

Impact and Potential Influence Mechanism of Paternalistic Leadership on Team Performance: From a Resource Allocation Perspective

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Abstract

An important impetus for this DMan research project stemmed from the author's observation in management practice. Specifically, it was observed that the same paternalistic leader can elicit differing levels of team performance when leading distinct teams. Additionally, some successful entrepreneurs in China's business Organisations often display pronounced authoritarian traits; however, the effectiveness of authoritarian paternalistic leadership (APL) has remained a subject of debate. Furthermore, the supervisor-subordinate Guanxi (SSG) within the Chinese context frequently exerts a substantial influence on leadership behaviours. Through a comprehensive literature review, the author identified the following insights: The existing literature exhibits a notable gap in investigating the effectiveness of paternalistic leadership at the team level, and the limited studies available on this topic have yielded inconsistent findings. Moreover, the differentiation of SSG within the Chinese context displays distinct characteristics compared to Leader-member exchange (LMX) differentiation observed in Western settings. However, this distinction has been frequently overlooked by scholars when studying Chinese management practices.

From a resource allocation perspective, the study examines the relationship between two types of paternalistic leadership and team performance (TP), as well as its mechanism of influence. The sample consisted of 104 teams from state-owned, private, and foreign-funded enterprises in China, with 676 participants. The findings revealed a U-shaped relationship between APL and TP. Furthermore, this U-shaped relationship was moderated by task interdependence (TI), being significant only when TI is high. Additionally, this study revealed that SSG differentiation mediates the negative effect of APL on TP; this mediating effect was also moderated by TI. Regarding benevolent paternalistic leadership (BPL), the results revealed its significant positive impact on TP, rather than the expected inverted U-shaped relationship as hypothesised. Moreover, the expected mediating role of the SSG differentiation in the positive relationship between BPL and TP, as well as the moderating role of TI in this relationship, were not supported. By bridging theory and practice, this study offers novel and actionable insights into the field of paternalistic leadership research.

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List of Abbreviations

APL	Authoritarian paternalistic leadership
BPL	Benevolent paternalistic leadership
MPL	Moral paternalistic leadership
SSG	Supervisor-subordinate Guanxi
TP	Team Performance
TI	Task interdependence
LMX	Leader-member exchange
OCB	Organisational citizenship behaviour
CITC	Corrected item–total correlation
EFA	Exploratory factor analysis
KMO	Kaiser-Meyer-Olkin
R_{wg}	Within-group interrater reliability
<i>ICC</i>	Intra-class correlation
<i>ICC(1)</i>	Within-group correlation
<i>ICC(2)</i>	Intercorrelation
<i>MSB</i>	Mean square between groups
<i>MSW</i>	Mean square within groups
RMSEA	Root mean square error of approximation
SRMR	Standardised root mean square residual
CFI	Comparative fit index
TLI	Tucker-Lewis index
CMV	Common method variance

1 Introduction

1.1 Research background

Team performance (TP) serves as a critical indicator of leadership effectiveness at the team level and provides essential assurance for the survival and sustainable development of organisations. Organisational management scholars have identified various factors influencing TP, spanning multiple dimensions such as the organisational environment, team composition, job design, and team processes (Hyatt & Ruddy, 1997; Xie et al., 2023). In team operations, the role of the team leader is particularly pivotal. Effective team leaders not only promote integration and coordination among team members but also exhibit genuine care for their subordinates while encouraging their autonomy, thereby driving the team toward high performance (Zhang et al., 2009). On the other hand, inappropriate behaviour by team leaders can hinder team processes and impede high performance (Druskat & Wheeler, 2003). Thus, the team leader stands out as a key factor influencing TP. Drawing from over two decades of management experience in the manufacturing industry in China, the author has led numerous teams and recognises that in China, a society characterised by high power distance, team members generally acknowledge and respect the hierarchical relationship between leaders and subordinates, showing a greater tendency to comply with their leaders' directives (Hofstede, 1984; Fu et al., 2023). As a result, in Chinese business contexts, the influence of team leaders on team development and performance is especially significant.

Paternalistic leadership is currently the predominant leadership style within the Asian Confucian cultural circle. This leadership style entails leaders demonstrating actions that reflect personal care, benevolence, and a genuine interest in the holistic well-being of their followers, encompassing both work-related and non-work aspects. Simultaneously, it incorporates behaviours that exercise legitimate authority and control. Paternalistic leadership draws its inspiration from the traditional relationship between a parent (often a father) and a child (Aycan, 2006; Chen & Farh, 2010; Hiller et al., 2019). The core of this leadership style lies in fostering a family-like work environment, where employees feel respected, valued, and

thus experience an enhanced sense of belonging and work motivation (Jiang & Ali, 2024).

In commercial organisations in China, numerous well-known entrepreneurs with remarkable achievements are often regarded as embodying the typical characteristics of paternalistic leadership (Yao et al., 2023). Based on the author's management experience, it has been observed that leaders at various levels—from grassroots team supervisors to senior managers—commonly exhibit traits associated with paternalistic leadership. At the same time, certain puzzling management phenomena have been noted: Some paternalistic leaders successfully guide their teams toward high performance, while others achieve only mediocre results. Furthermore, some paternalistic leaders display significantly varying levels of performance when managing teams engaged in different tasks. These observations call for deeper investigation. Despite being the prevailing leadership style in Chinese business organisations, paternalistic leadership frequently faces criticism due to its reliance on “rule by man” which conflicts with the contemporary societal value of the “rule of law” (Lin et al., 2017; Dedahanov et al., 2022). A key manifestation of the “rule by man” feature of paternalistic leadership is that leaders deviate from established rules and implement management decisions based on the proximity of their relationships with subordinates. In China, a prototypical Guanxi-based society, this integration of supervisor-subordinate Guanxi (SSG) into non-work domains is often viewed as an unfair practice by third-party employees (Chen et al., 2008). The author has also faced challenges in this area during management practice. In Chinese society, it is difficult for leaders to avoid cultivating close personal relationships with their subordinates. This is because maintaining positive “Guanxi” with subordinates not only satisfies the psychological needs of both parties but also boosts employees' work engagement, ultimately enhancing individual performance. However, the impact of such dual-purpose personal relationships on overall team performance remains a critical question when considering the entire team dynamic.

To summarise, the author has encountered several complex issues in management practice, such as: How does paternalistic leadership influence team performance? Why does the same paternalistic leader demonstrate differing levels of effectiveness when managing teams engaged in varied tasks? Furthermore, if leaders develop differentiated Guanxi with

their subordinates, how does this impact the overall performance of the team? Having identified these challenges in practice, the author reviewed relevant literature to systematically and thoroughly investigate these questions, thereby providing insights for the practical application of paternalistic leadership in management.

The prevalence of paternalistic leadership in China has its historical and cultural contexts. Dickson et al. (2003) noted that cultural contexts in developing countries often exhibit common traits such as high power distance, strong family ties, and an expectation that organisations should provide for their employees and their families. These characteristics are reflected in a paternalistic leadership style, prevalent in cultures that value collectivism and hierarchical social relationships. Paternalism aligns with the values of collectivism and high power distance cultures (Raj & Saraswathy, 2024). In Western societies where individualistic culture prevails, paternalistic leadership behaviour, particularly authoritarian conduct, is often viewed as oppressive, exploitative, and manipulative. However, in cultures rooted in indigenous psychology, such as Confucianism, paternalistic leadership has positive connotations (Lin et al., 2017; Shafi et al., 2021).

Since the theory of paternalistic leadership was introduced, it has garnered significant attention in organisational management research, prompting scholars to develop a series of findings that have substantially enriched and expanded this theory. While numerous studies have demonstrated the effectiveness of paternalistic leadership (Pellegrini and Scandura, 2008; Aycan, 2006; Çetin et al., 2021), ample empirical evidence also highlights the inconsistent impacts of its various forms on individual and team outcomes (Lin et al., 2017; Zhang et al., 2009; Liu et al., 2021; Li and Wang, 2021; Lee et al., 2024). Specifically, authoritarian leadership, a component of paternalistic leadership, has often been associated with negative effects (Farh et al., 2008; Liu et al., 2021; Yao et al., 2023). However, some studies have identified positive outcomes at the team level (Gao et al., 2014; Huang and Lin, 2021). Regarding benevolent leadership, although its effectiveness has been widely affirmed (Cheng et al., 2002; Lin and Chen, 2021; Cheah et al., 2022), certain scholars have also identified its double-edged sword effect on individual and team performance (Li et al., 2018; Peng et al., 2024; Huang and Yin, 2024). Through a literature review, this research identified gaps in

empirical research on paternalistic leadership, which deserve continued attention and exploration by researchers.

First, scholars have largely overlooked the impact of paternalistic leadership at the team level. Most empirical studies on paternalistic leadership have focused on its influence and process on subordinates' reactions, attitudes, and effectiveness from an individual or dual perspective (Zhang et al., 2009; Chen et al., 2014). In management, simply extrapolating research findings from the individual level to the team level can be perilous in practical settings, as it can lead the team in the wrong direction and potentially decrease rather than increase its efficiency or performance (Zhang et al., 2009).

Second, current research has often provided incongruous findings regarding the influence of paternalistic leadership on team output. Specifically, scholars have frequently produced inconsistent or even contradictory conclusions about how paternalistic leadership influences TP due to varying theoretical frameworks. In addition, compared with other leadership types, there is limited discussion of the moderating variables that affect the effectiveness of paternalistic leadership, requiring further research efforts (Lin et al., 2017). Task interdependence (TI) is a key requirement and constraint that must be considered in both theoretical research and practical applications of teams (Kozlowski and Bell, 2013). However, scholars have seldom highlighted this critical variable in their research on paternalistic leadership and team outcomes.

Third, limited research has explored the role of supervisor – subordinate Guanxi (SSG) differentiation in the relationship between paternalistic leadership and team performance (TP). Additionally, the mediating role of leader-member exchange (LMX) differentiation in this context remains under-investigated. Many empirical studies have demonstrated the significant impact of LMX differentiation on TP. However, most scholars have focused on its main and moderating effects, while neglecting its potential mediating effect. As a key means of implementing management strategies, LMX differentiation could potentially play a pivotal intermediary role, with leadership influencing TP through differential treatment of subordinates.

Furthermore, the literature has largely overlooked SSG differentiation, an indigenous concept that specifically addresses the differentiation of supervisor-subordinate relationships within the Chinese cultural context. Additionally, SSG differentiation and LMX differentiation possess distinct connotations. LMX differentiation pertains to relationship differentiation based on subordinates' contributions and competence, whereas SSG differentiation can be interpreted as relationship differentiation stemming from leaders' personal biases or their unique relationships with certain subordinates (Chen et al., 2014). Despite scholars recognizing the differences between Western LMX concepts and Chinese SSG contexts across cultures, most researchers examining leader – member relationships and differentiation in the Chinese context have relied on Western LMX frameworks and measures, which fail to fully capture the authentic dynamics of supervisor-subordinate interactions embedded in the Chinese cultural milieu. Consequently, it is crucial to explore SSG differentiation rather than LMX differentiation when studying leader-member relationships in the Chinese context.

1.2 Research questions, aim, boundaries, and model

Integrating the practical issues identified during management practice with the research gaps uncovered through literature review, it is posited that investigating the relationship between paternalistic leadership and TP constitutes a worthwhile endeavor. Furthermore, it is argued that TI and SSG differentiation within the Chinese context may act as critical factors influencing this relationship, thus shedding light on the underlying mechanisms through which paternalistic leadership affects TP. This study focuses on these variables, defines research questions and boundaries, and constructs research models accordingly.

1.2.1 Research questions and aim

The aim of this study is to explore how various dimensions of paternalistic leadership

influence team performance. Specifically, it examines the relationship between paternalistic leadership and TP, as well as the underlying mechanisms through which this influence occurs. Based on the phenomena observed in practice and the gaps identified through a comprehensive literature review, the following research questions were formulated:

Question 1: What is the impact of paternalistic leadership on TP? Is this relationship characterised by a linear or nonlinear pattern?

Question 2: How does TI moderate the association between paternalistic leadership and TP?

Question 3: How do different styles of paternalistic leadership behaviour influence SSG differentiation? Does SSG differentiation significantly affect TP? Can SSG differentiation serve as a mediator in the relationship between paternalistic leadership and TP?

Question 4: Does TI also moderate the indirect effects of paternalistic leadership on TP via SSG differentiation?

1.2.2 Research boundaries

Currently, the three-dimensional theory of paternalistic leadership has gained widespread acceptance among scholars, positing that it consists of three sub-dimensions: authoritarianism, benevolence, and morality (Farh & Cheng, 2000; Lin & Chen, 2021; Huang & Yin, 2024). Nevertheless, despite its broad acceptance, some empirical studies have questioned this classification framework (Huang, 2017; Hiller et al., 2019). Many scholars continue to support the two-dimensional conceptualisation of paternalistic leadership, which includes only benevolence and authoritarianism (Pellegrini & Scandura, 2008; Cao, 2015; Yao et al., 2023). The moral dimension of paternalistic leadership shows considerable overlap with the concept and measurement of ethical leadership, suggesting that it might not be necessary to treat morality as a distinct sub-type of paternalistic leadership (Ng & Feldman, 2014). Hiller et al. (2019) argued that paternalistic leadership is characterised by both nurturing (benevolence) and directive (authority) behaviours. This encompasses a genuine and

comprehensive concern for followers' well-being, combined with intentional and non-manipulative control and leadership. As they stated, "It seems reasonable to suggest that a sincere and well-intentioned (i.e., moral) manifestation of benevolence and authority captures the core and original essence of paternalistic leadership, making the inclusion of morality as a separate, unique dimension unnecessary" (Hiller et al., 2019, p. 176).

An important objective of this study is to examine the nonlinear relationship between paternalistic leadership and team performance. Practical observations and prior scholarly findings indicate that authoritarian leadership and benevolent leadership may exhibit a double-edged sword effect (Huang & Lin, 2021; Li et al., 2018; Dedahanov et al., 2022). These two dimensions of paternalistic leadership reflect the characteristic of "rule of man" (Dedahanov et al., 2022), which is closely aligned with the mediating variable selected in this study—SSG differentiation. Therefore, investigating these two dimensions aligns more closely with the objectives of this research.

In business organisations, leaders at various levels undertake distinct responsibilities (Mumford et al., 2007) and are endowed with differing levels of authority and resources (Katz and Kahn, 1978). To accurately capture the relationship between team leadership and TP, thereby enhancing the validity of the research findings, this study focuses on grassroots functional work teams within commercial organisations. Sundstrom et al. (1990) defined work teams as groups of interdependent individuals who collectively share responsibility for outcomes and whose presence is clearly recognizable both to themselves and others. Hackman (1980) outlined three key characteristics of functional work teams: mutual interdependence among members that shapes specific team structures during the team-building process; a clear identity of team members that is perceptible to both insiders and outsiders; and the necessity for effective collaboration among members to achieve tasks or make decisions, supported by sufficient authority to execute these tasks. Consequently, unlike other Organisational team types such as cross-functional teams or self-managed teams (Yukl, 2010), functional work teams exhibit a more stable structure and place greater emphasis on leadership, aligning closely with the objectives of this study. In addition, some teams may have multiple leadership roles, such as primary leaders and deputy leaders within the team. A critical

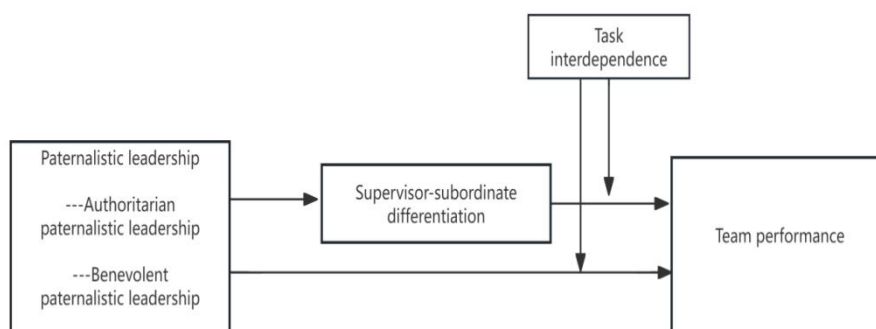
variable in this study is SSG differentiation. If a team includes more than one leader, the distinction between the leader and the member becomes difficult to measure precisely. To ensure the accuracy and effectiveness of data measurement, the sample for this study was exclusively drawn from grassroots teams with a single leader.

The data for this study were collected from the Chinese mainland. The research subjects span a diverse array of industries, including manufacturing, financial services, and trade, as well as various enterprise types such as state-owned, foreign-funded, and private enterprises. Furthermore, the formal investigation was conducted from January to March 2024. During this period, no significant uncontrollable events that might have influenced the variables occurred, thus ensuring the exclusion of interference caused by abrupt external environmental changes. Additionally, the overall performance and personnel of the participating organisations remained stable, with no disruptions attributable to key events or shifts in participant roles.

1.2.3 Proposed research model

According to the research questions and boundaries outlined in the previous section, the proposed research model for this study is as follows:

Figure1-1:Research model



1.3 Leader-centred research approach

A useful approach to categorising leadership theories is to examine whether they focus on leaders or followers. Most leadership theories emphasise the personal characteristics and behaviours of leaders while paying less attention to the attributes of followers. Leader-centred theory stands out as it argues that leaders' traits, skills, or behaviours significantly contribute to leadership effectiveness. Similarly, many contingency theories prioritise leader characteristics over follower characteristics. However, a limited number of studies and theories do highlight the attributes of followers, such as empowerment theory and attribution theory. Empowerment theory focuses on how followers perceive their capacity to influence significant events, while attribution theory explains how followers interpret a leader's impact on events and outcomes. The aim of the present study was to investigate the impact of paternalistic leadership on TP and its underlying mechanism by adopting a leader-centred research perspective. The primary reason lies in China's distinctive social and cultural environment.

First, the role of leaders within the Chinese context is indispensable. China is a society deeply embedded in Guanxi, which plays a crucial role in transitional societies characterised by insufficient bureaucratic systems (Pearce and Robinson, 2000; Xin and Pearce, 1996). These societies tend to favour particularistic over universalistic Organisational practices. In such settings, managers enjoy considerable autonomy in decision-making due to the lack of stringent regulations or dependable enforcement mechanisms (Zhang et al., 2014). Consequently, the substantial authority of leaders in the Chinese context may enhance their influence on team performance. Second, leader-member relationships in the Chinese cultural milieu possess unique features. "Filial piety" and "loyalty" form the foundational pillars of traditional Chinese culture, emphasising a hierarchical structure. Leader-member relationships are premised on unequal power dynamics between leaders and subordinates, which aligns with societal norms in high-power-distance cultures. While paternalism has faced criticism in Western literature for its unquestioned power disparities, Chinese society demonstrates profound respect for authority, where "obedience" is positively regarded. This adherence to

authority provides individuals with a sense of security (Yang, 1995). Taking these two dimensions into account, it can be inferred that leaders wield significantly greater influence on team outcomes than followers in the Chinese context, thereby justifying the adoption of a leader-centred research approach in this thesis.

Using the functional perspective of leadership, classifying leadership types based on their behaviours is a key approach to assessing the effectiveness of team leaders in terms of team performance and outcomes (Burke et al., 2006; Ceri-Booms, 2017). By reviewing the literature on leadership behaviour theory and contingency theory, this study revealed that most leadership theories broadly categorise leadership styles as “relationship-oriented” or “task-oriented” (Fleishman et al., 1991; Fiedler, 2006). Fleishman et al. (1991) supported this argument by analysing 65 classification systems of leadership behaviours proposed between 1940 and 1986. Drawing upon the functional perspective to define different paternalistic leadership styles, it is observed that APL focuses on achieving high performance and can be classified as task-oriented leadership, while BPL aims at team harmony and falls under relationship-oriented leadership. The present study adopts a functional perspective to classify and examine the effectiveness of paternalistic leadership at the team level considering other specific behavioural characteristics exhibited by leaders.

The rational allocation of resources is critical to addressing almost all management problems in modern economic society. Fundamentally enterprise management focuses on achieving optimal business objectives through effective resource allocation. For departments and teams within a business organisation, the key to sustainable competitive advantages lies in the rational allocation of their own resources (Barney, 2001). Only an optimal allocation of resources can maximise the value of resources and lead to high levels of performance for teams. This study adopted a leader-centred research method, given that team leaders play a crucial role in allocating resources and their resource allocation strategies significantly affect TP. Therefore, this study introduced two related theories, namely resource allocation preferences theory and LMX theory, as its theoretical foundation. In addition, the application of these theories allowed the researcher to introduce SSG differentiation, a crucial variable introduced in this study. In the Chinese context, the allocation of leadership resources is often

influenced by the quality of SSG (Law et al., 2000; Wang et al., 2021; Cai et al., 2024). When leaders and subordinates establish Guanxi of varying quality, it inevitably leads to differences in their interactions, which impacts resource allocation. Therefore, there may be a significant relationship between SSG differentiation and leadership resource allocation.

According to allocation preferences theory, leaders allocate resources to address two primary objectives: overcoming challenges from the external task environment and managing interpersonal dynamics within the group (Collins & Cuetzkow, 1964). Specifically, they must balance decisions between prioritising collective performance and productivity or fostering group harmony and solidarity (Leventhal, 1976b; Leventhal et al., 1980), which correspond respectively to the task orientation and relationship orientation in the functional perspective of leadership. Leaders employ strategies such as fairness, equality, or reciprocity in resource allocation based on their goals. These strategies reflect leaders' expectations regarding the outcomes of resource distribution. Some leaders focus on maximising performance, while others prioritise team harmony as their main objective. Still others seek reciprocity in their interactions with specific subordinates (Leventhal, 1976b). Additionally, LMX theory is closely linked to resource allocation, emphasising leaders' distribution of personal resources such as energy, time, and attention.

Combining the above two theories, leaders' resource allocation preference consists of two dimensions: first, the allocation of their personal resources such as energy, time, and material resources; and second, the distribution of resources to subordinates, including emotional support, work-related resources, and incentive mechanisms. The primary purpose of resource allocation is either to enhance task performance or to foster harmonious relationships. Therefore, integrating resource allocation preference theory with LMX theory for analysis aligns well with the classification of different paternalistic leadership behaviours based on leadership functions in this study.

1.4 Research contributions

The present study conducts a validation analysis based on the proposed research questions, thereby contributing to the enhancement and expansion of empirical research on paternalistic leadership theory and LMX theory.

First, this study proposes and empirically validates the nonlinear association between paternalistic leadership and TP, specifically the U-shaped relationship between APL and TP. By investigating the nonlinear dynamics between paternalistic leadership and TP, this study clarifies the inconsistent findings reported in prior research within this domain. Regarding BPL, while no nonlinear relationship with TP is observed in this study, the results indicate that BPL behaviour is significantly and positively correlated with TP. Notably, the findings reveal a U-shaped relationship between APL and TP, wherein authoritarianism initially exerts a negative influence on TP, which gradually transitions to a positive impact as its intensity increases. Previous studies have largely overlooked this nonlinear relationship, thereby resulting in conflicting reports of APL's effects on TP as either non-significant (Zhang et al., 2009), negative (Chen et al., 2012), or positive (Huang, 2017; Song et al., 2014). The current findings address an empirical gap by substantiating the nonlinear association between paternalistic leadership and TP, thus contributing to the theoretical advancement of paternalistic leadership.

Second, the results indicate that TI serves as a critical boundary condition for the U-shaped effects of APL on TP, thereby enriching our understanding of the mechanism underlying this nonlinear relationship. Econometric analyses frequently neglect complex interactions and nonlinear relationships among variables, resulting in inconsistent findings. Causal relationships observed under specific conditions may not hold or even reverse under alternative conditions due to the influence of multiple moderating factors (Meyer et al., 1993). As a key determinant of team characteristics, TI is hypothesised to mediate the nonlinear relationship between paternalistic leadership and TP. The findings confirm that TI indeed moderates the association between APL and TP, with the U-shaped pattern emerging only when TI is high. By substantiating this mechanism, the study delineates the contextual

boundaries within which APL exerts its effectiveness at the team level, thereby advancing the theoretical framework of paternalistic leadership.

Third, this study advances the contextualised empirical research on LMX theory. Since Chinese society serves as a prototypical relational society, the concept of SSG, as a localised framework, more accurately reflects the genuine dynamics between leaders and members within the Chinese context. Nevertheless, this critical dimension is often overlooked by scholars specializing in Chinese management studies. The novel findings of this study demonstrate that paternalistic leadership positively influences SSG, regardless of whether APL or BPL is employed. However, these two leadership styles exert contrasting effects on SSG differentiation. Specifically, APL promotes SSG differentiation, while BPL diminishes it. These results clarify the distinct behavioural tendencies of the two paternalistic leadership styles regarding the supervisor-subordinate relationship. Moreover, this study uncovers that SSG differentiation significantly reduces TP, thereby enriching our understanding of the differentiation embedded in personal relationships.

Furthermore, this study introduces SSG differentiation as a mediating variable to investigate the negative impact of paternalistic leadership on TP. By establishing a theoretical foundation for this construct, it uncovers the psychological mechanism through which paternalistic leadership influences group outcomes. In contrast to prior studies that predominantly relied on LMX differentiation, this research adopts SSG differentiation, aligning with the requirements of indigenous research while ensuring measurement validity and reliability. Additionally, given the limited exploration of antecedents related to LMX differentiation in existing literature, this study confirms the mediating role of SSG differentiation in the negative relationship between APL and TP. It also validates the moderating effect of TI, thereby enriching and extending both paternalistic leadership theory and LMX theory.

In addition to its theoretical contributions, this study underscores the practical implications of its findings for specific management practices and reflects on the areas where paternalistic leaders can enhance their performance in real-world applications. Moreover, the study provides valuable insights for the self-development of paternalistic leaders and offers

guidance for Organisations in selecting and appointing such leaders.

1.5 Thesis structure

To achieve the research objectives, that is, to examine the effect of paternalistic leadership on TP and its mechanism, this thesis is divided into eight chapters, including this introduction chapter.

Chapter 2 provides the literature review and research hypotheses. The first section of this chapter provides a comprehensive literature review. It primarily discusses the evolution of leadership theory, paternalistic leadership theory and related empirical research, the variables used in the study, and the theoretical basis before formulating the research questions. The second section focuses on developing the research hypotheses.

Chapter 3 introduces the research design and methods. This chapter begins with an introduction to the research paradigm encompassing ontology, epistemology, methodology and sampling strategy. Next, it outlines the measurement of all variables. Then, it introduces ethical requirements.

Chapter 4 presents the process of pre-study. The first part of this chapter presents a pilot study that involves optimising the scales and refining the data collection process. The next part includes a small sample testing involving data analysis and discussion of the results.

Chapter 5 presents the details of main study. This chapter presents detailed descriptions of the samples and data and examines the reliability, validity, common method bias, and convergent indicators of the data. Next, a confirmatory factor analysis is conducted to examine the discriminant validity of the hypothesised model and the descriptive statistics of the data are reported for subsequent hypothesis testing.

Chapter 6 provides the process of hypothesis testing. All of the predicted hypotheses are examined in this chapter.

Chapter 7 introduces the discussion of the main study. In this chapter, a comprehensive discussion is conducted by integrating the findings of the previous chapters with a review of relevant studies while analysing the cultural particularities reflected in these results.

Chapter 8 is the concluding chapter. It summarises the key findings of this study and discusses the contributions, recommendations and limitations of this study.

1.6 Summary

This chapter offers a succinct summary of the thesis. It begins by presenting the research background and pinpointing gaps in prior studies. Subsequently, it delineates the research questions, objectives, scope, and introduces the proposed research model. Following this, the chapter briefly examines the research perspective and theoretical underpinnings of the thesis. More specifically, grounded in allocation preferences theory and Leader-Member Exchange (LMX) theory, this study adopts a leader-centred approach. Regarding leadership functions, paternalistic leadership is categorised into task-oriented and relationship-oriented dimensions. Next, the chapter highlights the contributions of this study. Lastly, it provides an overview of the thesis structure.

2 Literature review and research hypotheses

The current chapter is structured into two main sections. The first section provides a comprehensive review of the literature related to the key constructs of this study. By critically assessing previous research, it identifies gaps in the existing body of knowledge, which facilitates the selection of suitable theoretical frameworks and research perspectives. The second section outlines the proposed research hypotheses.

2.1 Literature review

In this section, research gaps in the literature are identified, and research questions are formulated through a comprehensive review of leadership theory, paternalistic leadership theory, the literature on supervisor-subordinate Guanxi (SSG) differentiation, and the literature on task interdependence (TI) and team performance (TP). Subsequently, research theories (allocation preferences theory and leader-member exchange theory) are selected based on the leader-centred research approach to lay the foundation for subsequent research hypotheses.

2.1.1 Development of leadership theory

The traditional theory of leadership effectiveness encompasses three primary components: leadership trait theory, leadership behaviour theory, and leadership contingency theory. Leadership trait theory emphasises the qualities and characteristics of leaders, forming the foundation for the entire field of leadership research. However, despite extensive efforts, researchers have been unable to develop a definitive trait model that reliably distinguishes effective leaders from ineffective ones (Stogdill, 1974). As a result, over time, the focus of research in this domain has transitioned from analysing leaders' inherent traits to exploring their observable behaviours (Halpin and Winer, 1957).

Early theories and research on effective leadership behaviour were heavily shaped by studies conducted at Ohio State University in the 1950s. Initially, researchers aimed to categorise key leadership behaviours and design a questionnaire to evaluate how frequently leaders exhibited these behaviours (Fleishman, 1953; Halpin and Winer, 1957). The survey results identified two predominant types of leadership behaviours: consideration and initiating structure. Consideration emphasises fostering harmonious interpersonal relationships within teams, whereas initiating structure focuses on establishing clear task objectives and ensuring their completion.

Specifically, consideration refers to the degree to which a leader exhibits care and respect for followers, prioritises their well-being, and conveys gratitude and support (Bass, 1990). In contrast, initiating structure relates to how leaders define and organise both their own roles and those of their followers. It also encompasses focusing on goal achievement and establishing clear communication patterns and channels (Fleishman, 1972). Subsequently, through a direct comparison of effective versus ineffective leadership behaviours, the University of Michigan identified two distinct types of leadership behaviours: employee-oriented and job-oriented leadership. Employee-oriented leaders emphasise fulfilling the individual needs of their subordinates, closely aligning with the concept of consideration as defined in the Ohio State University study. Conversely, job-oriented leaders prioritise achieving work objectives and optimising work processes, akin to initiating structure behaviour. Building upon these insights, Blake and Mouton (1968) from the University of Texas developed a comprehensive two-dimensional leadership grid theory. This theory evaluates leaders' levels of concern for people and production to determine their primary leadership style (Blake & Mouton, 1969). Consequently, leadership behaviour research has culminated in the identification of two predominant types: people-oriented and task-oriented leadership behaviours.

Traditional theories of leadership behaviour, which assume that leaders treat all subordinates consistently and uniformly (Boies and Howell, 2006), fail to account for the differential treatment of subordinates by leaders (Yukl, 2010). Drawing on role-playing theory

(Kahn et al., 1964) and social exchange theory (Blau, 1964; Cropanzano and Mitchell, 2005), Graen et al. (1972) introduced LMX theory, thus initiating research on personalised leadership theories. Compared with other leadership theories, the primary value of LMX theory lies in its recognition that leaders establish distinct exchange relationships with different subordinates rather than treating them all the same (Graen and Uhl-Bien, 1995). However, scholars have not paid sufficient attention to these variations in exchange relationships (Erdogan and Liden, 2002; Liden et al., 2006; Maslyn and Uhl-Bien, 2005).

Early research on effective leadership was grounded in the implicit assumption that specific leader traits or broadly defined behaviours were universally and positively correlated with subordinates' performance and satisfaction across contexts (Stogdill, 1974). However, subsequent studies have yielded inconsistent findings, prompting the emergence of contingency theory. This theory elucidates why effective leadership necessitates varying personal traits or skills depending on the situational context. During the 1970s and 1980s, researchers advanced several contingency theories, such as path-goal theory, situational leadership theory, LPC contingency theory, leadership substitution theory, cognitive resource theory, the connectionist model, and the normative decision model. In most contingency theories, discussions of leadership effectiveness frequently employ the dichotomy of task-oriented and relationship-oriented approaches.

According to a review conducted by Fleishman et al. (1991), 65 leader behaviour classification systems proposed between 1940 and 1986 were identified. They observed that almost all of these classification systems had a common trend, with behaviours being categorised into two groups: those focused on accomplishing tasks and those focused on facilitating team interaction and development. This distinction is not only evident in the literature on individual leadership but also in the literature on teams and leadership within teams. For example, Burke et al. (2006) argued that there are two main categories into which specific leadership behaviours can be grouped based on their focus when considering leadership from a functional perspective. These categories involve directing efforts towards task completion and/or towards team members and their interactions. This classification of leadership behaviours into task-oriented and people-oriented approaches aligns with the

theoretical analysis conducted by Fleishman et al. (1991). Furthermore, the meta-analytic findings presented by Burke and colleagues demonstrate that both types of behaviours contribute positively to the overall performance of teams.

The review of leadership theory development reveals that categorising leadership behaviour into task-oriented and relationship-oriented (people-oriented) dimensions is a prevalent approach. This classification offers valuable insights for the study of paternalistic leadership, as various styles of paternalistic leadership may possess distinct objectives and, accordingly, divergent work orientations. Consequently, this methodological framework facilitates the analysis of the varied impacts of different paternalistic leadership styles on TP.

2.1.2 Paternalistic leadership

Paternalistic leadership is regarded as an individualised approach to leadership, identified by scholars through observation, interviews, qualitative research, and theoretical analysis of the behaviour exhibited by Chinese leaders (Silin, 1976; Redding, 1990; Cheng, 1995; Westwood, 1997). In contrast to Western leadership theories, paternalistic leadership displays unique cultural characteristics and has attracted growing scholarly attention in the field of leadership studies in recent years (Farh & Cheng, 2000; Aycan, 2006; Pellegrini & Scandura, 2008). By integrating strict discipline and authority with paternal benevolence (Farh & Cheng, 2000), paternalistic leadership often projects an authoritarian image while effectively managing subordinates and simultaneously showing personalised concern for their well-being in both professional and personal contexts (Pellegrini & Scandura, 2008). Evidence from China, Japan, India, Mexico, and Turkey indicates that paternalistic leadership reflects the dynamic relationship between leaders and subordinates. Leaders expect commitment, respect, and obedience from their subordinates (Aycan, 2006), while subordinates willingly demonstrate obedience in return for the care and protection provided by their leaders (Aycan et al., 2000; Martinez, 2003; Pellegrini & Scandura, 2006; Farh & Cheng, 2000).

2.1.2.1 Origin of paternalistic leadership

Although paternalistic leadership has a long history, its effectiveness has been questioned by scholars, particularly those in the Western world who generally perceive it unfavourably. Weber (1947) argued that as organisations become more bureaucratic and emphasise rules and the protection of individual rights, paternalistic practices will gradually lose relevance. He posited that in a paternalistic system, obedience is owed to the leader based solely on their status, characterising paternalism as one of the most fundamental forms of traditional domination. Furthermore, he advocated for replacing traditional control mechanisms, such as paternalism, with the rational-legal model of bureaucracy. Weber (1968) further claimed that the transition from traditional paternalistic organisations to rational-legal ones would lead to improved performance outcomes. However, with the rise of humanist ideologies, scholars have increasingly focused on exploring the dynamics between leaders and subordinates. Extensive research has shown that paternalistic leadership, as a significant leadership style, remains prevalent in various cultures worldwide, especially in Asian and non-Western societies (Farh et al., 2006; Martinez, 2003; Pellegrini & Scandura, 2006; Uhl-bien et al., 1990).

Paternalism is prevalent in countries across the Asia-Pacific region, such as China, India, South Korea, and Japan (Dorfman & Howell, 1988). It also stands out as a prominent cultural characteristic in the Middle East (Ali, 1993; Ayman et al., 2000) and Latin America (Osland et al., 1999). Ayman (2006) defined paternalistic leadership as a hierarchical relationship between supervisors and subordinates, where leaders offer care, protection, and guidance to their subordinates in both work-related and personal domains. In return, subordinates are expected to exhibit loyalty and obedience toward their leaders (Ayman, 2006). Furthermore, Ayman et al. (2013) emphasised that paternalistic leadership distinguishes itself from other leadership styles by creating a familial atmosphere through active engagement in subordinates' lives, thereby fostering expectations of loyalty. In Asian cultures, paternalism is deeply embedded in traditional family values (Kim, 1994). Farh and Cheng (2000) contended that paternalistic leadership, which originates from China's indigenous Confucian philosophy and may appear authoritarian or manipulative in Western contexts, carries positive implications within a Chinese context.

The traditional Confucian model of family education has exerted a profound influence on the managerial philosophy and practices associated with paternalistic leadership. Paternalistic leadership draws upon a family metaphor, wherein managers adopt a protective and resource-providing role toward employees, similar to how parents nurture and care for their children. The development of paternalism seeks to humanize the workplace, reinforce its moral values, and establish a more adaptable management system that promotes collaborative relationships between employers and employees rather than rigid contractual arrangements (Aycan, 2006; Erben and Guneser, 2008). Specifically, paternalistic leadership represents a leadership style that integrates the traditional Chinese Confucian principles of family

Yang (1995) posited that Chinese family education methods predominantly emphasise obedience and restraint, prioritising practical educational procedures. These methods incorporate a “culture of shame” through social comparison and integrate the concept of “law and emotion” into educational strategies. Children are frequently expected to adopt specific behaviours before fully comprehending them. Through this experiential process, they gradually understand and establish judgment criteria based on practice, ultimately internalising societal behavioural norms. This educational approach, which begins with practice and progresses toward understanding, contrasts significantly with the Western model, which typically emphasises understanding, judgment, choice, and then practice. Traditional Chinese social education relies on negative reinforcement for non-conforming behaviour to cultivate “obedience”. Such an approach may heighten children's sensitivity to their own deficiencies and instill avoidance of mistakes as a foundational behavioural principle. In the context of Chinese social education, parents often assume dual roles as both disciplinarians and nurturers, utilizing a blend of strictness and gentleness in child-rearing. This approach diverges somewhat from the more unified parenting styles commonly observed in Western societies.

Historically, Chinese fathers have typically assumed an authoritarian role, enforcing obedience through punishment, while mothers have exhibited kindness and flexibility, alleviating potential tensions between father and child through emotional communication. In modern Chinese families, these traditional “black” (strict) and “white” (lenient) roles may be

reversed, although the fundamental pattern persists, serving as a foundational motivation for paternalistic leadership in Chinese society. Overall, the emergence of paternalistic leadership is deeply intertwined with individuals' experiences within family life. As patterns of family life evolve over time, paternalistic leadership styles may also adapt accordingly. However, certain parental characteristics, such as benevolence, virtue, and normative control/guidance, remain inherently resistant to significant change over short periods, continuing to serve as societal foundations for effective leadership (Huang, 2017).

2.1.2.2 Development of paternalistic leadership theory

In the Chinese cultural context, the exploration of paternalistic leadership was initiated by Silin's pioneering work in 1976. Silin identified that compared to their Western counterparts, business owners in Taiwan displayed dualistic characteristics in their leadership behaviour. Specifically, leaders demonstrated benevolence and moral values while simultaneously maintaining a hierarchical distance from their employees, refraining from explicitly communicating their intentions, and frequently employing control strategies (Silin, 1976). Reding (1990) further elaborated on paternalistic management as a fundamental aspect of Chinese leadership, introducing the concept of Benevolent Paternalistic Leadership (BPL). He argued that in Chinese management practices, prioritising people is central, and leaders should exhibit parental-like concern for their subordinates.

Empirical studies have shown that paternalistic leadership is both effective (Westwood, 1997) and prevalent in Chinese business organisations (Cheng, 1995). Cheng proposed the dyadic theory of paternalistic leadership after studying leadership behaviour patterns and management styles in Taiwanese enterprises. He identified “Li-Wei” (inspiring awe or fear) and “Shi-En” (granting favours) as the two primary behavioural dimensions of paternalistic leadership, which correspond to authoritarian paternalistic leadership (APL) and benevolent paternalistic leadership (BPL), respectively. Specifically, authoritarian paternalistic leaders adopt an authoritative style by directing subordinates' behaviours and emphasising their own status to maintain respect for their authority. In turn, subordinates exhibit behaviours such as

obedience, compliance, and deference. On the other hand, benevolent paternalistic leaders focus on promoting subordinates' well-being while preserving their dignity and respectability. Subordinates respond with gratitude and loyalty. Cheng (1995) further argued that the key distinction between paternalistic leadership theory and Western leadership theories lies in their underlying assumptions about the social relationship between leaders and followers. While Western theories emphasise a relatively egalitarian relationship based on mutual rights and obligations, paternalistic leadership is grounded in a hierarchical structure where unequal social dynamics are inherent.

Building on dyadic theory, Cheng et al. (2000) further elaborated on the concept of paternalistic leadership by introducing moral paternalistic leadership (MPL) as an additional dimension, thereby constructing a comprehensive three-dimensional theoretical framework. Paternalistic leadership is characterised by leaders who integrate strict discipline and authoritarian control with paternal benevolence and moral integrity. Within the three sub-dimensions of paternalistic leadership, APL refers to leaders who emphasise their absolute authority and exercise rigorous control over subordinates while demanding unconditional obedience. Specific behaviours associated with APL include exerting dominance over subordinates, underestimating their capabilities, and cultivating a lofty self-image as a leader while guiding subordinates through didactic methods (Cheng, 1995). Benevolent paternalistic leadership (BPL) pertains to leaders who exhibit genuine and holistic concern for the personal and family well-being of their subordinates. In turn, subordinates feel valued and develop a sense of obligation to reciprocate when opportunities arise (Cheng et al., 2004). Moral paternalistic leadership (MPL) involves leaders demonstrating exemplary personal virtues, such as refraining from exploiting their authority for personal gain and serving as role models in both personal and professional contexts, thereby earning the admiration and identification of their subordinates (Cheng et al., 2000).

Lin et al. (2017) refined the definition of paternalistic leadership through a comprehensive review of existing literature. They posited that, within a Guanxi-oriented context, leaders demonstrate strict discipline, role-based authority, parental support and care, as well as the influence of moral exemplars to uphold hierarchical order and foster collective

harmony between supervisors and subordinates. The ternary theoretical model delineates the core dimensions of paternalistic leadership, thereby facilitating subsequent research and earning widespread acceptance among scholars (Lin et al., 2017).

Although most scholars endorse the ternary theory of paternalistic leadership, this framework has recently faced challenges. Many scholars continue to support the dualistic perspective on paternalistic leadership (Yu et al., 2008; Fu et al., 2012; Cao, 2015; Hiller et al., 2019; Qiu, 2021; Yao et al., 2023). Some researchers have pointed out that the morality dimension of paternalistic leadership overlaps significantly with ethical leadership, emphasising the role of leaders as moral exemplars with high ethical standards. This overlap has even led some scholars to consider the moral dimension of paternalistic leadership as a proxy for ethical leadership (Ng and Feldman, 2014; Dedahanov et al., 2022). A study further revealed a strong correlation of 0.80 between ethical leadership and MPL (Cheng et al., 2014). Through a meta-analysis of paternalistic leadership literature, Hiller and colleagues conducted an in-depth discussion on whether the moral sub-dimension of paternalistic leadership should be distinguished as a separate leadership style. They argued that paternalistic leadership is fundamentally rooted in parental principles, where leaders exhibit care and control over followers akin to how parents guide and nurture their children. Specifically, paternalistic leadership is characterised by both benevolent care and authoritative guidance, encompassing genuine concern for followers' well-being and purposeful, non-manipulative direction. Based on these insights, they concluded that analysing the moral dimension as a distinct sub-type of paternalistic leadership may not be necessary (Hiller et al., 2019).

This study posits that patriarchal leadership theory, which integrates authoritarianism and benevolence, more accurately reflects leaders' management skills in the Chinese context of “tempering justice with mercy”. This aligns with the theoretical underpinning of Chinese paternalistic leadership rooted in traditional Confucian parenting culture (Yang & Lu, 2009). Moreover, most leadership theories classify leadership styles into either task-oriented or relationship-oriented categories, which effectively capture the essential features of APL and BPL. Additionally, a central objective of this research is to explore the nonlinear relationship between paternalistic leadership and team performance. Empirical evidence and prior

scholarly investigations suggest that APL and BPL may exhibit a dual-effect phenomenon (Huang & Lin, 2021; Li et al., 2018; Dedahanov et al., 2022). Consequently, this thesis adopts a dualistic perspective on paternalistic leadership to examine how APL and BPL influence TP.

2.1.2.3 Empirical research on paternalistic leadership

Empirical research on paternalistic leadership has predominantly centred on its effectiveness (Lin et al., 2017). Scholars have examined not only the direct effects of paternalistic leadership but also incorporated various mediating and moderating variables into their empirical analyses. Moreover, the scope of this research has broadened from individual-level investigations to include team-level and organisational-level analyses, despite the majority of studies still concentrating on the individual level. Additionally, some researchers have compared the effectiveness of paternalistic leadership with that of Western leadership theories.

1. Influence of paternalistic leadership at the individual level

Studies examining the effectiveness of paternalistic leadership have predominantly focused on the individual level. These studies primarily investigate how paternalistic leadership influences subordinates' attitudes, performance, organisational citizenship behaviour, and creativity. Regarding attitudes, research has demonstrated that BPL and MPL positively promote employees' affective trust, whereas APL exhibits no significant effect on affective trust (Chen et al., 2014). Additionally, studies revealed that BPL and MPL positively enhance team members' voice behaviours, while APL negatively impacts such behaviours (Liu et al., 2021a). In terms of performance, research findings indicated that BPL and MPL are positively correlated with both in-role and extra-role performance, whereas APL is negatively associated with subordinate performance (Chen et al., 2014). Consistent conclusions have also been drawn by other studies. For example, within the domain of creativity, one study found that both BPL and MPL positively influence innovation performance, whereas APL negatively impacts innovation performance (Li & Wang, 2021). In

contrast, another study reported differing results. Hao (2023) demonstrated that BPL significantly boosts the performance of startups. Conversely, APL has a pronounced negative effect on startup performance, while no significant association was observed between MPL and startup performance. These findings highlight the intricate nature of paternalistic leadership mechanisms, suggesting that the effectiveness of its dimensions varies substantially across contexts.

In conclusion, at the individual level, numerous scholars have identified the positive effects of BPL and MPL on subordinates' attitudes, behaviours, and performance, as well as the negative effects of APL on them. However, recent studies have revealed that both APL and BPL are positively linked to employees' work-family conflicts, mediated by emotional repression among employees (Yao et al., 2023). Peng and colleagues further demonstrated in a study of nurses that the direct effect of BPL on perceived workplace bullying is marginally positive. Nonetheless, when considering the mediating role of organisational climate, BPL exhibits a negative correlation with perceptions of workplace bullying (Peng et al., 2024). BPL embodies a tendency toward "rule by man", characterised by meticulous care and attention to employees akin to parental behaviour, yet it lacks equality and demonstrates significant selectivity (Dedahanov et al., 2022). These findings highlight the dual nature of BPL. With regard to APL, some scholars contend that its effectiveness hinges on followers' characteristics; specifically, authoritarianism positively influences subordinates with a high authority orientation but exhibits no such effect on those with a low authority orientation (Cheng et al., 2004). Recent studies further demonstrate that employees' power distance orientation positively moderates the emotional suppression effect of APL and negatively moderates the emotional suppression effect of BPL (Yao et al., 2023). Moreover, in a cross-cultural investigation, Nigerian scholars have found in the processing industry that APL, akin to BPL and MPL, significantly boosts employee performance (Igbomor & Olisemenogor, 2023). This implies that the adverse effects of APL may be contingent upon specific boundary conditions.

2. Influence of paternalistic leadership at the team level

Research on the correlation between paternalistic leadership and organisational performance has demonstrated a significant association between paternalistic leadership and the overall effectiveness of an organisation. Furthermore, several studies have highlighted that paternalistic leadership plays a crucial role in shaping interpersonal relationships among Organisational members.

A study on the ternary theory of paternalistic leadership revealed that both BPL and MPL positively influence organisational performance, whereas APL) exerts a negative impact (Ju, 2008. Consistent findings were reported by Chen et al. (2012), who demonstrated that BPL and MPL significantly enhance team effectiveness, while APL negatively affects team effectiveness. Furthermore, they identified team cohesion as a mediating factor, through which APL undermines team effectiveness by reducing team cohesion. A more recent investigation by Chiang et al. (2021) highlighted that APL tends to create a team environment where emotions are suppressed, resulting in heightened emotional exhaustion among team members, which subsequently diminishes TP.

The above studies align with the findings of numerous Western studies showing that APL behaviour typically leads to low team output (Knight et al., 1999). However, some scholars have obtained different conclusions regarding the relationship between APL and team output. For example, Song et al. (2014) examined the multi-level interaction effect of CEOs' leadership behaviour and senior managers' support on the work performance of middle managers in Chinese enterprises at three management levels: CEOs, senior managers, and middle managers. Their findings indicated that a CEO leadership style characterised by low benevolence, high authority, and performance orientation can effectively enhance the positive influence of senior managers' support on middle managers' work performance. Recent studies have suggested that APL effectively promotes the subjective and objective performance of organisations, but impedes communication and knowledge flow among employees due to excessive control and a reluctance to delegate authority or disclose information. This in turn hampers organisational learning and employee development (Lin et al., 2017).

Zhang et al. (2009) incorporated team conflict management as a mediating variable to investigate the influence of paternalistic leadership behaviours on TP. Their results indicated

that BPL and MPL behaviours significantly enhance TP, whereas APL behaviours do not substantially diminish it. The authors posited that the negative impact of APL on TP is moderated by cultural factors. In particular, within Eastern cultures, APL behaviours do not necessarily lead to a reduction in TP (Zhang et al., 2009). This finding resonates with Hofstede's (1984) argument that leadership behaviours vary across cultures and that individuals' acceptance of authority is contingent upon their cultural values. However, a more recent study examined the relationship between paternalistic leadership and TP through the lenses of team identity and emotional exhaustion as mediators, yielding contrasting conclusions (Huang and Lin, 2021). Specifically, this study demonstrated that APL is positively associated with TP via team identification but negatively correlated with TP through emotional exhaustion. The personal characteristics of leaders significantly influence the moderating effect of APL on TP. For example, when a paternalistic leader demonstrates strong competencies in either professional technology or managerial skills, their authoritative behaviour positively impacts TP. Conversely, if such a leader lacks these essential skills, their APL behaviours can negatively affect TP (Gao et al., 2014). Several scholars have carried out research on the nonlinear impact of BPL on team output. Li and colleagues found that the impact of BPL on TP follows a non-linear, inverted U-shaped pattern. Specifically, moderate or low levels of BPL can significantly enhance TP by creating supportive environments. However, excessively high levels of BPL may weaken TP, as overemphasis on subordinates' personal needs can detract from activities aligned with team objectives (Li et al., 2018).

The aforementioned studies underscore the critical role of cultural factors, leader characteristics, and intermediary mechanisms in shaping the relationship between APL and TP, leading to varied outcomes. Conversely, there is a strong scholarly consensus regarding the positive influence of BPL on TP. Extensive empirical evidence has consistently shown that BPL exerts a significant positive effect on TP (Chen et al., 2012; Zhang et al., 2009; Huang and Lin, 2021). However, recent research has further elucidated that the relationship between BPL and TP follows a nonlinear trajectory, characterised by an inverted U-shaped curve (Li et al., 2018). In conclusion, the influence mechanism of paternalistic leadership on TP is intricate and merits further investigation.

3. A comparative analysis of paternalistic leadership and other leadership styles

Scholars have conducted comparative analyses between paternalistic leadership and transformational leadership. A study suggested that paternalistic leadership represents a culturally specific (emic) approach that is commonly found in collectivist and hierarchical societies, while transformational leadership is more characteristic of Western individualistic cultures. Leaders with paternalistic tendencies establish personal connections with their followers to enhance both personal and work-related outcomes for them (Cheng et al., 2004). Another study discovered that the behaviour of transformational leaders primarily influences organisational commitment and communication between supervisors and subordinates through employees' cognitive trust, ultimately affecting dynamic performance within the organisation. Conversely, paternalistic leadership affects job satisfaction through affective trust among employees, in turn influencing static performance (Ju et al., 2008). It can be observed that, owing to the disparities in cultural foundations, paternalistic leadership and transformational leadership exhibit distinct approaches in managing supervisor-subordinate relationships.

A recent study by (Jiang & Ali, 2024) conducted a comparative analysis of paternalistic leadership and transactional leadership, revealing that the distinction between paternalistic leadership and transactional leadership is rooted in their long-term effects and the level of employee engagement. While transactional leadership emphasises addressing immediate issues and completing tasks, it generally motivates employees using rewards and penalties, with limited focus on fostering deeper employee growth or emotional connection. However, paternalistic leaders aim to nurture employees' self-management skills and sense of responsibility, building strong working relationships by providing sustained care and support over time (Jiang & Ali, 2024).

Some scholars have compared BPL with servant leadership, indicating that servant leadership differs in essence from benevolent leadership. While servant leadership is characterised by an other-focused approach, prioritising the interests of employees, benevolent leadership also demonstrates concern for employees' professional and personal lives. It further recognises employees' strengths, offering them complete trust and respect,

while fostering a forgiving and upbeat organisational environment. In this setting, employees are not penalized for work-related errors; instead, they are encouraged to experiment and learn from mistakes. Through the aforementioned comparison, it is evident that caring for and nurturing subordinates constitutes a critical management responsibility within paternalistic leadership. Furthermore, the supervisor-subordinate Guanxi may play a pivotal role in the managerial activities associated with paternalistic leadership.

Through a comprehensive review of the empirical literature on paternalistic leadership, it is clear that the effectiveness of different paternalistic leadership styles varies. Specifically, benevolent and moral leadership styles tend to positively influence individual and team performance outcomes. In contrast, authoritarian leadership often negatively affects individual performance, while its impact on team performance remains inconsistent across studies. Overall, scholars have identified the dual-edged nature of APL and BPL on individual or team outputs. Although the majority of scholars argue for a linear relationship between paternalistic leadership and team performance, a minority have explored its potential nonlinear relationship with team output. In addition, by examining scholars' comparisons between paternalistic leadership and other personalised leadership styles, it becomes evident that attending to the personal well-being and happiness of subordinates constitutes a critical component of paternalistic leadership. Consequently, the supervisor-subordinate relationship holds significant importance within organisations practicing paternalistic leadership in the Chinese context.

2.1.3 SSG differentiation

LMX differentiation refers to qualitative differences in the relationships formed between team leaders and individual members (Erdogan & Bauer, 2010; Henderson et al., 2009), which serves as a foundational premise of LMX theory (Liden & Graen, 1980). Given constraints on time, energy, and resources, leaders typically establish and sustain varying degrees of exchange relationships with different team members (Graen & Uhl-Bien, 1995). LMX differentiation is not a new concept but rather an extension of LMX theory at the team

level, emerging as the field has evolved. Consequently, prior to analysing LMX differentiation, this thesis provides a comprehensive discussion of the theoretical framework underpinning LMX.

2.1.3.1 LMX theory

Based on social exchange theory, Graen and Cashman (1975) were the first to introduce the concept of LMX theory. They posited that due to constraints such as limited time and resources, leaders are unable to allocate resources equally among all subordinates. As a result, leaders develop differentiated exchange relationships with their subordinates based on their abilities or skills. Subordinates who establish high-quality exchange relationships with their leaders take on additional responsibilities beyond their formal job descriptions and receive enhanced resources or rewards, including greater trust and respect from leaders, more promotion opportunities, and increased autonomy in their work. In contrast, subordinates involved in low-quality exchange relationships primarily focus on fulfilling their basic job requirements and engage in routine, formalised interactions with their leaders (Graen and Uhl-Bien, 1995).

From the evolution of LMX theory, it is clear that early LMX research predominantly concentrated on the individual level. However, as teamwork has become increasingly prevalent in Organisations, researchers have extended the scope of LMX to include the team level and have carried out a series of studies on LMX differentiation. In recent years, LMX theory has received substantial attention, particularly concerning LMX differentiation (Anand et al., 2011; Haynie et al., 2014). Leaders form high-quality relationships with in-group subordinates while maintaining low-quality relationships with out-group subordinates. This leads to heterogeneity in the quality of LMX relationships within the same team, referred to as LMX differentiation (Liden et al., 2006). The higher the degree of LMX differentiation, the more significant the disparities in relationship quality between team members and their leaders, which in turn results in inequitable resource allocation by leaders (Matta & Van, 2020).

2.1.3.2 SSG

The concept of LMX primarily encompasses work-related communication, as supported by previous research (Law et al., 2000), consistent with Western universalist values (Ma and Qu, 2010). However, in the Chinese business context, leader–member communication extends beyond its conventional definition. It encompasses not only work-related exchanges but also non-work-related interactions that are deeply intertwined with the Guanxi culture prevalent in Chinese society (Chen et al., 2014). The term “Guanxi” is rooted in Confucianism and posits that individuals fundamentally exist within a network of relationships (King, 1991), necessitating adherence to Guanxi rules and obligations to maintain harmony within hierarchical relationships (Chen et al., 2013). Chen et al. (2004) defined Guanxi as an informal, unique personal connection between individuals who are bound by an implicit psychological contract and adhere to the social norms associated with relationships, which include maintaining long-term connections, mutual commitment, loyalty, and obligation. In the process of developing relationships between supervisors and subordinates in the Chinese context, employees not only establish work connections to fulfil their job responsibilities but also participate in social activities that contribute to the formation of personal bonds unrelated to work (Boyd and Taylor, 1998). These personal connections are commonly known as SSG (Chen et al., 2009; Hui and Graen, 1997; Law et al., 2000).

China is widely recognised for its emphasis on interpersonal relationships, which play a crucial role in the social fabric of its people. The Chinese approach to interpersonal communication differs significantly from that of Western cultures. In recent years, scholars examining the psychology and behaviour of Chinese individuals have increasingly focused on the indigenous concepts of “Guanxi” (relationship) and “Ren-Qing” (favour). These phenomena are particularly prominent in private enterprises, where informal networks based on blood ties, kinship, and pan-family culture exert substantial influence over corporate decision-making processes. Yang (1998) succinctly described this phenomenon, noting that in traditional society, family experiences and habits often serve as the primary reference for group or organisational life among Chinese individuals. As a result, when engaging in activities outside their families, within groups or organisations, they naturally draw upon and

apply structural forms, relationship patterns, and ways of doing things derived from their familial context.

SSG refers to the intricate interplay of work and non-work interactions between leaders and members (Zhang et al., 2014). For example, subordinates might assist their supervisors in managing family affairs or extend dinner invitations (Law et al., 2000). This study conceptualises SSG as an interpersonal relationship between the supervisor and subordinate, marked by personal life integration, emotional attachment, and deference to the supervisor (Chen et al., 2009). In Western LMX theory, the leader-subordinate relationship is universal and emphasises the “law of equity”, which involves a fair exchange between subordinates and leaders based on performance and rewards (Zhang et al., 2014). By contrast, the supervisor-subordinate Guanxi in China is characterised by both instrumental and affective dimensions, with a strong focus on “Ren-Qing” (Chen et al., 2009). Within LMX theory, subordinates’ contributions and abilities are critical determinants of whether they can become insiders. Leaders allocate scarce resources to the most productive insiders to enhance departmental or Organisational performance. However, in the context of SSG within Chinese Organisations, loyalty and emotional attachment, rather than ability or contribution, may play a decisive role in determining whether subordinates maintain favourable relationships with their supervisors (Chen et al., 2009).

SSG and LMX function differently in Organisational contexts. When supervisors establish positive relationships with their subordinates, they may exhibit leniency and offer preferential treatment that exceeds what is justified by formal criteria (Cheung and Wu, 2011). This dynamic creates a sense of obligation among subordinates, prompting them to reciprocate through supportive behaviours related to task performance and OCB (Liu et al., 2013; Liu and Wang, 2013). Advocates of the positive effects of SSG argue that both Chinese and Western managers operating in China may aim to develop high-quality SSG with their subordinates, as it correlates positively with various personal outcomes such as job satisfaction, organisational commitment, task allocation fairness, and career advancement opportunities (e.g., Law et al., 2000; Wong et al., 2003). Recent evidence further supports this perspective, showing a significant positive relationship between SSG and work-related

outcomes, including job engagement, innovative behaviour, and task performance (Huang et al., 2021). Conversely, some scholars emphasise the potential negative consequences of SSG on collective welfare, arguing that it can undermine group, organisational, or societal interests due to its tendency to introduce bias into managerial decision-making processes, thereby fostering favouritism and corruption (e.g., Dunfee and Warren, 2001; Fan, 2002; Ma et al., 2023). Some scholars have posited that the validity of SSG is contingent upon specific boundary conditions. A study by Su and colleagues revealed that the level of subordinates' traditionality moderates the relationship between SSG and job engagement. Specifically, a positive correlation between SSG and job engagement emerges when traditionality is high. In contrast, no significant correlation exists when traditionality is low. Moreover, their findings indicated that the indirect effect of traditionality on the relationship between SSG and job performance, mediated by job engagement, is significant only under conditions of high traditionality (Su et al., 2022). Additionally, other researchers have highlighted a “double-edged sword” effect of SSG on subordinate job happiness. On one hand, positive SSG can enhance job happiness via leaders' resource reciprocation and promote positive psychological experiences at work. On the other hand, it may diminish job happiness by increasing workload (Fu et al., 2023). In summary, the influence of SSG on individual-level outcomes remains inconsistent across studies.

2.1.3.3 Research on SSG differentiation

Investigating localised SSG differentiation as a form of LMX differentiation within the Chinese context holds significant implications for TP research. Nonetheless, existing literature scarcely addresses its association with TP. Consequently, this study explores the relationship between localised SSG differentiation and TP by examining its role at the team level, drawing on theories and prior literature on LMX differentiation.

Many studies have investigated the effects of LMX differentiation on individuals and team performance outcomes, yet the findings remain inconsistent. At the individual level, LMX differentiation may undermine perceptions of organisational fairness (Ma and Qu, 2010).

Specifically, the greater the level of LMX differentiation perceived by employees, the lower their job satisfaction and subjective well-being tend to be (Hooper and Martin, 2008a). Furthermore, when employees perceive LMX differentiation within their team, the positive impact of high-quality LMX on employee commitment is likely to be attenuated (Van et al., 2002). A recent study also revealed that LMX differentiation negatively affects TP through disruptions in team coordination (Li and Liao, 2014). At the team level, a pioneering study found that LMX differentiation positively influences group performance in teams with a lower median LMX quality, whereas no significant relationship was observed in teams with a higher median LMX quality (Liden et al., 2006). In addition, the study highlighted the moderating effect of TI on the relationship between LMX differentiation and TP. Specifically, in groups characterised by high TI, LMX differentiation significantly and positively influenced TP. Conversely, in groups with low TI, no substantial association was observed between LMX differentiation and TP (Liden et al., 2006). Nevertheless, another study revealed that in teams with low-quality LMX relationships, LMX differentiation negatively impacted team efficiency by exacerbating team conflict (Boies and Howell, 2006).

Scholars have predominantly examined LMX differentiation as an independent variable, and extensive research has identified various factors that influence its effect on TP. Haynie et al. (2014) demonstrated that in environments with high distributive justice, there is a positive correlation between LMX differentiation and TP. Conversely, when distributive justice is low, this correlation becomes negative. The relationship between LMX differentiation and TP depends not only on the degree of team diversity but also on the overall level of LMX quality within the team (Stewart & Johnson, 2009). Naidoo et al. (2011) further argued that during the later stages of a team's life cycle, rather than in the early stages, LMX differentiation exhibits a positive correlation with TP. A limited number of scholars have investigated LMX differentiation as a mediating variable. For example, Chiniara and Bentein (2016) found that perceived differences in LMX quality within a team mediate the relationship between servant leadership and both team task performance and service-oriented OCB. Additionally, Le and Roma (2012) noted that variations in work values among members are positively associated with LMX differentiation in teams characterised by low or moderate levels of LMX quality,

and that such differentiation enhances both commitment and performance.

Given the inconsistent findings regarding the relationship between LMX differentiation and both individual and group outcomes, scholars have sought to explore the underlying mechanisms of LMX differentiation to elucidate its paradoxical nature. A study by Chen et al. (2018) represented a significant initial contribution to advancing research on the foundations of LMX differentiation. Their research identified members' task performance and OCB as two primary bases for LMX differentiation, which are critical factors influencing the relationship between LMX differentiation and group outcomes. Specifically, their findings suggested that when leaders base their differential treatment of group members more heavily on task performance and/or OCB, the likelihood of LMX differentiation having a detrimental effect on intragroup relational quality and group proactivity decreases.

Pan et al. (2021) introduced the concept of LMX differentiation basis, defining it as the criteria and factors that leaders and subordinates utilize to establish and sustain differentiated exchange relationships. Based on this framework, they categorised the foundations of LMX differentiation into work-oriented and relationship-oriented bases. The work-oriented basis encompasses factors such as task performance, OCB, work effort, work attitude, and skills, whereas the relationship-oriented basis includes subordinates' background, social networks, leader-member similarity, and the extent of subordinates' ingratiation, along with personal relationships between leaders and members. Additionally, Pan et al. (2021) posited that inconsistencies in the impact of LMX differentiation on TP arise because prior studies have focused exclusively on the degree of differentiation while neglecting potential variations in its underlying bases. Specifically, they argued that work-oriented and relationship-oriented differentiation bases exert distinct influences on TP. Moreover, it is typical for multiple differentiation bases to coexist within a team or even between supervisors and subordinates within the same dyad (Kim and Organ, 1982; Liden et al., 1993).

SSG differentiation represents the manifestation of LMX differentiation within the Chinese context, grounded in the interplay between work-related and non-work relationships between leaders and followers. Given their possession of resources and decision-making authority, leaders inevitably allocate limited resources and energy differently among

subordinates, thereby establishing varied relational dynamics that influence subordinate behaviour (Wang & Li, 2017). However, SSG has seldom been utilized as a measure of LMX differentiation in the Chinese Organisational context. Empirical evidence suggested that intra-team SSG differentiation negatively affects employees' job satisfaction while positively influencing their turnover intentions (Chen et al., 2014). Li et al. (2018) posited that greater SSG differentiation reflects differing levels of support provided by leaders to team members, causing some subordinates to feel more valued and trusted than others. This inequity undermines psychological identification within teams and impedes the development of both team identity and leadership identity (Cui & Yu, 2019). Recent studies have examined the individual-level effects of SSG differentiation, revealing its dual impact on certain outcomes. Specifically, SSG differentiation adversely affects employees' work attitudes and retention intentions, yet it can also strengthen the positive association between SSG and job satisfaction, organisational commitment, and supportive behaviours among colleagues (Chen et al., 2014). Additionally, researchers have noted that the antecedents of SSG differentiation remain unclear, suggesting that future investigations could explore potential precursors such as leadership style (Chen et al., 2014).

This section offers an in-depth and systematic review of the literature on LMX theory, LMX differentiation, SSG, and SSG differentiation. Contrary to the foundational premise of LMX theory, empirical evidence has shown that while some studies suggest LMX differentiation enhances team output, a substantial body of research indicates it can negatively affect TP. To address this paradox, scholars have introduced the concept of LMX differentiation basis, exploring why such differentiation may yield both positive and negative outcomes for team performance. They argue that when differentiation is grounded in subordinates' work-related factors or performance metrics, it tends to promote favourable team outcomes. Conversely, differentiation driven by personal relationships with subordinates is more likely to hinder team effectiveness (Chen et al., 2018; Pan et al., 2021).

In addition, a comparison of the content of LMX and SSG reveals that the basis for differentiation between LMX and SSG varies significantly. According to LMX theory, the primary objective of LMX is to achieve task performance goals. While subordinates who

maintain a high level of exchange with their leaders may gain access to more resources and empowerment compared to others, this is contingent upon their demonstrated outstanding performance and competence. In contrast, SSG encompasses both work-related and non-work-related dimensions, measured by the degree of closeness between leaders and subordinates. In Chinese culture, where particularism is prevalent, individuals are often treated differently based on private relationships, and leaders are highly likely to exhibit in-group favouritism, potentially sacrificing impartiality for “Favour” and “Face” (Chen & Chen, 2004). Thus, the basis of LMX differentiation differs markedly from that of SSG differentiation. Scholars have classified the basis of LMX differentiation, clearly indicating that SSG differentiation is predominantly rooted in the personal relationship between leaders and subordinates.

2.1.4 TI

Any work team integrates team members in an interdependent manner, as completing tasks or achieving desired goals necessitates mutual dependence and collaboration (Van et al., 2001). Interdependence encompasses various dimensions, including goals, tasks, feedback, outcomes, and rewards. Task interdependence (TI) refers to the extent of interaction required among group members to perform a task (Pearce & Gregersen, 1991). Specifically, it reflects how much team members rely on one another for information sharing, resource allocation, and support in completing tasks (Van et al., 2001). TI increases among team members when work tasks become complex and can only be accomplished through collaborative efforts involving resource sharing, information exchange, or expertise (Van et al., 2001). Consequently, the level of TI varies. Wageman (2001) proposed that the level of TI can be evaluated based on four dimensions: (a) the definition of the task; (b) the process used to accomplish it; (c) the technology required to complete the task; and (d) the distribution of skills and resources across team members. Therefore, when a task requires a complex division of labor and collaborative effort among team members, it demonstrates a high degree of interdependence.

TI fosters frequent interpersonal interactions and communication between supervisors and subordinates. In situations characterised by high levels of interdependence, team members collaborate closely to achieve their objectives. Conversely, in situations with low levels of interdependence, team members tend to act more independently (Blanc et al., 2021). Totterdell (2000) discovered that when team members engage in activities that require the collective cooperation of the entire team, there tends to be a more homogeneous and positive emotional connection among members. Conversely, when they are involved in tasks that depend on individual efforts, the emotional connection becomes more negative. TI has been recognised as an important situational variable that influences group processes and outcomes (Liden et al., 1997). Previous studies have demonstrated that TI can be a moderator between team inputs and team states, processes, and outcomes (Ilgen et al., 2005; Kozlowski and Ilgen, 2006). A meta-analysis conducted by Nicolaides et al. (2014) revealed that shared leadership is highly effective, specifically in situations in which there is a high level of TI.

2.1.5 TP

For the definition of team performance, two perspectives can be identified: narrow and broad. In the narrow perspective, team performance centres on team tasks and goals, with a primary focus on team output (Devine & Philips, 2001). From the broader perspective, team performance not only includes team output but also encompasses other critical dimensions such as team capability, work efficiency, group atmosphere, cohesion, acquired skills, and the satisfaction, attitudes, and behaviours of team members (Hackman, 1987; Sundstrom, 1990; Nalder, 1990). In accordance with the aforementioned concept of TP, which is typically assessed using two approaches: subjective evaluation and objective evaluation. Subjective evaluation involves self-assessments by team members or evaluations provided by team leaders, whereas objective evaluation entails collecting and analysing quantifiable performance data. However, obtaining objective measures of work outcomes was impractical due to the lack of productivity data at the team level in Organisations. Even if such objective data were available, such data would likely lack comparability across different companies

(Tjosvold et al., 2006). As a result, this study opted for managerial evaluations of team performance as the outcome measure. This study aims to explore the effectiveness of paternalistic leadership at the team level and the role of SSG differentiation within this context, focusing on team effectiveness, leader-member relationships, and employee satisfaction. As a result, this study opted for managerial evaluations of team performance as the outcome measure.

2.1.6 Summary and conclusions of the literature review

Paternalistic leadership is a leadership style deeply embedded in the Chinese cultural context and frequently observed among leaders in Chinese society, making it a subject of significant research value. Over the past two decades, substantial advancements have been made in the theoretical understanding of paternalistic leadership. These efforts have laid critical theoretical and practical foundations for this leadership style, contributing significantly to its comprehension while providing an essential basis for related studies. However, as revealed by the literature review, several gaps remain in both theoretical and empirical research. Specifically, these gaps pertain to the dimensions of paternalistic leadership, the relationship between paternalistic leadership and TP, and the exploration of SSG differentiation and its mediating role in the relationship between paternalistic leadership and TP. Based on these identified research gaps, this thesis proposes the following research questions.

1. Impact of paternalistic leadership on TP

Most research in the field of paternalistic leadership has predominantly focused on investigating the influence of leader behaviour on individual-level outcomes, with relatively little attention given to its effects at the team or organisational level (Hiller et al., 2019). In management studies, it is crucial to acknowledge that findings derived from individual-level analyses may not always generalise to group-level contexts (Rousseau, 1985). The results of

the literature review reveal inconsistencies in the impact of paternalistic leadership behaviour across both individual and team levels. By contrast, Benevolent Paternalistic Leadership (BPL) exhibits positive effects on both individuals and teams, enhancing attitudes, behaviours, performance, and team output. At the individual level, APL negatively influences employee behaviour or performance; however, its effects at the team level remain ambiguous. Fleishman (1995, 1998) consistently highlighted that prior leadership research has neglected the potential nonlinear effects of leadership behaviour. Therefore, what is the impact of paternalistic leadership on TP? Is this relationship linear or non-linear?

2. Moderating Role of TI

Nonlinear relationships are typically contingent upon specific boundary conditions. Numerous theoretical and empirical studies have shown that TI substantially influences leaders' decisions to prioritise either equity or equality principles in resource allocation (Chen et al., 1998; Rosenbaum et al., 1980), which subsequently exerts a significant impact on TP. However, Yu and colleagues failed to identify the moderating role of TI in the relationship between LMX differentiation and TP (Yu et al., 2018). Consequently, this prompts the following inquiry: In what manner does TI moderate the relationship between paternalistic leadership and TP?

3. Role of SSG differentiation in the relationship between paternalistic leadership and TP

LMX differentiation may play a pivotal role in explaining the efficacy of leadership at the team level (Cao, 2015). However, prior studies have predominantly treated LMX differentiation as either an independent or moderating variable, focusing on its main and moderating effects (Cao, 2015; Chen et al., 2014; Yu et al., 2018; Li et al., 2016; Liden et al., 2006), while largely neglecting its potential mediating role. Given that LMX differentiation is driven by leader behaviour and significantly influences TP, it may serve as a mediator between leadership behaviour and team outcomes. Moreover, the literature has yielded

inconsistent findings regarding the relationship between LMX differentiation and team outcomes. To address this issue, some scholars have introduced the concept of LMX differentiation basis (Chen et al., 2018; Pan et al., 2021), arguing that the nature of differentiation bases (work-oriented versus relationship-oriented) determines whether such differentiation enhances or undermines team processes.

Moreover, scholars have not sufficiently emphasised the distinction between LMX differentiation and SSG differentiation. A comprehensive literature review reveals that LMX differentiation and SSG differentiation are distinct constructs with different theoretical foundations and content. Specifically, SSG differentiation is a measure of relational disparities between leaders and members in the Chinese context, which aligns more closely with the objective of addressing Chinese management issues. However, it is important to note that many researchers have neglected this distinction and applied Western LMX frameworks when analysing issues relevant to the Chinese context. This approach implicitly risks failing to capture the culturally specific local relationships, thereby potentially introducing bias into measurement results. How do different styles of paternalistic leadership behaviours influence SSG differentiation? Does SSG differentiation significantly impact TP? Can SSG differentiation mediate the relationship between paternalistic leadership and TP?

This study aims to elucidate the impact of paternalistic leadership on TP in the Chinese context and its underlying mechanisms. Investigating these issues within a Guanxi-dominated cultural framework can deepen our understanding of how various leadership styles and behaviours influence team outcomes in specific cultural settings, which is crucial for achieving the research objectives. Additionally, positioning paternalistic leadership as an antecedent variable for SSG differentiation addresses concerns raised by prior scholars (Chen et al., 2014).

4. Moderated Mediation Role of TI

A leader's differential treatment of group members is more readily tolerated in groups with high task interdependence. This occurs because members engage in frequent and

meaningful interaction, closely monitor one another's performance, and thus perceive variations in treatment as grounded in fairness rather than bias within the group (Liden et al., 2006). Consequently, high TI might mitigate the negative impact of SSG differentiation or leadership style on TP. Therefore, could TI serve as a boundary condition in the relationship between SSG differentiation and TP? Moreover, does TI also moderate the indirect effects of patriarchal leadership on TP via SSG differentiation?

2.1.7 Theoretical basis

The preceding section outlines the objective of this thesis through a comprehensive literature review and emphasises identified research gaps. Specifically, the objective is to investigate both the direct and indirect effects of various paternalistic leadership styles on TP. To achieve this aim, an appropriate theoretical framework is introduced in this section to facilitate further analysis.

2.1.7.1 Functional classification of paternalistic leadership

According to the aforementioned review of leadership theories, leadership styles are predominantly categorised into relationship-oriented and task-oriented dimensions. Fleishman et al. (1991) reinforced this classification by systematically analysing 65 leadership behaviours. Task-oriented leaders prioritise achieving task goals and exhibit behaviours that focus on task completion. Conversely, relationship-oriented leaders emphasise fostering strong interpersonal relationships with their subordinates, treating the attainment of task goals as secondary (Fiedler, 1971). Burke et al. (2006) contended that analysing the impact of leadership behaviour on TP from a functional leadership perspective is justified.

Some scholars have argued that task-oriented managers are often perceived as authoritarian leaders who emphasise a hierarchical distribution of power. In contrast, people-oriented managers are typically viewed as participative leaders who prioritise egalitarianism among subordinates (Likert, 1961). Drawing on prior research and the defining

features of paternalistic leadership behaviours, this study categorises APL and BPL according to their respective emphases on task orientation and relationship orientation. Authoritarian paternalistic leaders focus predominantly on task achievement, prioritising efficiency and ensuring work completion. They tend to rely more on instrumental mechanisms than emotional considerations when managing interpersonal dynamics. Conversely, benevolent paternalistic leaders emphasise relationship orientation, placing higher importance on nurturing relationships with subordinates and addressing their needs. These leaders prefer to incorporate emotional factors into their interactions while minimising reliance on purely instrumental approaches in interpersonal management.

2.1.7.2 Allocation preferences theory

Allocation preferences theory is a foundational framework for understanding resource allocation in teams and Organisations (Yu et al., 2018). Rooted in Organisational equity theory, which emphasises the proportional distribution of rewards and resources by allocators based on the effectiveness of recipients' actions (Adams, 1965), Leventhal (1976a, 1976b) developed a theory concerning preferences in resource allocation. This theory posits that groups face challenges stemming from both the external work environment and interpersonal dynamics within the group (Collins & Cuetzkow, 1964). To address these challenges, rewards and resources serve three primary functions: (1) providing the necessary resources to undertake activities that resolve task or socio-emotional issues; (2) reinforcing and enhancing recipients' behaviours that contribute to solving these issues; and (3) making group membership attractive to recipients while fostering their loyalty. Consequently, rewards and resources can shape recipients' behaviours in group problem-solving processes. Allocators use these rewards and resources strategically to guide recipients' behaviours toward addressing group challenges (Leventhal, 1976a). Allocation decisions are instrumental actions aimed at achieving allocators' goals, such as improving TP or promoting team harmony.

Based on the purpose of allocation, allocation preferences theory outlines several core principles guiding leaders' decision-making, including equity and equality (Cropanzano &

Schminke, 2001; Leventhal et al., 1980). The equity principle posits that resources and rewards should be distributed in proportion to the input-output ratio of group members (Adams, 1965), whereas the equality principle asserts that resources and rewards should be equally shared among all members irrespective of individual contributions (Deutsch, 1975). When leaders aim to enhance productivity through resource allocation, they should prioritise the equity principle, as it maximizes group productivity over time. Conversely, when their primary objective is to minimise conflict and foster unity, they should emphasise the equality principle, which promotes interpersonal harmony (Leventhal, 1976a). Beyond equity and equality, the reciprocity principle serves as a key determinant of social behaviour. Allocators reward recipients based on prior assistance and services rendered, thereby ensuring ongoing willingness to engage with recipients and reciprocate services (Blau, 1964). By adhering to the reciprocity principle, allocators can reinforce their relationships with receivers (Leventhal, 1976a).

Scholars have noted that the principles of resource allocation may conflict with one another in specific situations (Deutsch, 2006), and the implications of these strategies are often more complex than leaders recognise (Cropanzano & Greenberg, 1997). Research has shown that leaders from different cultural backgrounds adhere to distinct principles of resource allocation. For example, cross-cultural empirical studies have highlighted differences between Chinese and Western cultures in their handling of social-emotional resources. In these studies, American managers tend to distribute social-emotional resources equally while allocating economic resources proportionally based on individual work performance (Martin & Harder, 1994). Conversely, Chen (1995) found that Chinese managers do not prioritise equality in the distribution of socio-emotional resources; instead, they allocate both economic and socio-emotional resources according to the performance level of the recipients. Chen further argued that although both the kinship-based exchanges prevalent in Chinese enterprises and the social exchanges discussed by Western scholars involve emotional resources as objects of exchange, the former emphasise differential treatment and relationship integration, whereas the latter focus on non-differential treatment to ensure fairness in maintaining relationships and protecting individual rights.

In summary, allocation preferences theory posits that the distribution of resources by leaders can exert either positive or negative influences on both the social system (i.e., work groups) and the individuals (i.e., group members) within it (Leventhal, 1976a, 1976b; Leventhal et al., 1980). While this theory underscores equity and equality as foundational principles of resource distribution (Yu et al., 2018), the principle of reciprocity also plays a critical role in shaping allocation decisions (Leventhal, 1976a). Consequently, leaders distribute resources with the objectives of enhancing TP, promoting cohesion and harmony among team members, or securing specific rewards from subordinates via reciprocal exchanges.

2.1.7.3 Theory selection

The primary objective of this research is to investigate the influence of paternalistic leadership on TP from a leader-centred perspective. Team leaders are pivotal in allocating team resources, which is critical for achieving sustainable competitive advantages and ensuring high performance (Barney et al., 2001). Given the importance of leaders' resource allocation for team performance outcomes, this study adopted theories related to resource allocation as its foundational framework, specifically LMX theory and allocation preferences theory. Since LMX differentiation serves as a key variable in this study, the integration of LMX theory is justified. Allocation preferences theory explains the efficacy of various allocation strategies in achieving specific outcomes. If allocators aim to maximise productivity, they should prioritise the equity principle, as equitable allocation enhances group productivity over time. Conversely, if their goal is to minimise conflict and maintain solidarity, they should emphasise the equality principle, as equal allocation promotes interpersonal harmony. Resource Allocation Preferences theory posits that leaders' allocation principles stem from their desired goals, which aligns with the functional division of paternalistic leadership and is thus suitable for application in this study.

Allocation preferences theory and LMX theory can mutually complement each other in the study of leadership resource allocation. From the perspective of performance outcomes,

team resource allocation involves the distribution of work-related resources, socio-emotional resources, reward resources, as well as leaders' personal resources (energy, time, emotions). While allocation preferences theory primarily focuses on leaders' preferences for allocating resources, it does not adequately address their allocation preferences for their own energy, time, and personal resources. LMX theory fills this gap by emphasising leaders' allocation preferences for their own resources such as emotion. Furthermore, allocation preferences theory can be employed to explain LMX differentiation. This theory (Leventhal, 1976a, 1976b; Leventhal et al., 1980) offers a valuable theoretical framework for understanding LMX differentiation at the group level. Indeed, the theoretical underpinnings of LMX research, grounded in role theory, explicitly explore how leaders allocate resources and establish high-quality relational exchanges with their subordinates (Liden & Graen, 1980; Yu et al., 2018). This study integrates both theories to analyse how different paternalistic leadership styles influence TP through resource allocation tendencies based on leadership behaviours (task-oriented or relationship-oriented), while considering the roles of SSG differentiation and TI in the relationship between paternalistic leadership and TP, thereby uncovering potential influence mechanisms between them.

LMX theory originates from social exchange theory, which emphasises reciprocal relationships between leaders and followers. Allocation preferences theory, on the other hand, focuses on how decision-makers distribute resources differently to achieve their objectives. This can also be viewed as a form of social exchange but specifically pertains to the allocation of resources tied to work-related tasks. A shared aspect of these two theories is the process by which leaders allocate resources to attain specific goals, adhering to principles such as fairness, equity, and reciprocity in distribution. This study examines both the direct effect of paternalistic leadership on TP and its indirect influence on TP mediated by SSG differentiation. By integrating these two theories, a complementary relationship is established, providing a clear causal mechanism for analysis in this study. Additionally, this integration contributes a fresh theoretical perspective to research in this field.

2.2 Research hypotheses

2.2.1 Paternalistic leadership and TP

Authoritarian leaders demand absolute compliance from their subordinates and brook no challenge to their authority, which may dampen team members' enthusiasm and motivation. Moreover, the rigid, high-pressure management style characteristic of authoritarian leadership often undermines mutual support and collaboration among team members, leading them to prioritise cultivating personal relationships with supervisors to safeguard their own interests. As a result, this negatively impacts the overall performance of the team (Gao et al., 2014). Consequently, as the level of authoritarianism within an Organisation or group rises, its adverse effects on TP also progressively intensify.

However, there may exist a critical tipping point at which this trend reverses. Based on the theory of resource allocation preferences, decisions regarding resource distribution are deliberate actions taken by allocators to achieve specific objectives. Allocators' preference for one distribution norm over another not only reflects their pursuit of fairness and justice but also signifies an instrumental expectation of gaining benefits (Leventhal, 1976a). Authoritarian leaders, as task-oriented managers (Wang et al., 2013), prioritise control and demanding behaviours while supervising subordinates to accomplish tasks by stimulating controlled motivation (Chen et al., 2014). Moreover, leaders with high authority are typically ambitious, aiming to achieve high-performance goals; thus, their allocation strategies often focus on maximising total performance (TP) (Pondy & Birnberg, 1969). As a result, they allocate more resources and energy toward activities designed to enhance performance outcomes.

Furthermore, highly authoritarian leaders are driven by strong task-oriented motives and tend to prioritise instrumental exchanges with subordinates over emotional ones. This not only reduces subordinates' likelihood of exploiting the supervisor-subordinate relationship for personal gain but also increases their tendency towards fair resource allocation based on subordinates' characteristics or abilities, thereby facilitating the attainment of

high-performance goals. Additionally, in a cultural context such as China, which is marked by a high power distance, leaders are expected to establish their authority through authoritative behaviours. Without doing so, subordinates may disregard their directives, resulting in poor execution (Zhong and Shi, 2004). Highly authoritarian leaders possess robust executive power, which can effectively enhance team coordination and contribute to positive team outcomes.

Therefore, given the detrimental impact of low to medium levels of APL on TP and the potential promoting effect of above-medium levels of APL on TP, this study proposes the following hypothesis:

H1a: There is a U-shaped relationship between APL and TP.

Scholars have consistently argued that benevolent leaders demonstrate concern and care for their subordinates, which in turn cultivates trust and commitment from the latter toward their leaders. As a result, subordinates often experience gratitude, motivating them to adhere to their supervisors' directives and reciprocate through diligent efforts (Chen et al., 2014; Farh and Cheng, 2000). At the team level, BPL can enhance motivation for positive collaboration within teams, increase respect for leaders' decisions, foster mutual trust among colleagues, strengthen interpersonal relationships, reduce perceptions of employee differentiation (Huang and Lin, 2021), and ultimately improve TP.

Excessive displays of benevolence by leaders may lead to counterproductive outcomes, as an overemphasis on a single activity can constrain an individual's capacity to engage in other essential tasks. As a result, individuals tend to prioritise activities perceived as subjectively beneficial or rewarding, or those that have become ingrained habits (Bergeron, 2007; Goode, 1960). Relationship-oriented benevolent leaders often invest substantial energy in nurturing and supporting their subordinates, which might inadvertently detract from efforts directed toward team goals and tasks (Li et al., 2018). Beyond a certain threshold, increasing acts of benevolence could result in diminishing returns, giving rise to the "too much of a good thing" effect (Li et al., 2018).

Specifically, drawing on resource allocation preference theory, benevolent leaders are inclined to allocate a considerable amount of their time to addressing individual challenges

faced by team members (Li et al., 2018). This focus may cause them to overlook other critical responsibilities necessary for the efficient execution of team tasks and the attainment of goals (Becker, 1965; Bergeron, 2007). prioritising interpersonal relationships at the expense of team tasks and objectives can have adverse effects on overall TP. Furthermore, Leventhal (1976a) posited that when the primary aim of resource allocators is to maximise productivity, they emphasise fair standards because equitable distribution enhances group productivity in the long term. Conversely, if their main objective is to minimise conflict and maintain unity, they prioritise equal standards as equal distribution promotes interpersonal harmony. Unlike APL, BPL emphasises team cohesion by avoiding conflict and competition (Zhang et al., 2014), thus leaning toward resource allocation based on equality. However, allocating substantial resources to under-performing individuals may result in limited output growth and prove highly inefficient and wasteful (Leventhal, 1976a). Consequently, while team harmony is maintained, it impedes the optimal allocation of resources, thereby negatively impacting TP. An ancient Chinese proverb suggests that “kindness does not lead troops”, indicating that overly benevolent leaders may be swayed by emotions and lose sight of principles, making it challenging to lead a team effectively. Therefore, exceeding the optimal midpoint of benevolence is likely to yield diminishing returns, leading to reduced TP.

Considering the positive effects of BPL at low to moderate levels and the potential adverse consequences beyond the optimal intermediate range, this study formulates the following hypothesis:

H1b: There is an inverted U-shaped relationship between BPL and TP.

2.2.2 Moderating effect of TI

The study posits that the nonlinear association between paternalistic leadership and TP is contingent upon specific boundary conditions. Team interdependence refers to the extent to which team members rely on each other’s contributions to complete tasks and achieve rewards (Kozlowski & Bell, 2003). Specifically, in teams with high levels of TI, effective coordination by leaders and collaborative efforts among team members are critical

determinants of supervisor performance (Liden et al., 2006; Saavedra et al., 1993). Conversely, in teams with low levels of TI, employees' work relationships tend to be more independent, as they primarily rely on individual efforts to accomplish assigned tasks (Campion et al., 1996).

The managerial advantage of authoritarian leaders stems from their capacity to concentrate resources and energy on task completion while preserving their authority, exercising high executive power, and promoting effective team coordination. By establishing clear chains of command and well-defined decision-making levels, such leadership enables members to better understand their role positioning, thereby increasing the predictability and efficiency of interaction and cooperation processes (Zhu et al., 2019). As a result, this enhances overall team performance outcomes.

Therefore, in situations of high TI, the detrimental impact of APL on TP is expected to gradually decrease as the level of leadership authoritarianism increases. Moreover, when leadership authoritarianism reaches a certain threshold, it can even improve TP. In situations of low TI, member cooperation is not an essential requirement for task completion (Liu et al., 2021), thereby reducing the pressure on authoritarian leaders to integrate resources and coordinate teams for optimal performance. Consequently, the effectiveness of authoritarian leaders remains untapped. As APL aligns more closely with the "Theory X" management style (Uhl-Bien and Maslyn, 2005), subordinates are often compelled to follow orders without their opinions being considered. This prevents team members from reaching true consensus in decision-making processes and consequently diminishes their contributions to team outcomes (Flood et al., 2000). In addition, in situations of low TI, communication and interaction between team leaders and members occur primarily at an individual level, fostering emotional rather than task-oriented connections. Consequently, this tendency towards partiality among authoritarian leaders may lead to differential treatment of subordinates based on personal preferences or relationships rather than work performance. Such biased behaviour hampers the equitable allocation of both work resources and emotional support, thereby adversely affecting TP. These detrimental effects are further exacerbated by increasing levels of authoritarianism. Therefore, in a low TI environment, as leadership authoritarianism intensifies, the negative influence of APL on TP is expected to progressively increase.

In teams characterised by high TI, benevolent leaders who focus on relationship building tend to distribute resources evenly to maintain team harmony (Cheng et al., 2000). However, this contradicts the original intention of LMX theory and hinders the optimal allocation of resources based on individual characteristics and abilities, consequently reducing performance. In addition, a task with a high level of interdependence requires a greater emphasis on instrumental exchanges than on emotional exchanges between leaders and subordinates to enhance task completion. Leaders who prioritise developing relationships with their subordinates may inadvertently diminish team coordination efforts. Furthermore, indiscriminate treatment of subordinates by benevolent leaders not only hampers role clarity but also potentially fosters complacency or inaction among subordinates, thereby impeding the effective accomplishment of team tasks. Therefore, the positive impact of BPL on TP is expected to gradually diminish as benevolence increases in contexts characterised by high team integration. BPL, which emphasises relationship building and attentiveness towards subordinates, effectively motivates team members to invest effort diligently in their work and contribute to task activities aligned with team goals (Farh & Cheng, 2000; Wang et al., 2013). In teams with low levels of TI, where the need for coordination and instrumental exchanges with subordinates is less pronounced, demonstrating care and concern for subordinates elicits reciprocal behaviours marked by gratitude. When managers provide sufficient personal support to their subordinates, it enhances their willingness to exert sustained effort for the Organisation, thereby improving performance (Eisenberger et al., 2002). Consequently, this study predicts that in a low TI context, an increase in benevolence will strengthen the positive impact of BPL on TP. Based on the above analysis, the following hypotheses are proposed:

H2a: TI moderates the curvilinear relationship between APL and TP. When the level of TI is high, there is a U-shaped relationship between APL and TP. When the level of TI is low, there is a negative relationship between APL and TP.

H2b: TI moderates the curvilinear relationship between BPL and TP. When the level of TI is high, there is an inverted U-shaped relationship between BPL and TP. When the level of TI is low, there is a positive relationship between BPL and TP.

2.2.3 Mediating role of SSG differentiation

This section first examines the relationship between paternalistic leadership and SSG differentiation, then investigates the impact of SSG differentiation on TP, and finally delves into the mediating role of SSG differentiation.

2.2.3.1 Paternalistic leadership and SSG differentiation

SSG quality serves as the cornerstone of SSG differentiation. To explore the relationship between paternalistic leadership and SSG differentiation, it is crucial to first examine the link between paternalistic leadership and SSG. Based on Guanxi theory, SSG represents an exchange process where subordinates invest in personal relationships with leaders beyond work-related activities, while receiving instrumental and emotional rewards from their leaders in return (Wang et al., 2011). Consequently, Guanxi encompasses both emotional and instrumental dimensions (Hwang, 1987; Miao et al., 2020), addressing participants' emotional needs for favour and belonging while fulfilling their instrumental needs for resources (Chen and Chen, 2004). This mechanism differs significantly from that of LMX. In LMX relationships, utility plays a central role as contribution and competence function as key currencies (Dienesch and Liden, 1986). By contrast, Guanxi can be viewed as either innate (Hui and Graen, 1997) or prescribed by cultural norms (Farh et al., 1998).

Although Guanxi values contribution and competence, these factors are neither mandatory nor essential. Instead, Guanxi primarily emphasises favour and unwavering loyalty, which closely mirror the core elements of family relationships (Hwang, 1987). Fundamentally, LMX focuses on building personal connections based on an individual's work performance. In contrast, Guanxi places greater emphasis on fulfilling work-related obligations due to pre-existing personal connections (Chen et al., 2009). Specifically, while both SSG and LMX are grounded in social exchange, they rely on distinct "relational models" (Fiske, 1992), leading to differing reciprocity principles. The relational model in LMX theory centres on "equity matching", ensuring a fair exchange of effort, performance, and rewards between supervisors and subordinates. By contrast, the relational model in Guanxi is characterised by

“community sharing”, cultivating strong personal obligations through particularistic or sentimental ties among the parties involved (Chen et al., 2009).

In the Chinese context, subordinates tend to attach more importance to SSG (Wang et al., 2011), which also serves as a crucial means for leaders to effectively manage their subordinates (Cheng et al., 2000). Establishing and maintaining favourable relationships (Guanxi) with employees, which involves cultivating strong interpersonal connections, is indispensable for Chinese managers to effectively manage their staff (Law et al., 2000). Therefore, paternalistic leaders, whether through APL or BPL, have an incentive to establish high-quality Guanxi with their subordinates. APL establishes high-quality Guanxi with subordinates, enhancing their obedience and loyalty while achieving instrumental goals, namely task completion, while BPL fosters universal and high-quality Guanxi with subordinates to maintain effective team harmony by supporting subordinates in their professional and personal lives. Therefore, in the Guanxi context prevailing in China, both APL and BPL are expected to positively affect SSG. However, regarding the differentiation of SSG, distinct paternalistic leadership styles may produce varying effects.

Authoritarian leaders seek to efficiently complete tasks and optimise resource allocation by building relationships of varying quality with subordinates. Additionally, a key characteristic of authoritarian leaders is their emphasis on personal authority, leading them to treat their subordinates differently based on their levels of obedience and loyalty. They tend to establish strong relationships with insiders who are expected to display unwavering loyalty and obedience (Cheng, 1995). According to allocation preference theory, adhering to the principle of reciprocity allows resource allocators to strengthen bonds with resource recipients (Leventhal, 1976a). In terms of resource allocation, authoritarian paternalistic leaders tend to engage in reciprocal exchanges with insiders to achieve dyadic reciprocity. This form of reciprocity is characterised by its partial nature and aims to provide subordinates with more resources or benefits than other members. In return for this preferential treatment, such insiders are expected to offer their support, loyalty, obedience, and gratitude to the leader. For instance, leaders may allocate a greater share of incentive resources and promotion opportunities to subordinates who maintain close Guanxi with them (Law, 2000).

In addition, APL behaviour inevitably results in the concentration of power. To a certain extent, leaders' judgments or preferences may override Organisational regulations and rules, thereby exacerbating inequalities and injustices within the Organisation and intensifying the hierarchical atmosphere among team members (Zhang et al., 2009). From the employees' perspective, while they are compelled to submit to the authority and arbitrariness of their leaders, some may also adopt alternative strategies, such as ingratiating themselves with leaders, enhancing their skills, or striving to become insiders to improve their standing. These responses further reinforce the perception of hierarchy among team members (Zhang et al., 2009). Moreover, Chen (1995) demonstrated that unlike Western leaders who typically distribute socio-emotional resources evenly among employees, Chinese leaders tend to allocate emotional resources based on employee performance, which further contributes to increased differentiation in SSG.

BPL is characterised by a focus on relationships, equitable distribution of emotional and reward resources, and treating followers as family members while caring for their professional and personal well-being. This fosters high levels of trust, obedience, and loyalty among followers (Cheng et al., 2004; Farh et al., 2008), thereby reducing the perception of SSG differentiation. Huang and Lin (2021) noted that BPL behaviour enhances team members' motivation for teamwork and respect for leaders' decisions, while promoting mutual trust among colleagues and diminishing hierarchical awareness. Cheng (2002) suggested that in a team setting, benevolent leaders cultivate a harmonious, friendly, and relaxed atmosphere, which reduces the sense of hierarchy and differences. Zhang et al. (2009) argued that personalised care from leaders instills familial warmth in subordinates, thus weakening their sensitivity to hierarchical dynamics within the team context. In summary, BPL not only reduces the perception of differentiation within teams but also narrows the perceived gap between supervisors and subordinates.

Based on the above analysis, paternalistic leadership, whether APL or BPL, can have a positive impact on SSG, although it has different effects on SSG differentiation. Regarding authoritarian leaders, on the one hand, they tend to place great importance on the degree of obedience and loyalty of subordinates as key factors in cultivating high-quality relationships

with them. On the other hand, to gain the support, obedience, and loyalty of subordinates considered insiders, authoritarian leaders tend to allocate more resources to them. This biased treatment leads to a notable division between insiders and outsiders, thereby exacerbating the disparity in SSG within the team.

Relationship-oriented benevolent leaders are more likely to exhibit genuine concern for their subordinates, cultivate emotional attachment and trust, and stimulate proactive engagement among them. This facilitates the establishment of high-quality reciprocal relationships. Furthermore, benevolent leaders typically prioritise team harmony, make efforts to treat subordinates equitably, and thereby develop close and harmonious Guanxi with them. Therefore, this research proposes the following hypotheses:

H3a: APL positively influences SSG and SSG differentiation.

H3b: BPL positively influences SSG, but negatively influences SSG differentiation.

2.2.3.2 SSG differentiation and TP

SSG differentiation refers to the degree of variation in LMX relationships within a team (Chen et al., 2015), which is shaped by leaders' personal preferences and their connections with different subordinates (Chen et al., 2014). When team leaders show preferential treatment toward certain subordinates, it often benefits those with strong Guanxi, potentially leading to accusations of discrimination and bias from disadvantaged parties (Brockner & Wiesenfeld, 1996). Chen et al. (2009) suggested that SSG emphasises emotion and loyalty over competence, allowing subordinates with lower competence or task performance to gain managerial favour through unwavering loyalty. High levels of SSG differentiation within a team may result in leaders offering more bonuses and promotion opportunities to subordinates with strong Guanxi, even when their work performance does not differ significantly from that of other team members (Law et al., 2000). Leadership impartiality is critical for ensuring procedural fairness in reward distribution (Lind et al., 1997). If leaders apply varying management approaches based on personal preferences, such differentiation can lead to injustices and conflicts within the team, negatively affecting member behaviours (Erdogan,

2001; Erdogan & Bauer, 2010; Wang & Zhong, 2011).

The integration of non-work relationships between supervisors and subordinates plays a crucial role in shaping leaders' preferences for resource allocation. However, when leaders allocate resources based on SSG, it may lead to increased potential damage to subordinates' perceptions of organisational equity (Chen et al., 2009). Wang and Li (2017) posited that team leaders, as both resource owners and decision-makers, often form distinct SSG with different subordinates due to limited resources and energy. This differentiation can significantly influence their behaviours. A significant disparity in SSG within a team can negatively affect subordinates' work experiences, potentially resulting in alienation or deterioration of their relationships with supervisors. Such outcomes can further impact job satisfaction, reduce organisational commitment, and cultivate negative work attitudes among subordinates (Chen et al., 2014), ultimately undermining both individual performance and TP.

LMX differentiation can directly influence leaders' resource allocation preferences, thereby exerting either positive or negative effects on both the organisation and its members (Leventhal, 1976a). Critics of LMX theory argue that when team leaders form distinct exchange relationships with subordinates and allocate resources differentially, this may be perceived as inequitable treatment, violating the principle of fairness (Uhl-Bien & Graen, 1995). Furthermore, from the perspective of differentiation bases, task-based LMX differentiation promotes TP, whereas relationship-oriented LMX differentiation undermines it (Chen et al., 2018; Pan et al., 2021). SSG differentiation is primarily grounded in private relationships between leaders and subordinates rather than in subordinates' work performance, which may lead to an unfair distribution of emotional and reward resources. This can evoke feelings of injustice among subordinates and trigger team conflict, thereby compromising team cohesion and group initiative, ultimately weakening TP. Based on these considerations, the following hypothesis is proposed:

H3c: SSG differentiation has a negative impact on TP.

2.2.3.3 Mediating effect of SSG differentiation

In China's Guanxi-based society, establishing diverse forms of Guanxi with subordinates is a critical strategy for leaders to effectively manage their teams (Law et al., 2000). SSG differentiation substantially influences the resource allocation process among leaders and, in turn, affects TP. Drawing on H3a, H3b, and H3c, it can be hypothesised that favouritism toward subordinates constitutes a defining characteristic of APL. This behaviour indirectly and negatively impacts TP by exacerbating SSG differentiation. By contrast, treating subordinates equitably represents a core attribute of BPL, which indirectly and positively enhances TP by reducing SSG differentiation. Accordingly, this study puts forth the following hypotheses:

H3d: SSG differentiation mediates the negative effect of APL on TP.

H3e: SSG differentiation mediates the positive effect of BPL on TP.

2.2.4 Moderating mediation role of TI

According to Law et al. (2000), Chinese managers tend to categorise employees based on SSG and prioritise those with high-quality guanxi when allocating bonuses or promotion opportunities. In teams characterised by low TI, the greater the SSG differentiation, the more likely it is that reward distribution will be perceived as unfair. This perception may lead to a lack of cooperation among team members, thereby undermining team cohesion and reducing overall performance. Conversely, in highly interdependent work teams, mutual support for information sharing and resource acquisition is essential for effectively completing collective tasks (Campion et al., 1996; Wageman and Gordon, 2005). Consequently, rewards are typically allocated based on the overall performance of the entire team (Beersma et al., 2013). In such teams, each member's contribution plays a critical role in achieving the team's final objectives and generating the desired output. Therefore, individual errors can hinder the team's progress and result in reduced collective rewards (Hu et al., 2021). To mitigate the negative effects of SSG differentiation, team members must address feelings of injustice, enhance collaboration, and strive for exemplary TP to secure additional personal resources and rewards.

In conclusion, this study predicts that TI moderates the relationship between SSG differentiation and TP. The previous hypotheses of this study posit that paternalistic leadership (both authoritarian and benevolent leadership styles) significantly affects TP (H1a and H1b), while SSG differentiation mediates the relationship between paternalistic leadership and TP (H3d and H3e). Based on these predictions, this research proposes that TI plays a moderated mediation role in the indirect effect of paternalistic leadership on TP through SSG differentiation. Therefore, the following hypotheses are proposed:

H4a: TI moderates the negative relationship between SSG differentiation and TP, such that a low level of TI enhance the detrimental effect of SSG differentiation on TP, while a high level of TI weakens it.

H4b: TI moderates the negative influence of APL on TP through SSG differentiation. Specifically, when the level of TI is high, the adverse impact of APL through SSG differentiation on TP is reduced; conversely, when the level of TI is low, this impact becomes more pronounced.

H4c: TI moderates the positive influence of BPL on TP through SSG differentiation. Specifically, when the level of TI is high, the positive impact of BPL on TP through SSG differentiation becomes stronger; conversely, when the level of TI is low, this impact decreases.

2.2.5 List of research hypotheses

The hypotheses proposed in this study are summarised in Table 2-1.

Table 2-1: Research hypotheses lists

Hypothesis number	Hypothesis content
H1a	There is a U-shaped relationship between APL and TP
H1b	There is an inverted U-shaped relationship between BPL and TP
H2a	TI moderates the curvilinear relationship between APL and TP. When the level of TI is high, there is a U-shaped relationship between APL and TP. When the level of TI is low, there is a negative

	relationship between APL and TP.
H2b	TI moderates the curvilinear relationship between BPL and TP. When the level of TI is high, there is an inverted U-shaped relationship between BPL and TP. When the level of TI is low, there is a positive relationship between BPL and TP.
H3a	APL positively influences SSG and SSG differentiation
H3b	BPL positively influences SSG, but negatively influences SSG differentiation
H3c	SSG differentiation has a negative impact on TP
H3d	SSG differentiation mediates the negative effect of APL on TP
H3e	SSG differentiation mediates the positive effect of BPL on TP
H4a	TI moderates the negative relationship between SSG differentiation and TP, such that a low level of TI enhances the detrimental effect of SSG differentiation on TP, while a high level of TI weakens it.
H4b	TI moderates the negative influence of APL on TP through SSG differentiation. Specifically, when the level of TI is high, the adverse impact of APL through SSG
H4c	TI moderates the positive influence of BPL on TP through SSG differentiation. Specifically, when the level of TI is high, the positive impact of BPL on TP through SSG differentiation becomes stronger; conversely, when the level of TI is low, this impact decreases.

Note: BPL = benevolent paternalistic leadership; APL = authoritarian paternalistic leadership; SSG= supervisor-subordinate

Guanxi;

2.3 Summary

The first section of this chapter offers a systematic and comprehensive review of the literature on the concepts explored in the present study. It also highlights research gaps and formulates corresponding research questions. Considering that leaders may play a more pivotal role in TP within the Chinese cultural context, this study adopts a leader-centred approach, focusing on the unique attributes and behavioural patterns associated with various paternalistic leadership styles. The review of leadership theory indicates that leadership styles are commonly categorised into task-oriented and relationship-oriented approaches. Based on the literature review of paternalistic leadership, this study demonstrates that both authoritarian and benevolent paternalistic leadership styles align with the functional classification of leadership due to their distinct task-oriented and relationship-oriented characteristics. Given that team leaders significantly influence resource allocation within their teams, their preferred allocation mode becomes a critical determinant of TP. Consequently, this study draws upon two theories related to resource allocation—allocation preferences theory and LMX theory—as its theoretical foundation. The second part of this chapter outlines the hypotheses, which

include the direct impact of paternalistic leadership on TP, the moderating effect of TI on the relationship between paternalistic leadership and TP, the mediating role of SSG differentiation in the relationship between paternalistic leadership and TP, and the combined moderated mediation effect of TI. In total, 12 hypotheses are proposed in this section for further empirical testing.

3 Research design and methods

After conducting a comprehensive review of relevant theories and literature, twelve hypotheses were formulated to address the research objectives. This chapter outlines the research design and methods. First, the philosophical foundations and the methodology adopted by the study are discussed, followed by an exploration of issues related to sampling strategy, variable measurement, and ethical considerations.

3.1 Research paradigm

The research paradigm serves as an overarching framework that delineates the philosophical methodologies and mechanisms employed when conducting research (Shepherd and Challenger, 2012). In essence, a scientific paradigm encompasses a set of cognitive systems comprising underlying assumptions, key questions to be addressed or difficult inquiries to be solved, research techniques to be used, and an example of what constitutes sound scientific investigation (Kuhn, 1970). The research paradigm underscores a top-down approach while emphasising the significance of three fundamental components: ontological assumptions, epistemological assumptions, and data collection methods. To better understand the philosophical approach and research paradigm adopted in this study, the subsequent section discusses both ontological and epistemological orientations.

3.1.1 Ontology

Ontology serves as the foundational basis for all research endeavors, indicating that every investigation must commence with an individual's worldview, which is inevitably shaped by personal experiences. Blaikie (2000) contended that ontology entails making assertions and assumptions about the essence of social reality—its existence, appearance, components, and their interactions. In summary, ontological perspectives centre on the perception of social reality. There are two primary ontological positions: objectivism and

constructivism. Objectivism asserts that entities possess objective reality, independent of observer influence (Bell et al., 2019). By contrast, constructivism argues that entities are socially constructed, with their actuality arising through human actions and interpretations (Bell et al., 2019).

This study employs the questionnaire survey method to examine the relationships among variables. The methodological foundation is rooted in an objectivist ontology, which assumes that organisational behaviour phenomena adhere to objective laws independent of human cognition. By utilizing standardized measurement instruments (such as validated scales) and large-sample datasets, the study aims to uncover statistical associations among variables, thereby reflecting underlying causal mechanisms rather than constructs subjectively imposed by researchers or participants. While the process of individual responses may involve subjective judgment, the research design strives to approximate objective reality to the greatest extent possible through rigorous sampling strategies, robust reliability and validity controls, and stringent statistical significance testing.

3.1.2 Epistemology

Epistemology elucidates the process of knowledge acquisition, as well as the nature, existence, and generation of knowledge (Crotty, 1998). It plays a pivotal role in refining research design, since neglecting epistemological considerations can substantially compromise the quality of research (Easterby-Smith et al., 2002). For scholars, their ontological perspective shapes their epistemological stance. The two primary epistemological positions are interpretivism and positivism, which reflect different approaches to the collection and interpretation of data concerning the nature of reality (ontology).

Interpretivism posits that social reality is constructed through the perceptions and meanings attributed by participants, rather than being an objective or factual truth. This approach emphasises subjective and meaningful interpretations of social phenomena, utilizing qualitative methods to explore individuals' experiences and perspectives within their specific contextual frameworks (Buckley et al., 2014). In qualitative research, the researcher acts as

the primary instrument for data collection and analysis, focusing on providing in-depth insights and rich descriptions of the context under investigation. Conversely, positivism asserts that social reality consists of objective facts that can be empirically tested against theories of causation (Neuman, 2007). Social scientists adhering to this paradigm typically employ quantitative research methods, generating knowledge by hypothesising relationships between variables and testing these hypotheses using rigorous, objective methodologies (Easterby-Smith et al., 2002). Positivism advocates deriving conclusions from empirical data rather than relying on subjective interpretation, aligning closely with an objectivist ontological stance. Both positivism and objectivism assume that universal causal laws exist among phenomena and can be uncovered through precise control of variables and systematic statistical analysis.

In conclusion, this study adopts an objectivist-positivist stance because this philosophical perspective aligns with the research theme and enables more effective addressing of the research questions. Specifically, the aim of this study is to investigate the impact of paternalistic leadership on TP, as well as the effects of SSG differentiation and TI within this relationship. Transforming these abstract constructs (variables) into quantifiable measures (Likert scale scores) reflects an underlying assumption of objective positivism, which posits that “phenomena can be objectively decomposed and quantified.” Additionally, this study employs a standardized data collection process to ensure the “value neutrality” of the data. Moreover, regression analysis and structural equation modeling are utilized to examine the relationships among variables, relying on the mathematical logic grounded in the premise of objective positivist philosophy that “discoverable laws exist objectively.”

Positivist research typically adheres to the principle of probability sampling, as positivism posits that objective laws govern social phenomena and can be uncovered through systematic investigation. By leveraging the randomization mechanism to emulate the experimental control characteristic of natural sciences, potential biases introduced by human selection are minimised, thereby enhancing the generalisability of results (Neuman et al., 2000). Nevertheless, probability sampling often faces challenges due to constraints imposed by research objectives, available resources, and time limitations. Consequently, some scholars

argue that a carefully designed non-random sampling method can serve as a practical alternative to probabilistic sampling techniques, capable of producing quasi-representative samples (Neuman et al., 2000; Babbie, 1998). Teddlie and Yu proposed a solution in such scenarios, suggesting that when it is not feasible to achieve representative samples aligned with research goals using probability sampling due to resource limitations, a mixed methods sampling approach can be employed as an effective alternative (Teddlie & Yu, 2007).

The primary objective of this study is to examine the influence of paternalistic leadership on team performance outcomes. Prior studies have shown that the impact of leadership behaviour on performance varies depending on the specific characteristics and nature of the enterprise (Tsui et al., 2004; Farh et al., 2008; Liu & Zhang, 2010). Therefore, Chen and Shen proposed that researchers should consider extracting research samples from diverse backgrounds to align with the specific nature of their research questions. This method aims to maximise systematic variance within the study, thus enabling a more precise reflection of the relationship between variables (Chen & Shen, 2023). Teddlie and Yu (2007) further emphasised that the sampling strategy should be logically derived from the research questions and hypotheses being addressed. Given the constraints imposed by limited resources and restricted access to companies, it is challenging to fully capture the diversity of enterprise natures through simple random sampling alone.

Consequently, guided by the recommendations of Teddlie and Yu (2007) and following the principle of maximum variation sampling, this study adopted a mixed methods sampling approach. Specifically, in the first stage, companies with diverse characteristics within China were strategically sampled to maximise systematic variance. In the second stage, random sampling was implemented within each selected company. Through the use of a theory-driven hierarchical design, standardised implementation protocols, and meticulous control of variables during statistical testing, the sampling method minimised bias and thus adhered to the positivist principle (Blaikie, 2010). This issue will be elaborated upon in a dedicated section addressing sampling strategies.

3.1.3 Rationale for the research methodology

A researcher's chosen methodological approach is grounded in and reflects specific ontological and epistemological assumptions, which dictate the selection of research methods for a given study (Grix & Jonathan, 2002). While multiple research methods coexist within the social sciences (Neuman, 2007), researchers must possess a thorough understanding of the strengths and limitations of each approach to make an informed choice that aligns with the nature of the problem being investigated. When the objective of research involves answering specific research questions, addressing particular issues, or statistically testing hypotheses, quantitative methods are particularly suitable (Creswell, 2013).

This study aimed to investigate the impact of paternalistic leadership on TP and its underlying mechanisms; consequently, a positivist quantitative research approach was adopted. First, in line with the research objective, specific research hypotheses were formulated. Subsequently, data were systematically collected and analysed, followed by rigorous hypothesis testing. The research design process strictly adhered to the seven steps proposed by Royer and Zarlowski (2001): 1) identifying the research topic; 2) conducting a comprehensive literature review; 3) clearly defining the research questions; 4) formulating precise research hypotheses; 5) collecting reliable data; 6) analysing data using appropriate methods; and 7) interpreting the results. The questionnaire survey is a widely recognised quantitative research method for collecting data, aiming to provide a quantitative description of the sample population based on a representative sample (Groves et al., 2004). Generally, questionnaire surveys serve two primary purposes: first, to systematically understand and describe the attitudes and behaviours of a specific group; and second, to conduct robust hypothesis testing. As elaborated below, in this study, data were collected via a structured questionnaire survey and analysed using SPSS 23.0 and Mplus 8.3 to examine the relationships between variables.

The accuracy and validity of quantitative data are critical factors for the success of an empirical study (Chen et al., 2008). In this study, constructs were measured using self-reported data. To enhance the robustness of the research findings, common method

variance (CMV) was systematically addressed, controlled and tested. CMV refers to the overlap in variation between two variables that arises due to the use of similar measurement tools, rather than reflecting the true relationship between underlying constructs (Teo, 2011). Specifically, CMV denotes the shared systematic error variance among variables measured using the same method or by the same evaluator (Richardson et al., 2009).

The causes of method variance are multifaceted. Podsakoff et al. (2003) systematically identified four primary effects contributing to method variance: the homology effect, the question characteristic effect, the question context effect, and the test context effect. When research data are collected from a single source and self-reporting is the sole means of response, this approach becomes more susceptible to CMV (Lindell & Whitney, 2001). Consequently, scholars have commonly adopted strategies to mitigate CMV by separating data sources and reducing the homology effect, such as integrating self-reports with objective data or data provided by alternative evaluators. However, not all constructs can be effectively measured using multi-source data. For certain constructs, particularly those related to cognition, attitude, emotion, values, and willingness, measurement through self-reporting is more appropriate. These constructs are inherently tied to the inner feelings and subjective experiences of participants rather than the objective environment or actual behaviours. Therefore, relying on personal introspection and self-reporting provides the most accurate and valid data for such constructs (Edwards, 2008; Podsakoff et al., 2013). This study examines the relationships among variables, including authoritarian paternalistic leadership (APL), benevolent paternalistic leadership (BPL), supervisor-subordinate Guanxi (SSG) differentiation, team performance (TP), and task interdependence (TI). Given that the measurement of most constructs involves participants' subjective perceptions, a single-source self-reporting method was employed.

In self-reports, participants may be influenced by subjective factors such as social desirability and cognitive limitations. To address the potential biases inherent in self-reports and minimise the impact of CMV, this study adopted a series of measures: 1. optimisation of questionnaire design. By ensuring participant anonymity and confidentiality, the study reduced respondents' motivation for consistency and encouraged more authentic responses.

Furthermore, given the sensitivity of certain measurement items, the timing of employee and supervisor reports was staggered to alleviate psychological pressure during self-reporting. 2. Refinement of questionnaire design. Based on feedback from a pilot study, the questionnaire was revised to ensure clarity in question phrasing, eliminate ambiguous or double-barreled expressions, and reduce comprehension errors among participants. A logical sequence of questions progressing from easy to difficult was established to enhance response rates. In the main study, a concise questionnaire was used to maintain participant engagement and willingness to respond. Beyond procedural controls, statistical control methods, specifically the Harman single-factor test, were employed to detect and mitigate CMV, thereby enhancing the robustness of the research findings.

3.1.4 Sampling strategy

Although positivist research frequently employs the principle of probability sampling, the essence of positivism lies in pursuing the objectivity and systematicity of knowledge rather than rigidly adhering to a single methodology (Blaikie, 2010). To achieve specific research objectives, non-probability sampling methods may occasionally be adopted. Empirical research should emphasise “operability” and “repeatability”. Non-probabilistic sampling remains consistent with the empirical spirit provided that the criteria are clearly defined and the process is transparent (Qiu, 2015).

Leadership behaviours can vary across organisations of different natures. A comparative survey of leadership behaviours in Chinese state-owned enterprises and foreign-funded enterprises revealed that leaders in state-owned enterprises tend to prioritise “relationship maintenance”, whereas leaders in foreign-funded enterprises place greater emphasis on “task orientation” (Tsui et al., 2004). Liu and Zhang (2010) also identified that paternalistic leadership manifests distinct behaviours depending on the varying characteristics of enterprises. In addition, some scholars have also identified the distinct influences of organisational properties on supervisor-subordinate Guanxi during their studies (Chen et al., 2014). Consequently, the primary variables of this study (paternalistic leadership and

supervisor-subordinate Guanxi) possess a strong cultural dimension and may be influenced by organisational nature and cultural factors. Furthermore, as the primary executive of a manufacturing enterprise, the author maintains business relationships with numerous foreign-funded enterprises within China. Hence, this study is particularly interested in whether paternalistic leadership behaviours and supervisor-subordinate Guanxi rooted in traditional Chinese culture will undergo changes due to cultural integration within foreign-funded enterprises in China, thereby offering practical recommendations for cross-cultural management.

Based on the aforementioned analysis and considering the constraints of researchers' resources, time, and energy, relying solely on random sampling is unlikely to produce representative samples that align with the research objectives. Teddlie and Yu (2007) suggested that researchers could adopt a mixed methods sampling approach to purposefully select samples that correspond to the research question. This method not only enhances the representation of a broader population as accurately as possible but also facilitates meaningful comparisons among diverse sample types. In accordance with the recommendations of these scholars, this study employs a two-stage mixed methods sampling approach. Specifically, in the first stage, the researcher constructed a sampling pool by leveraging existing networks and subsequently selected several enterprises for each type of enterprise nature (state-owned, private, and foreign-funded).

In the second stage, random sampling was utilized to select samples from target enterprises. Based on the research topic's requirements (e.g., ensuring the validity of variable measurements such as distinguishing supervisor-subordinate Guanxi from team performance), the inclusion criteria for teams were established as follows: A team must comprise one leader, at least two subordinates, and have been in existence for over one year. Concerning sample size, Maas and Hox (2005) differentiated between the sample size requirements for achieving adequate significance in fixed effects tests versus random effects tests. Their results suggested that a minimum of 100 groups might be necessary to achieve the nominal α level in variance testing. Consequently, approximately 100 team samples were planned for selection during the study design phase. Furthermore, during the data analysis phase, advanced

statistical techniques for quantitative analysis (e.g., integrating control variables and conducting robustness tests within regression models) were employed to mitigate the limitations inherent in the mixed-method sampling approach, thereby strengthening the explanatory power of the findings.

In conclusion, this study employed a mixed methods sampling approach. By utilizing a theory-driven design, along with the fundamental principles of positivism and advanced quantitative analysis and statistical techniques, it sought to maximise the replicability, verifiability, and generalisability of the findings.

3.2 Measurement

3.2.1 Criteria of scale selection and measurement methods

The selection of measurement questions is intrinsically tied to the impact and credibility of a research study, forming the foundation for robust empirical investigations. Moreover, the phrasing of these measurement questions is pivotal in accurately capturing participants' understanding and responses. Scale reliability involves repeatability, internal consistency, and the stability of measurement outcomes. Validity refers to the degree to which a measurement tool or method accurately evaluates what it is intended to measure. To ensure the reliability and validity of the scale items, this study employed a set of well-established scales published in reputable national and international journals for variable assessment. Participants were instructed to rate their responses to all questions using a 6-point Likert scale. Given that the Confucian “doctrine of the mean” may influence Chinese individuals' decision-making (Chiu & Yang, 1987), potentially leading them to favour the midpoint of a scale, this research adopted a 6-point Likert scale without a midpoint to minimise central tendency bias. Consequently, all items within the scale were rated on a 6-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree).

3.2.2 Determining scale content

The present study employed a sophisticated scale to assess the variables, utilising specific measurement tools for each variable.

3.2.2.1 Paternalistic leadership scale

The original Paternalistic Leadership Scale, developed by Cheng et al. (2000), consists of 25 items and is measured along three dimensions: authoritarian paternalistic leadership (APL), benevolent paternalistic leadership (BPL), and moral paternalistic leadership (MPL). BPL refers to leadership behaviours that demonstrate personalised concern for employees and their well-being, including care for employees or their family members. This dimension comprises 11 items. MPL can be characterised as the leader's behaviour reflecting a high level of personal virtue, self-discipline, and selflessness, encompassing 5 items. APL pertains to the leader possessing absolute authority and control, requiring complete obedience from subordinates, and includes 9 items. This scale has been widely acknowledged as a measure of paternalistic leadership in organisational and management research. Subsequent scholars have referenced this scale and refined it by reducing certain items to enhance its applicability for empirical studies (Chen et al., 2009). However, the original paternalistic leadership scale measured excessive negative behaviours associated with APL. For instance, the scale developed by Cheng et al. (2000) includes typical items such as "My leader does not disclose his/her true intentions", "My leader withholds information from us", and "In front of us, the leader rarely smiles". The aforementioned measurement items may exhibit discrepancies when compared to actual APL behaviour in contemporary contexts.

In the era of globalization, Chinese parents who embrace egalitarian ideals are increasingly adopting democratic methods to raise their children, bringing about a variety of new changes in parenting styles. The traditional notion of paternalistic leadership tends to focus excessively on its negative dimensions (such as self-promotion and personal gain) while neglecting the positive aspects associated with the leader's influence (such as striving for group objectives and overall welfare). This fails to fully capture the cultural nuances of

Chinese leadership, which emphasises paternalistic authority with well-intentioned purpose. Numerous studies have indicated that in Chinese business organisations, leaders tend to exhibit higher levels of benevolence and moral dimensions compared to their authoritarian tendencies (Cao, 2015; Lin et al., 2017).

In response to these concerns, Cheng et al. (2014) developed a new paternalistic leadership scale that not only addresses scholars' concerns about the inaccurate measurement of the authoritarian dimension in previous scales but also offers greater simplicity. The new paternalistic scale comprises 15 items and exhibits good reliability and validity, with internal consistency coefficients for authoritarianism, benevolence, and morality of $\alpha = 0.88$, $\alpha = 0.90$, and $\alpha = 0.95$, respectively (Cheng et al., 2014). This study will adopt this scale to measure the two dimensions of paternalistic leadership: APL and BPL. As discussed in the literature review, the focus of this research is on these two dimensions; hence, only APL and BPL items from the scale are selected for analysis in this study.

Table 3-1: Paternalistic leadership scale

Variable	Item	
Benevolent paternalistic leadership (BPL)	My supervisor often shows his/her concern about me.	Cheng et al. (2014)
	My supervisor understands my preference enough to accommodate my personal requests.	
	My supervisor encourages me when I encounter difficulties in work.	
	My supervisor would try to understand the real cause of my unsatisfied performance.	
	My supervisor trains and coaches me when I lack the required abilities at work.	
Authoritarian paternalistic leadership (APL)	My supervisor appears to be intimidating in front of his/her subordinates.	
	My supervisor brings me a lot of pressure when we work together.	
	My supervisor is very strict with his/her subordinates.	
	My supervisor scolds me when I fail expected target.	
	My supervisor disciplines me for violation his/her principles.	
Moral paternalistic leadership (MPL)	My supervisor is responsible on the job.	
	My supervisor takes responsibility on job and never shirks his/her duty.	
	My supervisor sets an example to me in all aspects.	
	My supervisor shows well self-disciplined before demanding upon others.	
	My supervisor leads, rather than follows, subordinates to deal with difficult tasks.	

3.2.2.2 SSG scale

The concept of LMX differentiation refers to the qualitative disparity in the exchange relationship between a leader and different subordinates within a team (Erdogan & Bauer, 2010; Henderson et al., 2009). This study examined leader-member exchange (LMX) differentiation in the Chinese context, namely SSG differentiation, based on relationship quality. In general, variance and standard deviation are used as indicators of relationship differentiation within a group (Erdogan & Bauer, 2010; Schyns & Felfe, 2006). Therefore, this research measured SSG differentiation by calculating the variance and standard deviation of the quality level within the group's SSG scores. A higher degree of LMX differentiation was indicated by higher variance and standard deviation values. Conversely, a lower degree of differentiation was indicated by a higher intra-group consistency coefficient, implying that leaders tend to treat different subordinates in a consistent manner (Boies & Howell, 2006; Ma & Qu, 2010). Since median measures better reflect the level of relationship quality than average measures within a population (Liden et al., 2006), this research calculated the in-group median of individual-level SSG scores.

In the study of supervisor-subordinate Guanxi scales, scholars predominantly utilized Chinese populations as research samples, considering the influence of national cultural characteristics and values on the construction of such relationships. Law et al. (2000) posited that the relationship between supervisors and subordinates can be conceptualised as a unidimensional construct, leading them to develop a six-item scale primarily assessing personal communication activities between leaders and their subordinates. Cheung et al. (2009) identified "Qing" (favour) as a key factor influencing SSG and proposed a three-item single-dimensional structural model, with a representative item being "My leader invited me to his/her home for dinner". Wong et al. (2010), building on the interaction frequency and mutual benefits between supervisors and their subordinates, developed an eight-item single-dimensional scale, with typical items including "After work, I frequently interact with my direct leader" and "After work, my direct leader and I share a high degree of common interests". However, a single-dimensional scale has been criticized for its lack of theoretical foundation and its inability to differentiate emotion-oriented and instrument-oriented relationships (Chen et al., 2009). In the Chinese context, SSG not only reflects the

work-related relationship between leaders and followers but also highlights a strong personal emotional dimension in non-work-related relationships between them. Both domestic and international scholarly theoretical and empirical studies reveal significant differences in the quality of leader-member exchange compared to its construct rooted in Western cultural backgrounds. These differences are evident in the scope of exchanges, the nature of relationships, and the content of exchanges, demonstrating qualitative distinctions. Consequently, a single-dimensional scale cannot fully capture the essential nature of the supervisor-subordinate relationship construct within the Chinese context.

To address the above limitations, Chen et al. (2009) developed a 12-item SSG scale encompassing three dimensions: affective attachment, personal-life inclusion, and deference to supervisors. Among these, affective attachment and personal-life inclusion reflect the characteristics of group sharing, while deference to supervisors embodies the inherent authority traits of collectivist culture with a large power distance. Meanwhile, this scale has been widely acknowledged and adopted by domestic scholars and is considered to have good reliability and validity within the Chinese context (Yu ,2024). Hence, this study adopted the three-dimensional scale to measure SSG. Given the goal of this study to examine the overall effects of SSG differentiation without any theoretical basis suggesting distinct functions for the three dimensions, this research followed previous studies and averaged the scores from each sub-dimension into a single score. The α of this scale was 0.83.

Table 3-2: SSG scale

Variable	Dimension	Item	
Supervisor-subordinate Guanxi (SSG)	Affective attachment	My supervisor and I always share thoughts, opinions, and feelings about work and life.	Chen et al. (2009)
		I feel at ease and comfortable when communicating with my supervisor.	
		I would be sorry and upset if my supervisor decided to work for another company.	
		If my supervisor has problems in his/her personal life, I will do my best to help him/her.	
	Personal-life inclusion	My supervisor asks me to help him/her deal with some family errands.	
		During holidays and festivals, my supervisor and I call or visit each other.	
		Outside of office hours, I have social activities with my supervisor, such as having dinner together or having fun together, that go beyond work duties.	
		I am familiar with my supervisor's family members or friends and have personal contact with some of them.	

	Deference to supervisors	I am willing to obey my supervisor unconditionally.	
		Even if I disagree with my supervisor, I still support his/her decisions.	
		I am willing to give up my goals to fulfil my supervisor's goals.	
		I am willing to sacrifice my interests to fulfil my supervisor's interests.	

3.2.2.3 TI scale

Pearce et al. (1991) developed a five-item scale, evaluated by team members, to assess the level of TI within a team. However, researchers have suggested that TI within a team should be assessed by supervisors rather than subordinates. The reason is that supervisors, being responsible for allocating team resources, have better knowledge of task characteristics (Liden, 1997). Hence, this research used the three-item scale developed by Liden et al. (1997), which was completed by group leaders. The α of the scale was 0.78.

Table 3-3: TI scale

Variable	Item	
Task interdependence (TI)	Group members work closely with each other in doing their work.	Liden et al. (1997)
	Group members frequently must coordinate their efforts with each other.	
	The way individual members perform their jobs has a significant impact on others in the group.	

3.2.2.4 TP scale

TP evaluation can be categorised into two dimensions: assessment by team leaders and appraisal by team members. Tjosvold et al. (2006) used the findings of Van et al. (2000) for the assessment dimension completed by team leaders, while drawing on the results of Alper et al. (1998) and Barker et al. (1988) for the appraisal dimension completed by team members. The six-item Leader Evaluation TP Scale and the five-item Member Evaluation Team Performance Scale were developed accordingly. This study measured TP based on the appraisal dimension completed by team members, thus adopting the five-item Member Evaluation Team Performance Scale. The data revealed a high internal consistency coefficient of 0.83 for this scale.

Table 3-4: TP scale

Variable	Item	
Team performance (TP)	Generally, team members are very satisfied with their work.	Tjosvold et al. (2006)
	Team members feel a strong commitment to their work.	
	Team members feel highly committed to their work goals.	
	The way we manage our work inspires us to better job performance.	
	All things considered, the team is highly pleased with the way it manages its work.	

3.2.3 Control variables

Due to the practical challenges inherent in implementing experimental and quasi-experimental designs, control variables are indispensable in organisational research (Bernerth and Aguinis, 2016). A thorough understanding of the rationale behind the inclusion of specific controls is critical for advancing the field. Demographic variables, such as age, gender, tenure, and education level, may influence an individual's work experience and, consequently, affect their relationship with their supervisor. For example, demographic factors can shape the dynamics between subordinates and supervisors (Zhang et al., 2009). Furthermore, research has demonstrated that demographics can impact attitudes, behaviours, and perceived outcomes (Duffy et al., 1998). According to human capital theory (Becker, 1965), certain personal characteristics, such as tenure and education level, positively influence attitudes, behaviour, and performance. Accumulated knowledge enables individuals to access better job opportunities, higher wages, additional resources necessary for successful task completion, and stronger incentives to remain within the organisation (Ng and Feldman, 2009). In this study, the control variables included enterprise nature (state-owned, private, or foreign-funded) and team size, defined as the number of employees within a team. Studies have shown that team size affects both supervisor-subordinate relationships and employee work performance (Cogliser and Schriesheim, 2000; Yu and Fu, 2016). The organisations examined in this study encompassed state-owned enterprises, private firms, and foreign-funded companies. Additionally, organisational culture influences leadership style and effectiveness. Therefore, organisation type was employed as a control variable to account for potential heterogeneity in results.

3.3 Ethics

Ethics plays a crucial role in research using both qualitative and quantitative methods (Bell et al., 2019). Ethical considerations are inherent in social research due to the collection of data from and about individuals (Punch, 2005). Ethics can be defined as “the actions taken with regard to the rights of those who are subjects or affected by one’s work” (Saunders et al., 2003, p. 129). This study received ethical approval from GUEP in November 2023 [GUEP 2023 15035 11392]. Ethics encompasses procedural ethics and practical ethics (Guillemin and Gillam, 2010). The ethics content, which included an Electronic Consent Form (see Appendix 1) and a Participant Information Sheet (see Appendix 2), was initially sent to the participants’ organisations with their consent, before being shared directly with individual participants prior to the formal study. This content covered the following aspects:

1. Background and purpose of the project: Prior to the formal study, the participants were duly informed of the researcher’s identity, affiliation, as well as the background, theme, and objectives of the research.
2. Responsibilities and potential risks: The participants had no obligation to participate in this study. Their decision to participate remained confidential within their company. If they decided to participate, they had the right to withdraw at any time without providing an explanation or facing any consequences. In such cases, data collection from these participants would cease immediately; however, any data collected prior to their withdrawal would be retained for subsequent analysis. There were no foreseeable risks associated with participating in this project and no financial or health concerns.
3. Privacy: To ensure participant confidentiality, the questionnaires were completed without disclosing their identity. Specifically, no names, contact information, and team names were requested or displayed on the questionnaire form itself. Furthermore, the researcher refrained from soliciting personal information from the participants.
4. Data security and complaint channels: All responses provided by the participants were strictly confidential and inaccessible to colleagues, supervisors, or other individuals within the

organisation. All participant data were stored anonymously for the entire retention period. During the data analysis stages, only authorised personnel, namely the researcher and their supervisor, could access anonymised questionnaire responses; however, the participants' identity remained protected due to the anonymity measures implemented in the study design. All collected data would be destroyed after a period of 10 years. The ethical approach to the project was approved by the University of Stirling's Integrated University Ethics Committee, an organisation where participants can also lodge complaints if they have concerns about the research content or process.

3.4 Summary

This chapter delves into the philosophical foundations, methodology, sampling strategy, scale development, and ethical considerations of this research. Considering the nature and objectives of this study, a positivist quantitative research approach was employed to investigate the relationships among various variables. The sample for the main study comprised state-owned enterprises, private companies, and foreign-funded enterprises in China. The variables under examination were measured using validated scales, while the control variables were selected based on prior studies in the field. Regarding ethics, this study received approval from the researcher's institutional review board, and all relevant ethical guidelines were clearly communicated to the participants and their respective Organisations before the commencement of the main study.

4 Pre-study

The pre-study was structured into two distinct stages. In the first stage, a pilot study was conducted to refine the language of the test scales and finalise the questionnaire design. The second stage involved a small-scale sample test to evaluate the reliability and validity of the scales, thereby ensuring the finalisation of the items and preparing the questionnaire for the main study.

4.1 Pilot study

The purpose of conducting a pilot study is to ensure the appropriateness and effectiveness of the research methods. The pilot study allowed the researcher to verify: a) the clarity and precision of the survey questions, specifically whether they were presented accurately, easily comprehensible, and free from ambiguity; and b) the feasibility and efficiency of the data collection procedure.

4.1.1 Scale optimisation

Although this study primarily focused on the Chinese context, some variables were assessed using Western-developed scales, necessitating translation. All scale items underwent a rigorous back-translation procedure (Brislin, 1986; Chen et al., 2018) to ensure content validity when applying these scales in a Chinese context. Specifically, to ensure scale adaptability, linguistic accuracy, and comprehensibility, five doctoral students specialising in management were invited to participate in a pilot study for scale evaluation and language refinement. Following extensive discussions between the researcher and the participants, the final measurement scales were determined, the wording of the questions was refined, and the order of the questionnaire items was finalised.

1. Language translation

The selection of measurement items directly influences the impact and credibility of a study, forming the foundational basis for successful empirical research. Furthermore, the language employed in these measurement items is crucial as it affects participants' understanding and responses, thereby influencing the accuracy of variable measurement. Chen et al. (2008) emphasised that when applying Western scales in the Chinese context, three critical factors must be considered: 1) researchers need to validate whether Western scales are applicable to data collected in the Chinese context; 2) once a specific scale is selected, all its questions should be retained without arbitrary deletion or modification; 3) researchers must ensure the quality of translation to maintain the original meaning and intent. The primary objective of a questionnaire survey is to gather external information through concise sentences that effectively capture various evaluations and perceptions.

In general, the data obtained from questionnaires reflect the specific attitudes and behaviours of individuals. In phenomenological studies focusing on social interactions, questionnaire-based information typically captures individuals' explanations and evaluations of their participation in social interactions, a concept often referred to as "methodological individualism" (Chen et al., 2008). High-context communication, a defining characteristic of Chinese cultural tradition (Hall, 1976), may constrain researchers' ability to measure certain topics in the Chinese context due to overly simplistic statements. Furthermore, interpersonal relationships in Chinese society are heavily influenced by social orientation, making it challenging to isolate and observe individual attitudes and behaviours independently. By contrast, the theoretical underpinnings of organisational psychology in Western societies prioritise individual development, independence, personal need satisfaction, and respect for individual differences. Considering the disparities in social and individual orientations across different cultural contexts, applying Western scales to discuss management phenomena in China may lead to linguistic limitations. Therefore, mere literal translation is insufficient; language expressions must be appropriately adapted to the Chinese context to ensure accurate measurement (Chen et al., 2008). Based on this understanding, modifications were made to certain measurement items. For instance, in the paternalistic leadership scale, the test item

“My supervisor disciplines me for violation of his/her principles” was modified to “My supervisor disciplines me for violation of his/her principles or orders”. In the supervisor-subordinate Guanxi (SSG) scale, the item “During holidays, my supervisor and I call or visit each other” was revised to “During holidays or festivals, my supervisor and I call or visit each other”; “I am familiar with my supervisor’s family members and have personal contact with them” was adjusted to “I am familiar with my supervisor’s family members or friends and have personal contact with some of them”.

2. Language simplification and clarification

The language of a questionnaire should be concise, precise, and unambiguous. For instance, in the subordinate-completed questionnaire, this study replaced the term “my leader” with “my immediate supervisor” to eliminate potential ambiguity arising from overlapping management roles. To align with ethical requirements, the initial questionnaire design incorporated both the Participant Information Form and the Electronic Consent Form, aiming to enhance participants’ understanding of the research context. However, feedback from two doctoral students indicated that this approach might be overly complex. They argued that the detailed content could negatively affect participants’ experience and potentially reduce their willingness to continue participation. Additionally, they recommended that the questionnaire items should increase in complexity progressively, which could improve response quality and completion rates.

After extensive discussions, the researcher and the five participants reached a consensus. In order to ensure the inclusion of all necessary information for informed consent, the researcher streamlined the content of the introductory section of the questionnaire, reorganised the order of scale measurements, and finalised the questionnaire (see Appendix 3).

4.1.2 Data collection process

To assess the validity and reliability of the scales in the questionnaire, a pre-study with a small sample was conducted prior to the main study. Additionally, another purpose of the small sample test was to investigate if there exists potential multicollinearity between variables applied in this study. The planned number of teams and individuals for the pre-study was approximately 20 and 100, respectively. Prior to administering the questionnaire, the researcher contacted eligible participants from the sample organisations and obtained their consent.

4.2 Small sample test

By collecting data on a limited scale and using SPSS 23.0 statistical software, the pre-study examined the reliability and validity of the measurement scales to identify suitable items, thus developing an effective final questionnaire for the main study. Moreover, the pre-study served to verify the rationality of the data collection process and methods while identifying areas requiring improvement.

4.2.1 Descriptive statistics of the pre-study sample

The participants in this pre-study were recruited from a private manufacturing enterprise located in Shandong Province, China. Following initial communication with the participants, 32 teams were selected to participate in the survey. To complete the survey, participants accessed the questionnaire website and selected their role as either “leader” or “member”. Upon making this selection, the system automatically redirected them to a customized response page corresponding to their chosen role. In accordance with Timmerman’s recommendation (Timmerman, 2005), this study set a minimum within-group response rate of 60% as the criterion for inclusion. Among the 32 teams, data from four teams were excluded due to compromised data integrity caused by two individuals simultaneously completing the

team leader questionnaire. Additionally, three teams were excluded because their members' response rates fell below the 60% threshold. Consequently, a total of 114 valid questionnaire pairs were collected from the remaining 25 teams. All relevant details are summarised in Table 4-1.

Table 4-1: Demographic statistics in the pre-study

Variable	Characteristic	Frequency	Percentage	Cumulative percentage
Gender	Male	59	52%	52%
	Female	55	48%	100%
	Other	0	0	100%
Age	18–25	4	3%	3%
	26–30	12	11%	14%
	31–40	48	42%	56%
	41–50	34	30%	86%
	Above 51	16	14%	100%
Tenure	Less than 1 year	12	11%	11%
	Less than 3 years	23	20%	31%
	Less than 5 years	17	15%	46%
	Less than 10 years	27	24%	70%
	More than 11 years	35	30%	100%
Education	Middle school or below	10	9%	9%
	High school	30	26%	35%
	Junior college	31	27%	62%
	Undergraduate	40	35%	97%
	Postgraduate or above	3	3%	100%
Team size	2–3	5	20%	20%
	4–5	10	40%	60%
	6–10	5	20%	80%
	11–15	4	16%	96%
	More than 16	1	4%	100%

Table 4-1 reveals that the majority of participants in the pre-study were in the 31–40 age group, or 56% of the total, and that men accounted for 52% of the participants. Regarding their educational attainment, 35% of the participants were educated at the junior high school

and senior high school levels, 27% at the junior college level, while 35% had a bachelor's degree. Only 3% had a master's degree. It is worth noting that the participants generally had a low education level due to their background in manufacturing assembly line work. In terms of work experience, 89% of the participants had been employed in their respective departments for more than 2 years. As for team size, teams with four to five members were the most common (40%), while teams with more than 16 members accounted for only a small proportion (4%). Overall, this sample distribution was deemed suitable for subsequent data analysis.

4.2.2 Reliability and validity of scales in the pre-study

The reliability and validity of the scales were rigorously evaluated and further enhanced during the pre-study phase, thereby ensuring their accuracy and dependability for use in the formal study.

1. Reliability of scales in the pre-study

Reliability refers to the degree of internal consistency when measuring constructs using a scale, and it is commonly used to assess the reliability, stability, and consistency of test results (Chen et al., 2008). In research contexts, Cronbach's α serves as the primary metric for evaluating reliability, specifically designed for Likert scales. A higher value indicates greater internal consistency, thereby reflecting better reliability of the scale. Lance et al. (2006) emphasised that both basic and applied research should aim for a Cronbach's α value exceeding 0.80, which was adopted as the threshold in this study. When validating and refining measurement items, researchers often employ the corrected item-total correlation (CITC), which measures the correlation between each individual item and the sum of all other items within the same variable. Values above 0.40 are typically recommended (Churchill, 1979). Additionally, it is crucial to compute Cronbach's α values after removing specific items; if the adjusted alpha following deletion exceeds the overall scale alpha, those items may be considered for removal.

According to the aforementioned recommendations, this study adopted the following approaches to revise the scales. Items with a CITC coefficient below 0.40 and an increase in Cronbach's α after deletion were removed. Furthermore, when a scale consists of multiple dimensions, it is crucial to evaluate both the reliability of the overall scale and that of each individual dimension independently (Wu, 2010). In this study, since the SSG scale includes second-order dimensions, its first-order and second-order dimensions were assessed separately. The reliability of all scales used in the pre-study is presented in Table 4-2.

Table 4-2: Results of the reliability analysis in the pre-study

Variable	Dimension	Item	CITC	Cronbach's α if item deleted	Cronbach's α	
APL		APL1	0.778	0.881	0.905	
		APL2	0.873	0.859		
		APL3	0.492	0.932		
		APL4	0.805	0.875		
		APL5	0.876	0.858		
BPL		BPL1	0.797	0.939	0.944	
		BPL2	0.821	0.941		
		BPL3	0.903	0.922		
		BPL4	0.892	0.922		
		BPL5	0.867	0.929		
SSG	SSGa	SSG1	0.641	0.924	0.882	0.928
		SSG2	0.555	0.927		
		SSG3	0.591	0.926		
		SSG4	0.616	0.925		
	SSGb	SSG5	0.718	0.921	0.894	
		SSG6	0.673	0.923		
		SSG7	0.809	0.917		
		SSG8	0.809	0.917		
	SSGc	SSG9	0.810	0.917	0.900	
		SSG10	0.762	0.920		
		SSG11	0.676	0.923		
		SSG12	0.703	0.922		
TP		TP1	0.595	0.961	0.923	
		TP2	0.869	0.893		
		TP3	0.890	0.888		
		TP4	0.896	0.889		
		TP5	0.853	0.896		

TI		TI1	0.653	0.798	0.828
		TI2	0.865	0.675	
		TI3	0.690	0.847	

Note: CITC = Corrected Item Total Correlation; BPL = benevolent paternalistic leadership; APL = authoritarian paternalistic leadership; TP = team performance; SSG= supervisor-subordinate Guanxi; TI = task interdependence

As presented in Table 4-2, the majority of items satisfied the measurement standards and were considered appropriate for retention. However, even after excluding a specific item, the resulting Cronbach's α remained higher than the overall α . Since these items had CITC coefficients exceeding 0.40, the dual criteria for deletion were not fulfilled simultaneously; therefore, they were retained. For example, although removing APL1 from APL led to an increase in Cronbach's α , its CITC value of 0.492 surpassed 0.40, failing to meet both conditions concurrently; hence, the item was retained. Similarly, despite an improvement in Cronbach's α following the removal of TP1 from TP, its CITC value of 0.595 substantially exceeded 0.40, justifying its retention. In conclusion, the Cronbach's α values for all variables surpassed the recommended minimum threshold of 0.70 (Nunnally, 1967), demonstrating satisfactory internal consistency across all scales.

2. Validity of scales in the pre-study

Validity refers to the extent to which a scale accurately measures the constructs being investigated, reflecting the precision and accuracy of the measurement (Chen et al., 2008). In empirical research, construct validity is often employed to evaluate the alignment between theoretical constructs and their operationalization in research design. Construct validity specifically assesses the degree to which variable measurements correspond to the definitions of theoretical constructs (Pedhazur and Schmelkin, 1991). To determine whether the scales effectively capture the intended theoretical constructs, this study utilized exploratory factor analysis (EFA) as a rigorous method for evaluation (see Table 4-3).

Table 4-3: EFA results in the pre-study

Construct	Item	Factor loading	Communality	KMO	Bartlett's test	Characteristic root	Cumulative explained variance
APL	APL1	0.863	0.745	0.825	0.000	3.625	82.976%
	APL2	0.927	0.859				
	APL3	0.615	0.379				
	APL4	0.883	0.779				
	APL5	0.929	0.863				
BPL	BPL1	0.864	0.747	0.873	0.000	4.148	82.955%
	BPL2	0.883	0.780				
	BPL3	0.942	0.888				
	BPL4	0.939	0.881				
	BPL5	0.923	0.851				
SSG	SSG1	0.933	0.913	0.885	0.000	2.230	74.330%
	SSG2	0.905	0.835				
	SSG3	0.915	0.863				
	SSG4	0.505	0.474				
	SSG5	0.824	0.702				
	SSG6	0.728	0.677				
	SSG7	0.782	0.739				
	SSG8	0.814	0.756				
	SSG9	0.760	0.740				
	SSG10	0.764	0.690				
	SSG11	0.864	0.749				
	SSG12	0.855	0.741				
TP	TP1	0.702	0.493	0.806	0.000	4.009	80.081%
	TP2	0.929	0.863				
	TP3	0.945	0.894				
	TP4	0.951	0.905				
	TP5	0.924	0.854				
TI	TI1	0.855	0.732	0.638	0.000	2.382	79.411%
	TI2	0.949	0.900				
	TI3	0.867	0.751				

Note: BPL = benevolent paternalistic leadership; APL = authoritarian paternalistic leadership; TP = team performance; SSG= supervisor-subordinate Guanxi; TI = task interdependence

According to Kaiser' s suggestion, the KMO value should not be less than 0.6, and all communality values should exceed 0.4 (Kaiser, 1974). As shown in Table 4-3, the majority of scale items satisfied the established measurement criteria and could thus be retained. However, one item (APL3) exhibited a communality value below 0.4, indicating insufficient

representation of variance. Therefore, this item was excluded from further analysis. Following its removal, the APL scale was re-assessed and confirmed to meet the required measurement standards. Moreover, each construct within the secondary dimension of SSG was evaluated independently, with all indices fulfilling the specified requirements.

4.2.3 Test of multicollinearity between variables

The simplest method to detect multicollinearity is by calculating the simple linear correlation coefficient between explanatory variables, which can identify multicollinearity between two explanatory variables (Hair et al., 1998). While this approach is straightforward and intuitive as it directly examines pairwise relationships, its reliability for drawing definitive conclusions is limited because it only considers bivariate correlations. In other words, a high correlation coefficient suggests the presence of multicollinearity, but a low coefficient does not necessarily indicate its absence. The variance inflation factor (VIF) test, initially proposed by Marquardt (1970), provides a more comprehensive measure of multicollinearity. A higher VIF value indicates that a variable is strongly correlated with other independent variables. Empirical studies have demonstrated that when $VIF_j \geq 10$, severe multicollinearity exists among explanatory variables, which can significantly affect least squares estimates (Jonston and Dinardo, 1997).

Table 4-4: Collinearity diagnostics

	Pearson correlation coefficient						Collinearity diagnostics
	Mean	SD	BPL	APL	TP	SSG	VIF
BPL	5.180	0.889	1				2.367
APL	4.068	1.292	0.325**	1			2.657
SSG	4.255	1.103	0.590**	0.773**	1		3.649
TP	5.299	0.815	0.655**	0.214*	0.396**	1	1.753

Note: N = 114. * $p < 0.05$; ** $p < 0.01$ (two-tailed tests). BPL = benevolent paternalistic leadership; APL = authoritarian paternalistic leadership; TP = team performance; SSG = supervisor–subordinate Guanxi.

As shown in Table 4-4, the correlation coefficients between variables were all below 0.8. Moreover, all variables had VIF values below 5, indicating the absence of multicollinearity.

4.3 Problems found and improvement measures

In the pre-study, several issues were identified concerning data collection, questionnaire design, and the validity and reliability of the scales. During the analysis of the collected data, it was determined that data from four teams were unusable because two participants in each team had completed the leadership questionnaire. This duplication made it impossible to effectively measure the relationship between supervisors and subordinates. Further investigation revealed that these teams had multiple leaders, which led to confusion among participants regarding who should complete the leadership questionnaire. Given that this study focused on subordinates' evaluations of their supervisors' leadership styles and the dynamics of their relationships, teams with multiple leaders could not provide accurate assessments of these aspects. Therefore, as part of the inclusion criteria for the main study, only teams with a single leader were included. Additionally, the ethics section of the questionnaire was found to be excessively lengthy and time-consuming, negatively impacting participants' experience and willingness to continue answering questions. To address this issue, in the main study, the detailed ethical content was sent separately through the WeChat groups of the participants' organisations, while the questionnaire itself included only a concise ethical explanation. This strategy aimed to minimise participants' reading time and enhance their motivation to complete the questionnaire.

The pre-study recruited 114 participants from 25 teams, achieving a 100% response rate among supervisors and a 76% response rate among subordinates, to evaluate the reliability and validity of the variables. Most measurement items in the scales demonstrated satisfactory reliability and validity based on established criteria. During the validity assessment, one item from the five-item APL scale, specifically "My direct supervisor is very strict with me", exhibited a communality value of 0.379, which fell below the acceptable threshold of 0.4. As a result, this item was excluded from further analysis to ensure that the APL scale met the required measurement standards. Regarding reliability, although this particular item technically satisfied the retention criteria defined in this study, its removal led to an increase in Cronbach's α from 0.905 to 0.932 for the overall scale, thereby providing robust justification for its exclusion. In conclusion, after refining the measurement items of the

variables, the study scales achieved excellent reliability and validity, making them suitable for use in the main study.

4.4 Summary and conclusions

This chapter presents the results of the pre-study, which consisted of a pilot study and a small sample test. In the pilot study, the researcher conducted in-depth discussions with five doctoral students concerning the content validity of the scales, their translation accuracy, the logical order of the questionnaire items, and the feasibility of the data collection process. During the small sample test, the researcher evaluated the reliability and validity of all scales and gathered feedback from participants. The findings revealed that most scales used in this study demonstrated high levels of reliability and validity. However, one item in the APL scale failed to meet the required validity criteria and was consequently removed, leading to a significant improvement in the scale's reliability and validity. As a result, in the main study, a refined four-item APL scale, excluding the problematic item, was employed for measurement, while other variables remained unchanged. Further discussions with participants highlighted the existence of teams with multiple leaders, which were excluded in the main study to maintain the integrity of validity testing. Additionally, some participants noted the excessive length of the ethical explanations provided in the study. Based on this feedback, the questionnaire was revised to produce a more concise version that was utilised in the main study.

5 Main study

The primary objective of the main study was to prepare the data for the hypothesis tests reported in the subsequent chapter. This section first outlines the sampling procedure and data collection process, then details the results of a series of tests that validate the effectiveness of the data. These tests include assessments of scale reliability and validity, common method variance (CMV), convergent validity, and confirmatory factor analysis (CFA). Additionally, the descriptive statistics of the data are provided to support the subsequent hypothesis testing.

5.1 Sampling procedure and data collection

This study employed a mixed methods approach for sample selection, following a two-phase procedure. In the first phase, the researcher established a sampling pool by utilizing existing networks and then applied stratified sampling by selecting a few companies from each enterprise category (state-owned, private, and foreign-funded). Ultimately, eight enterprises across three provinces in eastern China were chosen as research subjects. These enterprises operate in the manufacturing, financial services, and trade industries and consist of three state-owned enterprises, two foreign-funded enterprises, and three private enterprises. The researchers contacted either the human resources department or the head of each company via field visits or phone calls to verify whether their team types met the inclusion criteria and to secure permission to conduct the survey.

The second stage involved systematic random sampling within the enterprises. Enterprises are stratified based on their nature, and an allocation plan is developed in conjunction with the number of teams within each enterprise. Random sampling is performed by distributing the proportion among enterprises according to the target sampling quantity while considering the response rate. The sampling procedure is outlined as follows: The human resources department of each sampled Organisation provided a list of teams involved in the sampling who met the inclusion criteria. The questionnaire survey was subsequently conducted anonymously via an online platform. Given that all of the participants were

Chinese, the questionnaire was provided in Mandarin Chinese. Each participant received a detailed explanation of ethical considerations prior to completing the questionnaire, discussing voluntary participation and the strict confidentiality measures implemented to protect their personal information. Additionally, each participant was assigned a unique identification number to ensure anonymity while ensuring a proper match between subordinates and supervisors. This study focused on team leaders and members as research subjects. To mitigate CMV and alleviate the psychological pressure on team leaders and employees when responding simultaneously, this study used separate data collection sources for team leaders and team members and conducted two surveys. The first survey assessed team members' personal background information, team background information, leader behaviour, and team performance (TP). The second survey was administered 1 month later to the team leaders and focused on their personal background information, team background information, and task interdependence (TI).

After a 3-month data collection period, a total of 942 questionnaires from 134 teams were obtained (with a response rate of 92% for supervisors and 77% for subordinates). Following Harrison and Klein's (2007) recommendations to ensure high reliability of group-level constructs, it was necessary to have an adequate number of survey participants. The present study followed the procedures outlined in previous works (e.g., Liden et al., 2006; Ma and Qu, 2010) and excluded data from 19 teams involving 174 individuals where the response rate was less than 60%. Of the remaining participants, a few team leaders (11) did not answer the questionnaire, leading to the invalidation of their followers' data (92), so the researcher had to discard their data from the analyses. As a result, the final sample size for the main study consisted of 104 teams, in which 572 subordinates were nested under 104 supervisors.

5.2 Descriptive statistics

Table 5-1: Demographic characteristics of the variables in the main study

Variable	Item	Frequency	Percentage	Cumulative percentage
Leader gender	Male	76	73%	73%
	Female	28	27%	100%
	Other	0	0%	100%
Leader age	18–25	0	0%	0%
	26–30	4	4%	4%
	31–40	55	53%	57%
	41–50	29	28%	85%
	Above 51	16	15%	100%
Leader tenure	Less than 1 year	11	11%	11%
	Less than 3 years	31	30%	41%
	Less than 5 years	18	17%	58%
	Less than 10 years	25	24%	82%
	More than 11 years	19	18%	100%
Education level of leader	Middle school or below	2	2%	2%
	High school	27	26%	28%
	Junior college	26	25%	53%
	Undergraduate	45	43%	96%
	Postgraduate or above	4	4%	100%
Member gender	Male	302	53%	53%
	Female	270	47%	100%
	Other	0	0%	100%
Member age	18–25	37	6%	6%
	26–30	86	15%	21%
	31–40	254	45%	66%
	41–50	138	24%	90%
	Above 51	57	10%	100%
Member tenure	Less than 1 year	92	16%	16%
	Less than 3 years	145	25%	41%
	Less than 5 years	93	17%	58%
	Less than 10 years	97	17%	75%
	More than 11 years	145	25%	100%
Education level of member	Middle school or below	82	14%	14%
	High school	166	29%	43%
	Junior college	173	30%	73%
	Undergraduate	143	25%	98%
	Postgraduate or above	8	2%	100%
Team size	2–3	15	14%	14%
	4–5	24	23%	37%
	6–10	40	39%	76%
	11–15	11	11%	87%
	More than 16	14	13%	100%

Enterprise nature	State-owned	46	44%	44%
	Private	25	24%	68%
	Foreign-funded	33	32%	100%

The average team size was 5.5 members, as indicated in Table 5-1, fulfilling the criteria for team-level measurement. Among the team members, 53% were male, with an average age ranging between 30 and 40 years. The average tenure of the current teams was 4 – 5 years, and 84% had served for more than 2 years, satisfying the validity requirements for measuring supervisor-subordinate Guanxi (SSG) in this study. In terms of educational background, 43% of the team members completed middle school or high school, while 30% held junior college degrees and 27% held undergraduate degrees. This study focused on core teams within mainstream industries in China. Although the overall educational level may appear relatively low, it aligns with China's current educational landscape and is consistent with the research objectives. Among the team leaders, approximately 73% were male, with an average age between 31 and 40 years, and their mean tenure in their respective teams was approximately 4 – 5 years, meeting the study's requirements for assessing team maturity. Regarding supervisors' education levels, 47% held at least an undergraduate degree, while 25% held junior college degrees. The educational attainment of team leaders generally exceeded that of team members. In the sample, state-owned enterprises accounted for 44%, private enterprises for 24%, and foreign-funded enterprises for 32%. Overall, the sample distribution was appropriate for subsequent data analysis.

5.3 Reliability and validity analysis

The reliability and validity of each variable in the main study were evaluated by referencing the findings from the pre-study. Specifically, APL was assessed using four items, BPL with five items, SSG with twelve items (including three sub-dimension items), TP with five items, and TI with three items.

5.3.1 Reliability analysis

Table 5-2: Results of the reliability analysis in the main study

Variable	Dimension	Item	CITC	Cronbach's α if item deleted	Cronbach's α	
APL		APL1	0.616	0.895	0.881	
		APL2	0.798	0.825		
		APL4	0.790	0.828		
		APL5	0.769	0.836		
BPL		BPL1	0.816	0.892	0.916	
		BPL2	0.685	0.934		
		BPL3	0.838	0.888		
		BPL4	0.845	0.886		
		BPL5	0.833	0.889		
SSG	SSGa	SSG1	0.462	0.869	0.837	0.873
		SSG2	0.485	0.868		
		SSG3	0.511	0.866		
		SSG4	0.535	0.865		
	SSGb	SSG5	0.473	0.869	0.820	
		SSG6	0.618	0.860		
		SSG7	0.612	0.860		
		SSG8	0.606	0.860		
	SSGc	SSG9	0.637	0.858	0.848	
		SSG10	0.580	0.863		
		SSG11	0.618	0.859		
		SSG12	0.618	0.860		
TP		TP1	0.690	0.923	0.919	
		TP2	0.784	0.903		
		TP3	0.838	0.893		
		TP4	0.851	0.888		
		TP5	0.820	0.895		
TI		TI1	0.728	0.692	0.819	
		TI2	0.624	0.803		
		TI3	0.677	0.753		

Note: The sample size for APL, BPL, SSG, and TP was 572, while that of TI was 104.

BPL = benevolent paternalistic leadership; APL = authoritarian paternalistic leadership; TP = team performance.

SSG= supervisor-subordinate Guanxi; TI = task interdependence

As shown in Table 5-2, all variables exhibited a reliability coefficient (t) exceeding 0.8, which signifies a high level of data reliability. Regarding “Cronbach’s α if item deleted”, no substantial increase in the reliability coefficient was observed following item deletion, leading

to the retention of all items. Additionally, the CITC values for the analysed items were above 0.4, indicating a robust correlation and commendable reliability among these items. Overall, the results demonstrate that the dataset possesses high reliability and is suitable for subsequent analyses.

5.3.2 Validity analysis

This research employed EFA to assess the validity of each variable, and the results are shown in Table 5-3.

Table 5-3: EFA results in the main study

Variab le	Factor	Factor loading	Commun ality	KMO	Bartlett's test	Characteris tic root	Cumulative explained variance
APL	APL1	0.764	0.584	0.766	0.000	2.959	77.983%
	APL2	0.892	0.796				
	APL4	0.895	0.801				
	APL5	0.882	0.778				
BPL	BPL1	0.882	0.778	0.884	0.000	3.885	77.700%
	BPL2	0.784	0.615				
	BPL3	0.910	0.828				
	BPL4	0.915	0.838				
	BPL5	0.909	0.826				
SSG	SSG1 (D1)	0.817	0.681	0.862	0.000	3.070	69.551%
	SSG2 (D1)	0.830	0.705				
	SSG3 (D1)	0.820	0.706				
	SSG4 (D1)	0.694	0.562				
	SSG5 (D2)	0.755	0.649				
	SSG6 (D2)	0.577	0.642				
	SSG7 (D2)	0.818	0.747				
	SSG8 (D2)	0.860	0.809				
	SSG9 (D3)	0.746	0.672				
	SSG10(D3)	0.718	0.649				
	SSG11(D3)	0.838	0.786				
	SSG12(D3)	0.802	0.738				
	TP1	0.789	0.622				
	TP2	0.871	0.758				

TP	TP3	0.906	0.821	0.866	0.000	3.820	76.402%
	TP4	0.910	0.828				
	TP5	0.889	0.791				
TI	TI1	0.891	0.794	0.701	0.000	2.213	73.768%
	TI2	0.823	0.678				
	TI3	0.861	0.741				

Note: The sample size for APL, BPL, SSG, and TP was 572, while that of TI was 104.

BPL = benevolent paternalistic leadership; APL = authoritarian paternalistic leadership; TP = team performance.

SSG= supervisor-subordinate Guanxi; TI = task interdependence

Validity analysis was conducted to evaluate the rationality of the quantitative data design, with particular emphasis on the attitude scale questions. As presented in Table 5-3, all measurement items across variables demonstrated factor loading coefficients with absolute values exceeding 0.4, which signifies a strong association between the items and their corresponding factors. Moreover, the communality values for all measurement items were greater than 0.4, validating the effective extraction of item information. Additionally, the KMO value exceeded 0.6, ensuring adequate sampling adequacy and efficient data extraction. The cumulative explained variance ratio after factor rotation for all scales surpassed 60%, indicating successful extraction of relevant information. Since SSG incorporated sub-dimensions, each construct within these dimensions was measured independently and satisfied the required standard indicators.

In conclusion, the reliability and validity of each variable were evaluated using data obtained from the sample of the main study, which comprised 104 team leaders and 572 team members. The findings indicated that all variables achieved acceptable levels of reliability and validity, thereby establishing a solid basis for subsequent analyses.

5.4 CMV

The questionnaire survey in this study used anonymous responses, thereby mitigating consistency and leniency bias among the participants. However, although TI was evaluated by department leaders, paternalistic leadership, SSG, and TP were all self-reported by employees. Consequently, this approach could not entirely eliminate common method bias. To address potential homology bias in the data, this study employed Harman's one-factor test to examine

the presence of common method bias in the measurement results. The results indicated that the unrotated first factor accounted for 35.928% of the variance, which is below the critical threshold of 40% (see Table 5-4). This suggests that there was no significant issue related to common method bias in this study, allowing further analysis to proceed.

Table 5-4: CMV results

Total variance interpretation						
Comp onent	Initial eigenvalue			Sums of squared loadings		
	Total	Variance percentage (%)	Cumulative percentage (%)	Total	Variance percentage (%)	Cumulative percentage (%)
1	9.341	35.928	35.928	9.341	35.928	35.928
2	5.042	19.392	55.320	5.042	19.392	55.320
3	1.637	6.298	61.617	1.637	6.298	61.617
4	1.314	5.055	66.673	1.314	5.055	66.673
5	1.178	4.530	71.203	1.178	4.530	71.203
6	.784	3.017	74.220			
7	.658	2.531	76.751			
8	.593	2.281	79.032			
9	.557	2.143	81.175			
10	.479	1.842	83.017			
11	.475	1.828	84.845			
12	.440	1.694	86.539			
13	.388	1.493	88.033			
14	.375	1.444	89.477			
15	.344	1.323	90.800			
16	.320	1.229	92.029			
17	.290	1.117	93.146			
18	.271	1.042	94.188			
19	.250	.961	95.149			
20	.240	.924	96.072			
21	.229	.881	96.953			
22	.177	.679	97.632			
23	.172	.663	98.295			
24	.158	.608	98.903			
25	.151	.582	99.485			
26	.134	.515	100.000			

Note: Extraction method: principal component analysis.

5.5 Convergence tests

This study focused primarily on the team level, except for TI, which was directly derived from team-level survey data. All other variables originated from individual-level data and required aggregation to the team level. Within-group interrater reliability (R_{wg}) and intra-class correlation (ICC) analyses were used to evaluate the methodological soundness of the quantitative data, particularly the attitude scale items. The $R_{wg(j)}$ index serves as a metric used to assess agreement among raters and is widely employed to evaluate the suitability of data aggregation at higher levels of analysis (James et al., 1984, 1993). A lower value of $R_{wg(j)}$ indicates that raters within a group hold differing opinions or perceptions regarding a construct. ICC values were used to assess the properties of data at the group level, such as the ratio of between-group variance to total variance (i.e., $ICC(1)$) and the reliability of group means (i.e., $ICC(2)$). Specifically, the $ICC(1)$ coefficient estimates the proportion of variation in an individual's response attributable to group membership, reflecting the extent to which a measure varies between groups rather than within them. Conversely, the $ICC(2)$ coefficient evaluates the consistency and reliability of average scores across groups in a sample (Bliese, 2000; James et al., 1993, 1984). Dansereau and colleagues suggested that a single R_{wg} indicator may not provide sufficient evidence to determine whether individual samples are aggregable. Therefore, a comprehensive evaluation must also be conducted in conjunction with $ICC(1)$ and $ICC(2)$ (Dansereau et al., 1995). This study incorporates the recommendations proposed by the aforementioned scholars.

1. R_{wg} test

The $R_{wg(j)}$ test method proposed by James et al. (1984) was employed in this study. Using SPSS 23.0 software, this research first computed the $R_{wg(j)}$ score of each variable to be merged for each team and then determined the R_{wg} value for all teams. The calculation formula is as follows:

$$Rwg(j) = \frac{j \left[1 - \left(\frac{\overline{S_{xj}^2}}{\sigma_{EU}^2} \right) \right]}{j \left[1 - \left(\frac{\overline{S_{xj}^2}}{\sigma_{EU}^2} \right) \right] + \left(\frac{\overline{S_{xj}^2}}{\sigma_{EU}^2} \right)}$$

According to the criteria established by James et al. (1984), the $R_{wg}(j)$ value of 0.70 or greater indicates sufficient intra-group consistency among team members' ratings, enabling aggregation at the team level for analysis. However, as LeBreton and Senter (2008) pointed out, there is insufficient justification for this threshold. They used the leader-member exchange (LMX) scale as an example to illustrate that in certain cases, leaders may have different true scores on measures of trust and support depending on whether they are rated by in-group or out-group members (LeBreton & Senter, 2008). The R_{wg} test results revealed that the $R_{wg}(j)$ values for TP, APL, BPL, and SSG were 0.840, 0.807, 0.785, and 0.543, respectively. Given that the SSG scale evaluates the supervisor-subordinate relationship, the moderate consistency ($R_{wg} > 0.5$) can be considered acceptable based on the aforementioned discussion.

2. ICC test

This study calculated the ICC coefficient by SPSS 23.0 software. The calculation formula was as follows:

$$ICC(1) = \frac{MSB - MSW}{MSB + [(k - 1) * MSW]}$$

$$ICC(2) = \frac{MSB - MSW}{MSB}$$

where MSB is the mean square between groups and MSW is the mean square within groups.

Table 5-5: ICC results

Variable	<i>ICC(1)</i>	<i>ICC(2)</i>
TP	0.686	0.916
APL	0.635	0.874
BPL	0.658	0.906
SSG	0.258	0.807

Note: BPL = benevolent paternalistic leadership; APL = authoritarian paternalistic leadership; TP = team performance; SSG= supervisor-subordinate Guanxi; *ICC(1)* = Within-group correlation; *ICC(2)* = Intercorrelation.

James (1982) recommended an *ICC(1)* value of 0.12, and Glick (1985) recommended an *ICC(2)* cutoff of 0.60. It can be observed from Table 5-5 that the results of the *ICC* tests in this study are consistent with the standards proposed by the aforementioned scholars. In conjunction with the R_{wg} tests discussed earlier, it can be concluded that the samples in this study satisfy the criteria for aggregation from the individual level to the team level.

5.6 CFA

This study conducted model fit tests using CFA. The measurement indexes include the Chi-square statistic (χ^2), CFI, IFI, RMSEA, and SRMR. The criteria for satisfactory model fit are as follows: CFI and IFI should exceed the minimum threshold of 0.90 (Bentler and Bonett, 1980), while RMSEA and SRMR should not exceed the maximum threshold of 0.08 (Hu and Bentler, 1999). Additionally, χ^2/df was chosen as a parsimonious fit index, with a recommended upper limit of 4 (Bentler and Bonett, 1980).

This study incorporates five primary variables, specifically APL, BPL, SSG differentiation, TP, and TI. The hypothesised model functions as the theoretical framework for this study, wherein these five variables were assessed individually as independent factors. Given the potential similarity in measuring leadership behaviour, Model 1 integrated APL and BPL into a single factor, resulting in a four-factor structure; Model 2 consolidated APL, BPL, and SSG differentiation into one factor, forming a three-factor structure; Model 3 merged APL, BPL, SSG differentiation, and TP into one factor, creating a two-factor structure; and Model 4 unified all variables into a single factor. The analysis results are displayed in Table 5-6.

Table 5-6: CFA results

Model	Common index	χ^2	df	p	χ^2/df	RMSEA	CFI	TLI	SRMR
	Criterion	-	-	> 0.05	< 4	< 0.8	> 0.9	> 0.9	< 0.8
Hypothesised model	Five-factor	233.360	160	0.000	1.458	0.067	0.961	0.954	0.071
Model 1	Four-factor	570.327	164	0.000	3.478	0.155	0.787	0.753	0.137
Model 2	Three-factor	596.211	167	0.000	3.570	0.158	0.775	0.744	0.142
Model 3	Two-factor	701.417	169	0.000	4.150	0.175	0.720	0.686	0.155
Model 4	One-factor	875.628	170	0.000	5.151	0.201	0.629	0.586	0.158

Note: Hypothesised model = APL, BPL, SSG differentiation, TP, TI; Model 1 = (APL+BPL), SSG differentiation, TP, TI; Model 2 = (APL+BPL+SSG differentiation), TP, TI; Model 3 = (APL+BPL+SSG differentiation+TP), TI; Model 4 = (APL+BPL+SSG differentiation+TP+TI); BPL = benevolent paternalistic leadership; APL = authoritarian paternalistic leadership; TP = team performance; SSG= supervisor-subordinate Guanxi; TI = task interdependence; RMSEA= Root mean square error of approximation; SRMR= Standardised root mean square residual; CFI= Comparative fit index; TLI= Tucker-Lewis index.

The data in Table 5-6 reveals that, when compared with the alternative models, the five-factor model fits the data better. Moreover, the χ^2/df value of the hypothesised model was less than 4, while its CFI and TLI exceeded 0.90. Additionally, its RMSEA and SRMR values were below 0.08, meeting the main CFA criteria. Therefore, the hypothesised model proposed in this study has discriminant validity and significantly outperforms the other models, thus warranting further analysis.

5.7 Descriptive statistical results

The mean value, standard deviation, and correlation coefficient of each variable are presented in Table 5-7. There is a correlation coefficient less than 0.8 between all variables, indicating the absence of multicollinearity. APL exhibited a significant negative correlation with TP ($r = -0.273, p < 0.01$), while it exhibited a significant positive correlation with SSG ($r = 0.398, p < 0.01$) and SSG differentiation ($r = 0.359, p < 0.01$). Similarly, SSG differentiation exhibited a significant negative correlation with TP ($r = -0.296, p < 0.01$),

while TI exhibited a significant positive correlation with SSG differentiation ($r = 0.266, p < 0.01$). Notably, BPL was significantly positively correlated with TP ($r = 0.215, p < 0.01$) and SSG ($r = 0.571, p < 0.01$), and negatively correlated with SSG differentiation ($r = -0.308, p < 0.01$). These descriptive statistical results were in line with the theoretical expectations of this study, providing an initial basis for subsequent hypothesis testing.

Table 5-7: Descriptive statistics and correlations

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
Leader Gender(1)	0.731	0.446	1												
Leader Age(2)	3.548	0.799	0.064	1											
Leader Tenure(3)	3.096	1.304	0.062	0.452**	1										
Leader Education(4)	3.212	0.942	0.091	-0.517**	-0.270**	1									
Team Size(5)	2.856	1.202	0.162	0.275**	0.294**	-0.153	1								
Organisation1(6)	0.240	0.429	0.139	-0.133	-0.267**	0.089	-0.271**	1							
Organisation2(7)	0.327	0.471	-0.085	-0.094	0.027	0.040	0.084	-0.392**	1						
TP(8)	5.235	0.485	0.145	0.023	0.105	-0.044	-0.080	0.178	-0.244*	1					
APL(9)	3.247	0.878	0.091	-0.006	0.092	-0.060	0.109	-0.177	0.100	-0.273**	1				
BPL(10)	5.079	0.573	0.156	-0.030	0.015	0.022	-0.102	0.166	-0.293**	0.798**	-0.229*	1			
SSG(11)	3.949	0.643	0.152	-0.049	0.108	-0.067	-0.022	-0.012	-0.115	0.410**	0.398**	0.571**	1		
SSG Differentiation(12)	0.674	0.359	-0.043	-0.154	0.120	0.063	0.016	-0.155	0.202*	-0.296**	0.359**	-0.308**	0.015	1	
TI(13)	5.054	0.778	0.136	-0.044	0.200*	0.015	0.092	-0.273**	0.031	0.215*	0.048	0.260**	0.266**	0.076	1

Note: N = 104. * $p < 0.05$; ** $p < 0.01$ (two-tailed tests). BPL = benevolent paternalistic leadership; APL = authoritarian paternalistic leadership; SSG= supervisor-subordinate Guanxi; Leader Gender (1 = male, 2 = female, 3 = other); Leader Age (1 = 18–25, 2 = 26–30, 3 = 31–40, 4 = 41–50, 5 = 51 and above); Leader Tenure (in years) = (1 = less than 1, 2 = less than 3, 3 = less than 5, 4 = less than 10, 5 = more than 11); Leader Education (1 = middle school or below, 2 = high school, 3 = junior college, 4 = undergraduate, 5 = postgraduate or above); Team Size (1 = 2–3, 2 = 4–5, 3 = 6–10, 4 = 11–15, 5 = 16 or more).

5.8 Summary

This chapter first details the sample and data, followed by an examination of data reliability, validity, common method bias, and convergent indicators, thereby confirming that the main study's data met the research requirements. The CFA results indicated that all of the indicators of the hypothesised model satisfied the validity criteria. Additionally, the descriptive statistical results of the data demonstrated that the correlations between various variables aligned with the expected results. Consequently, the data from the main study were suitable for subsequent hypothesis testing.

6 Hypothesis testing

This chapter examines the hypotheses proposed in this study. All variables, except for the control variables, were standardised prior to hypothesis testing to mitigate multicollinearity. Additionally, the variables involving squared terms were computed from the centralised data. SPSS 23.0 and Mplus 8.3 were used for data analysis.

6.1 Main effect test: Influence of paternalistic leadership on TP

Based on relevant theoretical research, this study examined the correlation between two dimensions of paternalistic leadership, which are authoritarian paternalistic leadership (APL) and benevolent paternalistic leadership (BPL), and team performance (TP). Specifically, it was hypothesised that APL would exhibit a U-shaped relationship with TP, while BPL would demonstrate an inverted U-shaped relationship with TP. To validate hypotheses H1a and H1b, this study developed a multilayer linear regression model, incorporating demographic and team characteristics as control variables. Hierarchical regression analysis was performed, using APL, BPL, and their quadratic terms as independent variables, with TP serving as the dependent variable. As presented in Table 6-1, the findings from Model 1 revealed that none of the control variables significantly influenced TP. However, upon adding APL to Model 1, a significant change in the F-value emerged ($p < 0.05$). Notably, the regression coefficient of APL (-0.151) was statistically significant ($t = -2.860$; $p < 0.01$), indicating that APL exerted a significant negative effect on TP. When the quadratic term of APL was added to Model 3 based on Model 2, a significant change in the F-value was observed ($p < 0.05$). Moreover, the R-squared value increased from 0.182 to 0.218, suggesting that the quadratic term of APL accounted for an additional 3.6% of the variance in TP. Specifically, regarding H1a, the regression coefficient for the quadratic term of APL was positive at 0.087 and statistically significant ($t = 2.080$, $p < 0.05$), indicating that the squared term of APL had a significant positive effect on TP. Consequently, it can be concluded that APL exhibited a U-shaped relationship with TP, supporting H1a (see Figure 6-1). As authoritarian tendencies increase, the negative impact of APL on TP gradually intensifies. However, once the leader's

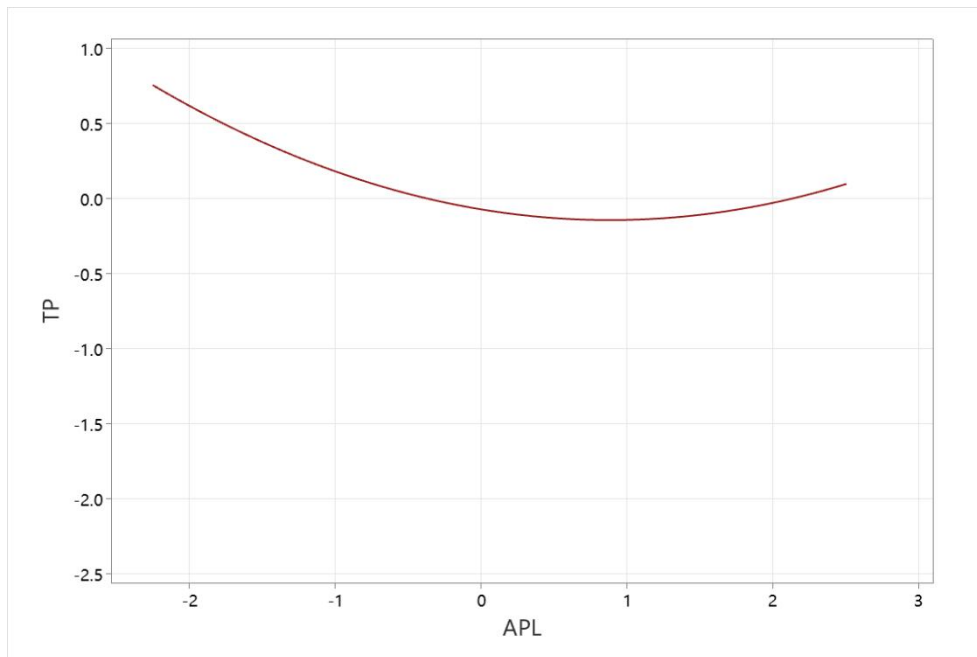
authoritarianism reaches a certain threshold, this adverse effect peaks and subsequently diminishes, eventually exerting a positive influence on team performance.

Table 6-1: Results of nonlinear relationship tests

	TP				
	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	0.119 (0.300)	0.185 (0.484)	-0.033 (-0.084)	-0.030 (-0.121)	-0.036 (-0.141)
Leader Gender1	0.143 (1.301)	0.179 (1.680)	0.157 (1.494)	0.016 (0.236)	0.017 (0.246)
Leader Age(2)	-0.046 (-0.606)	-0.066 (-0.899)	-0.055 (-0.765)	-0.008 (-0.159)	-0.007 (-0.156)
Leader Tenure(3)	0.065 (1.553)	0.071 (1.747)	0.081* (2.015)	0.041 (1.566)	0.042 (1.564)
Leader Education(4)	-0.033 (-0.565)	-0.047 (-0.829)	-0.028 (-0.489)	-0.026 (-0.710)	-0.026 (-0.712)
Team Size(5)	-0.040 (-0.931)	-0.035 (-0.844)	-0.027 (-0.665)	-0.008 (-0.296)	-0.007 (-0.256)
Organisation1(6)	0.112 (0.876)	0.062 (0.500)	0.090 (0.731)	0.090 (1.126)	0.091 (1.125)
Organisation2(7)	-0.201 (-1.843)	-0.191 (-1.816)	-0.167 (-1.598)	0.018 (0.260)	0.018 (0.257)
APL		-0.151** (-2.860)	-0.161** (-3.081)		
APL*APL			0.087* (2.080)		
BPL				0.664** (12.193)	0.669** (10.374)
BPL*BPL					0.006 (0.146)
R²	0.112	0.182	0.218	0.654	0.654
Adj R²	0.047	0.113	0.143	0.625	0.621
F	F(7, 96) = 1.726, p = 0.112	F(8,95) = 2.646, p = 0.012	F(9, 94) = 2.915, p = 0.004	F(8, 95) = 22.416, p = 0.000	F(9, 94) = 19.722, p = 0.000

Note: Dependent variable = TP; N = 104. * $p < 0.05$; ** $p < 0.01$ (two-tailed tests). BPL = benevolent paternalistic leadership; APL = authoritarian paternalistic leadership; TP = team performance; Leader Gender (1 = male, 2 = female, 3 = other); Leader Age (1 = 18–25, 2 = 26–30, 3 = 31–40, 4 = 41–50, 5 = 51 and above); Leader Tenure (in years) = (1 = less than 1, 2 = less than 3, 3 = less than 5, 4 = less than 10, 5 = more than 11); Leader Education (1 = middle school or below, 2 = high school, 3 = junior college, 4 = undergraduate, 5 = postgraduate or above); Team Size (1 = 2–3, 2 = 4–5, 3 = 6–10, 4 = 11–15, 5 = 16 or more).

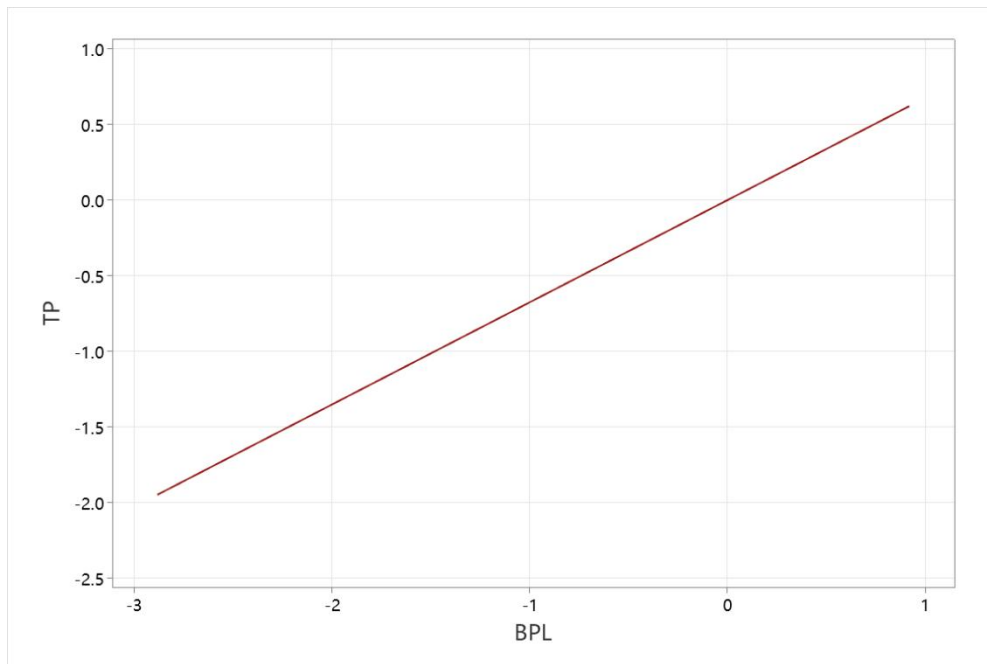
Figure 6-1: The U-shaped relationship between APL and TP



Note: APL = authoritarian paternalistic leadership; TP = team performance.

After incorporating BPL into Model 4 based on Model 1, the change in F-value was statistically significant ($p < 0.05$), indicating that BPL contributed explanatory power to the model. Furthermore, the R-squared value increased from 0.112 to 0.654, suggesting that BPL explained approximately 54.2% of the variance in TP. Specifically, the regression coefficient of BPL was 0.664 and was statistically significant ($t = 12.193, p < 0.01$), implying a strong positive relationship between BPL and TP. After adding the quadratic term of BPL to Model 5 based on Model 4, there was no significant change in either the R-squared or the F-value.

Figure 6-2: The linear relationship between BPL and TP



Note: BPL = benevolent paternalistic leadership; TP = team performance.

6.2 Test of the moderating effect of task interdependence (TI) on the relationship between paternalistic leadership and TP

Based on relevant theoretical studies, this study hypothesised that TI moderates the nonlinear relationship between paternalistic leadership and TP. A simple multilevel linear regression model is insufficient to examine whether the nonlinear relationship between paternalistic leadership and TP differs significantly at different levels of TI. Therefore, following hierarchical regression analysis, this research employed Mplus 8.3 to investigate the relationship between the independent and dependent variables across varying levels of TI. Given that H1b was not supported, it was not feasible to confirm the moderating role of TI in the nonlinear relationship between BPL and TP, nor could H2b be validated. In this section, the study focused on examining the moderating role of TI in the relationship between APL and TP.

Table 6-2: Moderating role of TI between APL and TP

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	0.119 (0.300)	0.185 (0.484)	0.127 (0.339)	0.189 (0.506)	0.021 (0.056)	-0.001 (-0.002)
Leader Gender1	0.143 (1.301)	0.179 (1.680)	0.134 (1.264)	0.148 (1.412)	0.136 (1.298)	0.163 (1.581)
Leader Age(2)	-0.046 (-0.606)	-0.066 (-0.899)	-0.037 (-0.511)	-0.060 (-0.829)	-0.054 (-0.744)	-0.054 (-0.757)
Leader Tenure(3)	0.065 (1.553)	0.071 (1.747)	0.054 (1.331)	0.054 (1.353)	0.064 (1.595)	0.071 (1.804)
Leader Education(4)	-0.033 (-0.565)	-0.047 (-0.829)	-0.044 (-0.792)	-0.042 (-0.771)	-0.028 (-0.503)	-0.023 (-0.427)
Team Size(5)	-0.040 (-0.931)	-0.035 (-0.844)	-0.033 (-0.821)	-0.029 (-0.718)	-0.023 (-0.584)	-0.028 (-0.709)
Organisation1(6)	0.112 (0.876)	0.062 (0.500)	0.144 (1.141)	0.124 (0.991)	0.138 (1.105)	0.103 (0.832)
Organisation2(7)	-0.201 (-1.843)	-0.191 (-1.816)	-0.168 (-1.628)	-0.192 (-1.864)	-0.174 (-1.692)	-0.191 (-1.885)
APL		-0.151** (-2.860)	-0.147** (-2.840)	-0.174** (-3.262)	-0.180** (-3.396)	-0.187** (-3.579)
TI			0.143* (2.316)	0.160* (2.596)	0.142* (2.292)	0.045 (0.591)
APL*TI				0.139 (1.784)	0.129 (1.666)	0.129 (1.699)
APL*APL					0.068 (1.632)	0.029 (0.641)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
APL²*TI						0.157*
						(2.101)
R²	0.112	0.182	0.226	0.252	0.273	0.307
Adj R²	0.047	0.113	0.152	0.172	0.186	0.215
F	$F(7, 96) = 1.726, p = 0.112$	$F(8, 95) = 2.646, p = 0.012$	$F(9, 94) = 3.056, p = 0.003$	$F(10, 93) = 3.132, p = 0.002$	$F(11, 92) = 3.140, p = 0.001$	$F(12, 91) = 3.353, p = 0.000$

Note: Dependent variable = TP; N = 104. * $p < 0.05$; ** $p < 0.01$ (two-tailed tests). APL = authoritarian paternalistic leadership; TP= team performance; TI= task interdependence.

As shown in Table 6-2, the hierarchical regression analysis included six models. In Model 1, the independent variables corresponded to the control variables used in this study. Model 2 added APL to Model 1, followed by the addition of TI to Model 3. Model 4 added the product of APL and TI to Model 3, while Model 5 added the quadratic term of APL to Model 4. Based on Model 5, Model 6 included the product of the quadratic term of APL and TI. Models 4 and 6 were used to investigate the moderating effect of TI. In relation to Model 4, after adding the product of APL and TI based on Model 3, there was no significant change in the R-squared value or F-value, suggesting that the moderating effect of TI on the relationship between APL and TP was not significant. After adding the product of the quadratic term of APL and TI to Model 5, the change in F-value in Model 6 was statistically significant ($p < 0.05$). This indicates that adding the product of the quadratic term of APL and TI had explanatory power for the model and contributed an additional 3.4% explanatory power to TP (the R-squared value increased from 0.273 to 0.307). Specifically, the regression coefficient of the interaction term between APL squared and TI on TP was 0.157, which was statistically significant ($t = 2.101, p = 0.038 < 0.05$). Therefore, it can be concluded that TI moderated the nonlinear relationship between APL and TP.

The hierarchical regression analysis confirmed that TI moderates the curvilinear relationship between APL and TP, although the specific mechanism of influence remains unclear. To investigate the differential effects of APL on TP at varying levels of TI, further

analysis was conducted using Mplus 8.3. Following the recommendations of Aiken and West (1991), the relationship between APL and TP was examined at low ($-1SD$) and high ($+1SD$) levels of TI to better understand the moderating effect of TI on the curvilinear relationship between APL and TP. The formula is as follows:

$$\text{slope1} = a + 2*b*LAPL + e*LTI + 2*f*LAPL*LTI;$$

$$\text{slope2} = a + 2*b*MAPL + e*LTI + 2*f*MAPL*LTI;$$

$$\text{slope3} = a + 2*b*HAPL + e*LTI + 2*f*HAPL*LTI;$$

$$\text{slope4} = a + 2*b*LAPL + e*HTI + 2*f*LAPL*HTI;$$

$$\text{slope5} = a + 2*b*MAPL + e*HTI + 2*f*MAPL*HTI;$$

$$\text{slope6} = a + 2*b*HAPL + e*HTI + 2*f*HAPL*HTI.$$

Where L, M, and L represent high, medium, and low, respectively.

After the calculations, the results regarding the moderating effects of TI are presented in the following table.

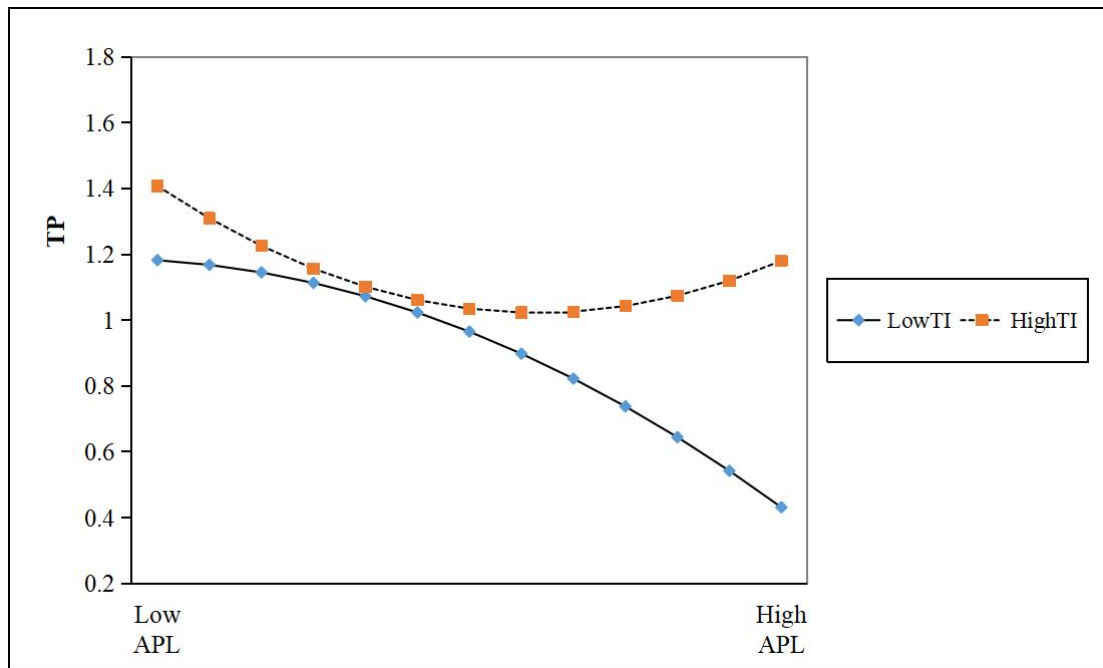
Table 6-3: Results of the moderating effect of TI on the relationship between APL and TP

	APL (Low)	APL (Medium)	APL (High)
TI (High)	-0.349**	-0.086	0.176
TI (Low)	-0.125	-0.287**	-0.448**

Note: Dependent variable = TP; N = 104. * $p < 0.05$; ** $p < 0.01$ (two-tailed tests). APL = authoritarian paternalistic leadership; TP = team performance; TI = task interdependence.

To visually illustrate the moderating effect of TI, this study developed a moderating effect diagram following the methodology proposed by Aiken and West (1991), as shown in Figure 6-3. The diagram reveals that when TI was high, the negative influence of APL on TP initially intensified with increasing levels of APL, subsequently diminished, and ultimately transitions to a positive impact after surpassing a specific threshold. In contrast, when TI was low, the negative effect of APL on TP consistently strengthened as APL increased, aligning with H2a. Consequently, H2a is supported.

Figure 6-3: Diagram of the moderating effect of TI on the relationship between APL and TP



Note: Dependent variable = TP; APL = authoritarian paternalistic leadership; TP = team performance; TI = task interdependence.

6.3 Path effects analysis: Examining the mediating role of SSG differentiation

This study adopted the method proposed by Baron and Kenny (1986) to examine the mediating role. Specifically, the following steps were followed: First, the independent variable must significantly predict the dependent variable. Second, the independent variable should exhibit a significant effect on the mediating variable. Third, the mediating variable must significantly influence the dependent variable. Finally, after accounting for the effects of the mediating variable, it is essential to assess whether the relationship between the independent and dependent variables remains significant. If this relationship becomes non-significant, complete mediation is indicated; if it remains significant but weaker, partial mediation is suggested.

As the relationships between APL, BPL, and TP were tested in the previous section and demonstrated significant correlations, they are excluded from testing in this section. In Table 6-4, Models 1 – 3, 4 – 6, and 7 – 8 represent different combinations of the relationships

among paternalistic leadership and SSG, paternalistic leadership and SSG differentiation, and SSG differentiation and TP, respectively. As previously discussed, this research emphasises the significance of the relationship between paternalistic leadership and SSG. Both APL and BPL significantly enhance SSG. Specifically, Model 2 in Table 6-4 shows that adding APL to Model 1 resulted in a significant change in the F-value ($p < 0.05$). Moreover, the R-squared value increased from 0.084 to 0.226, indicating that APL accounts for an additional 14.2% of the variance in SSG explained by the model. Notably, the regression coefficient of APL is 0.284 and statistically significant ($t = 4.163$; $p < 0.001$), suggesting a strong positive influence on SSG attributable to the inclusion of APL in the model. As for the relationship between APL and SSG differentiation, according to Model 4, none of the control variables included in this study exhibited a statistically significant effect on SSG differentiation. However, upon adding APL to Model 4 (as shown in Model 5), there was a significant change in the F-value ($p < 0.05$), indicating that the inclusion of APL enhanced the explanatory power of the model. Moreover, the R-squared value increased from 0.103 to 0.207, suggesting that APL explained an additional 10.4% of the variance in SSG differentiation. Specifically, the regression coefficient of APL was 0.136 and was statistically significant ($t = 3.529$, $p = 0.001 < 0.01$), confirming its positive influence on SSG differentiation. Taken together with the prior finding of APL's positive effect on SSG, H3a is supported.

Regarding the impact of BPL on SSG, Model 3 demonstrated that incorporating BPL into Model 1 significantly altered the F-value ($p < 0.05$), which indicates that BPL contributes explanatory power to the model. Moreover, the R-squared value increased from 0.103 to 0.181, implying that BPL accounts for an additional 7.8% of the variance in SSG differentiation. Specifically, the regression coefficient of BPL (-0.187) was significant ($t = -3.012$, $p < 0.01$), suggesting a notable negative association with SSG differentiation. Taken together with the earlier finding of a positive effect of BPL on SSG, H3b is supported.

Regarding the impact of SSG differentiation on TP, after incorporating SSG differentiation into Model 8 based on Model 7, a significant change in the F-value was observed ($p < 0.05$), suggesting that SSG differentiation contributed explanatory power to the model. Specifically, the regression coefficient of SSG differentiation was -0.395 and

statistically significant ($t = -2.998, p = 0.003 < 0.01$), indicating that SSG differentiation exerted a significant negative influence on TP. Consequently, H3c was supported.

Table 6-4: Results of the relationships among APL and SSG, BPL and SSG, APL and SSG differentiation, BPL and SSG differentiation, as well as SSG differentiation and TP.

	SSG			SSG differentiation			TP	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Constant	0.715 (1.339)	0.591 (1.195)	0.571 (1.282)	0.215 (0.728)	0.155 (0.556)	0.257 (0.905)	0.119 (0.300)	0.204 (0.534)
Leader Gender(1)	0.261 (1.771)	0.193 (1.405)	0.140 (1.124)	-0.013 (-0.155)	-0.045 (-0.583)	0.023 (0.289)	0.143 (1.301)	0.138 (1.306)
Leader Age(2)	-0.171 (-1.691)	-0.134 (-1.422)	-0.135 (-1.590)	-0.110 (-1.953)	-0.092 (-1.720)	-0.120* (-2.228)	-0.046 (-0.606)	-0.089 (-1.205)
Leader Tenure(3)	0.077 (1.358)	0.066 (1.266)	0.054 (1.139)	0.057 (1.838)	0.052 (1.772)	0.064* (2.132)	0.065 (1.553)	0.088* (2.142)
Leader Education(4)	-0.102 (-1.292)	-0.076 (-1.035)	-0.095 (-1.447)	-0.002 (-0.049)	0.010 (0.252)	-0.004 (-0.098)	-0.033 (-0.565)	-0.034 (-0.602)
Team Size(5)	-0.039 (-0.669)	-0.048 (-0.898)	-0.008 (-0.164)	-0.003 (-0.087)	-0.007 (-0.240)	-0.012 (-0.382)	-0.040 (-0.931)	-0.041 (-0.995)
Organisation1 (6)	-0.132 (-0.768)	-0.039 (-0.242)	-0.153 (-1.066)	-0.063 (-0.667)	-0.019 (-0.206)	-0.057 (-0.628)	0.112 (0.876)	0.087 (0.706)
Organisation2 (7)	-0.200 (-1.363)	-0.219 (-1.610)	0.011 (0.088)	0.110 (1.351)	0.101 (1.313)	0.048 (0.595)	-0.201 (-1.843)	-0.158 (-1.491)
APL		0.284** (4.163)						
BPL			0.639** (6.564)					
APL					0.136** (3.529)			
BPL						-0.187** (-3.012)		
SSG differentiation								-0.395** (-2.998)
R²	0.084	0.226	0.370	0.103	0.207	0.181	0.112	0.189
Adj R²	0.018	0.160	0.317	0.038	0.140	0.113	0.047	0.120
F	$F(7, 96) = 1.262, p = 0.277$	$F(8, 95) = 3.459, p = 0.002$	$F(8, 95) = 6.975, p = 0.000$	$F(7, 96) = 1.580, p = 0.151$	$F(8, 95) = 3.105, p = 0.004$	$F(8, 95) = 2.633, p = 0.012$	$F(7, 96) = 1.726, p = 0.112$	$F(8, 95) = 2.760, p = 0.009$

Note: Dependent variables = SSG, SSG differentiation, and TP; N = 104. * $p < 0.05$; ** $p < 0.01$ (two-tailed tests).

BPL = benevolent paternalistic leadership; APL = authoritarian paternalistic leadership; TP = team performance; SSG = supervisor–subordinate Guanxi.

After testing the impact of the two paternalistic leadership styles on SSG differentiation and the effect of SSG differentiation on TP, the subsequent step was to investigate the mediating role of SSG differentiation. Specifically, this research examined the mediating role of SSG differentiation between APL and TP. To mitigate any interference caused by the U-shaped influence of APL on TP, this research included the quadratic term of APL as a control variable when testing the mediating effect of SSG differentiation on the relationship between APL and TP.

Table6-5: Results of the mediating effect of SSG differentiation on the relationships between APL and TP, and between BPL and TP

	TP			
	Model 1	Model 2	Model 3	Model 4
Constant	-0.033 (-0.084)	0.007 (0.017)	-0.030 (-0.121)	-0.006 (-0.025)
Leader Gender1	0.157 (1.494)	0.142 (1.378)	0.016 (0.236)	0.019 (0.267)
Leader Age(2)	-0.055 (-0.765)	-0.083 (-1.166)	-0.008 (-0.159)	-0.019 (-0.386)
Leader Tenure(3)	0.081* (2.015)	0.097* (2.448)	0.041 (1.566)	0.047 (1.752)
Leader Education(4)	-0.028 (-0.489)	-0.024 (-0.426)	-0.026 (-0.710)	-0.027 (-0.720)
Team Size(5)	-0.027 (-0.665)	-0.029 (-0.729)	-0.008 (-0.296)	-0.009 (-0.337)
Organisation1(6)	0.090 (0.731)	0.085 (0.708)	0.090 (1.126)	0.085 (1.057)

	TP			
	Model 1	Model 2	Model 3	Model 4
Organisation2(7)	-0.167 (-1.598)	-0.134 (-1.302)	0.018 (0.260)	0.023 (0.323)
APL*APL	0.087* (2.080)	0.091* (2.215)		
APL	-0.161** (-3.081)	-0.119* (-2.189)		
BPL			0.664** (12.193)	0.647** (11.348)
SSG differentiation		-0.313* (-2.312)		-0.093 (-1.037)
Sample size	104	104	104	104
R²	0.218	0.261	0.654	0.658
Adj R²	0.143	0.181	0.625	0.625
F	$F(9, 94) = 2.915, p = 0.004$	$F(10, 93) = 3.279, p = 0.001$	$F(8, 95) = 22.416, p = 0.000$	$F(9, 94) = 20.060, p = 0.000$

Note: Dependent variables = SSG, SSG differentiation, and TP; N = 104. * $p < 0.05$; ** $p < 0.01$ (two-tailed tests). BPL = benevolent paternalistic leadership; APL = authoritarian paternalistic leadership; TP = team performance; SSG = supervisor-subordinate Guanxi.

With regard to the mediating role of SSG differentiation in the relationship between APL and TP, the results presented in Table 6-5 demonstrate that Model 2 added SSG differentiation as a control variable based on Model 1. The observed change in F-value was statistically significant ($p < 0.05$), indicating that adding SSG differentiation had explanatory power for the model. Moreover, there was an increase in the R-squared value from 0.218 to 0.261, suggesting that SSG differentiation accounted for approximately 4.3% of the variance in TP. Notably, the coefficient of SSG differentiation was statistically significant ($\beta = -0.313, p < 0.01$), while the coefficient of APL ($\beta = -0.119, p < 0.01$) showed a significant reduction, implying that part of the effect of APL on TP was indirectly mediated by SSG differentiation.

According to the process program (see Table 6-6), the bootstrap method was employed to assess the significance of the mediating effect of SSG differentiation. The results revealed a significant indirect effect of APL on TP through SSG differentiation ($\beta = -0.042$, $p < 0.05$), with a 95% bias-corrected confidence interval of $(-0.192, -0.001)$, excluding 0. Once again, it demonstrated that H3d was supported. APL tends to strengthen relationships with a select few subordinates, leading to more pronounced stratification between inner and outer groups within the team (Chen et al., 2014). Since SSG is largely driven by personal relationships between leaders and subordinates, this results in unequal resource distribution among team members. The greater the degree of differentiation, the more resources tend to favour members of the inner group. Hence, APL expands the degree of differentiation of SSG, consequently exacerbating the disparity in resource allocation, which leads to two primary outcomes: 1) It diminishes the efficiency of optimal resource allocation and thereby weakens TP. 2) It enhances perceptions of unfairness among outer group members, reducing their motivation to collaborate and thereby weakening TP. In summary, the inequity in resource allocation drives SSG differentiation to act as a mediator in the negative relationship between APL and TP.

Table 6-6: Results of the mediating effect of SSG differentiation on the relationship between APL and TP

Item	c			a*b		a*b (Boot S.E.)	a*b (z)	a*b (p)	a*b (95% BootCI)	c' Direct effect	Result
	Total effect	a	b	Mediating effect							
APL => SSG differentiation	-0.161**	0.135**	-0.313*	-0.042	0.049	-0.867	0.386	-0.192 ~	-0.119*	Partial	
=> TP								-0.001		mediation	

Note: APL = authoritarian paternalistic leadership; TP = team performance; SSG = supervisor-subordinate Guanxi.

As for the mediating effect of SSG differentiation on the relationship between BPL and TP, the results presented in Model 4 of Table 6-5 reveal that when controlling for the variables included in Model 3, the inclusion of SSG differentiation did not result in a statistically significant change in the F-value. This indicates that SSG differentiation lacks explanatory power within the model. Additionally, the R-squared value increased only marginally by

0.004, which is effectively negligible and close to zero. Consequently, H3e was not supported. These findings suggest that SSG differentiation does not function as a mediator for the positive influence of BPL on TP.

6.4 Moderated mediation effect of TI

The influence of SSG differentiation on TP was a central focus of this study. To elucidate the underlying mechanism, the regulatory relationship between SSG differentiation and TP was initially investigated by treating TI as a boundary condition. Subsequently, the moderating role of TI in the relationship between paternalistic leadership and TP via SSG differentiation was examined. With respect to the moderating effect of BPL on the relationship between SSG differentiation and TP, it was found that SSG differentiation did not significantly mediate the link between BPL and TP, thus rendering the testing of H4c unnecessary.

1. Moderating effect of TI on the relationship between SSG differentiation and TP

The moderating effect of TI on the relationship between SSG differentiation and TP was tested through a hierarchical regression analysis using three models. Model 1 included the independent variable (SSG differentiation) and the control variables, while Model 2 added the moderating variable (TI) to Model 1. Finally, Model 3 added the interaction term between SSG differentiation and TI to Model 2 (see Table 6-7).

Table 6-7: Results of the moderating effect of TI on the relationship between SSG differentiation and TP

	Model 1	Model 2	Model 3
Constant	0.204	0.146	0.030

	Model 1	Model 2	Model 3
	(0.534)	(0.390)	(0.082)
Leader Gender1	0.138	0.092	0.132
	(1.306)	(0.876)	(1.282)
Leader Age(2)	-0.089	-0.060	-0.055
	(-1.205)	(-0.817)	(-0.772)
Leader Tenure(3)	0.088*	0.070	0.061
	(2.142)	(1.725)	(1.530)
Leader Education(4)	-0.034	-0.031	-0.006
	(-0.602)	(-0.566)	(-0.119)
Team Size(5)	-0.041	-0.039	-0.031
	(-0.995)	(-0.973)	(-0.791)
Organisation1(6)	0.087	0.171	0.110
	(0.706)	(1.374)	(0.893)
Organisation2(7)	-0.158	-0.134	-0.128
	(-1.491)	(-1.288)	(-1.266)
SSG differentiation	-0.395**	-0.396**	-0.397**
	(-2.998)	(-3.081)	(-3.172)
TI		0.149*	0.146*
		(2.443)	(2.448)
SSG differentiation*TI			0.403*
			(2.505)
R²	0.189	0.237	0.285
Adj R²	0.120	0.164	0.208
F	$F(8, 95) = 2.760, p = 0.009$	$F(9, 94) = 3.244, p = 0.002$	$F(10, 93) = 3.711, p = 0.000$

Note: Dependent variable = TP; N = 104. * $p < 0.05$; ** $p < 0.01$ (two-tailed tests).

TP = team performance; SSG = supervisor–subordinate Guanxi; TI = task interdependence.

The regression coefficient of the interaction term between SSG differentiation and TI

was 0.403, as shown in Table 6-7, and was statistically significant ($t = 2.505, p = 0.000 < 0.05$). This indicates that the influence of TI on TP exhibited significant variation when modulated by SSG differentiation. In line with Dawson (2014)'s methodology, a simple slope analysis was conducted by adding and subtracting one standard deviation from the mean of TI separately (see Tables 6-8). Subsequently, the interaction effects were visualized through plotting (see Figure 6-4).

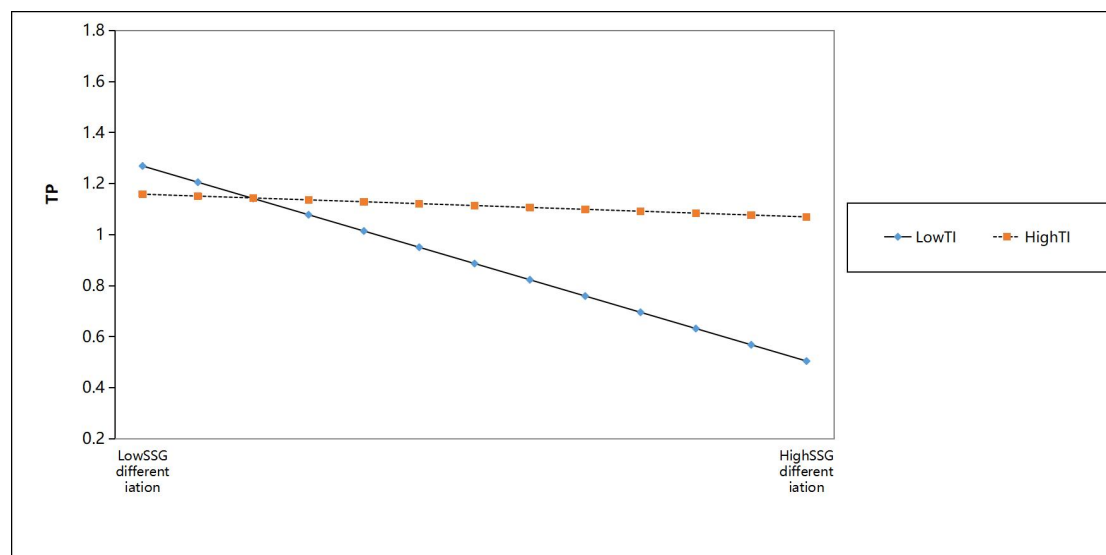
Table 6-8: Results of the simple slope analysis of the moderating effect of TI on the relationship between SSG differentiation and TP

Moderating variable	Regression coefficient	S.E.	t	p	95% CI	
Mean	-0.397	0.125	-3.172	0.002	-0.642	-0.152
High (+1SD)	-0.083	0.177	-0.471	0.639	-0.430	0.263
Low (-1SD)	-0.710	0.177	-4.009	0.000	-1.057	-0.363

Note: Dependent variable = TP; N = 104.* $p < 0.05$; ** $p < 0.01$ (two-tailed tests).

TP = team performance; SSG = supervisor–subordinate Guanxi; TI = task interdependence; CI = confidence interval.

Figure 6-4: The moderating role of TI between SSG differentiation and TP



Note: Dependence Variable=TP; TP= team performance; SSG = supervisor–subordinate Guanxi; TI = task interdependence

Combining Tables 6-8 and Figure 6-4, it is evident that when TI was high, SSG

differentiation exhibited a weaker and statistically non-significant negative effect on TP compared to a medium level of TI ($t = -0.471, p = 0.639 > 0.05$). Conversely, when TI was low, the negative effect of SSG differentiation on TP became significantly stronger ($t = -4.009, p < 0.05$). This suggests that TI moderates the negative relationship between SSG differentiation and TP, thereby supporting H4a.

2. Moderated mediation effect of TI

Wen et al. (2012) proposed a systematic procedure for testing the moderated mediation effect. Assuming that X represents the independent variable, Y denotes the dependent variable, Me is the mediating variable, and Mo is the moderating variable, the following steps are undertaken: First, examine whether X and Mo significantly predict Y by assessing the significance of the coefficient of X in the regression model; second, evaluate how X and Mo jointly influence Me by confirming the significance of the coefficient of X; third, investigate the collective impact of X, Mo, and Me on Y by verifying the significance of the interaction term Mo*X; finally, assess the extent to which X interacts with both Mo and Me in influencing Y by requiring a significant coefficient for the interaction term Mo*Me. If all these conditions are met, it can be concluded that there is indeed a significant moderated mediation effect.

Given that the U-shaped effect of APL on TP and the moderating effect of TI on the nonlinear relationship between APL and TP were confirmed in the preceding sections, the quadratic term of APL as well as the interaction term between the quadratic term of APL and TI were included as control variables to account for potential confounding effects when testing the moderated mediation effect of TI. Following the methodology proposed by Wen et al. (2012), the regression results are reported in Tables 6-9.

Table 6-9: Results of the moderated mediation effect of TI

TP	SSG differentiation
----	---------------------

	TP	SSG differentiation
Constant	-0.120 (-0.333)	0.118 (0.403)
APL	-0.120* (-2.363)	0.134** (3.445)
TI	0.025 (0.341)	
Leader Gender1	0.172 (1.724)	-0.048 (-0.614)
Leader Age(2)	-0.058 (-0.865)	-0.086 (-1.589)
Leader Tenure(3)	0.080* (2.095)	0.052 (1.746)
Leader Education(4)	0.002 (0.038)	0.014 (0.333)
Team Size(5)	-0.027 (-0.710)	-0.007 (-0.237)
Organisation1(6)	0.059 (0.497)	-0.011 (-0.118)
Organisation2(7)	-0.128 (-1.327)	0.103 (1.325)
APL*APL	0.032 (0.746)	-0.000 (-0.005)
APL*APL*TI	0.160* (2.227)	0.037 (0.810)
SSG differentiation	-0.340** (-2.677)	
SSG differentiation*TI	0.367* (2.390)	
Sample size	104	104
R²	0.376	0.214
Adj R²	0.278	0.120
F	$F(13, 90)=4.167, p=0.000$	$F(10, 93)=2.532, p=0.010$

Note: Dependent variable = TP; N = 104. * $p < 0.05$; ** $p < 0.01$ (two-tailed tests).

APL = authoritarian paternalistic leadership; TP = team performance; SSG = supervisor–subordinate Guanxi; TI = task interdependence.

The regression analysis presented in Table 6-9 indicates that, after controlling for the aforementioned variables, the interaction term between SSG differentiation and TI yielded a significant regression coefficient of 0.367 ($t = 2.390$, $p < 0.05$), thereby confirming the mediating effect of TI. As shown in Table 6-10, SSG differentiation acted as an intermediary variable with non-zero effects at low (-0.085) and average (-0.046) levels, as evidenced by the 95% bootstrap confidence intervals not encompassing 0. Conversely, at high levels, the 95% bootstrap confidence interval included 0, implying no mediating effect at this level. Based on these results, it can be concluded that the mediating effect of SSG differentiation varies inconsistently across different levels of TI, thus supporting H4b.

Table 6-10: Conditional direct effect of TI

Mediating variable	Level	Level value	Effect	Boot S.E.	Boot LLCI	Boot ULCI
SSG differentiation	Low (-1SD)	-0.776	-0.085	0.052	-0.200	-0.001
	Mean	0.002	-0.046	0.028	-0.113	-0.004
	High (+1SD)	0.780	-0.007	0.028	-0.073	0.042

Note: Boot S.E.= Bootstrap standard error; Boot LLCI = lower limit of 95% interval of bootstrap sampling; Boot ULCI= upper limit of 95% interval of bootstrap sampling; SSG = supervisor–subordinate Guanxi.

6.5 Summary of hypothesis testing results

The hypotheses proposed in this study are tested across four distinct sections. Section one evaluates the correlation between paternalistic leadership and TP. Section two examines the moderating effect of TI on the relationship between paternalistic leadership and TP.

Section three investigates the mediating effect of SSG differentiation on the relationship between paternalistic leadership and TP, including the correlations between PL and SSG, PL and SSG differentiation, as well as SSG differentiation and TP. Lastly, section four analyses how TI moderates the influence of PL on TP through the mechanism of SSG differentiation.

Table 6-11 provides a summary of the hypothesis test results, while Figure 6-5 illustrates the

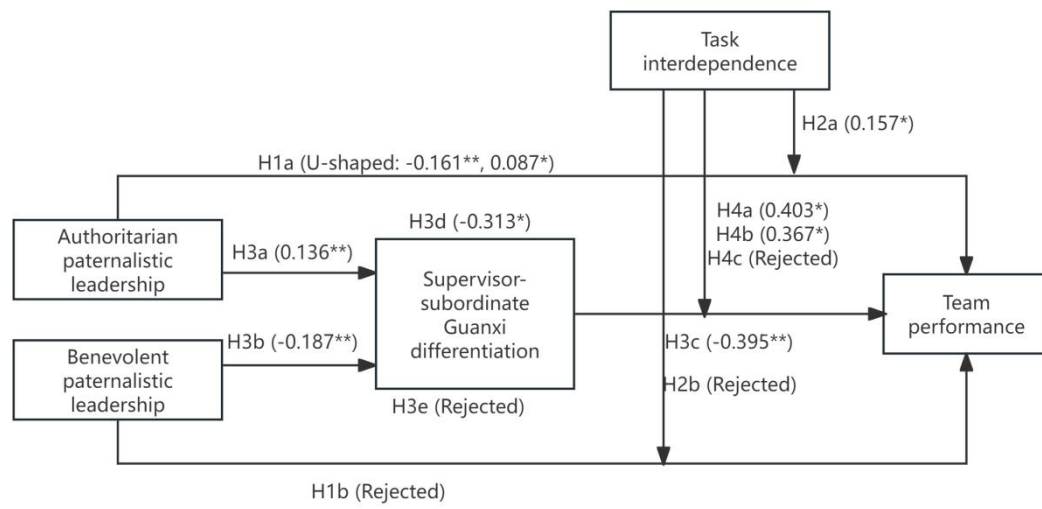
findings of the hypothesised model.

Table 6-11: Paths and results of hypothesis tests

Relationship	Hypothesis	Result
APL→TP	H1a: There is a U-shaped relationship between APL and TP	Supported
BPL→TP	H1b: There is an inverted U-shaped relationship between BPL and TP	Rejected
Moderating effect of TI on APL→TP	H2a: TI moderates the curvilinear relationship between APL and TP. When the level of TI is high, there is a U-shaped relationship between APL and TP. When the level of TI is low, there is a negative relationship between APL and TP.	Supported
Moderating effect of TI on BPL→TP	H2b: TI moderates the curvilinear relationship between BPL and TP. When the level of TI is high, there is an inverted U-shaped relationship between BPL and TP. When the level of TI is low, there is a positive relationship between BPL and TP.	Rejected
APL→SSG APL→SSG differentiation	H3a: APL positively influences SSG and SSG differentiation	Supported
BPL→SSG BPL→SSG differentiation	H3b: BPL positively influences SSG, but negatively influences SSG differentiation	Supported
SSG differentiation→TP	H3c: SSG differentiation has a negative impact on TP	Supported
APL→SSG differentiation→TP	H3d: SSG differentiation mediates the negative effect of APL on TP	Supported
BPL→SSG differentiation →TP	H3e: SSG differentiation mediates the positive effect of BPL on TP	Rejected
Moderating effect of TI between SSG differentiation and TP	H4a: TI moderates the negative relationship between SSG differentiation and TP, such that a low level of TI enhances the detrimental effect of SSG differentiation on TP, while a high level of TI weakens it.	Supported
Moderated mediation effect of TI on APL→SSG differentiation→TP	H4b: TI moderates the negative influence of APL on TP through SSG differentiation. Specifically, when the level of TI is high, the adverse impact of APL through SSG	Supported
Moderated mediation effect of TI on BPL→SSG differentiation→TP	H4c: TI moderates the positive influence of BPL on TP through SSG differentiation. Specifically, when the level of TI is high, the positive impact of BPL on TP through SSG differentiation becomes stronger; conversely, when the level of TI is low, this impact decreases.	Rejected

Note: BPL = benevolent paternalistic leadership; APL = authoritarian paternalistic leadership; TP = team performance; SSG= supervisor-subordinate Guanxi; TI = task interdependence

Figure 6-5: Results of the hypothesised model



7 Discussion

This chapter first presents the findings of this research, elaborating on the potential factors that contribute to these outcomes. Subsequently, it investigates the prevalence of paternalistic leadership in China by considering social-cultural and psychological perspectives.

7.1 Discussion of research results

This study integrates leader-member exchange (LMX) theory with allocation preferences theory to investigate the impact of paternalistic leadership on team performance (TP) and elucidate its underlying influence mechanisms. Specifically, this study hypothesises that the relationship between paternalistic leadership and TP is nonlinear and contingent upon the degree of task interdependence (TI) within teams. Additionally, it is proposed that supervisor-subordinate Guanxi (SSG) mediates the negative relationship between authoritarian paternalistic leadership (APL) and TP, as well as the positive relationship between benevolent paternalistic leadership (BPL) and TP, both of which are moderated by TI. According to the research objective of this thesis, 12 research hypotheses were empirically tested to explore the relationships among the five key variables: APL, BPL, SSG differentiation, TI, and TP, yielding a variety of empirical findings. This chapter provides an in-depth discussion of these results.

This study revealed a U-shaped relationship between APL and TP. At the individual level, studies have shown that APL negatively affects subordinates' personal performance (Cheng et al., 2000; Chen et al., 2014; Lin et al., 2017). The findings of the current study suggest that the influence of APL on both individual and team level performance may lack consistency, a view consistent with previous arguments (Zhang et al., 2009). At the team level, the results showed a consistent negative impact on TP associated with moderate to low levels of APL, in line with the findings of numerous scholars (Cao, 2015; Lin et al., 2017). However, this study departs from previous research by uncovering a novel aspect: the positive influence of high-level APL on TP. The prevailing understanding of paternalistic leadership has tended to

overemphasise the negative dimensions of APL while overlooking its positive contributions toward achieving collective goals and promoting well-being. This perspective has failed to fully capture the authentic essence of paternalistic authority within its local context (Fu et al., 2023). The advantage of APL in achieving excellent TP lies in its task-oriented nature. Authoritarian paternalistic leaders emphasise instrumental exchanges, dedicating their energy and resources to enhancing performance while striving for fair and reasonable allocation of teamwork resources to achieve high-performance goals. The higher the degree of authoritarianism, the more task-oriented these leaders become, and the greater their willingness to work toward high-performance objectives. Furthermore, in the Chinese context, highly authoritarian leaders—viewed as the traditional prototype of Chinese leadership—are better able to elicit obedience and loyalty from subordinates, whether driven by respect or fear of punishment for failing to meet goals. This, in turn, motivates subordinates to exert greater effort to improve TP. However, leaders with mid-level authoritarianism allocate personal and team resources less effectively toward TP goals compared to their high-level counterparts, demonstrating weaker task orientation. Additionally, due to insufficient perceived authority, these leaders generate significantly less loyalty and obedience from subordinates. In summary, the impact of APL on TP follows a U-shaped pattern, characterised by an initial decline followed by subsequent growth.

Previous scholars have frequently reached divergent conclusions regarding the relationship between APL and team-level outcomes (Zhang et al., 2009; Gao et al., 2014; Huang & Lin, 2021). A critical reason for these discrepancies may stem from the neglect of the nonlinear relationship between APL and team performance outcomes. In China's business Organisations, many successful entrepreneurs exhibit pronounced authoritarian traits. Compared to leaders with moderate levels of authoritarianism, highly authoritarian leaders, characterised by strong execution capabilities and high-performance aspirations, may positively influence team performance. The identification of the nonlinear relationship between APL and TP not only addresses the primary research question of this study but also clarifies the reasons for the inconsistent findings regarding APL's impact on team-level outcomes. Moreover, this discovery of the nonlinear relationship introduces a novel

perspective to leadership research and fills an important gap in this field. However, this study did not conduct an in-depth examination of the turning point within this U-shaped relationship, particularly the threshold at which leadership authoritarianism transitions from hindering to enhancing performance. Future research could further explore this aspect.

The hypothesis (H2a) that TI acts as a boundary condition in moderating the nonlinear effect of APL on TP was supported. This intriguing finding reveals a U-shaped relationship between APL and TP at high levels of TI, whereas this relationship turns negative at low levels of TI. Based on this result, the positive influence of APL on TP seems to depend on high levels of TI, suggesting that only leaders with a pronounced authoritarian orientation can effectively enhance TP. This finding further underscores the significance of categorising APL as task-oriented. When TI is high, team tasks necessitate cooperation among all members, requiring the leader to frequently coordinate team activities—a role that aligns with the preferences of highly authoritarian leaders who prioritise control. The more authoritarian a leader is, the more they concentrate their efforts and resources on achieving group objectives through systematic direction. Additionally, highly authoritarian leaders often possess substantial executive power, which enhances their capacity for effective team coordination. Furthermore, when TI is high, interactions between leaders and subordinates tend to focus more on instrumental rather than emotional aspects. In such contexts, highly authoritarian leaders are more likely to treat their subordinates equitably and allocate resources based on their abilities and individual characteristics, factors that positively contribute to overall TP. Conversely, when TI is low, TP depends largely on the individual contributions of team members. In task-oriented scenarios, authoritarian leaders and their subordinates typically engage in one-on-one interactions. Highly authoritarian leaders often prioritise subordinates who exhibit a high degree of obedience to maintain authority and control. Rather than considering the abilities of their subordinates, these leaders allocate emotional, work-related, or reward resources based on the closeness of the relationship between supervisor and subordinates. This approach undermines the principles of fairness and equality, thereby negatively impacting TP.

TI is a crucial team characteristic variable. In roles characterised by high task

interdependence, employees must collaborate, exchange ideas, and disseminate information among themselves. Furthermore, they often leverage each other's resources to achieve both individual and team objectives (Zhang et al., 2022). Consequently, TI may represent one of the key boundary conditions that influence the effectiveness of leadership behaviour. In scholarly investigations examining the relationship between personalised leadership and team performance, TI frequently emerges as a critical variable. For instance, Srivastava and colleagues found that the influence of transformational leadership on team performance was more pronounced under conditions of high TI (Srivastava et al., 2006). Similarly, studies exploring the relationship between shared leadership and team performance have shown that shared leadership tends to be more effective when task interdependence is elevated (Nicolaidis et al., 2014). Previous scholars have examined the relationship between APL and TP by focusing on leaders' own characteristics, such as leadership ability, and certain mediating variables, such as team exhaustion and team identification (Gao et al., 2014; Huang and Lin, 2021), revealing the double-edged sword effect of APL on TP. Nevertheless, the moderating role of TI—a critical team characteristic variable—has been neglected in paternalistic leadership research. This study uncovers the moderating effect of TI on the nonlinear relationship between APL and TP, thereby enriching the literature on paternalistic leadership and offering practical implications for Organisational management, including insights into how Organisations can match leaders with team task characteristics more effectively.

The hypothesised inverted U-shaped relationship between BPL and TP was not supported; instead, the results indicated that BPL significantly enhanced TP. However, Li et al. (2018) identified an inverted U-shaped relationship between BPL and TP, arguing that excessive benevolence from leaders might impede TP by overlooking critical activities related to team goal pursuit, particularly team action processes. One plausible explanation for this discrepancy lies in the differing sample characteristics of the two studies. As Ng and Feldman (2009) noted, demographic variables such as age, education level, occupation, and TI can influence leadership effectiveness. Li et al.'s study explored the curvilinear relationship between BPL and TP among employees in the R&D department of a large applied research

institution in China, focusing on knowledge workers in high-tech industries with relatively low average age and high education levels. In contrast, the present study concentrated on participants from traditional manufacturing and financial services sectors, characterised by a higher average age and lower education levels.

Although the nonlinear relationship between BPL and TP was not observed in this study, the findings underscored a significant positive influence of BPL on TP, aligning with the conclusions drawn by numerous scholars. Specifically, BPL has been empirically demonstrated to exert substantial positive effects on individual behaviour, TP, and OCB (Kearney & Gebert, 2009; Lehmann-Willenbrock et al., 2015; Morgeson et al., 2010). The meta-analysis conducted by Hiller et al. (2019), which synthesized findings from 152 studies on paternalistic leadership behaviour, revealed that leaders who genuinely care for and personally engage with their subordinates are more likely to inspire high levels of job performance compared to others. Benevolent leaders prioritise fundamental empathy, consideration of others' needs, and relationship maintenance as internal goals (Chen et al., 2014), prompting them to pay closer attention to both the work and non-work aspects of their subordinates' lives—a practice that should be encouraged and affirmed (Chan & Mak, 2012). In particular, within the non-work domain, benevolent leaders offer assistance to followers during personal crises and exhibit concern for their family members (Cheng et al., 2004; Farh et al., 2008). In the work context, benevolent leaders prioritise and nurture the growth and development of their subordinates (Wang and Cheng, 2010). Consequently, subordinates are motivated to follow benevolent leaders due to trust and a sense of gratitude. Moreover, the supportive and caring behaviours demonstrated by benevolent leaders reinforce the emotional connection between leaders and followers, thereby fostering a positive feedback loop (Chen et al., 2014), in which employees' gratitude enhances TP.

In this study, the moderating role of TI in the relationship between BPL and TP was not confirmed, a result consistent with prior research. For instance, Ceri-Booms et al. (2017) examined the impact of different leadership styles (task-focused and people-focused) on overall TP and found no significant relationship between TI and the effectiveness of these leadership styles in enhancing TP. Additionally, the meta-analysis by D'Innocenzo et al.

(2016) provided no substantial evidence that TI moderates the association between shared leadership and TP. From a cultural perspective, within the context of Chinese collectivist culture, an equitable distribution of resources can reduce social comparisons among employees and promote perceptions of fairness. Moreover, benevolent paternalistic leaders' comprehensive concern and support for their subordinates can strengthen team cohesion and foster cooperative behaviours among team members. As such, regardless of whether TI is high or low, subordinates are likely to be motivated to improve their performance.

H3e, which posits the mediating role of SSG differentiation in the relationship between BPL and TP, was not supported. One possible explanation is that subordinates' interpretation and perception of SSG differentiation may vary depending on the leadership style, such as authoritarian or benevolent leadership. Specifically, BPL behaviour might reduce subordinates' perception of SSG differentiation. Additionally, Anand et al. (2016) highlighted a measurement issue regarding LMX differentiation at the group level. Most studies have relied on actual LMX differentiation as a statistical measure of within-group variation, rather than perceived LMX differentiation, which emphasises the subjective influence of perceptions on objective reality. Based on social comparison theory, Chiniara and Bentein (2018) investigated the influence of servant leadership on the perceived differences in LMX quality. They identified variations in relational quality between servant leaders and their followers. However, servant leaders' focus on follower well-being fosters a sense of respect and recognition, which diminishes individuals' tendencies to engage in social comparisons. While team members might observe disparities in the dynamics between individual members and their leaders, they are less likely to perceive significant differences in the overall quality of leader – member relationships within the team (Chiniara & Bentein, 2018). Both benevolent leaders and servant leaders exhibit similar behaviours by providing comprehensive support for the growth and well-being of all subordinates (Graham, 1991; Liden et al., 2014). Consequently, benevolent paternalistic leaders primarily aim to reduce subordinates' engagement in social comparison processes, resulting in perceptual differences that are less pronounced than actual disparities. Therefore, SSG differentiation does not mediate the relationship between BPL and TP.

This study revealed a strong positive correlation between BPL and TP, with a regression coefficient of 0.664 for BPL on TP, thereby underscoring the significance of BPL within the Chinese context. In collectivist societies, family ties and interpersonal relationships are integral to nearly every aspect of life (Farh et al., 1997). Employees anticipate that their supervisors will address personal concerns and provide support at work; otherwise, they may perceive such supervisors as ineffective. Consequently, BPL, which prioritises subordinates' well-being and needs, emerges as one of the most effective leadership styles (Kozan, 1993). Moreover, BPL enjoys popularity in other cultural contexts. For instance, Paşa et al. (2001) contended that Turkish employees favour “paternalistic and considerate” leaders (benevolent leaders) who care for and support their subordinates while also seeking respect from them. Pellegrini and Scandura (2006) emphasised the existence of an emotional bond between paternalistic managers and their subordinates, where leaders' attentiveness fosters reciprocity in their relationships. This reciprocal dynamic enhances subordinates' commitment and job satisfaction. Leaders who exhibit genuine care and kindness, and who are personally invested in their followers' lives, inspire their followers to demonstrate supervisor job performance, greater creativity, higher engagement in Organisational citizenship behaviours (OCB), improved job attitudes and perceptions of the leader, as well as reduced intentions to leave the Organisation and decreased involvement in counterproductive work behaviours (Shafi et al., 2021; Hiller et al., 2019).

The field of modern management has progressively shifted towards a dual paradigm: a scientific approach prioritising efficiency as the ultimate goal, and a humanistic approach emphasising humanity as the ultimate pursuit (Peng et al., 2018). Nevertheless, even within the humanistic framework of behavioural science, which recognises and addresses employees' irrational needs such as emotions and feelings, there remains an instrumental perspective on employees. This perspective seeks to temper the cold and calculating rationality inherent in organisational management but ultimately constitutes a more subtle and euphemistic form of exploitation (Scott, 1988). In contrast, BPL prioritises individuals, genuinely addressing employees' emotional and personal needs without sacrificing these for the sake of efficiency. This leadership style fosters respect and gratitude among subordinates. Importantly, the

current study found no adverse effects of BPL on TP, underscoring its alignment with the “humanity” valued by benevolent leaders themselves. As scholars have noted, benevolence thus appears to be overwhelmingly positive (Hiller et al., 2019).

H3a and H3b were supported, indicating that APL and BPL exerted contrasting influences on SSG differentiation. Given that “social orientation” is a defining feature of Chinese culture, it is crucial for individuals in this cultural context to develop positive interpersonal relationships to ensure mutual benefits in future interactions (Yang and Lu, 2009). As illustrated in Table 6-4, both APL and BPL demonstrated positive correlations with the quality of SSG within teams. Consequently, it can be inferred that paternalistic leaders are more likely to cultivate high-quality relationships with their subordinates.

The findings of this thesis demonstrated the positive influence of APL on SSG differentiation, whereas BPL exerted a negative impact on SSG differentiation. This suggests that authoritarian leaders differentiate their treatment of subordinates based on perceived closeness and form relationships of varying quality accordingly. In contrast, benevolent leaders treat all subordinates equally and aim to cultivate relationships of consistent quality with every team member. Authoritarian leaders prioritise task completion and goal achievement by establishing relationships of differing quality with subordinates depending on their abilities and performance, as well as allocating resources strategically to attain high-performance objectives. Moreover, authoritarian leaders emphasise absolute authority and expect unwavering obedience from their subordinates (Cheng et al., 1995), thereby tending to develop closer relationships with employees who exhibit high levels of obedience or share special connections. Although these two approaches to treating subordinates may appear contradictory, they reflect the dual tendencies of authoritarian leaders in different contexts: equitable resource allocation aimed at achieving task objectives and inequitable resource distribution based on Guanxi for sustaining authority. In contrast, benevolent leaders exhibit personalised, holistic, and sustained concern for their subordinates’ well-being (Cheng et al., 2000). By addressing the individual needs of their subordinates, they aim to foster close interpersonal relationships. This study confirmed the negative impact of BPL on SSG differentiation, suggesting that benevolent leaders prioritise equal resource allocation,

especially emotional resources.

This study verified the promoting effects of APL and BPL on SSG and simultaneously confirmed their diametrically opposite influences on SSG differentiation. These results reveal the distinct tendencies of these two leadership styles in managing dyadic relationships with subordinates as well as overall relationships with all subordinates. These findings not only bridge the gap in research on the relationship between paternalistic leadership and SSG differentiation but also address the inadequacies in the existing literature concerning SSG. This is significant because these findings provide a novel perspective for localised management research in China.

The results for H3c indicated a significant negative effect of SSG differentiation on TP, implying that SSG, as a context-specific manifestation of LMX in China, operates differently from LMX. Western LMX theory posits that leaders allocate their limited energy and resources differently based on employees' abilities and characteristics to enhance performance (Dienesch and Liden, 1986). This theory implicitly assumes that resource allocation is fair and contingent upon work relationships with subordinates, thereby enabling LMX differentiation to positively influence TP under certain conditions. However, empirical studies have reported inconsistent effects of team-level LMX differentiation on TP (Yu et al., 2018; Li et al., 2016). Pan et al. (2021) argue that the primary reason for these inconsistencies lies in the exclusive focus of prior research on the level of LMX differentiation, while neglecting its foundational aspects, which may be critical determinants of its positive or negative impact (Pan & He, 2017). Employing a fair resource model, Pan et al. (2021) demonstrated, from the perspective of the equity principle, that task-oriented differentiation can enhance allocation equity climate and TP, while relationship-oriented differentiation can undermine these variables. This directly and precisely addresses the question of how LMX resource allocation affects equity. Specifically, when leaders allocate work resources based on employees' contributions to task performance and other job-related factors, such allocations are perceived as equitable, thereby fostering TP. Conversely, if leaders distribute resources according to employees' engagement in ingratiating behaviours, loyalty, or other non-work-related factors, this approach is likely to be perceived as inequitable, thus weakening TP. In the Chinese context, where SSG primarily

revolves around personal relationships (i.e., non-work-related factors), it becomes challenging for leaders to achieve equitable resource allocation, particularly emotional resources. Due to the exclusivity inherent in Guanxi, leaders tend to allocate resources based on the closeness of their relationships with subordinates rather than on subordinates' competencies. Such practices not only hinder optimal resource allocation, affecting Organisational performance, but also evoke feelings of injustice among employees who are not closely connected and even third-party observers (Chen et al., 2004). As a result, SSG differentiation diverges from the core tenets of LMX theory, failing to ensure a rational distribution of resources and ultimately diminishing TP.

This study elucidated the negative impact of SSG differentiation on TP, underscoring the critical role of this localised concept in addressing Chinese management issues. Prior research predominantly relied on LMX to explore management problems in China, which often failed to fully capture the nuances of authentic supervisor-subordinate relationships. This finding, grounded in a localised perspective, highlights the significance of social and cultural contexts in management research and contributes to the expansion of LMX theory. Moreover, previous scholars have reached inconsistent conclusions regarding the influence of LMX differentiation on TP (Stewart & Johnson, 2009; Boies & Howell, 2006; Haynie, 2014). In light of this inconsistency, some researchers posited that the discrepancies arise from differing bases of such differentiation. Specifically, work-oriented differentiation tends to enhance performance, while relationship-oriented differentiation may impair it (Pan et al., 2019). The present study validates the negative effect of SSG differentiation on TP, thereby substantiating the findings reported by Pan and colleagues.

Scholars have investigated various mediating variables that influence the relationship between paternalistic leadership and TP, such as team conflict management (Zhang et al., 2009), team identity, and emotional exhaustion (Huang and Lin, 2021). Given that the core of paternalistic leadership lies in utilizing SSG as a critical management strategy, this study selected SSG differentiation as a mediating variable. Hypothesis H3d, which suggested that SSG differentiation effectively mediates the negative effect of APL on TP, was supported. Considering the distinct cultural characteristics of SSG, examining SSG differentiation is of

great significance for expanding research on leaders' management behaviours in the Chinese context. Authoritarian leaders tend to treat subordinates differently based on SSG rather than solely on performance differentiation. Such differentiation primarily rooted in private relationships may lead to an irrational allocation of work resources (including emotional resources) and thereby weaken the overall team performance. Therefore, it is reasonable for this study to distinguish supervisor-subordinate relationships in the Chinese context from that in Western contexts, thus more accurately reflecting LMX within the Chinese cultural framework.

The mediating role of SSG differentiation in the negative relationship between APL and TP was supported, thereby addressing the research question of this study and offering significant theoretical and practical implications. Theoretically, this finding has clarified the mechanism by which APL negatively influences TP, thereby contributing to the literature on paternalistic leadership theory. Practically, this finding highlights an important pathway through which APL diminishes TP, providing valuable insights for the application of paternalistic leadership in organisational settings.

The moderating role of TI in the relationship between SSG differentiation and TP (H4a) was supported. This finding indicates that when team members perceive others' need for help, reciprocal exchange behaviours are more likely to occur, thereby enhancing their willingness to cooperate and ultimately promoting TP. Conversely, when team members realize they can complete their tasks independently, they may prioritise individual achievements over contributing additional effort toward overall TP. Furthermore, SSG differentiation may lead to perceptions of unfairness among out-group subordinates, which not only negatively affects their individual performance but also undermines TP at the team level. Therefore, teams with high levels of TI mitigate the detrimental effects of SSG differentiation on TP, whereas teams with low levels of TI exacerbate this negative impact. H4b was also supported, as the results revealed that in teams with high levels of TI, APL did not significantly influence TP through SSG differentiation. However, in teams with low levels of TI, APL had a pronounced adverse effect on TP via SSG differentiation. These findings further validate the moderating role of TI in the direct relationship between APL and TP and highlight its significance as a critical

boundary condition for effective APL.

The sample of this study was drawn from three types of organisations: state-owned, private, and foreign-funded enterprises in China. The findings indicated no significant differences in the effectiveness of paternalistic leadership across various organisational types, thereby underscoring the critical importance of considering the overarching cultural context. This is because leadership styles and Guanxi, which are grounded in traditional Chinese values, continue to be deeply ingrained in societal and organisational structures. Although paternalistic leadership patterns may evolve alongside cultural shifts and family dynamics, the core attributes of paternalistic leadership and their influence on performance outcomes are difficult to modify within a short timeframe (Huang, 2017).

7.2 Cultural uniqueness reflected in research results

This study investigates the nonlinear relationship between paternalistic leadership and TP, as well as the underlying mechanism. The concept of this nonlinear relationship has been a topic of discussion in ancient Chinese culture for centuries. The philosophy of “Yin” and “Yang” from the Zhouyi (I Ching) can be employed to explain the phenomenon of conflicting cultural values (Ma, 2004). Individuals may choose the most pertinent values that align with their desired goals to guide their behaviour across different contexts and time periods. The value orientation within each culture is dynamic, with opposing values interacting to achieve equilibrium in various situations (Fang, 2012). In management, the prudent application of “Yin-Yang” principles can assist managers in fostering mutual constraints and cooperation within organisations while maintaining a balanced state (Liu et al., 2014). This study uncovers a nonlinear relationship between APL and TP, thereby confirming the existence of this curvilinear association.

The nonlinear effects manifests in various ways within management area, with the most prevalent being the “too-much-of-a-good-thing” effect and the “too-confused-to-be-good” effect. The latter refers to the phenomenon wherein a medium level of an antecedent may lead to worse outcomes compared to its higher or lower levels (Lin & Feng, 2022). In the literature

on the curve hypothesis, most empirical studies have focused on inverted U-shaped relationships. For example, Fleishman (1998) found that dissatisfaction and turnover significantly increase at both extremes of the consideration and structure scale (p. 829), while Li et al. (2018) identified an inverted U-shaped relationship between BPL and TP. However, research on U-shaped relationships remains relatively scarce. The U-shaped impact of APL on TP might initially appear perplexing, but it becomes more comprehensible when examined within a specific cultural context.

In their comparative study, Aycan et al. (2000) demonstrated that paternalistic leadership traits are more pronounced in Eastern countries, such as Pakistan, China, and Turkey, which are characterised by high power distances and collectivist cultures, compared to other regions. For instance, paternalism is deeply embedded in Turkish society, where people highly value affective reciprocity and particularism. These cultural values contribute to the widespread acceptance of paternalism as an appropriate leadership style (Aycan, 2006; Wasti et al., 2007). Therefore, it can be inferred that paternalistic leadership is particularly effective in societies with strong collectivist orientations and significant power distance dynamics (Aycan, 2006). Huang (2017) further argued that although APL has historically been prevalent in traditional Western societies and continues to be observed in modern contexts, it is often perceived as politically incorrect due to its contradiction with mainstream Western values. Criticisms of APL by scholars have predominantly centred on its inclination to centralize authority, its hesitancy to delegate power, its strict control over subordinates, and its reliance on directive orders, thereby emphasising the limitations of this leadership style. In their analysis of autocratic and abusive leadership behaviours, Harms et al. (2018) identified parallels between certain dimensions of abusive supervision and the authoritarian facet of paternalistic leadership. Conceptually, it has been argued that the authoritarian dimension of paternalistic leadership does not invariably manifest as extreme authoritarianism. Instead, there exist various forms of authoritarianism in which authority can be exercised without undermining individual dignity while still maintaining a deliberate focus on control. This perspective aligns with the foundational principles of paternalistic leadership, underscoring the distinction between APL and generic authoritarian leadership. Paternalistic leadership originates from the

family education model rooted in Confucian culture, where parents adopt a role of benevolently commanding and guiding their children, thus differentiating it from abusive management practices. Although APL may weaken subordinates' identification with their supervisors, it can also foster compliance among subordinates (Farh et al., 2006).

The effectiveness of APL is particularly pronounced in the Chinese context due to its alignment with the country's cultural traditions. Hofstede (1984) demonstrated that leadership behaviours vary across cultures and that obedience and acceptance of authority are contingent upon individual cultural values. Additionally, the Global Leadership and Organisational Behaviour Effectiveness (GLOBE) study, which encompassed 61 countries, revealed that social leadership expectations and national culture directly shape leadership behaviours (House et al., 2001). From a cultural psychology perspective, Chinese society places greater emphasis on social norms such as community, responsibility, and respect for authority compared to individualistic societies, which prioritise values like freedom, autonomy, rights, and self-realization (Triandis, 1995). Moreover, the importance of family in the Chinese interdependent self-view (Markus and Kitayama, 1991), parenting patterns (Lin and Wang, 1995), and characteristics of pan-familism (Yang, 1998) further illustrate variations in power dynamics between leaders in Chinese and Western organisations. This underscores the implicit presence of APL as perceived by Chinese subordinates.

Chinese culture is undeniably characterised by collectivism. As Yang (1995) conceptualises, Chinese psychological collectivism is deeply intertwined with this cultural trait. In contrast to the individual-oriented behavioural patterns prevalent in Western societies, traditional Chinese individuals exhibit socially oriented behaviours that can be categorised into four primary dimensions: relationship orientation, authority orientation, familistic (group) orientation, and generalised other orientation. This framework emerges from the socio-economic characteristics of traditional Chinese society. Scholars like Yang (1995) have analysed this phenomenon through the theoretical lenses of cultural ecology and ecological psychology. Given that agriculture constituted the backbone of China's traditional economy, marked by high labour intensity, limited production capacity, and reliance on land resources, these economic features profoundly shaped social interaction patterns associated with

familism, relationship orientation, and authority orientation. In the context of resource scarcity and demanding working conditions, the stability of family relationships and the need for parental authority contribute to the development of behavioural patterns centred on interpersonal relationships and hierarchical authority. Individuals who adhere to traditional Chinese values often revere authority with unwavering faith, demonstrating complete trust in authority both psychologically and behaviourally. Authority is perceived as an entity that exercises control over resources. When faced with authority, individuals may experience a sense of psychological helplessness, leading them to comply unconditionally. Compliance with authority also serves as a means for individuals to establish their identity within the family and society, seeking recognition and approval from those in positions of power through obedience. Consequently, in traditional Chinese families and societies that emphasise hierarchical relationships, obedience to authority is particularly valued. This emphasis on obedience is prominently reflected in Confucian classics, and its influence remains evident in contemporary society.

Therefore, under the influence of China's traditional culture, Chinese people tend to accept the existence of APL in society. Although they may harbor aversion toward authoritarianism, they might simultaneously recognise its rationality within specific contexts. In contemporary Chinese society, individuals are not isolated autonomous entities but are instead deeply embedded within a social structure characterised by interpersonal relationships and Guanxi (Yang, 2006). The authority of Chinese leaders is largely derived from their subordinates' recognition and compliance (Cheng et al., 1995). The effectiveness of paternalistic leadership may depend on the degree of their dependence on the leader. Cheng et al. (2004) posited that authoritarianism positively influences subordinates with a high inclination toward authority, whereas it has little to no effect on those with a low inclination toward authority. Some scholars have pointed out that in the Chinese context, employees might attribute a leader's authoritarian behaviour more to cultural traditions than to their own work or the Organisational context to which they belong. Regardless of the nature of their job or the type of organisation, if individuals perceive that leaders tend to exhibit authoritarian behaviour due to traditional cultural norms, then their resistance to and dissatisfaction with

such behaviour may not significantly influence their overall attitude toward the organisation (Gao, 2015). Consequently, the behaviour of authoritarian leaders can be seen as a double-edged sword. On the one hand, such leaders often establish hierarchical relationships with their subordinates, which may result in an inequitable distribution of resources and hinder employees' initiative and job satisfaction, ultimately diminishing TP. On the other hand, in Chinese society where high power distance and obedience are culturally ingrained, highly authoritarian leaders are more likely than others to enhance team coordination by ensuring compliance from their subordinates. Moreover, their task-oriented leadership style allows them to allocate resources efficiently, thereby achieving team objectives and improving overall performance.

7.3 Summary

This chapter elaborates on the findings of this thesis and provides a comprehensive analysis of the socio-cultural context underpinning these results, thereby deepening readers' understanding. In the discussion section, potential explanations for the results are systematically proposed. Specifically, this chapter discusses the nonlinear relationship between APL and TP, as well as the moderating role of TI in this relationship. Regarding BPL, the results of the hypothesis test did not support the inverted U-shaped relationship between BPL and TP, which contrasts with the conclusions drawn by previous scholars. This chapter has provided an explanation by analysing the differences in team member characteristics and task interdependence levels across the studies. This chapter also discusses the distinct impacts of APL and BPL on SSG differentiation and the negative effect of SSG differentiation on TP. It further clarifies why SSG differentiation mediates the relationship between APL and TP but does not mediate the relationship between BPL and TP. Additionally, this section explores the cultural context that nurtures the emergence of APL, elucidating why this leadership style is prevalent in the Chinese setting and functions as a double-edged sword.

8 Conclusions, contributions, recommendations, limitations, and future research directions

8.1 Main conclusions

The aim of the study is to understand how different types of Paternalistic leadership affect team performance (TP) from resource allocation preference perspective. To identify the mechanism of influence of paternalistic leadership on TP, this study incorporated task interdependence (TI) as a moderating variable to examine the boundary conditions of the effect of paternalistic leadership on TP. Furthermore, SSG differentiation was introduced as a mediating variable to assess whether paternalistic leadership has an indirect influence on TP through SSG differentiation. The research findings have indicated that the majority of the hypotheses are supported (see Tables 8-1). For the unsupported hypotheses, this study also offers plausible explanations regarding the potential reasons. Hence, this study has successfully addressed the research questions and accomplished the research aim.

Table 8-1: Results of hypothesis tests

Hypothesis	Result
H1a: There is a U-shaped relationship between APL and TP	Supported
H1b: There is an inverted U-shaped relationship between BPL and TP	Rejected
H2a: TI moderates the curvilinear relationship between APL and TP. When the level of TI is high, there is a U-shaped relationship between APL and TP. When the level of TI is low, there is a negative relationship between APL and TP.	Supported
H2b: TI moderates the curvilinear relationship between BPL and TP. When the level of TI is high, there is an inverted U-shaped relationship between BPL and TP. When the level of TI is low, there is a positive relationship between BPL and TP.	Rejected
H3a: APL positively influences SSG and SSG differentiation	Supported
H3b: BPL positively influences SSG, but negatively influences SSG differentiation	Supported
H3c: SSG differentiation has a negative impact on TP	Supported
H3d: SSG differentiation mediates the negative effect of APL on TP	Supported
H3e: SSG differentiation mediates the positive effect of BPL on TP	Rejected
H4a: TI moderates the negative relationship between SSG differentiation and TP, such that a low level of TI enhances the detrimental effect of SSG differentiation on TP, while a high level of TI weakens it.	Supported
H4b: TI moderates the negative influence of APL on TP through SSG differentiation. Specifically, when the level of TI is high, the adverse impact of APL through SSG	Supported
H4c: TI moderates the positive influence of BPL on TP through SSG differentiation. Specifically, when the level of TI is high, the positive impact of BPL on TP through SSG differentiation becomes stronger; conversely, when the level of TI is low, this impact decreases.	Rejected

Note: BPL = benevolent paternalistic leadership; APL = authoritarian paternalistic leadership; TP = team performance; SSG= supervisor-subordinate Guanxi; TI = task interdependence

The detailed conclusions are as follows:

The findings supported the nonlinear relationship between APL and TP. Specifically, as the level of authoritarianism increases, the negative impact of APL on TP gradually increases. However, this negative effect reaches a turning point when leaders' authoritarianism reaches a certain level, leading to a decrease in its influence on TP and ultimately having a positive effect. This perspective is new compared with previous findings, as scholars have often found no significant relationship (Zhang et al., 2009), a negative correlation (Chen et al., 2012; Ju, 2008) or a positive correlation (Huang, 2017; Song et al., 2014) between APL and TP. The U-shaped relationship between APL and TP suggests that leaders with moderate levels of authoritarianism have a greater negative impact on TP.

Regarding BPL, the results did not support the expected nonlinear relationship between BPL and TP. The results of this study revealed a significant positive impact of BPL on TP, in line with most previous studies (Kearney and Gebert, 2009; Lehmann et al., 2015; Morgeson et al., 2010; Zhang et al., 2009; Cao, 2015; Gao, 2012). The meta-analysis conducted by Hiller et al. (2019) also indicated that BPL consistently demonstrates positive effects on individual attitudes, behaviours, or team-level performance outcomes in various studies. A comparison of the sample in this study with that of Li et al. (2018), who revealed an inverted U-shaped relationship between BPL and TP, shows that the sample in Li et al. came from a high-tech company, whose employees are generally knowledge workers engaged in innovative work, which is quite different from the sample in this study.

This study revealed that TI moderates the U-shaped relationship between APL and TP. Specifically, when TI is high, the negative effect of APL on TP is attenuated compared to when TI is low, thereby forming the U-shaped relationship between APL and TP. Conversely, when TI is low, APL exerts a stronger negative influence on TP, resulting in a purely negative correlation. Thus, TI serves as a critical situational variable in the APL-TP relationship. By investigating its moderating role, this study elucidated the "black box" of APL's effectiveness at the team level. However, the findings did not support TI's moderating effect on the

relationship between BPL and TP. This study explained that BPL fosters team cohesion and promotes helpful behaviours among members by ensuring equitable resource distribution and demonstrating universal care for subordinates. Consequently, BPL motivates subordinates to enhance their performance regardless of TI levels.

The findings of this study revealed that while both APL and BPL are positively correlated with the quality of SSG, they exert opposing effects on SSG differentiation. Specifically, APL enhances SSG differentiation positively, whereas BPL diminishes it. This suggests that authoritarian leaders differentiate their treatment of subordinates based on varying levels of Guanxi and aim to cultivate distinct relational dynamics accordingly. In contrast, benevolent leaders adopt an egalitarian approach, treating all subordinates equally and striving to establish relationships of consistent quality with each team member. Moreover, this study uncovered a significant negative relationship between SSG differentiation and TP. These results contribute to a deeper understanding of how LMX theory operates within diverse cultural frameworks.

The present study revealed the mediating role of SSG differentiation in the negative relationship between APL and TP. Through expanding SSG differentiation, APL has further intensified the unequal distribution of resources, thereby negatively affecting the optimal allocation of resources and employees' perception of fairness, which indirectly undermines TP. However, the mediating role of SSG differentiation in the relationship between BPL and TP was not supported. This study offered an explanation: BPL behaviours may foster team harmony and reduce team conflict, thereby diminishing subordinates' perception of SSG differentiation within the team. Consequently, SSG differentiation cannot mediate the relationship between BPL and TP.

This study supported the moderating role of TI in the relationship between SSG differentiation and TP, as well as the moderated mediation effect between APL and TP via SSG differentiation. In teams with high levels of TI, team members acknowledge the necessity of seeking help from others in their work, which can reduce the perceived disparity in the quality of supervisor-subordinate relationships. This reduction fosters reciprocal exchange behaviours that enhance team cooperation, thereby alleviating the adverse impact of

SSG differentiation on TP. Conversely, when TI is low, team members exhibit weaker motivation for reciprocal exchange and collaboration because they perceive less need for external support in their tasks. Consequently, SSG differentiation may intensify social comparisons among subordinates, heightening their perception of unfairness, particularly for out-group subordinates. Therefore, the detrimental effect of SSG differentiation on TP is more pronounced in teams with low TI compared to those with high TI. Additionally, this study confirmed that TI plays a significant moderated mediation role in the influence of APL on TP through SSG differentiation. Specifically, for teams characterised by high TI, APL has little to no significant effect on TP via SSG differentiation; however, for teams with low TI, APL exerts a substantial negative influence on TP through SSG differentiation.

In conclusion, this study has successfully addressed the research questions and accomplished the anticipated research aim. Regarding APL, the findings indicate that all hypotheses are consistent with expectations. With respect to BPL, while some hypotheses remain unverified, this paper offers plausible explanations for the potential causes.

8.2 Contributions

Through its empirical research, this study explores the effect of paternalistic leadership on TP and the underlying mechanism in the Chinese context, and makes contributions to relevant theories and empirical research. This study's main contributions are discussed below.

1. This study expands empirical research on the nonlinear relationship between leadership style and team output, as well as its mechanism of influence, thereby enriching current leadership theory. Although some scholars have suggested a curvilinear rather than linear relationship between leadership and organisational outcomes (Fleishman, 1998), limited research has been conducted in this area. This study has identified the nonlinear effect of authoritarian leadership on team performance, thereby extending the nonlinear research findings in the field of leadership. However, no significant nonlinear relationship was detected between BPL and TP. Instead, a strong positive correlation between BPL and TP was found, thus enriching the literature on the outcomes of paternalistic leadership at the team level.

2. The findings reveal an important boundary condition for the nonlinear relationship between APL and TP, providing a more nuanced understanding of the effectiveness of this debated leadership style. Specifically, the effectiveness of APL at the team level is significantly moderated by TI among members. When TI is high, authoritarian paternalistic leaders exhibit a U-shaped effect on TP. Conversely, when tasks do not necessitate close cooperation among team members, the impact of such leaders on overall TP becomes negative, regardless of their degree of authoritarianism. By identifying TI as a boundary condition in the relationship between paternalistic leadership and TP, this study reconciles prior inconsistent findings and contributes to the theoretical development of paternalistic leadership.

3. This study extends the contextualised empirical research on LMX theory by investigating the impact of SSG differentiation, rather than LMX differentiation, on TP. Although widely adopted and acknowledged in organisational management studies, there remains a gap in understanding how LMX differentiation manifests as SSG differentiation within the Chinese context. Most Chinese and international scholars have relied on LMX to measure leader – member relationships in their China-based studies, neglecting the substantial distinction between LMX and SSG in this setting. In Chinese society, the concept of “Guanxi” encompasses a much broader meaning than the Western-defined LMX. The direct application of Western constructs may result in inconsistencies due to cultural differences, hindering an accurate grasp of leader-subordinate dynamics and potentially undermining research objectives. This study conducted several pioneering investigations into identifying the positive effects of APL and BPL on SSG, the positive influence of APL on SSG differentiation, and the negative impact of BPL on SSG differentiation. These findings clarified the distinct behavioural tendencies of these two paternalistic leadership styles in the context of the supervisor-subordinate relationship. Furthermore, the negative effect of SSG differentiation on TP was empirically validated, thereby deepening the understanding of this differentiation, which is rooted in personal relationships.

4. This study has made a pioneering contribution by introducing SSG differentiation as a mediating variable in the relationship between paternalistic leadership and TP, thereby filling

a gap in empirical research on paternalistic leadership. Although scholars have extensively examined the main and moderating effects of LMX differentiation, little attention has been paid to its antecedents. Therefore, this study analyses paternalistic leadership style as an antecedent of LMX differentiation to enhance research in this area. Furthermore, by introducing and validating SSG differentiation as a mediator through which paternalistic leadership affects TP under different management models, this study fills a major research gap. Moreover, the confirmation of the mediating role of SSG differentiation elucidates the fundamental reason underlying the critique of APL. Specifically, it highlights how resource allocation based on proximity to subordinates undermines fairness, thereby impeding the effective functioning of this task-oriented leadership style and ultimately compromising team output.

8.3 Practical Contribution and Recommendations

The research findings elucidate the mechanisms and boundary conditions through which different paternalistic leadership styles influence team performance. The results offer valuable insights into the ambiguities present in current management practices, providing practical guidance for Chinese business organisations and foreign-funded enterprises in talent selection and utilization. Additionally, this study offers strategic recommendations for Chinese managers regarding leadership behaviour choices and interpersonal relationship management. This section examines the topic from four distinct aspects.

8.3.1 Reflections on management practices

The primary motivation for this research originates from the author's observations in practical management contexts, where the efficacy of paternalistic leadership, particularly APL, is often questioned. However, the existing literature has yet to offer a consistent and conclusive response to this issue. This study reveals a nonlinear relationship between APL and TP, further elucidating the moderating role of TI and the mediating role of SSG. These

findings indicate that the influence of leadership style on team outcomes depends on various factors, including contextual conditions and interpersonal dynamics, thereby introducing an element of uncertainty. The author personally encountered similar scenarios during management practice.

The Organisation where the author is employed is a traditional manufacturing enterprise. Several years ago, the company reassigned the manager of the production department to the R&D department as its supervisor. During his tenure in the production department, the manager consistently delivered exceptional performance and successfully achieved all predetermined goals. Moreover, his extensive experience in production operations was deemed to hold substantial guiding significance for product research and development processes. As such, the company expected that he would similarly elevate the performance of the R&D department. On the surface, this personnel reassignment seemed promising. However, contrary to expectations, during the three years he led the R&D department, the department's performance not only failed to improve but also experienced frequent delays in product development timelines and delivery schedules, which had a detrimental effect on the company's overall performance. Additionally, during this period, two key members of the R&D department resigned. Given these unsatisfactory results, the company considered reassigning him to another department, a decision that ultimately prompted the manager to resign.

As this study neared completion, the author reflected on the aforementioned events and pinpointed the critical factors that influenced the manager's performance. Firstly, this manager emphasises efficiency and execution capability, advocates for a hierarchical structure with strict compliance, and retains sole decision-making authority, thus exemplifying a highly authoritarian leadership style. Secondly, the operational characteristics of the production department require close collaboration among team members to accomplish tasks, indicating a high degree of TI. In contrast, employees in the R&D department typically work independently, driven by personal creativity and tailored to specific customer requirements, which reflects a low level of TI. Based on the findings from this study, it can be inferred that the manager's unsuccessful experience in the R&D department may stem from the differing

levels of TI between the two departments. Given the high interdependence of work tasks in the production department, the manager's focus on strong execution, rigorous procedural control, and subordinate obedience aligns well with the team's needs, thereby enhancing both task completion efficiency and quality. However, within the context of low TI in the R&D department, these traits may become liabilities. For instance, consider a product designer who is required to adhere strictly to procedures and systems while working under constant supervision. Such constraints, akin to "dancing with shackles on one's feet", could stifle their innovative inspiration.

Furthermore, based on feedback from the personnel department, one of the two core employees who resigned did so because of a perceived lack of fairness in the supervisor's decision-making process. Specifically, the manager assigned a high-potential project, to which the employee had significantly contributed during its development phase, to another team member with whom the manager shared a close personal relationship. As a result, this R&D department employee decided to resign as a protest against what was perceived as an unjust managerial decision.

It is clear from the aforementioned cases that the interdependence of team tasks represents a pivotal boundary condition for the effectiveness of APL at the team level. Furthermore, the biased behaviour of authoritarian leaders can significantly impact employees' job satisfaction and performance. In conclusion, the theoretical model proposed in this study offers a coherent and systematic explanation for the management phenomena illustrated by the aforementioned cases.

8.3.2 Self-reflection as a practicing manager

The findings of this study not only address several challenging issues encountered by the author in management practice but also prompt the author to reflect on the weaknesses of his leadership behaviours, such as authoritarian tendencies and unfair treatment toward subordinates.

First, regarding authoritarian behaviour. As the author has advanced in position, there has

been an increasing emphasis on subordinates' compliance. Interactions with team members have shifted noticeably from two-way communication to one-way directives. This transformation may stem from the heightened pressures inherent in a more senior role, inadvertently fostering a more direct and commanding management style. However, the author has acknowledged that during the decision-making process, there has been a marked reduction in opposing viewpoints. Subordinates have grown increasingly accustomed to obedience and dependence, with very few willing to challenge the author's opinions or act as a "beautiful enemy". Consequently, the author's authoritarian tendencies could compromise the rationality of decision-making and diminish the effectiveness of leadership. Moreover, such behaviour might undermine the team's innovative spirit and collaborative atmosphere. Therefore, it is crucial to critically reflect on and adjust the management approach to foster a more open, inclusive, and collaborative work environment. Such modifications are likely to enhance team creativity and initiative while strengthening team cohesion and performance.

Second, regarding supervisor-subordinate Guanxi. The author has realised a critical issue in his management process: the mismanagement of SSG differentiation. Specifically, veteran employees who have worked alongside the author for years tend to receive preferential treatment, with more resources and opportunities allocated to them. In contrast, newly joined team members often receive inadequate attention and support. This biased allocation of resources not only impedes the development of new employees but also weakens team morale and productivity. Consequently, in future management practices, the author will emphasise treating every team member equitably. Regardless of seniority, a fair distribution of resources and opportunities will be ensured. The author plans to implement a more transparent and equitable performance evaluation system to facilitate the rational allocation of resources. Furthermore, the author will enhance training and guidance for new employees, assisting them in adapting to the team culture and work processes more effectively, thereby strengthening team cohesion and improving overall work efficiency.

8.3.3 Implications for organisations in appointing paternalistic leaders

Paternalistic leadership represents a prevalent leadership style within Chinese business organisations. When appointing a team leader, the initial step involves evaluating their leadership style. For BPL, its influence—whether at the individual or team level—is proved positive in the most of findings. The current context of Chinese business organisations seems more conducive to the implementation of a people-oriented management approach. Therefore, grassroots organisations should prioritise recruiting benevolent leaders or encouraging leaders to demonstrate benevolent behaviour more frequently. This study hypothesises that both APL and BPL exert a double-edged sword effect on team performance. However, the relevant hypotheses regarding BPL have yet to be validated. Therefore, this section focuses on how organisations can appoint APL to enhance performance or reduce its negative effects.

Regarding APL, organisations should align team task characteristics with the leadership authoritarianism level to maximise positive leadership outcomes while mitigating potential negative effects. Specifically, organisations should avoid assigning highly authoritarian leaders to manage teams with low task interdependence, particularly innovative teams that emphasise employee autonomy and potential. Due to the advantages of highly authoritarian leadership in terms of management efficiency, execution capability, and team coordination, such leadership is more appropriate for teams with high task interdependence, especially those involving highly standardised tasks like assembly line operations or requiring rapid responses, such as crisis management departments. Additionally, for teams with low maturity or members who accept authoritarianism readily, highly authoritarian leadership may remain a viable option.

Due to human resource constraints, organisations may encounter challenges in achieving optimal leadership appointments and occasionally experience the adverse effects of authoritarian leadership. To address this, organisations should implement strategies to mitigate the negative aspects of authoritarian leadership and reduce its detrimental impact on performance. Specifically, for authoritarian leaders who excessively emphasise “parental authority” and undermine employee autonomy, organisations should establish a transparent decision-making process (e.g., requiring feasibility reports for major decisions) and regularly

monitor employee job satisfaction through anonymous surveys. Such measures can help restrain the “one-man show” and “over-intervention” tendencies often associated with authoritarian leaders. Additionally, to counteract biased treatment of subordinates by authoritarian leaders (e.g., favouring loyal subordinates with protection or additional resource support), organisations should conduct regular fairness assessments to gauge employees’ perceptions of equitable treatment. Based on these assessment results, organisations can issue warnings regarding such biased behaviours and mandate corrective actions to enhance overall organisational fairness.

Although this study’s sample encompasses state-owned enterprises, private enterprises, and foreign enterprises, the findings reveal no significant differences in the relationship between leadership style and performance across enterprise types. This insight provides valuable implications for cross-cultural management within multinational corporations. In China’s Guanxi-oriented society, it is challenging to alter localised psychological tendencies, behavioural patterns, and interpersonal relationship dynamics during management activities, which may result in conflicts with the corporate culture of the parent company of multinational enterprises. Managers who recognise and appreciate these cultural differences are more adept at adapting to them and enhancing organisational performance compared to their counterparts. Consequently, multinational corporations could implement comprehensive training programs for foreign executives focused on Chinese sociocultural knowledge, such as the historical context of Confucianism, patriarchal traditions, and “Guanxi” culture. Such initiatives would empower them to better understand the psychological traits and behavioural norms of the Chinese population, thereby improving their cross-cultural management capabilities.

8.3.4 Implications for the self-improvement of paternalistic leaders

Paternalistic leadership can adopt targeted strategies to enhance leadership effectiveness. For BPL, to reduce the potential negative effects of “rule by man”, it is crucial to transform emotional care for subordinates into a formalized and standardized welfare system, thereby

mitigating the impact of subjective biases on fairness. For APL, improving employee participation and decision-making quality necessitates learning to balance authority with restraint effectively. This involves delegating authority appropriately, establishing clear boundaries based on the significance of decisions, retaining final decision-making power over core matters, and empowering teams to make independent decisions on non-core issues. Furthermore, APL should actively acknowledge employees' challenging behaviours and recognise the importance of "upward management" as a mechanism for mutual feedback and growth.

This study has revealed that both APL and BPL have promoting effects on SSG. However, APL tends to establish SSG of varying qualities depending on subordinates' levels of obedience and loyalty. To mitigate potential negative effects on team productivity, authoritarian leaders should aim to establish SSGs of consistent quality across all subordinates. Specifically, when leaders share special relationships with certain subordinates (e.g., relatives, classmates, or acquaintances), they should allocate emotional and work resources equitably to mitigate social comparisons and perceptions of differential treatment within SSGs.

8.3.5 Summary

In conclusion, throughout the entire doctoral research and thesis writing process, the author has developed a deep appreciation for the significance of dynamically integrating theory with practice. A management methodology was constructed, which entails identifying issues from practical contexts, exploring solutions through theoretical frameworks, and subsequently validating conclusions in real-world applications to form a closed-loop system. As a practicing manager, the author acknowledges that the nonlinear characteristics inherent in complex management systems must be translated into an actionable decision-making framework to enable theory to effectively guide practice. This academic endeavor facilitated three pivotal transformations in the author: First, the meta-skill of transforming fragmented phenomena into structured cognition was cultivated; Second, nonlinear thinking was fostered, allowing for the identification of critical variables influencing complex management issues

and enabling a comprehensive understanding of the relationships among these variables; Third, a mechanism was established to translate the spirit of academic critique into a driving force for organisational improvement. These insights will continue to empower the author to promote a virtuous cycle of knowledge creation and value transformation within organisations, particularly from the perspective of a scholar-manager operating in complex environments.

8.4 Limitations and future research directions

1. This study focuses on the fundamental team structure within business organisations, as grassroots managers engage in daily interactions with their subordinates. These interactions allow for a relatively accurate assessment of leadership characteristics and the dynamics between supervisors and subordinates. However, functional differences exist between grassroots managers and middle or senior management levels, resulting in varying effects and outcomes when leaders perform management actions or interact with their subordinates. Dubin (1979) categorised leadership into two types: leadership in organisations and leadership of organisations. The former pertains to leaders at all levels who influence their subordinates through face-to-face interaction while executing tasks; the latter concerns top-level leadership within a unit or organisation, which focuses on the strategic development of the entire organisation, also referred to as “strategic leadership”. Leaders at different organisational levels encounter varying degrees of environmental complexity and execute distinct tasks, necessitating diverse cognitive abilities (Mumford et al., 2007). Additionally, leadership functions differ across organisational levels in terms of authority, resource allocation, and subordinates’ implicit recognition of leaders’ legitimacy (Katz and Kahn, 1978). In this study, the sample was drawn from grassroots teams, where managers engage in frequent, continuous communication with their subordinates on a daily basis. Consequently, future research might explore middle and senior management roles within business organisations, potentially uncovering divergent results.

2. This study utilized cross-sectional data and thus was unable to fully capture the precise causal relationships between variables. To ensure a high response rate for the questionnaire

and an effective pairing of leaders with subordinates, the survey was conducted within a relatively short timeframe, necessitating reliance on cross-sectional data. Nevertheless, it is important to acknowledge that leadership behaviour and the relationship dynamics between supervisors and subordinates are subject to change over time. Longitudinal surveys may provide more comprehensive insights into these evolving patterns. For example, the influence of highly authoritarian leaders on TP could vary depending on the stage of team tenure. Such leaders might significantly enhance TP during the early stages of team formation. However, a management approach centred on strict guidance and control may gradually diminish subordinates' work initiative due to insufficient empowerment, thereby undermining the positive effect of APL on TP. Similarly, as leader – subordinate interactions within a team deepen over time, the relationship between BPL and TP may also evolve. Prolonged displays of benevolence might eventually be perceived as routine by employees, potentially eroding leaders' authority and consequently reducing the positive impact of benevolence on TP. Therefore, future studies should consider employing longitudinal research designs with multiple time points to more comprehensively examine the dynamic relationships among these variables. By systematically tracking the development process of teams, researchers can gain deeper insights into how paternalistic leadership influences team output.

3. The dependent variable in this study was subjective team performance, which is influenced by human factors. Integrating this analysis with objective data on TP would strengthen the persuasiveness and applicability of the study. Consequently, future research may consider combining subjective performance assessments with objective measures of team performance to examine the effects of paternalistic leadership behaviour at the team level. This approach could not only deepen understanding but also enhance the recognition of this topic within the academic community.

4. The overall organisational atmosphere may also impact employees' perception of their direct leaders, thereby influencing performance. Specifically, the leadership style adopted by senior leaders in a company can have a significant effect on employees. If top leaders adopt an authoritarian approach, employees may view their supervisors' authoritarian behaviour as reasonable and acceptable. Furthermore, the relationship between team leaders and their

supervisors influences their attitude and behaviour towards their subordinates. Compared with leaders who do not have closeness relationships with their immediate supervisors, those who build strong connections tend to provide less help to their subordinates (Cashman et al., 1976). Therefore, future research should consider factors such as the organisational leadership atmosphere or the dynamics between leaders and their supervisors.

5. This study adopted a leadership-centred perspective to investigate the relationship between leadership style and TP, with the implicit assumption that high power distance and hierarchy in the Chinese context contribute to the crucial role of leaders in achieving TP. Therefore, this study focused primarily on examining the interaction between supervisors and subordinates as well as the top-down influence of leaders, while overlooking the importance of subordinates. However, leadership effectiveness depends to some extent on followers, as they can actively shape their leaders' attitudes and behaviours (Uhl-bien et al., 2011). Particularly in teams characterised by ambiguous hierarchical relationships such as self-managed teams and cross-functional teams, followers assume greater responsibility for team outcomes. Therefore, future research could focus on studying effective follower behaviour and its impact on leadership behaviour, leader–member relationship dynamics, and team outcomes. In addition, subordinates' traditionalism level can influence subordinates' obedience (Su et al. 2022), which may act as the boundary condition in the relationship between paternalistic leadership, particularly APL, and team performance. Future research could investigate the mediating role of subordinates' traditionality in the relationship between paternalistic leadership and team performance.

6. Further investigations are warranted regarding the dimensions of paternalistic leadership and the measurement items of the scale. Concerning the dimensions of paternalistic leadership, some scholars have contended that moral paternalistic leadership (MPL) should not be treated as a distinct dimension (Hiller et al., 2021). Aligned with the classification of leadership functions (task-oriented or relationship-oriented), this study adopted a binary conceptualisation of paternalistic leadership. Future research could further investigate which framework, two-dimensional or three-dimensional, more accurately captures the essence of paternalistic leadership.

The measurement of paternalistic leadership has been refined and updated by scholars in recent years (Cheng et al., 2000; Wang et al., 2011; Cheng et al., 2014). However, the effectiveness of leadership is intricately tied to social and cultural contexts. Considering the growing integration of traditional Chinese culture, socialist culture, and Western culture into contemporary society, future studies should aim to conduct more comprehensive and precise analyses of the cultural foundations that influence the effectiveness of paternalistic leadership. Furthermore, it may be necessary to reconceptualise paternalistic leadership (Gao et al., 2014) and improve its measurement scale. For instance, the Multidimensional Paternalistic Leadership (MPL) scale primarily focuses on leaders' role modelling and impartiality (Cheng et al., 2000; Cheng et al., 2014). Gao et al. (2014) questioned whether this scale fully captures the moral dimension, as an analysis grounded in China's traditional Confucian culture identified a broader spectrum of virtues expected of leaders. Consequently, further research on the measurement of paternalistic leadership is warranted.

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Appendices

Appendix1: Electronic Consent Form

Research Project Title: Impact and Potential Influence Mechanism of Paternalistic Leadership on Team Performance: From a Resource Allocation Perspective

Approval Number [GUEP 2023 15035 11392]

Please tick box	
I confirm that I have read and understood the information sheet explaining the research project and I have had the opportunity to ask questions about the project.	
I understand that my participation is voluntary and that I am free to withdraw at any time during the study without giving a reason and without any penalty. I understand that if I withdraw no more data will be collected from me. However, any data collected up until the point that I withdraw may be kept and used in the data analysis.	
I understand that my responses will be kept anonymous and I give permission for members of the research team to have access to my anonymised responses.	
I agree to take part in this study	

Appendix 2: Participant Information Sheet

1. Research Project Title

Impact and Potential Influence Mechanism of Paternalistic Leadership on Team Performance: From a Resource Allocation Perspective

2. Background, aims of the project

I am Yong Wang, a part-time Doctor of Leadership and Innovation student at the University of Stirling in Scotland, UK. I am undertaking research entitled “Impact and Potential Influence Mechanism of Paternalistic Leadership on Team Performance: From a Resource Allocation Perspective”, which aims to understand how leadership influences team performance via the mediating role of leader-member Guanxi differentiation. I would like to invite the staff of your company who meet the requirements of the research to take part and I would be very grateful.

3. Why has the company been invited to take part?

The company has been invited because it meets the requirements of the survey, such as the scale of the company and industry characteristics. I am very keen to learn from companies such as yours about the relationships between paternalistic leadership behaviour and team performance.

4. Does the company have to take part?

No. The company does not have to take part. It is under no obligation to take part. If the company does decide to take part, It can withdraw its participation at any time without needing to explain and without penalty by advising the researcher of this decision. If it withdraws I will not collect any more data from the staff of the company. However, any data collected up until the point that it withdraws will be kept and used in the data analysis.

5. What will happen if the company takes part?

Your employees who meet the inclusion criteria of the research will need to complete an online questionnaire, which should take approximately 3-5 minutes. To protect participants' personal information, the questionnaire will be filled on condition that they are not identified. Specifically, the questionnaire will not show their name, contact information, or team name.

6. Are there any potential risks in taking part?

There are no foreseeable risks in taking part. There are no financial or health and safety issues involved in this project.

7. Are there any benefits in taking part?

I will not provide any direct benefits for participants. I believe people take part in the project because they are interested in it. A summary of the fully anonymized findings will be available for anyone who would like to read them.

8. What happens to the data I provide?

I am carrying out this study as part of my personal studies towards the completion of my degree.

The data participants provide will be stored anonymously. Specifically, I will not ask for any personal data about participants and their responses will be assigned a number rather than their names. My supervisors will have access to the data from the questionnaire participants fill in when analysing the data I collect, yet they can not identify participants as it is anonymous. All data will be kept for 10 years on a secure University server and then destroyed.

9. Will the research be published?

This research will be written up for my doctoral thesis and stored in the University of Stirling repository. It will also be presented at conferences or published in an academic journal. Participants will not be identifiable in any publication.

10. Who has reviewed this research project?

The ethical approaches of this project have been approved by The University of Stirling General University Ethics Panel.

11. Who do I contact if I have concerns about this study or I wish to complain?

If you would like to discuss the research with someone. Please contact either of these persons

1. Yong Wang, Researcher

Email: Yong.wang@stir.ac.uk

2. Professor, Oliver Mallett, Supervisor
Email:oliver.mallett@stir.ac.uk
3. Professor, Jun He, Supervisor
Email:econhejun@126.com

You have the right to lodge a complaint against the University regarding data protection issues with the UK Information Commissioners Office (<https://ico.org.uk/concerns/>).

The University's Data Protection Officer is Joanna Morrow, Deputy Secretary. If you have any questions relating to data protection, these can be addressed to data.protection@stir.ac.uk in the first instance.

Appendix 3: Pre-study questionnaire

Dear Sir/Madam,

Welcome to my study on the effectiveness of leadership at the team level in the Chinese business context. I am Yong Wang, a part-time Doctor of Leadership and Innovation student at the University of Stirling in Scotland, UK. I am undertaking research entitled “Impact and Potential Influence Mechanism of Paternalistic Leadership on Team Performance: From a Resource Allocation Perspective”, which aims to understand how paternalistic leadership influences team performance via the mediating role of leader-member Guanxi differentiation. I want to invite you to take part in this research, and I would be very grateful.

You have been invited because the company you work for meets the survey requirement. In addition, the team you are in matches up with the inclusion criteria of the research as well, such as the team scale and supervisors tenure, so everyone within your team will be invited to take part. You will need to complete an online questionnaire, which should take approximately 15 minutes. To protect your personal information, the questionnaire will be filled on condition that you are not identified. Specifically, the questionnaire will not show your name, contact information, or team name.

There are no foreseeable risks in taking part. There are no financial or health and safety issues involved in this project. You will not be provided any direct benefits for participants. A summary of the fully anonymized findings will be available for anyone who wants to read them. The data you provide will be stored anonymously. Specifically, I will not ask for any personal data about you and your response will be assigned a number rather than your name. My supervisors will have access to the data from the questionnaire you fill in when analysing the data I collect, yet they can not identify you as it is anonymous. All data will be destroyed after 10 years.

The ethical approaches of this project have been approved by The University of Stirling General University Ethics Panel. The approval number is [GUEP 2023 15035 11392].If you would like to discuss the research with someone. Please contact either of these persons.

Yong Wang, Researcher

Email: Yong.wang@stir.ac.uk

Professor, Oliver Mallett, Supervisor

Email:oliver.mallett@stir.ac.uk

Professor, Jun He, Supervisor

Email:econhejun@126.com

You have the right to lodge a complaint against the University regarding data protection issues with the UK Information Commissioners Office (<https://ico.org.uk/concerns/>).

The Universitys Data Protection Officer is Joanna Morrow, Deputy Secretary. If you have any questions relating to data protection, these can be addressed to data.protection@stir.ac.uk in the first instance.

You will complete a formal questionnaire anonymously, and if you decide to participate in the survey, please answer the following questionnaire; If you do not want to participate, please simply opt out.

Note:The system will link different questionnaires according to the participants' answers. Participants who select option "1" will be automatically entered into the leader questionnaire, and participants who select option "2" will be entered into the team member questionnaire.

Thank you again for taking time out of your busy schedule to participate in this survey !

Entrance

What is your position in your team?

(1) Team leader (2) Team member

Questionnaire filled by supervisors for pre-study

Except for the first question, which needs to fill in the team code, the rest are multiple choice questions. Each question has 6 choices, including: strongly disagree, disagree, slight disagree, slightly agree, agree, and strongly agree. Please evaluate and judge according to your feelings and experiences, and choose the option that is most suitable for you. Thank you again for taking time out of your busy schedule to participate in this study!

Note: In order to protect your privacy and prevent your information from being identified by third parties, you will be assigned a number to replace your team name. Please fill in the number before answering the main questionnaire.

Please fill in () with the number assigned to your team:

Team number: ()

1. Your gender: (1) Male (2) Female (3) Other

2. How long have you been in charge of the current team?

(1) Less than 1 year (2) Less than 3 years (3) Less than 5 years (4) Less than 10 years

(5) More than 11 years

3. The size of your team (besides leader)

(1) 2-3 people (2) 4-5 people (3) 6-10 people (4) 11-15 people (5) More than 16 people

4. Your age:

(1) 18-25 years old (2) 26-30 years old (3) 31-40 years old (4) 41-50 years old (5) Above 51 years old

5. Your education level

(1) Middle school or below (2) High school (3) Junior college (4) Undergraduate

(5) Postgraduate or above

Task interdependence		Stro ngly Disa gree	disa gree	sligh tly disa gree	sligh tly agre e	agre e	Stro ngly agre e
1	Group members work closely with each other in doing their work	1	2	3	4	5	6
2	Group members frequently must coordinate their	1	2	3	4	5	6

	efforts with each other						
3	The way individual members perform their jobs has a significant impact upon others in the group	1	2	3	4	5	6

Questionnaire filled by team members for pre-sutdy

Except for the first question, which needs to fill in the team code, the rest are multiple choice questions. Each question has 6 choices, including: strongly disagree, disagree, slightly disagree, slightly agree, agree, and strongly agree. Please evaluate and judge according to your feelings and experiences, and choose the option that is most suitable for you. Thank you again for taking time out of your busy schedule to participate in this study!

Note: In order to protect your privacy and prevent your information from being identified by third parties, you will be assigned a number to replace your team name. Please fill in the number before answering the main questionnaire.

Please fill in () with the number assigned to your team:

Team number: ()

1. Your gender: (1) Male (2) Female (3) Other

2. Your age:

(1) 18-25 years old (2) 26-30 years old (3) 31-40 years old (4) 41-50 years old (5) Above 51 years old

3. How long have you been in the current team?

(1) Less than 1 year (2) Less than 3 years (3) Less than 5 years (4) Less than 10 years
(5) More than 11 years

4. Your education level

(1) Middle school or below (2) High school (3) Junior college (4) Undergraduate
(5) Postgraduate or above

Team task performance What do you think of the overall performance of your team?		Strong ly Disagr ee	disag ree	sligh tly disag ree	slig htly agre e	agr ee	Stron gly agree
1	Generally, team members are very satisfied with their work.	1	2	3	4	5	6
2	Team members feel a strong commitment to their work.	1	2	3	4	5	6
3	Team members feel highly committed to their work goals.	1	2	3	4	5	6
4	The way we manage our work inspires us to better job performance.	1	2	3	4	5	6
5	All things considered, the team is highly pleased with the way it manages its work.	1	2	3	4	5	6

leadership style Please describe the leadership style of your immediate supervisor		Stron gly Disagr ee	disag ree	slight ly disag ree	slig htly agre e	agre e	Stron gly agree
1	My supervisor often shows his/her concern about me	1	2	3	4	5	6
2	My supervisor understands my preference enough to accommodate my personal requests	1	2	3	4	5	6
3	My supervisor encourages me when I encounter difficulties in work	1	2	3	4	5	6
4	My supervisor would try to understand the real cause of my unsatisfied performance	1	2	3	4	5	6
5	My supervisor trains and coaches me when I lack required abilities at work	1	2	3	4	5	6
6	My supervisor appears to be intimidating in front of his/her subordinates	1	2	3	4	5	6
7	My supervisor brings me a lot of pressure when we work together	1	2	3	4	5	6
8	My supervisor is very strict with his/her subordinates	1	2	3	4	5	6
9	My supervisor scolds me when I fail expected target	1	2	3	4	5	6
10	My supervisor disciplines me for violation of his/her principles or orders.	1	2	3	4	5	6

Supervisor-subordinate Guanxi Please describe the relationship between you and your immediate supervisor		Strongly Disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
1	My supervisor and I always share thoughts, opinions, and feelings toward work and life.	1	2	3	4	5	6
2	I feel easy and comfortable when I communicate with my supervisor	1	2	3	4	5	6
3	I would feel sorry and upset if my supervisor decided to work for another company.	1	2	3	4	5	6
4	If my supervisor has problems with his/her personal life, I will do my best to help him/her out.	1	2	3	4	5	6
5	My supervisor would ask me to help him/her deal with some family errands.	1	2	3	4	5	6
6	During holidays or festivals, my supervisor and I would call each other or visit each other.	1	2	3	4	5	6
7	After office hours, I have social activities together with my supervisor, such as having dinner together or having entertainment together, which go beyond work duties.	1	2	3	4	5	6
8	I am familiar with the family members or friends of my supervisor and have personal contact with these members.	1	2	3	4	5	6
9	I am willing to obey my supervisor unconditionally.	1	2	3	4	5	6
10	While I disagree with my supervisor, I would still support his/her decisions.	1	2	3	4	5	6
11	I am willing to give up my goals to fulfil my supervisor's goals.	1	2	3	4	5	6
12	I am willing to sacrifice my interests to fulfil my supervisor's interests	1	2	3	4	5	6

Appendix 4: Main study questionnaire

Dear Sir/Madam,

Welcome to my study on the effectiveness of leadership at the team level in the Chinese business context. The aim of the study is to investigate your views about leader style, team relationship and performance. I would be grateful if you could join me. You will need to complete an online questionnaire anonymously, which takes about 3-5 minutes. To protect your personal information, the survey will not show your name, contact information or team name. Your colleagues, your boss, and anyone else in the company will never know your answer. The ethical approach to the project has been approved by the Ethics Committee of the University of Stirling under the approval number [GUEP 2023 15035 11392]. If you would like to discuss the research with someone. Please contact either of these persons.

Yong Wang, Researcher

Email: Yong.wang@stir.ac.uk

Professor, Oliver Mallett, Supervisor

Email: oliver.mallett@stir.ac.uk

Professor, Jun He, Supervisor

Email: econhejun@126.com

Note:

1. Please confirm you have worked in the present team for at least 6 months. If not, please quit the survey now. "Team" refers to the department, team and other small groups you have been in.

2. In order not to disclose your identity and personal information, please fill in the team number assigned to you in this survey before answering questions. This questionnaire is limited to internal members of your team, and the system will rule it invalid if it is forwarded again.

3. There is no right or wrong answer, but due to the logical connection between the questions, answering the questionnaire randomly will be judged as invalid by the system. Please answer carefully to ensure the validity of your questionnaire. Thank you again for taking time out of your busy schedule! I wish you all the best!

Yong Wang

Questionnaire filled by supervisors for the main study

Please fill in () with the number assigned to your team and then start to answer questions:

My team number: ()

All of the questions are one-choice questions. Each question has 6 choices, including: strongly disagree, disagree, slightly disagree, slightly agree, agree, and strongly agree. Please evaluate and judge according to your feelings and experiences, and choose the option following your real thoughts. Thank you again for taking time out of your busy schedule to participate in this study!

Task interdependence		Strongly Disagree	disagree	slightly disagree	slightly agree	agree	Strongly agree
1	Group members work closely with each other in doing their work	1	2	3	4	5	6
2	Group members frequently must coordinate their efforts with each other	1	2	3	4	5	6
3	The way individual members perform their jobs has a significant impact upon others in the group	1	2	3	4	5	6

1. Your Gender: (1) Male (2) Female (3) Other

2. How long have you been in charge of the current team?

(1) Less than 1 year (2) Less than 3 years (3) Less than 5 years (4) Less than 10 years

(5) More than 11 years

3. The size of your team (besides leader)

(1) 2-3 people (2) 4-5 people (3) 6-10 people (4) 11-15 people (5) More than 16 people

4. Your age:

(1) 18-25 years old (2) 26-30 years old (3) 31-40 years old (4) 41-50 years old (5) Above 51 years old

5. Your education level

- (1) Middle school or below (2) High school (3) Junior college (4) Undergraduate
(5) Postgraduate or above

Questionnaire filled by team members for the main study

Please fill in () with the number assigned to your team and then start to answer questions:

My team number: ()

All of the questions are one-choice questions. Each question has 6 choices, including: strongly disagree, disagree, slightly disagree, slightly agree, agree, and strongly agree. Please evaluate and judge according to your feelings and experiences, and choose the option following your real thoughts. Thank you again for taking time out of your busy schedule to participate in this study!

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3	Team members feel highly committed to their work goals.	1	2	3	4	5	6
4	The way we manage our work inspires us to better job performance.	1	2	3	4	5	6
5	All things considered, the team is highly pleased with the way it manages its work.	1	2	3	4	5	6

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3	My supervisor encourages me when I encounter difficulties in work	1	2	3	4	5	6
4	My supervisor would try to understand the real cause of my unsatisfied performance	1	2	3	4	5	6

5	My supervisor trains and coaches me when I lack required abilities at work	1	2	3	4	5	6
6	My supervisor appears to be intimidating in front of his/her subordinates	1	2	3	4	5	6
7	My supervisor brings me a lot of pressure when we work together	1	2	3	4	5	6
8	My supervisor scolds me when I fail expected target	1	2	3	4	5	6
9	My supervisor disciplines me for violation of his/her principles or orders.	1	2	3	4	5	6

Supervisor-subordinate Guanxi Please describe the relationship between you and your immediate supervisor		Strongly Disagree	disagree	slightly disagree	slightly agree	agree	Strongly agree
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8	I am familiar with the family members or friends of my supervisor and have personal contact with some of these members.	1	2	3	4	5	6
9	I am willing to obey my supervisor unconditionally.	1	2	3	4	5	6
10	While I disagree with my supervisor, I would still support his/her decisions.	1	2	3	4	5	6
11	I am willing to give up my goals to fulfil my supervisor's goals.	1	2	3	4	5	6
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1. Your gender: (1) Male (2) Female (3) Other

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