383-397.

Kogut, B. and Zander, U. (1993). Knowledge of the Firm and the Evolutionary Theory of the Multinational Corporation. *Journal of International Business Studies*, 24(4), 625–645.

Kostova, T. and Roth, K., 2002. Adoption of an organizational practice by subsidiaries of multinational corporations: Institutional and relational effects. *Academy of management journal*, 45(1), pp.215-233.

Kostova, T. and Zaheer, S., 1999. Organizational legitimacy under conditions of complexity: The case of the multinational enterprise. *Academy of Management review*, 24(1), pp.64-81.

Kostova, T., Roth, K. and Dacin, M.T., 2008. Institutional theory in the study of multinational corporations: A critique and new directions. *Academy of management review*, 33(4), pp.994-1006.

Kostova, T., 1999. Transnational transfer of strategic organizational practices: A contextual perspective. *Academy of management review*, 24(2), pp.308-324.

Kozlowski, S.W. and Klein, K.J., 2000. A multilevel approach to theory and research in organizations: Contextual, temporal, and emergent processes.

Kristensen, P.H. and Zeitlin, J., 2005. *Local players in global games: The strategic constitution of a multinational corporation*. Oxford University Press on Demand.

Koch, A. and Strotmann, H., 2008. Absorptive capacity and innovation in the knowledge intensive business service sector. *Econ. Innov. New Techn.*, 17(6), pp.511-531.

Lee, R.P., 2010. Extending the environment–strategy–performance framework: The roles of multinational corporation network strength, market responsiveness, and product innovation. *Journal of International Marketing*, 18(4), pp.58-73.

Lee, R.P., Chen, Q. and Lu, X., 2009. In search of platforms to increase market responsiveness: Evidence from foreign subsidiaries. *Journal of International Marketing*, 17(2), pp.59-73.

Lee, R.P., Chen, Q., Kim, D. and Johnson, J.L., 2008. Knowledge transfer between multinational corporations' headquarters and their subsidiaries: Influences on and implications for new product outcomes. *Journal of International Marketing*, 16(2), pp.1-31.

Lee, J.Y., Park, Y.R., Ghauri, P.N. and Park, B.I., 2014. Innovative knowledge transfer patterns of group-affiliated companies: The effects on the performance of foreign subsidiaries. *Journal of International Management*, 20(2), pp.107-123.

Lee, K.P., Bae, J.Y., Lee, B.H. and Choi, J.H., 2019. The acculturative stress of host country managers working at MNC subsidiaries: Determinants and effects. *Journal of World Business*, 54(4), pp.387-398.

Lee, J.Y. and MacMillan, I.C., 2008. Managerial knowledge-sharing in chaebols and its impact on the performance of their foreign subsidiaries. *International Business Review*, 17(5), pp.533-545.

Lee, S.H. and Song, S., 2012. Host country uncertainty, intra-MNC production shifts, and subsidiary performance. *Strategic Management Journal*, 33(11), pp.1331-1340.

LePine, J.A., LePine, M.A. and Jackson, C.L., 2004. Challenge and hindrance stress: relationships with exhaustion, motivation to learn, and learning performance. *Journal of applied psychology*, 89(5), p.883.

LePine, J.A., Podsakoff, N.P. and LePine, M.A., 2005. A meta-analytic test of the challenge stressor–hindrance stressor framework: An explanation for inconsistent relationships among stressors and performance. *Academy of management journal*, 48(5), pp.764-775.

LePine, M.A., Zhang, Y., Crawford, E.R. and Rich, B.L., 2016. Turning their pain to gain: Charismatic leader influence on follower stress appraisal and job performance. *Academy of Management Journal*, 59(3), pp.1036-1059.

Li, J., Yang, J.Y. and Yue, D.R., 2007. Identity, community, and audience: How wholly owned foreign subsidiaries gain legitimacy in China. *Academy of Management Journal*, 50(1), pp.175-190.

Luo, Y., Shenkar, O. and Nyaw, M.K., 2002. Mitigating liabilities of foreignness: Defensive versus offensive approaches. *Journal of International Management*, 8(3), pp.283-300.

Luo, Y., Shenkar, O. and Nyaw, M.K., 2001. A dual parent perspective on control and performance in international joint ventures: Lessons from a developing economy. *Journal of international business studies*, 32(1), pp.41-58.

- Luo, Y., 2001. Toward a cooperative view of MNC-host government relations: Building blocks and performance implications. *Journal of International Business Studies*, 32(3), pp.401-419.
- Luo, Y., 2003. Market-seeking MNEs in an emerging market: How parent–subsidiary links shape overseas success. *Journal of International Business Studies*, 34(3), pp.290-309.
- Lazarus, R.S. and Folkman, S., 1984. *Stress, appraisal, and coping*. Springer publishing company.
- Langfred, C.W. and Moye, N.A., 2004. Effects of task autonomy on performance: an extended model considering motivational, informational, and structural mechanisms. *Journal of applied psychology*, 89(6), p.934.
- Lazarova, M., Westman, M. and Shaffer, M.A., 2010. Elucidating the positive side of the work-family interface on international assignments: A model of expatriate work and family performance. *Academy of Management Review*, 35(1), pp.93-117.
- Li, H. and Atuahene-Gima, K., 2001. Product innovation strategy and the performance of new technology ventures in China. *Academy of management Journal*, 44(6), pp.1123-1134.
- Lu, J.W. and Beamish, P.W., 2001. The internationalization and performance of SMEs. *Strategic management journal*, 22(6-7), pp.565-586.
- Lu, J.W. and Xu, D., 2006. Growth and survival of international joint ventures: An external-internal legitimacy perspective. *Journal of Management*, 32(3), pp.426-448.

Li, X., Liu, X. and Thomas, H., 2013. Market orientation, embeddedness and the autonomy and performance of multinational subsidiaries in an emerging economy. *Management International Review*, 53(6), pp.869-897.

Li, J. and Lee, R.P., 2015. Can knowledge transfer within MNCs hurt subsidiary performance? The role of subsidiary entrepreneurial culture and capabilities. *Journal of World Business*, 50(4), pp.663-673.

Lawton, T.C. and Rajwani, T.S. eds., 2015. *The Routledge companion to non-market strategy*. Routledge.

Lozano, S., Arenas, A. and Sánchez, A., 2008. Community connectivity and heterogeneity: clues and insights on cooperation on social networks. *Journal of Economic Interaction and Coordination*, 3(2), p.183.

May, D.R., Gilson, R.L. and Harter, L.M., 2004. The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of occupational and organizational psychology*, 77(1), pp.11-37.

MacKinnon, D.P., Lockwood, C.M. and Williams, J., 2004. Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate behavioral research*, 39(1), pp.99-128.

Malhotra, N. and Birks, D., 2007. *Marketing Research: an applied approach: 3rd European Edition*. Pearson education.

Malhotra, N.K., Schaller, T.K. and Patil, A., 2017. Common method variance in advertising research: When to be concerned and how to control for it. *Journal of Advertising*, 46(1), pp.193-212.

- Marshall, N.L., Barnett, R.C. and Sayer, A., 1997. The changing workforce, job stress, and psychological distress. *Journal of Occupational Health Psychology*, 2(2), p.99.
- Macey, W. H., & Schneider, B. (2008). The meaning of employee engagement. *Industrial and Organizational Psychology*, 1, 3–30.
- Marks, M.A., DeChurch, L.A., Mathieu, J.E., Panzer, F.J. and Alonso, A., 2005. Teamwork in multiteam systems. *Journal of Applied Psychology*, 90(5), p.964.
- Marks, M.A., Mathieu, J.E. and Zaccaro, S.J., 2001. A temporally based framework and taxonomy of team processes. *Academy of management review*, 26(3), pp.356-376.
- Mudambi, R. and Zahra, S.A., 2007. The survival of international new ventures. *Journal of International Business Studies*, 38(2), pp.333-352.
- Mudambi, R., Pedersen, T. and Andersson, U., 2014. How subsidiaries gain power in multinational corporations. *Journal of World Business*, 49(1), pp.101-113.
- Michailova, S. and Zhan, W., 2015. Dynamic capabilities and innovation in MNC subsidiaries. *Journal of World Business*, 50(3), pp.576-583.
- MacInnis, D.J. and Jaworski, B.J., 1989. Information processing from advertisements: Toward an integrative framework. *Journal of marketing*, 53(4), pp.1-23.
- McFarland, R.G., Rode, J.C. and Shervani, T.A., 2016. A contingency model of emotional intelligence in professional selling. *Journal of the Academy of Marketing Science*, 44(1), pp.108-118.
- Meyer, J., Rowan, B. and Scott, W.R., 1983. *Organizational Environments*. Beverly Hills.
- Meyer, J.P. and Gagne, M., 2008. Employee engagement from a self-determination theory perspective. *Industrial and Organizational Psychology*, 1(1), pp.60-62.

- Mohr, A.T. and Puck, J.F., 2007. Role conflict, general manager job satisfaction and stress and the performance of IJVs. *European Management Journal*, 25(1), pp.25-35.
- Morley, M.J. and Flynn, M., 2003. The relationship between work-role characteristics and intercultural transitional adjustment domain patterns among a sample of US and Canadian expatriates on assignment in Ireland. *Cross Cultural Management: An International Journal*, 10(3), pp.42-57.
- Morgeson, F.P. and Hofmann, D.A., 1999. The structure and function of collective constructs: Implications for multilevel research and theory development. *Academy of management review*, 24(2), pp.249-265.
- Morgan, G., and Kristensen, P. H. (2006). The contested space of multinationals: Varieties of institutionalism, varieties of capitalism. *Human Relations*, 59(11): 1467–1490.
- Morris, S., Hammond, R. and Snell, S., 2014. A microfoundations approach to transnational capabilities: The role of knowledge search in an ever-changing world. *Journal of International Business Studies*, 45(4), pp.405-427.
- Mirchandani, D.A. and Lederer, A.L., 2008. The impact of autonomy on information systems planning effectiveness. *Omega*, 36(5), pp.789-807.
- Miao, C.F. and Evans, K.R., 2013. The interactive effects of sales control systems on salesperson performance: a job stressors–resources perspective. *Journal of the Academy of Marketing Science*, 41(1), pp.73-90.
- Miller, S.R. and Eden, L., 2006. Local density and foreign subsidiary performance. *Academy of Management journal*, 49(2), pp.341-355.

- Melamed, S., Shirom, A., Toker, S., Berliner, S. and Shapira, I., 2006. Burnout and risk of cardiovascular disease: Evidence, possible causal paths, and promising research directions. *Psychological bulletin*, 132(3), p.327.
- Merchant, H. and Schendel, D., 2000. How do international joint ventures create shareholder value?. *Strategic Management Journal*, 21(7), pp.723-737.
- Mezias, S.J., Chen, Y.R., Murphy, P., Biaggio, A., Chuawanlee, W., Hui, H., Okumura, T. and Starr, S., 2002. National cultural distance as liability of foreignness: the issue of level of analysis. *Journal of International Management*, 8(4), pp.407-421.
- Menguc, B., Auh, S., Yeniaras, V. and Katsikeas, C.S., 2017. The role of climate: implications for service employee engagement and customer service performance. *Journal of the Academy of Marketing Science*, 45(3), pp.428-451.
- Nohria, N. and Ghoshal, S., 1994. Differentiated fit and shared values: Alternatives for managing headquarters-subsidiary relations. *Strategic management journal*, 15(6), pp.491-502.
- Nguyen, Q.T. and Rugman, A.M., 2015. Multinational subsidiary sales and performance in South East Asia. *International Business Review*, 24(1), pp.115-123.
- Najafi-Tavani, Z., Robson, M.J., Zaefarian, G., Andersson, U. and Yu, C., 2018. Building subsidiary local responsiveness:(When) does the directionality of intrafirm knowledge transfers matter?. *Journal of World Business*, 53(4), pp.475-492.
- Najafi-Tavani, Z., Giroud, A. and Andersson, U., 2014. The interplay of networking activities and internal knowledge actions for subsidiary influence within MNCs. *Journal of World Business*, 49(1), pp.122-131.

- Najafi-Tavani, Z., Giroud, A. and Sinkovics, R.R., 2012. Mediating effects in reverse knowledge transfer processes. *Management International Review*, 52(3), pp.461-488.
- Nell, P.C., Puck, J. and Heidenreich, S., 2015. Strictly limited choice or agency? Institutional duality, legitimacy, and subsidiaries' political strategies. *Journal of World Business*, 50(2), pp.302-311.
- Nurmi, N. and Hinds, P.J., 2016. Job complexity and learning opportunities: A silver lining in the design of global virtual work. *Journal of International Business Studies*, 47(6), pp.631-654.
- Nunnally, J. C. (1967). *Psychometric theory*. New York: McGraw-Hill.
- Naumann, E., 1993. Antecedents and consequences of satisfaction and commitment among expatriate managers. *Group & Organization Management*, 18(2), pp.153-187.
- Nederhof, A.J., 1983. The effects of material incentives in mail surveys: Two studies. *Public Opinion Quarterly*, 47(1), pp.103-112.
- Neuman, W., 2010. L.(2003). *Social research methods: Qualitative and quantitative approaches*, 5.
- Nielsen, S. (2010), "Top management team diversity: a review of theories and methodologies", *International Journal of Management Reviews*, Vol. 12 No. 3, pp. 301-16.
- Özsomer, A. and Gençtürk, E., 2003. A resource-based model of market learning in the subsidiary: The capabilities of exploration and exploitation. *Journal of International Marketing*, 11(3), pp.1-29.

- Oehmichen, J. and Puck, J., 2016. Embeddedness, ownership mode and dynamics, and the performance of MNE subsidiaries. *Journal of International Management*, 22(1), pp.17-28.
- O'Donnell, S.W., 2000. Managing foreign subsidiaries: agents of headquarters, or an interdependent network?. *Strategic management journal*, 21(5), pp.525-548.
- Oakley, A., 1999. *People's way of knowing: gender and methodology. Critical Issues in Social Research* (Hood, S., Mayall, B., Oliver, S., eds.), Open University Press, Buckingham, pp.154-177.
- O'Rourke, N., Hatcher, L. and Stepanski, E.J., 2005. *A step-by-step approach to using SAS for univariate & multivariate statistics*. SAS institute.
- Pache, A.C. and Santos, F., 2010. When worlds collide: The internal dynamics of organizational responses to conflicting institutional demands. *Academy of management review*, 35(3), pp.455-476.
- Prahalad, C.K. and Doz, Y.L., 1987. *The multinational mission: Balancing local stressors and global vision*. Simon and Schuster.
- Peteraf, M.A., 1993. The cornerstones of competitive advantage: a resource-based view. *Strategic management journal*, 14(3), pp.179-191.
- Peng, M.W., Wang, D.Y. and Jiang, Y., 2008. An institution-based view of international business strategy: A focus on emerging economies. *Journal of international business studies*, 39(5), pp.920-936.
- Peng, M.W., 2004. Identifying the big question in international business research. *Journal of International Business Studies*, 35(2), pp.99-108.

- Peng, M.W., 2003. Institutional transitions and strategic choices. *Academy of management review*, 28(2), pp.275-296.
- Pfeffer, J., & Salancik, G. 1978. *The external control of organizations: A resource-dependence perspective*. New York: Harper & Row.
- Porter ME. 1991. Towards a dynamic theory of strategy. *Strategic Management Journal*, Winter Special Issue 12: 95–117.
- Podsakoff, N.P., LePine, J.A. and LePine, M.A., 2007. Differential challenge stressor-hindrance stressor relationships with job attitudes, turnover intentions, turnover, and withdrawal behavior: a meta-analysis. *Journal of Applied psychology*, 92(2), p.438.
- Podsakoff P.M., MacKenzie S.B., Lee J-Y, and Podsakoff, N.P., 2003. Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of applied psychology*, 88(5), pp.10-1037.
- Pearsall, M.J., Ellis, A.P. and Stein, J.H., 2009. Coping with challenge and hindrance stressors in teams: Behavioral, cognitive, and affective outcomes. *Organizational Behavior and Human Decision Processes*, 109(1), pp.18-28.
- Petrocelli, J.V., 2003. Hierarchical multiple regression in counseling research: Common problems and possible remedies. *Measurement and evaluation in counseling and development*, 36(1), pp.9-22.
- Poppo, L., Zhou, K.Z. and Li, J.J., 2016. When can you trust “trust”? Calculative trust, relational trust, and supplier performance. *Strategic Management Journal*, 37(4), pp.724-741.

- Renn, R.W. and Vandenberg, R.J., 1995. The critical psychological states: An underrepresented component in job characteristics model research. *Journal of management*, 21(2), pp.279-303.
- Rich, B.L., Lepine, J.A. and Crawford, E.R., 2010. Job engagement: Antecedents and effects on job performance. *Academy of management journal*, 53(3), pp.617-635.
- Rosenzweig, P.M. and Singh, J.V., 1991. Organizational environments and the multinational enterprise. *Academy of Management review*, 16(2), pp.340-361.
- Rugman, A.M. and Verbeke, A., 2001. Subsidiary-specific advantages in multinational enterprises. *Strategic Management Journal*, 22(3), pp.237-250.
- Rugman, A.M., Oh, C.H. and Lim, D.S., 2012. The regional and global competitiveness of multinational firms. *Journal of the Academy of Marketing Science*, 40(2), pp.218-235.
- Rui, H., Zhang, M. and Shipman, A., 2016. Relevant knowledge and recipient ownership: Chinese MNCS' knowledge transfer in Africa. *Journal of World Business*, 51(5), pp.713-728.
- Reinholt, M.I.A., Pedersen, T. and Foss, N.J., 2011. Why a central network position isn't enough: The role of motivation and ability for knowledge sharing in employee networks. *Academy of Management Journal*, 54(6), pp.1277-1297.
- Reinartz, W., Haenlein, M. and Henseler, J., 2009. An empirical comparison of the efficacy of covariance-based and variance-based SEM. *International Journal of research in Marketing*, 26(4), pp.332-344.
- Reus, T.H. and Rottig, D., 2009. Meta-analyses of international joint venture performance determinants. *Management International Review*, 49(5), p.607.

- Ren, H., Bolino, M.C., Shaffer, M.A. and Kraimer, M.L., 2013. The influence of job stressors and resources on repatriate career satisfaction: A relative deprivation perspective. *Journal of World Business*, 48(1), pp.149-159.
- Redding, G. and Witt, M.A., 2009. China's business system and its future trajectory. *Asia Pacific Journal of Management*, 26(3), pp.381-399.
- Rindfleisch, A., Malter, A.J., Ganesan, S. and Moorman, C., 2008. Cross-sectional versus longitudinal survey research: Concepts, findings, and guidelines. *Journal of marketing research*, 45(3), pp.261-279.
- Rodell, J.B. and Judge, T.A., 2009. Can "good" stressors spark "bad" behaviors? The mediating role of emotions in links of challenge and hindrance stressors with citizenship and counterproductive behaviors. *Journal of Applied Psychology*, 94(6), p.1438.
- Robson, M.J., Katsikeas, C.S. and Bello, D.C., 2008. Drivers and performance outcomes of trust in international strategic alliances: The role of organizational complexity. *Organization science*, 19(4), pp.647-665.
- Sacramento, C.A., Fay, D. and West, M.A., 2013. Workplace duties or opportunities? Challenge stressors, regulatory focus, and creativity. *Organizational Behavior and Human Decision Processes*, 121(2), pp.141-157.
- Sargent, L.D. and Terry, D.J., 2000. The moderating role of social support in Karasek's job strain model. *Work & Stress*, 14(3), pp.245-261.
- Sax, L.J., Gilmartin, S.K. and Bryant, A.N., 2003. Assessing response rates and nonresponse bias in web and paper surveys. *Research in higher education*, 44(4), pp.409-432.

Schaufeli, W.B., Salanova, M., González-Romá, V. and Bakker, A.B., 2002. The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness studies*, 3(1), pp.71-92.

Salas, E., Driskell, J. E., & Hughes, S. (1996). Introduction: The study of stress and human performance. In J. E. Driskell & E. Salas (Eds.), *Stress and human performance* (pp. 1–46). Mahwah, NJ: Erlbaum.

Salanova, M., Agut, S. and Peiró, J.M., 2005. Linking organizational resources and work engagement to employee performance and customer loyalty: the mediation of service climate. *Journal of applied Psychology*, 90(6), p.1217.

Schaufeli, W.B. and Bakker, A.B., 2004. Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 25(3), pp.293-315.

Schaufeli, W.B., Taris, T.W. and Van Rhenen, W., 2008. Workaholism, burnout, and work engagement: Three of a kind or three different kinds of employee well-being?. *Applied psychology*, 57(2), pp.173-203.

Schleimer, S.C., Coote, L.V. and Riege, A., 2014. Headquarters to subsidiary transfer effects on marketing strategy exploitation. *Journal of Business Research*, 67(3), pp.307-315.

Sekiguchi, T., Bebenroth, R. and Li, D., 2011. Nationality background of MNC affiliates' top management and affiliate performance in Japan: knowledge-based and upper echelons perspectives. *The International Journal of Human Resource Management*, 22(05), pp.999-1016.

- Szulanski, G., 2000. The process of knowledge transfer: A diachronic analysis of stickiness. *Organizational behavior and human decision processes*, 82(1), pp.9-27.
- Scott, S.M., 1995. Institutions and organizations.
- Sullivan, S.E. and Bhagat, R.S., 1992. Organizational stress, job satisfaction and job performance: where do we go from here?. *Journal of management*, 18(2), pp.353-374.
- Stinchcombe AL. 1965. Social structures and organizations. In Handbook of Organizations, March JG (ed). Rand McNally: Chicago, IL; 142–193.
- Staw, B.M., Sandelands, L.E. and Dutton, J.E., 1981. Threat rigidity effects in organizational behavior: A multilevel analysis. *Administrative science quarterly*, pp.501-524.
- Schulz, M., 2001. The uncertain relevance of newness: Organizational learning and knowledge flows. *Academy of management journal*, 44(4), pp.661-681.
- Shaffer, M.A., Harrison, D.A. and Gilley, K.M., 1999. Dimensions, determinants, and differences in the expatriate adjustment process. *Journal of International Business Studies*, 30(3), pp.557-581.
- Shaffer, M., Singh, B. and Chen, Y.P., 2013. Expatriate pay satisfaction: the role of organizational inequities, assignment stressors and perceived assignment value. *The International Journal of Human Resource Management*, 24(15), pp.2968-2984
- Sheng, S., Zhou, K.Z. and Li, J.J., 2011. The effects of business and political ties on firm performance: Evidence from China. *Journal of Marketing*, 75(1), pp.1-15.
- Shao, L., Kwok, C.C. and Guedhami, O., 2010. National culture and dividend policy. *Journal of International Business Studies*, 41(8), pp.1391-1414.

Shirom, A., Cooper, C.L. and Robertson, I.T., 1989. *International review of industrial and organizational psychology*.

Shaw, D. and Shiu, E., 2002. An assessment of ethical obligation and self-identity in ethical consumer decision - making: a structural equation modelling approach. *International Journal of Consumer Studies*, 26(4), pp.286-293.

Song, M., Van Der Bij, H. and Weggeman, M., 2005. Determinants of the level of knowledge application: a knowledge-based and information-processing perspective. *Journal of Product Innovation Management*, 22(5), pp.430-444.

Sonnentag, S., 2003. Recovery, work engagement, and proactive behavior: a new look at the interface between nonwork and work. *Journal of applied psychology*, 88(3), p.518.

Sonnentag, S. and Frese, M., 2002. Performance concepts and performance theory. *Psychological management of individual performance*, 23(1), pp.3-25.

Sonnentag, S., Mojza, E.J., Demerouti, E. and Bakker, A.B., 2012. Reciprocal relations between recovery and work engagement: the moderating role of job stressors. *Journal of Applied Psychology*, 97(4), p.842.

Solomon, M.R., C. Surprenant, J.A. Czepiel, and E.G. Gutman. "A Role Theory Perspective on Dyadic Interactions: The Service Encounter," *Journal of Marketing*, (49), Winter 1985, pp. 99-111.

Slangen, A.H. and Hennart, J.F., 2008. Do multinationals really prefer to enter culturally distant countries through greenfields rather than through acquisitions? The role of parent experience and subsidiary autonomy. *Journal of International Business Studies*, 39(3), pp.472-490.

- Tadić, M., Bakker, A.B. and Oerlemans, W.G., 2015. Challenge versus hindrance job stressors and well-being: A diary study on the moderating role of job resources. *Journal of Occupational and Organizational Psychology*, 88(4), pp.702-725.
- Tan JJ, and Litschert RJ. 1994. Environment–strategy relationship and its performance implications: an empirical study of the Chinese electronics industry. *Strategic Management Journal* 15(1): 1 – 20.
- Tsai, W. and Ghoshal, S., 1998. Social capital and value creation: The role of intrafirm networks. *Academy of management Journal*, 41(4), pp.464-476.
- Tian, X. and Slocum, J.W., 2014. What determines MNC subsidiary performance? Evidence from China. *Journal of World Business*, 49(3), pp.421-430.
- Tims, M., Bakker, A.B. and Derks, D., 2013. The impact of job crafting on job demands, job resources, and well-being. *Journal of occupational health psychology*, 18(2), p.230.
- Tina Dacin, M., Goodstein, J. and Richard Scott, W., 2002. Institutional theory and institutional change: Introduction to the special research forum. *Academy of management journal*, 45(1), pp.45-56.
- Teece, D.J., 2007. Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic management journal*, 28(13), pp.1319-1350.
- Teece, D.J., Pisano, G. and Shuen, A., 1997. Dynamic capabilities and strategic management. *Strategic management journal*, 18(7), pp.509-533.
- Taggart, J. and Hood, N., 1999. Determinants of autonomy in multinational corporation subsidiaries. *European Management Journal*, 17(2), pp.226-236.

Tempel, A., Edwards, T., Ferner, A., Muller-Camen, M. and Wächter, H., 2006. Subsidiary responses to institutional duality: Collective representation practices of US multinationals in Britain and Germany. *Human Relations*, 59(11), pp.1543-1570.

Torrente, P., Salanova, M., Llorens, S. and Schaufeli, W.B., 2012. Teams make it work: How team work engagement mediates between social resources and performance in teams. *Psicothema*, 24(1), pp.106-112.

Troilo, G., De Luca, L.M. and Atuahene-Gima, K., 2014. More innovation with less? A strategic contingency view of slack resources, information search, and radical innovation. *Journal of Product Innovation Management*, 31(2), pp.259-277.

Ullah, S., Akhtar, P. and Zaefarian, G., 2018. Dealing with endogeneity bias: The generalized method of moments (GMM) for panel data. *Industrial Marketing Management*, 71, pp.69-78.

Van Yperen, N.W. and Snijders, T.A., 2000. A multilevel analysis of the stressors–control model: Is stress at work determined by factors at the group level or the individual level?. *Journal of occupational health psychology*, 5(1), p.182.

Van den Broeck, A., De Cuyper, N., De Witte, H. and Vansteenkiste, M., 2010. Not all job demands are equal: Differentiating job hindrances and job challenges in the Job Demands–Resources model. *European journal of work and organizational psychology*, 19(6), pp.735-759.

Venaik, S., Midgley, D.F. and Devinney, T.M., 2005. Dual paths to performance: The impact of global pressures on MNC subsidiary conduct and performance. *Journal of International Business Studies*, 36(6), pp.655-675.

- Vinokur, A.D. and Schul, Y., 2002. The web of coping resources and pathways to reemployment following a job loss. *Journal of occupational health psychology*, 7(1), p.68.
- Wang, S., Tong, T.W., Chen, G. and Kim, H., 2009. Expatriate utilization and foreign direct investment performance: The mediating role of knowledge transfer. *Journal of Management*, 35(5), pp.1181-1206.
- Wallace, J.C., Edwards, B.D., Arnold, T., Frazier, M.L. and Finch, D.M., 2009. Work stressors, role-based performance, and the moderating influence of organizational support. *Journal of applied psychology*, 94(1), p.254.
- Wall, T.D., Jackson, P.R., Mullarkey, S. and Parker, S.K., 1996. The stressors—control model of job strain: A more specific test. *Journal of Occupational and Organizational Psychology*, 69(2), pp.153-166.
- Wang, L., Sheng, S., Wu, S., & Zhou, K. Z. (2017). Government role, governance mechanisms, and foreign partner opportunism in IJVs. *Journal of Business Research*, 76, 98–107.
- Weick, K.E., 1979. *Social Psychology of Organizing*. Reading, MA.: Addison-Wesley.
- Wernerfelt, B., 1984. A resource-based view of the firm. *Strategic management journal*, 5(2), pp.171-180.
- Webster, J.R., Beehr, T.A. and Love, K., 2011. Extending the challenge-hindrance model of occupational stress: The role of appraisal. *Journal of Vocational Behavior*, 79(2), pp.505-516.
- Weiss, H.M. and Cropanzano, R., 1996. Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work.

Wheeler, A.R., Halbesleben, J.R. and Whitman, M.V., 2013. The interactive effects of abusive supervision and entitlement on emotional exhaustion and co-worker abuse. *Journal of Occupational and Organizational Psychology*, 86(4), pp.477-496.

Witt, M.A., 2010. China: what variety of capitalism?.

Xanthopoulou, D., Bakker, A.B., Demerouti, E. and Schaufeli, W.B., 2007. The role of personal resources in the job demands-resources model. *International journal of stress management*, 14(2), p.121.

Yamin, M., 1999. An evolutionary analysis of subsidiary innovation and 'reverse' transfer in multinational companies. *In International Business Organization* (pp. 67-82). Palgrave Macmillan, London.

Young, S. and Tavares, A.T., 2004. Centralization and autonomy: back to the future. *International Business Review*, 13(2), pp.215-237.

Yildiz, H.E. and Fey, C.F., 2012. The liability of foreignness reconsidered: New insights from the alternative research context of transforming economies. *International Business Review*, 21(2), pp.269-280.

Yuan, L., Pangarkar, N. and Wu, J., 2016. The interactive effect of time and host country location on Chinese MNCs' performance: An empirical investigation. *Journal of World Business*, 51(2), pp.331-342.

Zaheer, S. and Mosakowski, E., 1997. The dynamics of the liability of foreignness: A global study of survival in financial services. *Strategic management journal*, 18(6), pp.439-463.

Zaefarian, G., Kadile, V., Henneberg, S.C. and Leischnig, A., 2017. Endogeneity bias in marketing research: Problem, causes and remedies. *Industrial Marketing Management*, 65, pp.39-46.

Zahra, S.A. and George, G., 2002. The net-enabled business innovation cycle and the evolution of dynamic capabilities. *Information Systems Research*, 13(2), pp.147-150.

Zhang, J., Di Benedetto, C.A. and Hoenig, S., 2009. Product development strategy, product innovation performance, and the mediating role of knowledge utilization: evidence from subsidiaries in China. *Journal of International Marketing*, 17(2), pp.42-58.

Zhang, Y., Li, H., Hitt, M.A. and Cui, G., 2007. R&D intensity and international joint venture performance in an emerging market: moderating effects of market focus and ownership structure. *Journal of International Business Studies*, 38(6), pp.944-960.

Zhan, W. and Chen, R.R., 2013. Dynamic capability and IJV performance: The effect of exploitation and exploration capabilities. *Asia Pacific Journal of Management*, 30(2), pp.601-632.

Zhang, Y., Li, H., Li, Y. and Zhou, L.A., 2010. FDI spillovers in an emerging market: the role of foreign firms' country origin diversity and domestic firms' absorptive capacity. *Strategic Management Journal*, 31(9), pp.969-98

Zhang, Z.-X., & Zhang, J. (2014). Understanding Chinese firms from multiple perspectives. Heidelberg: Springer.

Zhang, Y., Zhao, W. and Ge, J., 2016. Institutional duality and political strategies of foreign-invested firms in an emerging economy. *Journal of World Business*, 51(3), pp.451-462.

Zhao, X., Lynch Jr, J.G. and Chen, Q., 2010. Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of consumer research*, 37(2), pp.197-206.

Zucker, L.G., 1988. *Institutional patterns and organizations: Culture and environment*. Ballinger Pub Co.

Appendices

Appendix 1. Ethics approval

The Secretariat
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UNIVERSITY OF LEEDS

Chong Yu
Leeds University Business School
University of Leeds
Leeds, LS2 9JT

**ESSL, Environment and LUBS (AREA) Faculty Research Ethics Committee
University of Leeds**

9 July 2020

Dear Chong

Title of study: **Stress in Headquarters-Subsidiary relationships: An empirical study of wholly-owned subsidiaries in manufacturing industry in China**

Ethics reference: **AREA 16-048 amendment June 2018**

I am pleased to inform you that your amendment to the research application listed above has been reviewed by a delegate of the ESSL, Environment and LUBS (AREA) Faculty Research Ethics Committee and I can confirm a favourable ethical opinion as of the date of this letter. The following documentation was considered:

Document	Version	Date
AREA 16-048 amendment June 18 Ethical_Review_From_Chong.docx	1	04/06/18
AREA 16-048 amendment June 18 Information Sheet.docx	1	04/06/18
AREA 16-048 amendment June 18 Consent Form.docx	1	04/06/18
AREA 16-048 amendment June 18 Questionnaire.docx	1	04/06/18
AREA 16-048 amendment June 18 Amendment_form.doc	1	04/06/18
AREA 16-048 Consent Form.docx	2	27/01/17
AREA 16-048 Ethical_Review_From_Chong (2).docx	2	27/01/17
AREA 16-048 Questionnaire Introduction.docx	1	11/12/16
AREA 16-048 Risk Assessment.docx	1	11/12/16
AREA 16-048 Information Sheet.docx	2	27/01/17

The reviewer made the following comments:

- The consent form states: "...I agree for the data I provide to be archived at 'SS_18'." Please clarify what 'SS_18' is in the consent form or information sheet so that participants understand what this means.

Please notify the committee if you intend to make any further amendments to the original research as submitted at date of this approval as all changes must receive ethical approval prior to implementation. The amendment form is available at <http://ris.leeds.ac.uk/EthicsAmendment>.

Please note: You are expected to keep a record of all your approved documentation, as well as documents such as sample consent forms, and other documents relating to the study. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited. There is a checklist listing examples of documents to be kept which is available at <http://ris.leeds.ac.uk/EthicsAudits>.

We welcome feedback on your experience of the ethical review process and suggestions for improvement. Please email any comments to ResearchEthics@leeds.ac.uk.

Yours sincerely

Jennifer Blaikie
Senior Research Ethics Administrator, the Secretariat
On behalf of Dr Kahryn Hughes, Chair, [AREA Faculty Research Ethics Committee](#)

CC: Student's supervisor(s)

Appendix 2: Questionnaire

Dear Sir/Madam,

Many thanks for agreeing to participate in our research project.

This project investigates the relationship between your subsidiary and its headquarters and how to improve your subsidiary's performance. It is undertaken by University of Leeds Business School, the University of Leeds, United Kingdom. You have been selected because of your knowledge regarding your subsidiary's operations and business relationships.

Please note that this study is for research purposes only, and all your answers will be treated as strictly confidential. We will not provide any other organisation with your information. However, we will provide you with aggregated feedback and an executive summary after we have analyzed the data.

We fully understand the stressors on your time, and we are very thankful for your help with this research project. The questionnaire will take about 20 minutes to complete.

Please note: There are no right or wrong answers; it is only your personal opinion on this topic that is important to us. Please answer all questions as openly as possible. The system allows for navigation between uncompleted pages to update your responses. Also, you can save your answers and exit/re-enter the survey at any time to update your responses.


If you have any questions or comments about this project, please do not hesitate to contact me on +44(0)7543234595 or you can write to me at the following email address: bn14cy@leeds.ac.uk. Again, thank you very much for your participation!


Sincerely yours,

Chong Yu

Postgraduate Researcher, Department of Marketing

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Q1 Thinking about institutional constituents in your subsidiary's host country (i.e. China) such as the government, professional associations, customer bodies and general public, please indicate to what extent you agree or disagree with the following statements:

	Strongly disagree (1)	Strongly agree (7)
Our Chinese subsidiary operations are highly dependent on the institutional constituents.	<input type="radio"/>	<input type="radio"/>
Success of our subsidiary rests on favourable Chinese national, state, and municipal government policies.	<input type="radio"/>	<input type="radio"/>
The success of our subsidiary in China depends on the institutional constituents.	<input type="radio"/>	<input type="radio"/>
Keeping our Chinese institutional constituents happy is a critical objective.	<input type="radio"/>	<input type="radio"/>
Institutional constituents play an important role in our industry.	<input type="radio"/>	<input type="radio"/>

- *In answering the following questions, please focus on the relationship between your subsidiary and the headquarters.*

Q2 Thinking about work-related items that may or may not influence your level of stress in your subsidiary's relationship with the headquarters, please indicate the frequencies of the following items:

	Never (1)	Always (7)
Having to complete a lot of work assigned by the headquarters	<input type="radio"/>	<input type="radio"/>
Having to work very hard to meet the headquarters' demands	<input type="radio"/>	<input type="radio"/>
Time pressure in working with the headquarters	<input type="radio"/>	<input type="radio"/>
Having to work at a rapid pace to complete all of our tasks	<input type="radio"/>	<input type="radio"/>
Performing complex tasks assigned by the headquarters	<input type="radio"/>	<input type="radio"/>
Having to use a broad set of skills and abilities to work with the headquarters	<input type="radio"/>	<input type="radio"/>
Having to balance several projects at once	<input type="radio"/>	<input type="radio"/>
Having to multitask our assigned projects	<input type="radio"/>	<input type="radio"/>
Having high levels of responsibility for meeting the headquarters' demands	<input type="radio"/>	<input type="radio"/>
A high level of accountability for the headquarters' demands	<input type="radio"/>	<input type="radio"/>

Q3 Thinking about work-related items that may or may not influence your level of stress in your subsidiary's relationship with the headquarters, please indicate the frequencies of the following items:

	Never (1)	Always (7)
Administrative hassles in working with the headquarters	<input type="radio"/>	<input type="radio"/>
Bureaucratic constraints (i.e. red tape) in working with the headquarters	<input type="radio"/>	<input type="radio"/>
Conflicting instructions and expectations from the headquarters	<input type="radio"/>	<input type="radio"/>
Unclear job tasks assigned by the headquarters	<input type="radio"/>	<input type="radio"/>
Conflicting requests from headquarters	<input type="radio"/>	<input type="radio"/>
Inadequate resources to accomplish tasks assigned by the headquarters	<input type="radio"/>	<input type="radio"/>
Conflict with the headquarters	<input type="radio"/>	<input type="radio"/>
Disputes with the headquarters	<input type="radio"/>	<input type="radio"/>
Office politics between your subsidiary and the headquarters	<input type="radio"/>	<input type="radio"/>
Other members of this MNC (e.g. sister subsidiary) receiving underserved rewards or promotions from the headquarters	<input type="radio"/>	<input type="radio"/>

Q4 Thinking about your subsidiary's work in its relationship with the headquarters, please indicate how frequently your subsidiary's top management team may or may not experience the following feelings:

	Never (1)	Always (7)
At our work, we feel bursting with energy.	<input type="radio"/>	<input type="radio"/>
At our work, we feel strong and vigorous.	<input type="radio"/>	<input type="radio"/>
We are enthusiastic about our job in this subsidiary.	<input type="radio"/>	<input type="radio"/>
Our job in this subsidiary inspires us.	<input type="radio"/>	<input type="radio"/>
When we arrive at work in the morning, we feel like starting to work.	<input type="radio"/>	<input type="radio"/>
We feel happy when we are working intensely in this subsidiary.	<input type="radio"/>	<input type="radio"/>
We are proud of the work that we do in this subsidiary.	<input type="radio"/>	<input type="radio"/>
We are immersed in our work in this subsidiary.	<input type="radio"/>	<input type="radio"/>
We get carried away when we are working in this subsidiary.	<input type="radio"/>	<input type="radio"/>

Q5 Please indicate to what extent you agree or disagree with the following statements:

	Strongly disagree (1)	Strongly agree (7)
Our subsidiary responds rapidly if something important happens with regard to its customers and competitors.	<input type="radio"/>	<input type="radio"/>
Our subsidiary quickly implements its planned activities with regard to customers and competitors.	<input type="radio"/>	<input type="radio"/>
If customer- and competitor-related activities do not lead to the desired effects, our subsidiary is fast at changing them.	<input type="radio"/>	<input type="radio"/>
Our subsidiary quickly reacts to fundamental changes with regard to its customers and competitors.	<input type="radio"/>	<input type="radio"/>

Q6 Please indicate the extent to which you agree or disagree with the following statements in relation to your subsidiary over the last three years:

	Strongly disagree (1)	Strongly agree (7)
Our subsidiary has uncommitted financial resources that can be used to fund strategic initiatives at short notice.	<input type="radio"/>	<input type="radio"/>
Our subsidiary has a large number of financial resources available in the short run to fund our initiatives.	<input type="radio"/>	<input type="radio"/>
Our subsidiary will have no problems obtaining financial resources at short notice to support new strategic initiatives.	<input type="radio"/>	<input type="radio"/>
Our subsidiary has a large number of financial resources at the discretion of management to fund new strategies initiatives.	<input type="radio"/>	<input type="radio"/>

Q7 Thinking about your subsidiary's social connections with government officials in China, please indicate the extent to which you agree or disagree with the following statements.

	Strongly disagree (1)	Strongly agree (7)
Top managers at our subsidiary have maintained good personal relationships with officials in various levels of Chinese government.	<input type="radio"/>	<input type="radio"/>
Top managers at our subsidiary have developed good connections with officials in Chinese regulatory and supporting organizations such as tax bureaus, state banks, and commercial administration bureaus.	<input type="radio"/>	<input type="radio"/>
So far, our subsidiary's relationship with Chinese regional government officials has been in a good shape.	<input type="radio"/>	<input type="radio"/>
Our subsidiary has spent substantial resources in building relationships with Chinese government officials.	<input type="radio"/>	<input type="radio"/>

Q8 Please answer the following questions:

	Very low (1)	Very high (7)
My knowledge about our subsidiary's relationship with the headquarters is.....	<input type="radio"/>	<input type="radio"/>
My confidence in answering the questions in this survey is.....	<input type="radio"/>	<input type="radio"/>

Q9 What year was your subsidiary established?

**Q10 What percentage of your subsidiary is owned by a foreign company?
Share of foreign ownership (%)**

Q11 How many employees are there in your subsidiary (approximately)?

Q12 Please indicate whether your subsidiary is devoted to activities aimed at the following purposes:

	Yes	No
The creation of new products and/or new technologies	<input type="radio"/>	<input type="radio"/>
The improvements of products or process	<input type="radio"/>	<input type="radio"/>

Q13 How many foreign employees are in the top two tiers of your subsidiary's management team?

Q14 What is your subsidiary's sales level in last year (approximately in CNY amount)?

Q15 Please indicate your subsidiary's expenditure on R&D activities over the last year (approximately in CNY amount).

Q16 Please indicate the industry of your subsidiary:

Q17 Where is your subsidiary's global headquarters located? Country/City:

Q18 Thinking about the environment of your subsidiary's local marketplace in China, please indicate to what extent you agree or disagree with the following statements:

	Strongly disagree (1)	Strongly agree (7)
Competition in our industry is cut-throat.	<input type="radio"/>	<input type="radio"/>

Q19 Please indicate what main type of product your subsidiary produces (choose only one):

- Industrial goods
- Consumer goods

Thank you very much for your participation in this survey. Again, we would like to assure you again that all your answers will be dealt with anonymously.