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Transformational Leadership and Collective Turnover in Chinese Pharmaceutical Industry: A Multilevel Analysis of Mediating Variables

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Doctor of Management

Supervisor:
PhD Nelson Campos Ramalho, Associate Professor,
ISCTE University Institute of Lisbon

May, 2023

BUSINESS
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Abstract

One of the most disruptive events in organizations is the sequenced or simultaneous leave of whole teams expressing a collective turnover phenomenon. This has been documented in certain industries and it is a priority issue but extant research in China has not yet consolidated a model that is able to explain it and allow for its preventive management.

This research is designed to build a model that considers both the individual and group level constructs to uncover the processes underlying this phenomenon by focusing on the role of leadership. The first study used 322 answers embedded in 69 teams in Pharmaceutics, collected in a time-lagged and from both leaders and team members, to test a multilevel model linking transformational leadership to turnover intention. HLM analysis showed transformational leadership is important to prevent turnover while loyalty to the leader emerged as a central intervening variable. The 2nd study tested a moderated mediated model to differentiate collective block turnover from syphoning turnover considering the leader's turnover intention and its effects on team performance. Findings supported the model suggesting a leader contagion effect leading to block turnover when the leader is transformational and intends to leave. Based on 34 interviews, a 3rd study qualitatively explored the role loyalty to the leader plays, due to Chinese culture characteristics. Findings corroborate the centrality of loyalty to the leader in a complex causal network, which gave rise to an integrated model of loyalty to the leader within the scope of collective turnover.

Keywords: Collective turnover, transformational leadership, loyalty to the leader, multilevel
JEL: M12, I1

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Resumo

Um dos acontecimentos mais disruptivos nas organizações consiste na saída sequencial ou simultânea de equipas inteiras, que exprime um fenómeno de saída colectiva. Este fenómeno foi documentado em certos sectores e é uma questão prioritária, mas a investigação existente na China ainda não consolidou um modelo capaz de o explicar e de permitir a sua gestão preventiva.

Esta investigação foi concebida para construir um modelo que considere os construtos a nível individual e grupal, a fim de desvendar os processos subjacentes a este fenómeno, centrando-se no papel da liderança. O primeiro estudo utilizou 322 respostas de 69 equipas da indústria farmacêutica, recolhidas com desfasamento temporal, tanto dos líderes como dos membros da equipa, para testar um modelo multinível que associa a liderança transformacional à intenção de saída. A análise HLM mostrou que a liderança transformacional é importante para evitar a saída, enquanto a lealdade ao líder surgiu como uma variável mediadora central. O segundo estudo testou um modelo moderado mediado para diferenciar a saída colectiva em bloco da de sifão considerando a intenção de saída do líder e os seus efeitos no desempenho da equipa. Os resultados apoiaram o modelo, sugerindo um efeito de contágio do líder que conduz à saída em bloco quando o líder é transformacional e tenciona sair. Com base em 34 entrevistas, um terceiro estudo explorou qualitativamente o papel desempenhado pela lealdade ao líder, devido às características da cultura chinesa. Os resultados corroboram a centralidade da lealdade ao líder numa rede causal complexa, que deu origem a um modelo integrado de lealdade ao líder no âmbito da saída colectiva.

Palavras-chave: Saída colectiva, liderança transformaiconal, lealdade ao líder, multinível
JEL: M12, I1

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摘 要

集体离职（团队成员相继或同时离开）是组织中最具有破坏性的一种现象。这种现象在某些行业很常见，也是研究者必须优先考虑的问题，但中国现有的研究还没有能够解释并对其进行预防的模型。

本研究旨在从个人和团队两个层面建立模型，通过聚焦领导力的作用来揭示这一现象背后的过程。第一项研究收集了来自医药行业 69 个团队的 322 份问卷，这些问卷按不同的时间点向领导者和团队成员发放收集，以测试变革型领导力与离职意向之间的多层次模型。HLM 分析显示，变革型领导力对于防止离职非常重要，而对领导的忠诚度则是一个核心干预变量。第二项研究测试了一个调节中介模型，考虑到领导者的离职意向及其对团队绩效的影响，研究将集体团队离职与虹吸式离职区分开来。研究结果支持该模型，即当领导者是变革型并意图离开时，领导者的蔓延效应会导致集体离职。第三项研究为基于 34 人次的访谈，定性地探讨了在中国文化特点下，对领导者的忠诚度所起的作用。研究结果证实了对领导者的忠诚度在一个复杂因果联系中的核心地位，研究者从而在集体离职的范围内形成了一个对领导者忠诚的综合模型。

关键词：集体离职，变革型领导，对领导者的忠诚度，多层次

JEL: M12, I1

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Chapter 1: Introduction

1.1 General context

The outbreak of COVID-19 has swept the world, bringing a huge impact on the economics of China and the world. All walks of life have been extremely difficult under the pandemic, with dropped market demand and strained capital chains. Among the various self-help measures, downsizing has become the most common one, with the proportion of layoffs in the hospitality and catering industry reaching 42.3% (Andrews-Lee, 2019). However, employee income has not risen year-on-year, and even presents a downward trend. To prevent cross infection during the pandemic, many companies have implemented flex time and remote working. Many enterprises have fallen into difficulties in the outbreak, such as the well-known Peking University Founder Group Co., Ltd. (CERDRA, 2020), which has been bankrupted and restructured due to the epidemic. Founder Group, a large conglomerate invested by Peking University, was in trouble in the face of the pandemic, causing the collapse of its $100 billion empire and forcing the firing of a large number of staff. With the outbreak of COVID-19, the volatility and turbulence of the external environment have become more frequent and unpredictable (Sun et al., 2021). Confronting the dual challenges brought by the environment and the market, namely, how to adapt to the changes in the environment, avoiding the crisis and seizing opportunities for development was an important issue for leaders.

According to official sources, the first quarter of 2020, China's pharmaceutical business was affected by the outbreak of COVID-19. There were varying degrees of delayed return to work, shutdown, transportation disruption, logistics control and personnel movement restrictions, which brought huge pressure on its operating performance. Especially for some enterprises with little strength which faced a high risk of capital chain breakage and bankruptcy in the short term (Barshikar, 2020). Numerous companies choose to cut salaries or lay off employees, thus leading to the firing of employees. During the COVID-19 outbreak, the sales scale of herbal decoction pieces, Chinese traditional patent medicine and Chinese herbal formula in the traditional business has been significantly promoted due to their special efficacy (Qiu et al., 2020), and the sales scale of biological products, such as vaccines and blood products, has also ushered in a rapid expansion. From the perspective of the emerging industry,

pharmaceutical e-commerce exerted its unique advantages during the epidemic, with excellent sales. The sales proportion of online pharmacies, Internet medical care and other pharmaceutical retail terminals has been further enhanced (Tran, 2021).

These factors have provided an opportunity to reshuffle the industry, causing a large number of staff turnover. The rapid changes in the internal and external environment of the industry have brought great challenges to the development of enterprises. Whether managers could avoid the crisis and seize the opportunity during the crisis was an important issue for the development of enterprises. Although the COVID-19 crisis in China is currently fading away, its legacy comprehends structural changes that affect all industries, some positive e.g. the increasing trust in physicians (Li et al., 2023), or the quality performance changes from telecommuting(Qu & Yan, 2023) and some negative e.g. neuropsychiatric dysfunctions(He et al., 2023);supply chain disruptions in pharmaceutical goods; among others(Liza et al., 2022).

Currently the outbreak of COVID-19 has greatly boosted the social and national concern of the medical and pharmaceutical industry in China. Driven by the market and the government, it is particularly important for China's pharmaceutical business to improve its capabilities for human resource management, develop rapidly, and shoulder the important responsibility of fighting the current legacy of the epidemic and protecting people's health in future epidemics.

China's pharmaceutical business industry is an important branch of the pharmaceutical industry, also known as the pharmaceutical circulation industry, which is a key link in the pharmaceutical industry as well as a bridge connecting pharmaceutical manufacturing companies and pharmaceutical terminal sales agencies. Pharmaceutical business is further divided into distribution and retail. With a large number of pharmaceutical companies and a variety of operational needs in China, pharmaceutical commercial enterprises are an indispensable part of the industry chain by providing solutions for the pharmaceutical industry with their professional and efficient service capabilities. China's pharmaceutical business industry is responsible for the circulation of medicine in the market, which is an independent economic sector specializing in the operation of pharmaceutical commodities. It supplies medical units (hospitals and primary medical institutions) and consumers with pharmaceutical commodities produced in factories, e.g. including drugs, medical equipment, chemical reagents, and glass instruments, through such business activities as purchase, sales, promotion, storage and transportation, to complete the transfer of pharmaceutical commodities from the production field to the consumption field.

According to data from the pharmaceutical circulation statistics system of the Ministry of Commerce of the People's Republic of China, the total sales of seven categories of

pharmaceutical commodities nationwide in 2020 was 2353.2 billion yuan. After deducting non-comparable factors, it increased by 1.20% year-on-year and its growth rate decreased by 7.67 percentage points compared over the same period. The sales of drug retail market reached 512.8 billion yuan ($78.3 billion), with a year-on-year increase of 11.57%, 1.72 percentage points higher than the same period last year. Among them, pharmaceutical distribution accounted for 78.2% of the total market, and pharmaceutical retail accounted for 21.8%. According to the sales category, the sales of Western medicine assumed a leading position, which accounted for 73.2% of the total sales of the seven categories of pharmaceutical products, followed by Chinese traditional patent medicine accounting for 15.0%, Chinese crude drug 3.1%, medical equipment 4.7%, chemical reagents 1.2%, glass instruments 0.1%, and other categories 2.7% (Ministry Of Commerce, 2021). The current industry size only takes up 2.3% of the annual GDP (Zhang, 2021), which will further expand with the aging of China's population and the outbreak of chronic diseases.

Since the founding of the People's Republic of China, the pharmaceutical business has experienced three institutional changes: "planned economy", "combination of planned and market economy", and "market economy". The market pattern has changed from the original government monopoly to competition and openness, with continuously increasing market vitality and abundant products and services supplied by the market. Before 1980, during the stage of "planned economy", the pharmaceutical distribution network was state-owned and divided into three levels: national, provincial, and municipal, with operation mainly concentrated in the cross-level vertical allocation between the national, provincial and municipal levels, with little horizontal docking and connection, but mainly administrative plan-based allocation. After 1980, China began to shift to a market economy and entered the stage of "combination of planned and market economy", which led to a rapid increase in the demand for pharmaceuticals. At the same time, the distribution system also became more dispersed, which was no longer confined to the vertical trading between the three levels. The proliferation of distributors led to fierce commercial competition in a region where the local distributors competed fiercely to capture a small share of the market. There were over 16,000 distributors nationwide, 80% of which were small distributors, while the top 3 distributors nationwide together held only 20% of the market share (PricewaterhouseCoopers, 2009). China's accession to the WTO in 2001 led to a boost in pharmaceutical regulation. The government required distributors to comply with the Good Supply Practice (GSP), which was intended to remove those distributors who had problems in their business, thus entering the stage of "market economy" at such time. With the declining profit margin of distributors, in order to maintain

survival and enhance market share, powerful distributors invested in mergers and acquisitions to scale up their operations. The average gross sales margin of pharmaceutical distribution companies in China was about 8%, while the net margin dropped to around 0.5%. Even in some cases, the net margin was zero. Pharmaceutical distributors had to change their original business model and transformed into drug agents, whose revenues mainly came from commissions and discounts from manufacturers. Along with the trend of scaling up operations and increased government regulation, the number of pharmaceutical distributors had been cut by more than half, from 16,000 to about 7,000 in the aftermath of GSP adoption.

Foreign companies also began to enter the pharmaceutical distribution industry China. Since 2003, according to the WTO agreement, China has been gradually opening up its market, creating a favorable external environment for foreign companies to enter this industry. One year later, the government continued to relax its policy, and the proportion of foreign investment was no longer mandatory. Since then, foreign pharmaceutical distribution companies have entered the Chinese market, including Eli Lilly and Company and Kantler Pharmacy (Ministry of Commerce of the People's Republic of China, 2022).

With the improvement of marketization, the competition of talents, varieties, market and management level in the industry has become increasingly fierce. The phenomenon of regional fragmentation, low industry concentration and small market share of corporate champion in the field of pharmaceutical business has been gradually improved. As of 2017, in terms of main business revenue, the top 100 pharmaceutical distribution enterprises accounted for 70.7% of the total size of the national pharmaceutical market in the same period. Among them, the main business revenue of four corporate champions accounted for 37.6% of the total size of the national pharmaceutical market in the same period, while the proportion in developed countries is generally above 70%, and that in the United States is more than 90%. The data show that the pharmaceutical distribution industry is at a disadvantage in competing with foreign industry giants, especially in terms of talent attraction. One of the observed phenomena concerns the frequent occurrence of employee collective turnover, i.e. the voluntary exit of groups of professional in Chinese pharmaceutical companies, either in a continuous flux or as a whole group. If domestic enterprises want to further improve their market share, they need to rapidly improve their abilities of business, operation and management, especially the management of talent turnover.

Pharmaceutical business is an industry greatly influenced by government policies. It poses high requirement on professional knowledge and related skills of employees and has a long training cycle. China has strict access requirements, so the high turnover of personnel in the

industry has a huge impact on the organization. On April 21, 2016, the State Council issued the Circular of the General Office of State Council on the Issuance of the Key Tasks for Deepening Reform of Medicine and Healthcare System in 2016 (Issued by Office of the State Council, 2016, No. 26), proposing the implementation of the "two-invoice system" where one invoice is from production to circulation and the other one is from circulation to medical institutions in the pilot provinces of medical reform. The "two-invoice system" is intended to compress layers of circulation channels and reduce the added price across intermediate layers, so as to make drug prices affordable. The implementation of this policy has led to the reduction of intermediate circulation links, the flattening of channels and the further improvement of industry concentration. Plenty of intermediate distributors have been eliminated, and the market share of pharmaceutical distributors with large scale and terminal coverage has been greatly improved.

Innovative business practices have also been actively promoted. One of such practices was to extend upstream so to cover the field of pharmaceutical production and manufacturing. Another innovative business practice was to develop downstream and open up pharmaceutical retail and e-commerce business. With the implementation of the new national health care reform, the entire Chinese market landscape has undergone dramatic changes. In 2020, China's over-the-counter (OTC) market size reached 512.8 billion yuan, of which the pharmaceutical e-commerce B2C market size exceeded 100 billion yuan (Ministry of Commerce of the People's Republic of China, 2022). It can be expected that, considering the COVID-19 disruption and the reform of government health insurance payment system, the sales and competition pattern of pharmaceutical market will witness new changes, and the original market pattern will be further challenged. One of the future critical questions is: How to retain high performance employees and reduce the turnover rate? This is a life-or-death issue for companies in the drastic external environment change within the pharmaceutical industry.

In summary, China's pharmaceutical industry is key for the economy not only in China but worldwide and the industry's specificity together with the changes it endured in the last years have been pressing effects upon employee turnover. However, the profile of human resources in this industry is highly regulated and has high replacement costs, which implies, employee turnover in China's pharmaceutical industry business is a critical strategic issue. Therefore, employee turnover research in this context is relevant of which some known factors should be studied, namely leadership.

1.2 Purpose

According to the above background, pharmaceutical business is a huge industry affected by the external environment and government policies, with strong professionalism and large market capacity. The industry has low profits and low price-elasticity of products and is closely related to people's life and health. As stated, the high employee turnover and poor management, can easily lead into organizational crisis and better theory and models are needed to inform both scholars and managers. One of such models pertains to the role of leadership and leaders themselves. A well-known effective leadership style – transformational leadership – has long been researched but not so strongly within the field of pharmaceutical business linking it to employee retention, namely to employee collective movements such as those expressed by collective turnover concept (Hausknecht, 2017).

The relationship between leadership, leadership style and turnover intention is currently a popular topic in the field of management in China. Most scholars believe that various aspects of a leader's personality, motivation, value, emotional intelligence, learning and decision-making style affect the leader's management style (Kornor & Nordvik, 2004), which affects team trust and then the turnover intention.

However, research in China focusing on processes linking leadership to turnover has not such a long history (Liu et al., 2013) and the integration of its multilevel impact is lacking (Su et al., 2020). There have been efforts into probing the internal mechanisms that explain turnover intention linked to leadership (Li & Xie, 2021; Ouyang et al., 2020; Yang et al., 2019) but the current research is largely ignoring an important phenomenon in employee turnover that is of special relevance in collectivistic societies: collective turnover. Likewise, models have been almost entirely focused on the individual level for an exception (Wang et al., 2018) which means the group-level factors and its interplay with the individual factors are not known. Although extant models are already very informative for decision makers and scholars to make better decisions in their respective domains of responsibility, a more complex model, closer to reality, may be of better value. This is an important theoretical gap that needs further attention.

For scholars, the ability to describe, explain and predict behavior of any given variable is *per se* valuable. However, the utility of such knowledge must also be ascertained. The topic of research on individual and collective turnover in pharmaceutical industry in China is one that matches both requirements, for scholars and managers.

By exploring a more complex model, that comprehends not only more variables, but also takes into consideration the group-level influences on such critical turnover behavior is of the

utmost importance for decision makers that need to define which policies and practices are effective into preventing such nefarious phenomenon. Thus, it is our hope that from findings, extant explanatory mechanisms are fine-tuned, bringing theoretical knowledge closer to reality and thus, offering managers better criteria for more effective decision-making in this domain.

The research, at the theoretical and empirical levels, is beneficial to the improvement of pharmaceutical human resource management and the economic benefits of the industry.

Based on the existing literature, this thesis is designed to study the mechanism between transformational leadership style and collective turnover intention, uncover the key influencing factors, theoretically analyze the influencing factors and mechanisms of turnover intention, discuss the relationship between each influencing factor and turnover intention, especially the relationship between transformational leadership style and turnover intention, thereby testing the hypotheses linking transformational leadership and turnover intention both at the collective and individual level.

According to the influencing factors of turnover intention, this thesis aims to establish a scientific human resource management model to form a management dial of the organization, which will effectively control turnover and promote the growth of organizational performance.

Through an empirical study of a sample of Chinese pharmaceutical business enterprises, this thesis is designed to validate or further enrich the theoretical model and framework to study the effectiveness of loyalty to leader in Eastern culture, which is expected to help organizations to reduce turnover, increase profits, and also provide better prospects and rewards for employees. By doing so, we intend to make contributions to the progress of society and industry and offer better suggestions for specific management practices.

1.3 Research Problem

Foreign capital inflow and the outbreak of COVID-19 witnessed the rapid flow of talents in the pharmaceutical industry between different regions and enterprises, the turnover of technical personnel and talents in particular, which can have a serious negative impact on the development prospects of the company's technical reserves and creation of talent pool. In addition, if the departing personnel are core technical personnel widely recognized in the industry, it may influence the company's performance in the capital market and will affect investors' confidence and the company's share price. Especially when many core-technical personnel leave with the team, not just themselves, which give collective turnover a more critical status, bringing immeasurable losses to the company's performance.

For example, in HOB Biotech Group (HOB), three executives and two core-technicians left in one year, resulting in a cumulative 49.63% decline of the company's stock price in eight months (IVD, 2022). The high turnover rate has brought a lot of trouble and hindrance to the development of enterprises, thus also to a certain extent hindering the healthy development of China's pharmaceutical economy. Although appropriate staff turnover rate can help enterprises to obtain fresh blood and vitality, if the turnover rate is too high, it will cause the instability of the workforce, low efficiency and reduced enterprise profitability. Therefore, more and more organizations begin to emphasize the issue of high employee turnover rate and explore countermeasures.

From the perspective of personnel that decides to leave, the rapid development of China's economy and the continuous improvement of living standards means that the level of demand is also rising. They are not only working to make a living and support their families, but also pursuing self-realization through work itself. The statistics of 34 million employees that changed jobs from MIT Sloan School of Management found that salary was not the most important factor leading to turnover (Chuan, 2022). According to this author, the top five reasons for employees' voluntary turnover during the last couple years are toxic corporate culture, job insecurity, strong corporate innovation, unclear corporate rewards and penalties, and poor response to COVID-19, which account for 10.4%, 3.5%, 3.2%, 2.9%, and 1.8% of the surveyed sample respectively. From this survey, we can learn that employees' disapproval of the leadership method of their managers is a major cause of employee turnover. Therefore, it is relevant to explore to which extent does leadership contribute to reduce the current status of employee turnover.

The kind of leadership style and leadership method that are appropriate and correct has always been a hot topic in the academic circle of leadership studies. In the past 40 years of China's reform and opening up, numerous literature and management practices have proven that transformational leadership style is an effective management style. Transformational leadership style was first proposed by Burns (1978) in his book Leadership, and further refined and precisely defined by Bass (1985) as a new leadership style theory. In general, transformational leadership style refers to such a leadership style in which leaders can guide members of the organization to participate in change. The dyad (leader-follower) can improve each other's maturity and motivation, awaken and enhance their work consciousness and work initiative, making them aware of the importance and significance of the responsibilities and tasks they undertake. This is to encourage subordinate employees to pursue higher levels of needs and motivation, so that they can actively participate in the change of the organization and

work hard in the direction beneficial to the future of the enterprise. Transformational leadership style advocates improving followers' maturity and motivation level, encouraging followers' work initiative and consciousness, and fully trusting leaders, which can foster good relationship between superior and subordinate and help inhibit the turnover intention of employees (Wang et al., 2011).

At present, there are few studies in mainland China which introduced transformational leadership style to solve the problem of employee turnover from a multilevel perspective. Therefore, this thesis conducts a study on the influence of transformational leadership style on collective turnover intention in this context, which is groundbreaking and valuable for solving the problem of collective turnover in the pharmaceutical industry. Collective turnover is not only affected by leadership style, but also by the country, system, culture, organizational commitment, team cohesion, trust, job satisfaction and other factors, which are generally difficult to measure directly through operational data or financial indicators (Hom et al., 2017). The primary issue is how to select and use the existing quantifiable measurement indicators to transform the above variables so that they can be measured within the unified framework of the transformational leadership and turnover intention evaluation model. Due to the correlation among various factors, in-depth analysis of the correlation among variables and a lot of data support are needed to construct the relevant model of turnover intention. This is not only a statistical question, but also a practical challenge for organizational management. It is necessary to classify the influencing variables effectively, and adopt robust data and analytic methods to explore the associations and causality of each variable in depth, so as to achieve the research purpose of minimizing the number of variables and revealing the influence with minimal measurement errors.

1.4 Thesis structure

This thesis will develop starting by exploring literature that introduces collective turnover as a specific configuration of employee turnover phenomena, as well as explaining variables, with a focus on leadership, namely, transformational leadership. With this introductory general review of literature, the thesis moves on with the literature review that sustains the multilevel conceptual model that is tested with the 1st study. Due to the importance of distinguishing between two types of collective turnover (syphoning versus block collective turnover, expressing differences in time dispersion), the thesis continues by offering another data exploration that puts emphasis on block collective turnover, the most critical type of event an

organization can face. This is achieved with study 2. To highlight the role of loyalty to the leader in the Chinese context the 3rd study is presented as qualitative findings from interviews that explored the reasoning of employees in deciding whether to follow or not an exiting leader considering also other personal and social factors. The thesis ends by discussing and conclusion on the overall findings.

Chapter 2: Literature Review

2.1 Collective turnover

Employee turnover research is eventually one of the most research topics in personnel management with over a century old track of findings (Hom et al., 2017).

Employee turnover is a major issue of human resources facing organizations today. Due to the dynamic and uncertain global economy, organizations rely heavily on the quality of human resources to create and maintain competitive advantage. Employee turnover can be divided into voluntary turnover and involuntary turnover. Termination of employment, whether voluntary or forced, is known as turnover. Since 1925, scholars have been working on this issue at the individual level for almost a century (Hom et al., 2017). Turnover is one of the most interesting topics in psychology, sociology, economics, and organizational behavior. In the literature of organizational behavior, researchers are interested in turnover intention for two reasons. One is to uncover the psychological processes and the other due to economic impact. Although scholars still have a strong interest in turnover at the individual level, they are now paying more and more attention to the collective turnover at the macro level, especially to its causes, consequences and influencing factors. From a social capital perspective (which considers three components: social ties, mutual trust among coworkers, and shared cognitions) collective turnover is far more important that individual turnover because social capital prevents turnover but when it occurs, social capital theory helps explaining why collective turnover triggers a looping effect that fosters subsequent turnover rates as it undermines its grounds of social capital (Chung et al., 2022).

The study of collective turnover has made great progress in the past two decades, and the field is booming at present. Collective turnover has many names like team turnover or collective job-hopping, and collective turnover is defined as “the aggregate levels of employee departures that occur within groups, work units, or organizations” (Hausknecht & Trevor, 2011, p. 353). This area is currently one of the most dynamic areas of research (Hausknecht, 2017).

Collective turnover is not only the sum of individual turnover behaviors. On the contrary, it is just partially isomorphic with the individual turnover. The two have common origins in the behaviors of lower-level members, but present different properties and meanings when higher-

level members respond to each other (Hausknecht, 2017). Collective turnover will lead to the increase of direct and indirect costs and the loss of intellectual assets of the organization, especially the turnover of technical personnel and high performers, which will have a serious negative impact on the development of the company's technology reserve and talent cultivation. This is what Maertz et al. (2022) name as dysfunctional turnover. It also occurs with those employees that are disgruntled, dissatisfied and eventually with lower productivity, in which case it is functional turnover.

Generally, turnover behavior has been found to lead to reduced profit of the company because of the brain drain and the leakage of the company's proprietary technology to its competitors. In this sense, we can say that the personnel turnover is a critical issue for all organizations, which will affect productivity, the quality of products and services, and profitability (Belete, 2018). Thus, if the separating employee is recognized as core technical personnel in the industry, it may impact the company's performance in the capital market and affect investors' confidence and the company's stock price. In particular, many core technical personnel abandon the company together with their team, rather than just by themselves, thus creating collective turnover. It will bring inestimable losses to the company's performance. The case of HOB (Hao Ou Bo) Chinese company in the pharmaceutical industry provides a strong example when three senior executives and two core technical personnel resigned within one year, resulting in the company's stock price falling 49.6% in eight months (IVD, 2022). Therefore, managing employee turnover and retention is a key priority for an organization to maintain business growth and sustainability (Lim et al., 2017).

The negative impact of employee turnover is strongly linked to the need for re-recruitment, selection and training of new employees to make up for production, but also leads to the loss of talents, leakage of know-how and damage to organizational reputation (Hom et al., 2020). Therefore, employee turnover is problem with high practical relevance in organizations. Properly managing employee turnover will provide valuable resources for organizations to improve operational efficiency and employee well-being. One way to manage employee turnover is to focus on its closes proxy: "turnover intention" (Cohen et al., 2015). Turnover intention refers to the decision of the employee to quit or leave the organization, rather than the actual separation from the organization itself.

If we can perceive the turnover intention of these employees before they leave, we can not only resist their "pile-up effect", but also control their leaving in the future. Most of the time, however, managers are not aware of an employee's intention to leave, because many employees do not show their intentions directly until they actually leave the organization.

An important phenomenon linked to employee turnover is its contagious nature, i.e. as more employees exit there is a stimulus for other employees to mimic the decision. This has been supported by Oh and Chhinzer (2021) study that found stronger association between turnover intention and actual turnover in organizations that have higher collective turnover. Every organization, regardless of its location, size, or nature of business, should always be concerned about employees' turnover intention, especially the collective turnover intention. This is due to the fact that collective employee turnover is even more impactful that individual employee turnover. Given the Chinese cultural background, we believe that these people usually share their intention to leave with their close friends or colleagues (Abid & Butt, 2017).

The social relations context in Chinese culture can favor collective turnover but the models explaining its driver are complex. A review by (Heavey et al., 2013) proposes such causes fall into six categories: 1) HRM inducements and investments (e.g. benefits, participation-enhancing work design), 2) HRM expectation-enhancing practices (e.g. downsizing, routinization), 3) shared attitudes towards job and organization (e.g. commitment, satisfaction, turnover intentions), 4) quality of work group and supervisory relations (e.g. climate, cohesiveness, relations with supervisor), 5) job alternative signals (e.g. unemployment rate, alternative job availability), and 6) job embeddedness signals (e.g. average employee tenure, union presence). This review is largely convergent with the one set out by Shahsavan and Safari, (2017) that proposed three overarching motives: 1) External environmental variables, such as economic policies and employment levels; 2) Organizational factors, including industry type, occupation type, organization size, level of supervision, salary and workplace; 3) Other reasons include the individual's work variables, such as the combined variables of job satisfaction, salary, promotion and working conditions, and the individual's non-work factors, such as family-related factors.

In the past few decades, a large number of studies have focused on finding the factors that cause collective turnover in organizations. However, leadership – despite its critical role in organizations – has been relatively less researched in connection to collective turnover (Hom et al., 2020).

2.2 Leadership and collective turnover: An individual level perspective

Leadership is a process, i.e. the interaction between a leader and followers, personality, or behavior, in which the leader influences followers to achieve organizational goals (Handley & Louw, 2016). From this definition, leadership is the ability of an individual to lead other

followers, teams, or the entire organization, which is simultaneously a management process and an organizational resource. As a management process, leadership has a non-mandatory impact; as organizational resources, leadership is considered to be able to successfully achieve organizational goals (Belete, 2018). Leadership style is the approach that managers adopt to exert their leadership and refers to the specific behaviors of leaders to motivate their subordinates to achieve organizational goals, i.e., the way or method that managers choose to manage their subordinates. Transformational leadership is one of the most discussed leadership styles by experts across the world, and also the most frequently used and effective leadership style in China over the past 40 years of reform and opening up (Miao et al., 2019).

The transformational leadership theory was first proposed by James MacGregor Burns. It refers to the process in which the leader explains the corporate vision to the followers, makes them realize the significance of the work they undertake, and gives them guidance and care, so as to stimulate their potential and thus achieve the organization goals (Burns, 1978). The transformational leadership theory has attracted much attention since it was put forward, which emphasizes that leaders focus on the higher-level needs of the followers. Through the realization of high-level goals of employees, the trust relationship within the organization can be established to promote the achievement of organizational interests and organizational reform (Bass, 1985). Bass developed Burns' theory on political leadership and further elaborated that transformational leadership is a follower-centric process in which the followers establish a strong identity with the leaders to achieve common goals. Transformational leadership consists of four components: idealized influence, intellectual stimulation, inspirational motivation, and individualized consideration (Bass & Avolio, 1993). Idealized influence refers to that the leader, who is committed to realizing the common goals and vision of the organization, shows a strong sense of morality and charisma and is emulated by his followers. Intellectual stimulation refers to the leader challenges addressing the followers by encouraging them to break past working patterns and introducing new practices so that the followers can think creatively and take risks. Inspirational motivation refers to the expression of a vision by the leader that inspires the followers to grow in confidence and meet expectations that are higher than expected. Motivational leaders should convey the organizational vision to their followers and help them improve their ability and confidence to realize the vision. Individualized consideration concerns the leader special attention given to the personal needs and concerns of the followers and help them grow. Leaders with this characteristic assign tasks at different levels to followers based on their individual knowledge and skills. Therefore, the synergy of these four factors helps leaders create a sound working environment in the organization, which

in turn further improves the performance of the followers (Wang et al., 2011).

Scholars believe that among various types of management, a large amount of empirical evidence proves that transformational leadership is more effective than other types of leadership (Budur, 2020). Burns (1978) originally argued that transformational leadership attaches great importance to the needs, values and ethics of the followers, and that morality is a central feature of the process. Leaders encourage their followers to uphold a higher moral responsibility and interact with them to help them get through difficult times. According to Ennis et al. (2018) transformational leaders inspire followers to go beyond expectations by: 1) Improving their awareness of the importance and value of specific and idealized goals; 2) Encouraging them to put the interests of the team or organization above their own; 3) Meeting their higher-level needs. Transformational leaders inspire followers to commit themselves to realizing the leaders' vision for the organization rather than focusing on their own interests. Therefore, transformational leaders influence is based on an appeal to higher ideals and moral values rather than by activating negative emotions. In line with this, transformational leaders have the following characteristics. First of all, transformational leaders are attractive, convincing and hopeful, with a clear vision of the future. Secondly, transformational leaders are the designer of the organization, who plan and arrange the internal staff practices. Thirdly, transformational leaders consistently build trust with their followers. Finally, transformational leaders understand their own weaknesses and focus on their strengths to achieve their ambitious goals. Transformational leaders attach great importance to positive interaction with their followers. They recognize and appreciate their followers and often listen to, guide, and delegate work to them. Transformational leaders are defined as humanity-oriented leaders who demonstrate a concern for fairness, compassion, and altruism. They attach importance to their own exemplary behavior and care for the needs of followers, whose power is mainly derived from the control of knowledge and uncertainty.

Scholars also point out that the construct of transformational leadership should not be limited to the individual level, but include the collective and team level (Bao et al., 2020). The transformational leadership theory holds that leaders influence followers at both the individual and team level (Wang & Howell, 2010). Scholars have divided transformational leadership into two components of individual-centered and team-centered, and simultaneously developed a two-level transformational leadership scale, identifying four individual-centered dimensions and three group-centered dimensions. They used the scale to examine the different effects of these two-level behaviors on individual followers and the team. The research found that team leaders need to exhibit different behaviors to motivate individual followers and the whole team.

To motivate individual followers, leaders need to set challenging goals and firmly believe that the followers can achieve those goals. In addition, leaders need to become coaches and mentors for followers, find ways to stimulate their creativity, and recognize their achievements in a timely manner. To improve the team performance, leaders need to foster team identity by emphasizing the common values and unique characteristics of the team. Besides, they should preach a convincing vision to team members and build the commitment of followers to the vision. At the same time, leaders need to encourage cooperation and build mutual trust among team members to ensure that they work effectively as a team.

In addition to the common characteristics expressed in western literature, China's transformational leadership also has the typical Chinese cultural characteristic of being relationship-oriented (Handley & Louw, 2016). The key to effective leadership for leaders is to establish harmonious relationships within and outside the organization and to demonstrate moral integrity. In a culture of bureaucratic governance that has lasted for more than 2,000 years, the Confucian philosophy of "cultivating the self, regulating the family, governing the state, then leading the world to peace" is deeply rooted in the daily beliefs of every leader. Based on this concept, a harmonious and mutually beneficial relationship will be maintained at work, that is, how leaders lead their followers depends on the nature of their relationships. Leaders need to ensure the well-being of their followers, and accordingly, the followers should respect, trust and obey their leaders in exchange for their benevolence, morality and protection. Therefore, China's transformational leadership also has some characteristics of paternalistic leadership.

2.2.1 Transformational leadership and turnover intention

Given the growing interest in studying collective turnover in organizations, effective leadership is becoming increasingly important. Transformational leadership is associated with the reduction of turnover intention, because it can motivate, challenge and motivate followers, optimize their performance to achieve the common goals of the organization, and promote high organizational support that is unlikely to cause turnover intention.

Transformational leadership has been largely reported as leading to positive changes in organizational systems and individuals, and aims to develop followers into leaders through influence, motivation, stimulation and inspiration (Bass, 1999). Team leaders not only need to maximize the contribution of individual followers to organizational efficiency, but must also retain their skills and abilities to realize the competitive advantage of the organization. In fact, transformational leadership can effectively involve followers in management based on a

continuous and mutually beneficial social exchange of interpersonal trust, loyalty, and strong identification. Over time, followers feel indebted and obligated to repay their leaders and organizations in kind. Therefore, it is not surprising that there is a significant correlation between transformational leadership and turnover intention (Magbity et al., 2020).

The viewpoint that transformational leadership will influence turnover intention has been clarified in western literature. There are recurrent findings that converge into showing a direct negative relationship between transformational leadership and turnover intention. This relationship has been explained by Sun and Wang (2017) that argue transformational leadership creates an organizational culture conducive to the establishment of collaboration among employees and between individual employees and their workplace. Despite the solid evidence on this relationship in the West, there is little research on transformational leadership and employee turnover in countries like China with non-Western cultural settings. Therefore, it is hoped that the study on the effectiveness of transformational leadership on turnover intention in the cross-cultural process and the study on the impact of transformational leadership on turnover intention in different cultural backgrounds will contribute to the development of global leadership training (Tse et al., 2013).

Considering this, we hypothesize that:

H1: Transformational leadership behavior is negatively associated with individual turnover intention.

As evidenced, scholars have been gaining knowledge about the process that builds up collective turnover. Bartunek et al. (2008) proposed three phases where employees share their unresolved dissatisfaction within the organization, which becomes a shared team perception by means of emotional contagion (of negative affect) as well as sensemaking processes. When this group is cohesive (and nurturing an image of self-efficacy) the process builds stronger, nurturing a pessimistic view of future improvement. If other alternative arises and there are no obstacles to leave, then the team will share the intention to voluntarily exit the organization and eventually start looking for another place to work. This ultimately ends up in actual exiting as a collective.

Comprehensive turnover intention models integrate the relationship among transformational leadership, affective commitment, job satisfaction, and turnover intention (Alkhateri et al., 2018). According to these authors, employees' perception and experience of transformational leadership behavior are directly related to their turnover intentions in the organization, and this relationship may be conveyed through employees' Loyalty to leader and organizational affective commitment. Based on the target similarity framework, we searched

the literature in this field in the last decade to find some recurrent variables in the model (Table 2.1).

Table 2.1 Illustrative list of intervening variables in turnover models

Independent variable	Intervening variables	Literature
TLP	Organizational Commitment	(Dimaculangan & Aguiling, 2012)
TLP	Leader-Member Exchange, Affective Commitment	(Tse et al., 2013)
TLP	Affective commitment	(Gyensare et al., 2016)
TLP	Psychological empowerment, trust, Affective Commitment	(Mittal, 2016)
TLP*	Turnover intention, collaborative culture	(Sun & Wang, 2017)
TLP	Job satisfaction, organizational commitment	(Lim et al., 2017)
TLP	Affective commitment, Employee engagement	(Gyensare et al., 2017)
TLP	Affective commitment	(Shahsavan & Safari, 2017)
TLP	Trust and job performance	(Ariyabuddhiphongs & Kahn, 2017)
TLP	Org. Affective and Normative commitment	(Ennis et al., 2018)
TLP	Job satisfaction	(Lum, 2018)
TLP	Trust in the leader	(Phungsoonthorn & Charoensukmongkol, 2018)
TLP	Org. Culture, Org. Climate, Org. Commitment	(Park & Pierce, 2020)
TLP	Job stress, Organizational Citizenship Behavior	(Manoppo, 2020)
TLP	Job Satisfaction, Affective Commitment	(Obeng et al., 2021)
TLP	Job satisfaction	(Wahyuni et al., 2022)
TLP	Psychological resilience	(Akcin, 2023)
TLP	Organizational Commitment	(Martins et al., 2023)

*Actual turnover is the dependent variable. All the other studies test for turnover intention.

This list does not exclude many other variables that have been considered but, in our opinion, it highlights some of the most convergent among conceptual models found. We will explore the most central ones.

One of the process-variables that has deserved attention in the research is organizational commitment, namely, organizational affective commitment.

2.2.2 Transformational leadership and organizational affective commitment

Organizational commitment is a key variable in transformational leadership research. It is an emotional and evaluative response, as well as an attitude or orientation towards the organization. It connects an individual's identity with the organization or makes it attached to the organization (Allen & Meyer, 1990). Organizational commitment is defined as employees' recognition of a specific group of people with goals and a willingness to keep their sense of

identity within this group. It is the individual's psychological attachment to the organization (Eliyana & Ma Arif, 2019). It is manifested as follows: a) a strong desire to stay in the organization, b) hard work to achieve the organization's aspirations, and c) the acceptance of the organization's values and goals. These behaviors reflect the employee's loyalty to the organization and show their concern for the success and further development of the organization.

Allen and Meyer (1990) proposed that organizational commitment comprehends affective commitment (the emotional bond between employees and the organization), normative commitment (the moral obligation to be performed if the employee wants to stay in the organization) and continuance commitment (the perceived cost related to withdrawing from the organization). Affective commitment refers to employees' emotional attachment to the organization, which is marked by their high loyalty to the organization. They will stay in the organization because they like to stay. Employees with high normative commitment will stay in the organization because they feel they should stay, while those with high continuance commitment will stay in the organization because they must stay. Employees' commitment to the organization is rooted in the assessment of the benefits and costs of continuous relationship (Astuty & Udin, 2020). Among them, affective commitment is understood as the core of organizational commitment. Its emotional nature makes them agree with the organization's goals and values, even internalizing them into their personal goals and values, thus affecting their work behavior and performance. High affective commitment keeps employees always aligned with the interests of their organization, and makes them be stricter with themselves, so that they will conduct behaviors beneficial to the organization, such as organizational citizenship behavior (Khaola & Rambe, 2021). Conversely, low affective commitment makes employees ignore the interests of their organization and relax their constraints, so that they will show behaviors that are not conducive to the organization, such as resignation. In short, the higher the employee's affective commitment to his organization, the stronger his sense of identity and belonging to the organization. In this case, he will feel obliged to abide by the norms of his organization, so he is less likely to resign (Zhou et al., 2016).

Transformational leadership has a significant impact on organizational affective commitment (Ribeiro et al., 2018). Research shows that transformational leaders may increase employees' organizational affective commitment by providing them with organizational support, fair and favorable working conditions, and rewards, as well as achieving their career goals (Stinghalber et al., 2015). Transformational leaders help employees effectively manage work pressure, redesign workflow, assist employees in the use of health plans and flexible work

arrangements, and improve employees' quality of work and life (Bass & Riggio, 2006).

Transformational leaders can use words, pictures and stories to provide clues for employees to enhance the perceived impact on work. The theoretical demonstration of the role of transformational leadership in establishing and increasing the affective commitment of followers can be traced back to (Bass & Riggio, 2006). They believe that transformational leaders establish and shape the affective commitment of their followers in many ways. Firstly, transformational leaders have an idealized impact on their followers. They are regarded as role models with exemplary qualities worthy of imitation. Transformational leaders behave in a manner consistent with the values they preach, making followers committed to these values. Second, transformational leaders are inspiring. They motivate followers by giving special meanings to the organization's mission and goals, and encourage them to pursue higher-level goals rather than their own interests, because transformational leaders activate employees' higher-level needs (Bass & Avolio, 1993). Third, transformational leaders enhance the affective commitment of their followers by providing intellectual stimulation. In conclusion, transformational leadership is characterized by idealized influence, inspiring motivation and intellectual stimulation that can consolidate followers' affective commitment (Peng et al., 2020).

Social exchange theory explains the relationship between transformational leadership and organizational affective commitment (Cropanzano & Mitchell, 2005). When leaders seek affective commitment from their followers, they need to engage in behaviors beyond economic communication. Transformational leaders emphasize the individual needs and development of followers, encourage them to do things beyond expectation (Bass, 1985), and emphasize the importance of appreciating and paying attention to their followers. As a result, followers feel trust, admiration, loyalty and respect for their transformational leaders. In other words, these leaders change employees by increasing motivation and trust and empowering them to achieve organizational goals.

Transformational leaders create followers' loyalty and meet their various needs by encouraging them to think about key issues, take innovative procedures and participate in decision-making, so as to exert a positive impact on organizational affective commitment. Research also shows that choosing transformational leaders with high EQ may maintain organizational stability and retain employees with high performance mostly due to idealized influence, inspirational motivation and individualized consideration (Barling et al., 2000). This same pattern was found for the relation between transformational leaders and commitment because charm, intellectual stimulation and personal consideration were the ones more closely

related to organizational affective commitment (Ennis et al., 2018).

We therefore hypothesize that:

H2: Transformational leadership behavior is positively associated with organizational affective commitment;

A closely related variable with organizational affective commitment, that emerges also in relation with transformational leadership literature is job satisfaction.

2.2.3 Transformational leadership and job satisfaction

Job satisfaction has always been a hot issue in organizational behavior, and different scholars have different ideas about its definition. At present, the concept of job satisfaction can be divided into three categories. The first type is the holistic concept, which gives a general explanation of job satisfaction, focusing on the general attitude of employees towards their work and related environment. It regards job satisfaction as a single concept and does not involve all aspects of job satisfaction like its causes and formation. The second type is the causative concept, which focuses on the causes of job satisfaction and regards it as one of the outcomes of satisfying individual needs. The third type is the element concept, which holds that job satisfaction is composed of many elements, and it depends on the individual's cognitive evaluation and emotional response to all aspects of his job composition. In summary, job satisfaction can be defined as the result of various characteristics of a person's work, which mainly involves the psychological state under a certain working situation (Zhang & Zhou, 2005). Job satisfaction refers to how satisfied employees are with their jobs, which is a complex multidimensional psychological concept related to motivation, emotion and cognition. It is a state in which a person feels satisfied and happy with his work, as well as a happy emotional feeling of an individual generated by the evaluation of work or work experience (Bernarto et al., 2020). Job satisfaction is a positive emotional state in which an individual feels satisfied with his or her job. It is an assessment of his or her job characteristics or experience (Lum, 2018).

Understanding employees' job satisfaction can clarify problems existing in organizational management, help in systematically solve them, and verify whether improvements have been made through re-testing. On the other hand, job satisfaction is the most important indicator to diagnose the status of organizational management. It can be a proxy of organizational performance, for example, by helping in timely prediction of employee turnover intentions. Besides, with timely improvement and proper measurements, it can prevent brain drain. Therefore, job satisfaction has the following four functions: help in diagnosing the organization,

influencing the future performance of the organization, protecting the mental health of employees, and improving the work quality of employees (Lu et al., 2001).

There is a large literature proving that transformational leadership has a positive impact on job satisfaction. If the work of transformational leaders produces valuable results, employees will feel satisfied and thus show a high job satisfaction. Transformational leadership is associated with the job satisfaction of subordinates (Medley & Larochelle, 1995). Leaders motivate their subordinates by enhancing the value of their work-related achievements so as to improve their confidence. Transformational leaders use three motivational behaviors in the process of management: charisma, individualized consideration and intellectual stimulation. Charisma is a core quality of transformational leaders, since it makes their followers want to identify with them, have strong feelings for them and trust them, and this trust can inspire the followers to make changes.

Transformational leadership contributes to higher employee performance which will far exceed job expectations, and these followers have higher job satisfaction (Dumdum et al. 2013). Job satisfaction is closely related to job performance as organizations with more satisfied employees tend to be more efficient and productive, and employees with higher satisfaction have lower turnover rate (Eliyana & Ma Arif, 2019).

We therefore hypothesize that:

H3: Transformational leadership behavior is positively associated with job satisfaction

2.2.4 Transformational leadership and Loyalty to leader

Loyalty to leader refers to the relative strength of subordinates' recognition, attachment and contribution to their direct supervisor (Xie et al., 2011). Loyalty to leader means that the followers are willing to rely on their leaders (Phungsoonthorn & Charoensukmongkol, 2018) and refers to the behavior that a subordinate engages in for the benefit of the supervisor, including the subordinate's active accommodation, assistance, obeying the supervisor's instructions, and sacrificing his or her own interests.

Research conducted in China has shown that transformational leadership has a significant impact on Loyalty to leader (Wang et al., 2017). The characteristics of transformational leaders may explain this positive effect on loyalty of employees.

Studies (Mwesigwa et al., 2020) have also shown that followers tend to be satisfied with their own work and want to be committed to the organization. Transformational leaders support and motivate them to take on difficult challenges and succeed in their work, which is an intrinsic motivation for them to stay in the organization. Transformational leaders have certain

characteristics such as integrity, caring, and kindness. When they care about and value their followers, followers tend to reciprocate to them with positive attitudes such as loyalty, admiration, and support.

Loyalty to the leader can also be approaches as the willingness of followers to depend on their leader. Loyalty to leader can be viewed from two perspectives: a relationship-based, and a role-based (Jiang & Cheng, 2008). From the relationship-based perspective, it refers to the relationship between a transformational leader and his or her followers. Based on this view, loyalty to the leader is developed through social exchange. This exchange is not necessarily based on mutual interest as it may also pertains to the fulfillment of a role and the recognition of other's role in the interaction. Thus, either stemming from the emotional bond established between leader and subordinate or from the social role expectations, loyalty is expected in leader-subordinate relations. In China the role-based loyalty relates with the Confucian principles of filial piety and loyalty to the higher-ranked (Hwang, 1999) and the justice subordinates feel in the interaction with the supervisor builds loyalty, although it is sensitive to the degree of collectivistic orientation (Wang et al., 2017).

From the role-based perspective, transformational leaders communicate with followers in an influential way and convey their vision of a better future, which helps develop the loyalty and respect from followers for the supervisor.

Loyalty to the leader is seen as the most important focus of work commitment in an organization, along with loyalty to colleagues and to the organization. Since the supervisor is both the representative of the organization and the person closest to employees in the organization, loyalty to the leader also has a strong impact on employees' behavior.

Chen et al. (1998) conducted a study in a Chinese context to find that there are five dimensions of loyalty to the leader: dedication, following the supervisor, hard work, recognition of the supervisor, and internalization of supervisor's thoughts. Thus, loyalty to the leader is used to express commitment to the supervisor, that is, the subordinate's attachment to the supervisor. Some scholars believe that the words, actions, qualities, and communication styles of transformational leaders have an impact on employees' loyalty (Mayfield & Mayfield, 2002). Other scholars also hold that transformational leaders are able to predict employees' behavior of putting forward suggestions (Detert & Burris, 2007). Although there is plenty research on transformational leadership, there is relative scarcity of studies that directly link it to employee's loyalty to the leader. Still, many studies show that leadership style has some influence on employees' loyalty by the proxy relationship between leadership style and turnover intention.

We therefore hypothesize that:

H4: Transformational leadership behavior has a positive relationship with the loyalty to leader;

H4a: Transformational leadership behavior has a positive relationship with the affective loyalty to leader;

H4b: Transformational leadership behavior has a positive relationship with the role loyalty to leader;

The consequences of transformational leadership reviewed so far (affective commitment, job satisfaction, loyalty to the leader) highlight not only the centrality of transformational leadership as a source of bonding, as it suggests the outcomes are not disconnected. This offers an understanding that the positive effects of transformational leadership are robust as the outcomes themselves should mutually reinforce each other. Their connections should help uncovering processes that link transformational leadership to employee turnover.

2.3 Connecting the intermediate processes

This section is intended to integrate the relationships reviewed and it focuses on the role loyalty to the leader plays as a plausible mediator between transformational leadership and intermediate variables that lead to turnover intention, namely, organizational affective commitment and job satisfaction.

2.3.1 Loyalty to leader and organizational affective commitment

Both Loyalty to leader and organizational affective commitment are psychological states employees experience towards leaders or the organization. These psychological states share a certain degree of identification and affective attachment. Luo et al. (2006) explained the difference between Loyalty to leader and organizational affective commitment based on the definition, antecedent variables and outcome variables. These authors sustain that the basis of employee loyalty is identification, the condition of employee loyalty is affective commitment, and the core of employee loyalty is a sense of obligation. A difference between loyalty to the leader and organizational affective commitment lies in loyalty to the leader reflecting the choice and identification with the supervisor's values and the sharing of hardships with the supervisor, which is based on the sense of belonging and responsibility (Indra et al., 2023). A second difference lies in voluntary and moral characteristics of Loyalty to leader.

In research focused on employee turnover, studies that consider loyalty to the leader

compared to those that consider organizational commitment show a wider range of focuses. The former focuses more on employees' attitudes and behavior and include also the latter as an outcome (Luo et al., 2006). In summary, Loyalty to leader and affective commitment to the organization are distinct but intersecting concepts.

2.3.2 Organizational affective commitment and turnover intention

As stated, organizational affective commitment expresses an emotional attachment of employees to the organization and it is the core of organizational commitment (Meyer & Allen, 1990). Employees with strong affective commitment recognize and appreciate the members of their organization. At the same time, they choose to stay in the organization, not because they feel obliged to do so (Alqudah et al., 2022)). Individuals with affective commitment to the organization are emotionally attached to the activities of the organization, and do not feel that their responsibilities to complete their tasks are stressful. Therefore, these employees are less likely to resign. They are emotionally involved in the organization and highly loyal to it. They are willing to stay in the organization and self-motivate because they feel a sense of family and security in it. As employees fully agree with their organization's values, they accept its goals and work hard (Kazemipour & Mohd Amin, 2012).

Unsurprisingly international and Chinese literature report organizational affective commitment as an important deterrent of turnover intention as well as withdrawal behaviors (Alkhateri et al., 2018; Shahsavan & Safari, 2017) with a stronger impact that normative or continuance commitment (Yang, 2019).

Many scholars have found that organizational affective commitment plays a mediating role between leadership style and employee turnover intention (Jang & Kandampully, 2018). When employees work with transformational leaders who provide support and inspiration, they will be more committed to the organization, so they are unlikely to find new jobs. Many empirical studies have discussed that transformational leadership behavior affects employees' turnover intention, and organizational affective commitment plays a mediating role between transformational leadership and turnover intention (Ennis et al., 2018).

Considering the proposed relations in the previous couple sections, we hypothesize that:

H5: Affective loyalty to leader mediates the positive relation between transformational leadership organizational affective commitment;

2.3.3 The relationship between Loyalty to leader and job satisfaction

According to Chinese scholars, individuals will show attitudes or behavior based on the social environment they are in and their past behavior (Chen, 2001; Jiang et al., 2005). Employees who are loyal to their leaders will idealize various information in the working environment, thus developing job attitudes that are consistent with their loyalty, such as higher job satisfaction.

In Chinese organizations, leaders categorize subordinates according to their "loyalty" and treat them differently, which obviously affects subordinates' job satisfaction (Zhan & Liu, 2022). In addition, the loyalty of subordinates to the leader is also in line with the expectations of paternalistic leadership in Chinese enterprises, which is a laudable attitude and behavior (Chen et al., 2013). Therefore, the leader will give special care and support to loyal subordinates, which will also affect the subordinates' job satisfaction and turnover intention (Jiang et al., 2005).

Employees' job attitudes, such as job satisfaction and turnover intention, originate from the interaction with others within the working environment. The conceptual connotation of loyalty to the leader includes, among other things, identifying and internalizing the values of the supervisor, making extra efforts for the supervisor, following the supervisor, and devoting themselves for the supervisor.

From a psychological point of view, employees who are loyal to their leaders are more likely to form values consistent with those of their leaders and give positive evaluations and support to their leaders' leadership behavior; and from a behavioral point of view, loyal employees support their leaders' decisions, make extra efforts to follow their leaders and dedicate themselves to them (Chen et al., 2002). Therefore, employees' loyalty at the psychological and behavioral levels makes them more likely to have higher job satisfaction and to stay in the organization and follow the supervisor.

Empirical studies show that loyalty to the leader has a significant positive relationship with job satisfaction and a remarkable negative relationship with the turnover intention (Chen, 2001). To be precise, employees with considerable loyalty to the leader have a higher level of commitment and job satisfaction than their peers, especially when employees perceive this climate in their working environment, which shapes their attitudes and behavioral responses to the organization (Gyensare et al., 2017).

Considering the proposed relations in the previous couple sections, we hypothesize that:

H6: Role loyalty to leader mediates the positive relation between transformational leadership and job satisfaction.

2.3.4 The relationship between Loyalty to leader and the turnover intention

China is a society that places a high value on interpersonal harmony, social bonds and social relationships (Wei & Li, 2013). Loyalty to the leader is defined as dedication and careful attachment to a specific supervisor in the form of effort on his or her behalf, following him or her and sharing values with the supervisor (Arshad et al., 2013).

From a Social Exchange Theory viewpoint, the norm of reciprocity is the mechanism that explains such behavior (Gouldner, 1960) and it operates because of role ascription (Dickson et al., 2003) as well as due to socioemotional factors (Mitchell et al., 2021) especially in a high-vertical collectivistic context (Rockstuhl et al., 2012).

Subordinates' dedication and commitment to the mission based on loyalty to their leaders encourages them to willingly complete the work tasks assigned to them (Sun, 2009). They will not leave or intend to abandon leaders they are loyal to, and they will have faith in their leaders and will not hesitate to follow them at any time. They identify with leaders' thoughts and work hard to support them. This leads to higher performance and lower tendency to leave (Wu & Wang, 2012). These authors have explained the mediation effect of loyalty to the leader based on its leveraging effect on employee motivation, which in turn improves their performance and satisfaction and reduces their turnover intention.

The differential relationship between affect-based versus role-based loyalty to the leader and turnover intention is not fully studied, so this study aims to extend the turnover intention model by using loyalty to the leader as an intervening variable.

Consider all stated hypotheses, we additionally hypothesize that:

H7: Affective loyalty to leader mediates the negative relation between transformational leadership and turnover intention;

H8: Role loyalty to leader mediates the negative relation between transformational leadership and turnover intention;

In this line of reasoning that intends to explain the processes linking transformational leadership to employee turnover intention, some well-known associations may be highlighted although, for parsimony's sake, not being formally stated as hypotheses. Such is the case of the relationship between job satisfaction and turnover intention as well as between.

2.3.5 The relationship between job satisfaction and turnover intention

Job satisfaction is the earliest variable of attitude found in research on employee turnover, and it has been extensively used to explain employees' job performance and turnover intention (Wang et al., 2020). It expresses "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke, 1976, p. 1304). As an attitude is entails the three attitudinal components, namely, a cognitive, affective and behavioral component (Hulin & Judge, 2003). The comprehensiveness of such attitude helps understanding why employees with high job satisfaction will have more positive performance when facing job duties, tasks and daily work. Therefore, job satisfaction is negatively correlated with turnover intention being the most important predictor of employees' turnover behavior in the future (Randhawa, 2007).

In studying the relation between job satisfaction and employee turnover, there are three approaches that bring different focus to the literature (Yücel, 2012):

1) Direct causal nexus: Job satisfaction directly affects employees' turnover. Employees in an organization either like or dislike their jobs, so it is intuitive that, given a conditional choice, some employees may stay while others may choose to leave the organization. Studies of job satisfaction try to explain this behavior from a humanitarian and a utilitarian viewpoint (Spector, 1997). The humanitarian view holds that people should be treated fairly and appropriately, and that the level of employee satisfaction reflects how they are treated in the organization, whether good or bad. It can also reflect the emotional and mental health of employees. Utilitarianism holds that employee satisfaction will lead to behaviors that affect the operations in the organization. For example, high employee satisfaction is associated with increased productivity within an organization, while the absenteeism and disruptive behaviors are perceived as negative outcomes by dissatisfied employees.

2) Indirect causal nexus. There is no direct causality between job satisfaction and turnover rate, but job satisfaction has an impact on turnover rate through some mediating variables. For example, the study of Judge (1993) found that job satisfaction does not predict turnover rate except via the turnover intention.

3) No causal nexus: There is no significant correlation (or weak correlation) and causality between the two, that is, the level of job satisfaction will not make employees leave (Xiong et al., 2008).

This may suggest both mediators (such as turnover intention) and boundary conditions, but overall, the vast empirical findings do encourage taking job satisfaction as an important predictor of employee turnover.

2.3.6 Integrating the transformational leadership to turnover intention process

The literature reviewed and hypotheses the current study proposes all come together into a continuum that may depict a more comprehensive explanatory process. The suggested model seems to have two parallel lines of influence: one of an affective nature (e.g. affect-based loyalty to leader), and the other of a normative nature (e.g. role-based loyalty to leader). Although organizational affective commitment was chosen as a primal predictor of turnover intention, and job satisfaction is measured so to account for both cognitive and affective dimensions, we expect affective commitment to mediate between transformational leadership and employees' turnover intention (Gyensare et al., 2016; Shahsavan & Safari, 2017).

This allows us to propose sequential mediation paths linking transformational leadership to turnover intention via loyalty to the leader plus affective commitment, also via loyalty to the leader plus job satisfaction which ends up in a three-step sequential mediation that links transformational leadership, with loyalty to the leader, with affective commitment, with job satisfaction, finally to explain turnover intentions. For clarity's sake, figure 2.1 shows the conceptual model for individual level analyses.

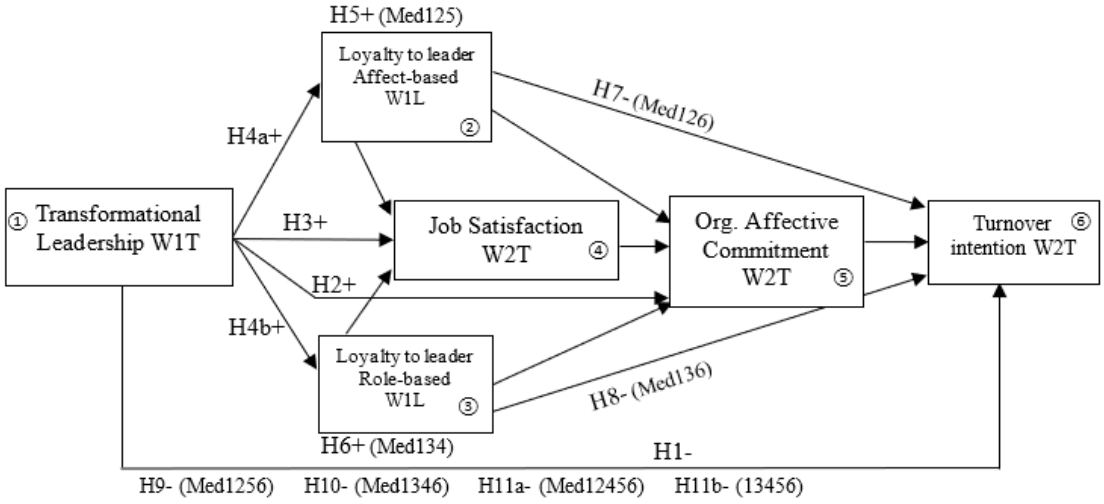


Figure 2.1 Individual level conceptual model

We thus hypothesize that:

H9: There is a two-step sequential mediation linking transformational leadership to turnover intention via affect-based loyalty to the leader, and organizational affective commitment respectively.

H10: There is a two-step sequential mediation linking transformational leadership to turnover intention via loyalty to the leader, and job satisfaction respectively.

H11: There is a three-step sequential mediation linking transformational leadership to

turnover intention via loyalty to the leader (both affect-based H11a, and role-based H11b), organizational affective commitment and job satisfaction, respectively.

2.4 Leadership and collective turnover: A team level perspective

2.4.1 Transformational leadership and turnover intention at the team level

It has been increasingly recognized that individual level perceptions are insufficient to account for the true complexity of organizational settings and how decisions (e.g. pertaining to turnover) are produced. As a social collective, there are dynamics at group level that have been extensively explored in Social Psychology (Nowak et al., 2003; Van Vugt & Schaller, 2008) that justify taking into account such level of analysis.

The acknowledgment of group-level factors has a long history in theory building and in specific domains of empirical research e.g. education (Goldstein et al., 1993; Rumberger, 1995) but its popularity gained momentum in the 1990s and 2000s with seminal publications (Hox & Kreft, 1994; Kozlowski & Klein, 2000).

As theory, research design, and data analysis techniques progress researchers become more able to integrate the complexity of reality. Most conceptual models are very simplified representations of reality and research on management was not always reflecting the embedded nature of individuals' behavior in organizations, i.e. the possible modulating effects that context has upon individual decisions or acting (Roberts et a., 1978). The emergence of contingency theories in the 1960s established this principle (Luthans & Stewart, 1977) but the true nature of that social context is a collective whole that influences and not so much the individual disconnected perceptions about it. The consideration of collective (or group level) constructs was achieved with the emergence of multi-level research (Hitt et al., 2007) and the necessary data analysis apparatus made it empirically robust (Klein & Kozlowski, 2000). Management research is now greatly benefited by multilevel models that help bridging micro and macro levels, closing the science – practice gap, and better integrating theories from different disciplinary backgrounds (Molina-Azorín et al., 2020).

Leadership is by definition a collective product, and not really an individual level phenomenon (Waldman et al., 2006). There cannot be leadership without a leader and followers, and leadership is coproduced by the interaction between these individuals as a whole. This is in line with Kirkman et al. (2009) but also Wang et al. (2005) and Shamir et al. (1998) that propose transformational leadership has a shared perceived nature because leaders direct

their behavior towards the whole of the team in order to achieve important leadership objectives such as building a common vision and purpose and bringing out synergies from the group. Although individuals may differ as regards how extensively they recognize in their leaders the behaviors that match a certain type of leadership, e.g. transformational leadership, their perception is always gauged by social exchange in a process of sense making and confirming one own perception with others perceptions. Once they converge, the group establishes a shared perception on the leadership.

This implies that models that comprehend transformational leadership should also conceive and measure this construct at the team level because leadership has as ascribed nature, i.e. it is attributed by the group and validated within the group shared perceptions (Avolio & Bass, 1995).

One of the features of transformational leadership is the concern and support the leader offers to followers. This supportive action was found to lower turnover intention in employees (Dupre & Day, 2007). The job embeddedness model (Felps et al., 2009; Mitchell et al., 2001; Oh & Chhinzer, 2021) has been used to frame how transformational leadership prevents turnover as it considers both person-organization fit and within-organizational social links which are two targets of transformational leadership. Acknowledging its multilevel relationship, Chang et al. (2013) tested the effect of store-level transformational leadership on individual turnover intention and found a significant negative effect. Likewise, Eberly et al. (2017) report a negative effect of team level transformational leadership via on-the-job embeddedness. Several explanations on the preventive effect of transformational leadership on employee turnover have been offered (Herman et al., 2013, Lee et al., 2019, Manoppo, 2020) but the consistent finding is that transformational leadership does have a negative effect on individual turnover through turnover intention (Oh & Chhinzer, 2021; Waldman et al., 2015) because it fosters a stronger sense of person-organizational fit as well as stronger social ties within the organization. Considering this, we hypothesize that:

H12a: Transformational leadership at the team level is negatively related to individual turnover intention.

As mentioned, turnover is also a phenomenon that is visible in both the individual and collective level because it is also produced by shared social processes (Bartunek et al., 2008). Thus, the research on antecedents of turnover have been most recently targeting collective turnover. Because both transformational leadership and turnover can more correctly be conceived as group-level constructs (Hausknecht & Trevor, 2011), researchers are paying more attention to this group-level effects. Few studies report empirical findings pertaining to the

relationship between transformational leadership and collective turnover at this level (Caillier, 2018; Sun & Wang, 2017) but the rationale is sound. In line with this we hypothesize that:

H12b: Transformational leadership at the team level is negatively related to collective turnover intention.

2.4.2 Team cohesion

Another construct that has been receiving much attention in team-level research but also in turnover research is team cohesion. Team cohesion is defined as an emergent state (Kozlowski & Ilgen, 2006) that expresses the degree of commitment team members have towards each other or towards the team tasks. It is a group-level construct (Klein & Kozlowski, 2000) that comprehends three dimensions (Beal et al., 2003) covering a relational cohesion, task cohesion, and pride in the team. All are relevant but within the scope of team research, task-related issues have been a central concern and thus, team task cohesion gained equivalent centrality.

The centrality of family and kin relations makes work team task cohesion comparatively more important than work team social cohesion in Chinese culture. Chang and Bordia's (2001) items that measure team cohesion clearly suggest this as "our team is united in trying to reach its goals for performance" or "everyone tries to help if team members encounter problems" takes precedence over "team member often socialize together" or "team members like to spend time together in their spare time". The latter is in line with the Confucian work values of duty towards the team, loyalty to the leader, endurance at work, and primacy of the collective over the individual interest (Siu et al., 2005; Hill, 2006; Lin et al., 2013).

Team cohesion is an important goal for team management because it produces a positive working climate that makes team members take pleasure in working together (George & Bettenhausen, 1990) while also achieving higher team performance (Salas et al., 2015). At the individual level, the perception of being within a cohesive work team positively relates with an individual's commitment to remain in the organization (Piper et al., 1983). Both the relational ties and positive expectations translate into higher job embeddedness which was found to be a strong predictor of voluntary turnover beyond job satisfaction and commitment (Mitchell et al., 2001). In line with this we hypothesize that:

H13a: Team cohesion at the team level is negatively related to individual turnover intention.

Alongside the individual cognitions on their work teams' cohesion, the processes that link coworkers incorporate both coworker support behaviors as well as coworker antagonism. These are fundamental to explain work attitudes and withdrawal behaviors (Chiaburu & Harrison,

2008). Among these withdrawal behaviors, intention to quit is also expressed in coworker interactions by a reduced level of interpersonal communication (Cox, 1999) and badmouthing (Krackhardt & Porter, 1986) which undermines social capital (Chung et al., 2022) and thus has a looping and contagious effect within the team (Oh & Chhinzer, 2021). Unsurprisingly, team cohesion was found to reduce collective voluntary turnover (Trevor & Nyberg, 2008). In line with this we hypothesize that:

H13b: Team cohesion at the team level is negatively related to collective turnover intention.

2.4.3 Team job satisfaction

Team job satisfaction is closely linked to team cohesion and it is, at the individual level, one of the strongest predictors of turnover intention (Nguyen & Tran, 2021) both as a main effect or combined with other contextual variables in both cross-sectional or time-lagged studies (Trevor, 2001; Tschopp et al., 2014).

At group level, team job satisfaction expresses the average, shared, subjective experience of job satisfaction and this construct is especially important when researching collective turnover. Its importance is due to the assumed contagion effects studied in team research where such shared psychological states exert influence upon individual behavioral intention. The same group dynamics found for team emergent states such as team cohesion, apply in team attitudes (such as job satisfaction) as these attitudes have a social nature, i.e. they are coproduced within the interaction of coworkers (Fisher, 2010). Wang et al. (2016) added a social network perspective to test the group-level contagion effects of the traditional "job satisfaction – turnover intention – turnover behavior" sequence to find that the multilevel effect occurs and both individual turnover intention was indirectly related to group job satisfaction, and group turnover intention was also directly affected by the group job satisfaction. We therefore hypothesize that:

H14a: Team Job satisfaction is negatively related to individual turnover intention.

Likewise, based on the same findings (Wang et al., 2016) and assuming that such attitude-behavior effects have an isomorphic nature, between individual and group level, we hypothesize that:

H14b: Team Job satisfaction is negatively related to collective turnover intention.

Based on the relevant literature and all the above assumptions, the following cross-level conceptual model (Figure 2.2) was developed to link transformational leadership to turnover intentions.

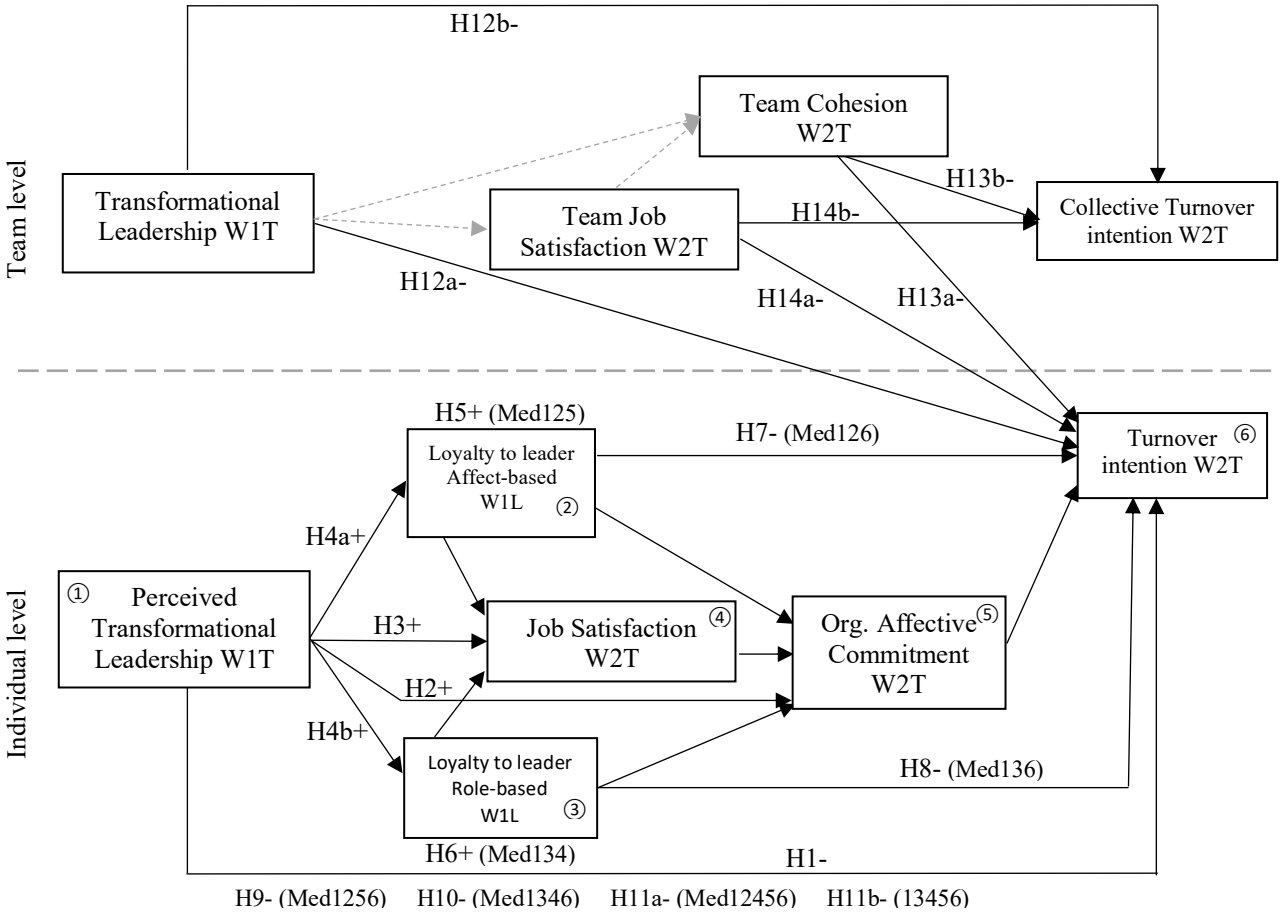


Figure 2.2 Cross level conceptual model

Note: Grey intermittent lines depict relations that have not been formally stated as hypotheses due to parsimony's sake and because they are well established in literature

Chapter 3: Study 1 – Testing a Multilevel Collective Turnover Model

Departing from the literature review, we designed an empirical study that is intended to test all the hypothesized relations depicted in the cross level conceptual model that links transformational leadership (both as an individual perception and a group level construct) to turnover intentions (both individually expressed as well as the whole team turnover intention) via parallel processes that include psychological variables as well as emergent team states.

3.1 Method

Because the study targeted work teams, we have approached 12 companies in the medical and healthcare industry to invite to participate in this study. Eleven have answered positively and they are located in the main cities in China (Beijing, Chongqin, Dalian, Guangzhou, Shanghai, Shenzhen, Wuhan, and Zhuhai).

Followed acceptance, the process was arranged so to firstly randomly chose employees in a total of 480. Simultaneously, arrangements were done so to be able to send employees an invitation, explaining the study, guaranteeing confidentiality and anonymity and explaining the process would require a second participation after one month, and making the questionnaire link (in WJX online software) available together with a personal code so to guarantee matching without compromising anonymity. All employees, staff of with supervisory functions, were invited up to the level of executive board as long as they have a direct leader to report.

The first questionnaire comprised a sociodemographic section asking for gender, age, education, organizational tenure, dyadic tenure, and supervisory functions. It also comprised transformational leadership and trust in supervisor scales. The first wave data collection was collected in November 2021 and lasted for approximately two weeks thus returning 390 answers. The second questionnaire comprised measures for Trust in team, Team commitment to the leader, Job satisfaction, and Team subjective performance and was deployed in December 2021. We received 354 answers, corresponding to a response rate of 74%, which is above the average reported in recent studies (Holtom et al., 2022). After matching with the second wave and data screening the usable sample is 322 answers. In planning the data collection, we settle

a target of a minimum of 50 teams as this is the minimum threshold according to Maas and Hox (2005) that can ensure unbiased estimates of standard errors in HLM at group level.

3.1.1 Procedure and sample

The sample comprises 322 valid answers from the two-wave data collection comprised in 69 teams (team size ranging from 3 to 11, averaging 4.7, mode 4). It is mainly feminine (59.9%), with most participants falling in the age group of 26 up to 45 years-old (up to 25 = 8.4%, 26-35=35.7%, 36-45=34.5%, 46-54=18.6%, and 55 or more = 2.8%). The sample is mostly educated with 50.2% holding at least a Bachelor's degree (highschool=12.7%, vocational=36.3%, college/BSc = 45.7%, Posgraduation=4.3%, and PhD=0.9%). The participants have a stable long-lasting relation with the organization, as visible in the organizational tenure structure where 60.2% are working in the same organization for at least 6 years (up to 1 year=9%, 1-2 years=11.5%, 3-5 years=19.3%, 6-10 years=20.8%, and 10 or more years=39.4%). This is mirrored to a lesser extent in the dyadic tenure (i.e. for how long participants are working with the same direct leader) with the most commonly reported lasting for 3 to 5 years (up to 1 year=14%, 1-2 years=19.6%, 3-5 years=28.9%, 6-10 years=17.4%, and 10 or more years=20.2%). The sample is mostly comprised of staff personnel without supervisory functions (49.4%) followed by junior managers (23.3%), middle managers (19.3%), and top managers (8.1%).

3.1.2 Measures

Team Trust (TT, wave 2, team-members) was measured with Simons and Peterson (2000) scale comprehending 5 items organized in a single factor. The CFA for this solution showed poor fit indices ($X^2(5)=56.216$, $p<.001$; Normed $X^2=11.243$; CFI=.957; TLI=.915, RMSEA=.179 CI90[.138;.222] PClose=.000, SRMR=.039). By using Lagrange multipliers, we removed two items ("TT2. Every executive present shows absolute integrity", "TT5. We count on each other and fully live up to our word") which produced a valid factor solution with good fit indices ($X^2(5)=1.378$, $p=.240$; Normed $X^2=1.378$; CFI=.999; TLI=.998, RMSEA=.033 CI90[.000;.150] PClose=.425, SRMR=.008). This solution has also good convergent validity (AVE=.668) as well as high reliability (CR=.857). This was answered in Wave 2 by the team members using a 7-point Likert scale (1=Strongly disagree to 7=Strongly agree).

Loyalty to the leader (LL, wave 2, team-members) was measured with Jiang and Cheng (2008) two-factor scale comprehending 8 items: Affect-based loyalty (5 items, e.g. "I praise my

current supervisor in front of my friends as a great supervisor to work with", "The reason why I prefer my current supervisor to others is because of his/her values") and role-based loyalty (3 items, e.g. "Being a subordinate, I have an obligation to perform well and let my supervisor be free of worries", "I do my assigned work well and efficiently; this is what a subordinate should do"). The CFA for this solution showed good fit indices ($X^2(18)=54.942$, p<.001; Normed $X^2=3.052$; CFI=.981; TLI=.971, RMSEA=.080 CI90[.056;.105] PClose=.020, SRMR=.031). Both factors have good convergent validity ($AVE_{affect\text{-}based}=.718$; $AVE_{role\text{-}based}=.673$) as well as high reliability ($CR_{affect\text{-}based}=.927$; $CR_{role\text{-}based}=.860$) and the two-factor solution has discriminant validity (HTMT=.776). This was answered in Wave 2 by the team members using a 7-point Likert scale (1=Strongly disagree to 7=Strongly agree).

Team Task Cohesion (TC, wave 2, team-members) was measured with Chang and Bordia (2001) subscale comprehending four items (e.g. "Everyone tries to help if team members encounter problems", "Our team is united in trying to reach its goals for performance"). This solution showed poor fit indices ($X^2(2)=21.764$, $p<.001$; Normed $X^2=10.882$; CFI=.977; TLI=.932, RMSEA=.175 CI90[.114;.245] PClose=.000, SRMR=.031). By using Lagrange multipliers, we removed one item ("TC4. Team members communicate freely about each other's responsibility") which produced a valid factor solution with good fit indices ($X^2(1)=1.794$, $p=.180$; Normed $X^2=1.794$; CFI=.998; TLI=.993, RMSEA=.061 CI90[.000;.204] PClose=.291, SRMR=.016). This solution has also good convergent validity (AVE=.710) as well as high reliability (CR=.879). This was answered in Wave 2 by the team members using a 7-point Likert scale (1=Strongly disagree to 7=Strongly agree).

Affective organizational commitment (OC, wave 2, team-members) was measured with four items from Meyer and Allen (1990) scale, organized in a single factor. This solution showed good fit indices ($X^2(2)=5.444$, $p=.066$; Normed $X^2=2.722$; CFI=.992; TLI=.977, RMSEA=.073 CI90[.000;.150] PClose=.223, SRMR=.021) as well as convergent validity (AVE=.522) and good reliability (CR=.806). This was answered in Wave 2 by the team members using a 7-point Likert scale (1=Strongly disagree to 7=Strongly agree).

Job satisfaction (JS, wave 2, team-members) was measured with a single item targeting general job satisfaction "Generally speaking, I am satisfied with my job". This single item measure has been reported in literature as being more efficient and without loses in measurement quality compared to larger scales (Dolbier et al., 2005; Nagy, 2002; Wanous et al., 1997). This was answered in Wave 2 by the team members using a 7-point Likert scale (1=Strongly disagree to 7=Strongly agree).

Team Performance (subjective, TP, Wave 2, team-members) was measured with four

items from Gonzalez-Mulé et al. (2016) based on Kearney & Gebert, 2009 and Zellmer-Bruhn & Gibson 2006) organized in a single factor (e.g. “TP2. This team achieves high performance.”, “TP4. This team is very successful in terms of overall achievement.”). This solution showed poor fit indices ($X^2(2)=43.690$, $p<.001$; Normed $X^2=21.845$; CFI=.967; TLI=.900, RMSEA=.255 CI90[.192;.323] PClose=.000, SRMR=.024). By using Lagrange multipliers, we removed one item (“1 This team achieves its goals.”) which produced a valid factor solution with good fit indices ($X^2(1)=3.450$, $p=.063$; Normed $X^2=3.450$; CFI=.997; TLI=.991, RMSEA=.087 CI90[.000;.195] PClose=.171, SRMR=.005). This solution has also good convergent validity (AVE=.837) as well as high reliability (CR=.939). This was answered in Wave 2 by the team members using a 7-point Likert scale (1=Strongly disagree to 7=Strongly agree).

Turnover Intention (TI, wave 2, team-members) was measured with the 3-item scale from Camman et al. (1983) which comprehends a single factor (“1 often think of leaving the organization”, “It is very possible that I will look for a new job next year,", and “If I may choose again, I will choose to work for the current organization" (reverse coded)”. The CFA for this model showed it is just-identified, and all items significant load on the latent factor (p<.001). This scale has been used in China (Chen et al., 1998; Hui et al., 2007), and it showed good convergent validity (AVE=.718) as well as good reliability (CR=.882). This was answered in Wave 2 by the team members using a 7-point Likert scale (1=Strongly disagree to 7=Strongly agree).

Transformational leadership (TL, Wave 1, Team leader Team members) was measured with the Dual Transformational Leadership Scale by Wang and Howell (2010) comprising 32 items that express seven factors. Namely: Communicating High Expectations (HE, 5 items, CR=.910, AVE=.718, e.g. “HE5.Encourages me to live up to my potential”), Follower development (FD, 5 items, CR=.945, AVE=.811, e.g. “FD3. Provides me with developmental experiences”), Intellectual Stimulation (IS, 4 items, CR=.948, AVE=.820, e.g. “IS2. Challenges me to think about old problems in new ways”), Personal Recognition (PR, 4 items, CR=.954, AVE=.838, e.g. “PR2.Gives me positive feedback when I perform well”), Emphasizing Group Identity (GI, 5 items, CR=.938, AVE=.792, e.g. “GI2.Says things that make us feel proud to be members of this team”), Communicating a Group Vision (GV, 4 items, CR=.960, AVE=.859, e.g. “GV4.Communicates a clear direction of where our team is going”), and Team-Building (TB, 5 items, CR=.965, AVE=.845, e.g. “TB3.Develops a team attitude and spirit among team members”). The first four factors express a focus on individuals while the last three factors express a focus on groups. This was answered in Wave 1 by the team members and team leader

using a 7-point Likert scale (1=Strongly disagree to 7=Strongly agree).

The CFA of this 7-factor solution with a general 2nd order factor showed acceptable fit indices (X^2(457)=1506.166, Normed X^2=3.296; CFI=.927; TLI=.921, RMSEA=.085 CI90[.080;.089] PClose=.000, SRMR=.035) although there was some indication that some items were harming the factor structure as suggested by Lagrange Multipliers. After removal of these items (namely HE2, FD1, and GI4) the fit indices became stronger (X^2(369)=1091.769, Normed X^2=2.959; CFI=.945; TLI=.939, RMSEA=.078 CI90[.073;.083]PClose=.000, SRMR=.031). The 2nd order factor has high reliability (CR=.982) as well as convergent validity (AVE=.888). For the specific two-main theoretical factor solution proposed by the authors, the fit indices are also good (X^2(369)=1041.290, Normed X^2=2.822; CFI=.949; TLI=.943, RMSEA=.075 CI90[.070;.081] PClose=.000, SRMR=.027) and both factors have both good reliability (CR_{TLInd}=.970, CR_{TLGrp}=.978) as well as convergent validity (AVE_{TLInd}=.891, AVE_{TLGrp}=.937). However, the factors seem to be indistinguishable as the HTMT shows a value above .90 (.93), but still they will be considered for theoretical reasons although multicollinearity must be controlled if both factors are included in the same model.

Trust in the leader (TrL, Wave 1, team members) was measured with McAllister's (1995) single factor, 4-item scale (e.g. "TR1.We have a sharing relationship. We can both freely share our ideas, feelings, and hopes") which showed poor fit indices (X^2(3)=41.920, Normed X^2=13.973; CFI=.961; TLI=.923, RMSEA=.201 CI90[.150;.257] PClose=.000, SRMR=.033). Lagrange Multipliers suggested issues with item 3 ("We would both feel a sense of loss if one of us was transferred and we could no longer work together). After removal of this item the factor solution has good fit indices (X^2(1)=1.847, p=.174, Normed X^2=1.847; CFI=.999; TLI=.997, RMSEA=.051 CI90[.000;.168] PClose=.334, SRMR=.005) which also has good reliability CR=.930) and convergent validity (AVE=.816). This was answered in Wave 1 by the team members using a 7-point Likert scale (1=Strongly disagree to 7=Strongly agree).

3.1.3 Control variables

Sociodemographic variables such as age (1=up to 25 years-old, 2=26-35, 3=36-45, 4=46-54, 5=55+), Gender (1=Male, 2=Female), education (1=high school, 2=vocational, 3=college / BsC, 4=Post graduation, 5=PhD), organizational tenure (1=up to 1 year, 2=1-2, 3=3-5, 4=6-10, 5=+10), supervisory functions (1=Staff, 2=Junior manager, 3=Middle manager, 4=Senior manager), and dyadic tenure (1=up to 1 year, 2=1-2, 3=3-5, 4=6-10, 5=+10) were included for descriptive purposes as well as for control purposes. At the group level, literature indicates team

trust and team performance can be influential in turnover intention which were also taken as control variables.

Team trust expresses the extent members of a team rely on each other's character, competence, and honesty and are willing to act based on the word given by their coworkers (McAllister, 1995). The higher the within-group trust, the stronger the positive climate that retains loyal team members (Brashear et al., 2005) and conversely, low team trust was found to increase the chances of employee turnover (Guan et al., 2015). Multilevel studies on team trust have been called for (Costa et al., 2017) as trust development is a product of individual, group and organizational factors. Testing for the interaction between individual trust and group-level trust in explaining voluntary turnover intentions, Jiang and Probst (2015) report non-significant interaction but rather a negative strong effect of both individual and group level trust. Li et al. (2017) also conducted a multilevel study on antecedents of turnover focusing on group trust, amongst others, to find that group trust is negatively related to individual turnover. Based on the same rationale that advocates turnover as a phenomenon that is fundamentally built on a shared social process rather than being of an individual nature (Bartunek et al., 2008), we establish the same grounds to link team trust with collective turnover. Therefore, we have included it as a group level control variable.

The last control variable is job performance, which is one of the important outcomes of work and is long known to play a motivating role, which is well documented in research (Steers, 1975; Judge et al., 2001). This is another construct that should be taken into consideration in turnover models. This is usually treated as a dependent variable, but it can be used to judge on the advantages / disadvantages of working in that particular team because it is not the same to work within a high-performing team as compared to a low-performing, both from the point of view of anticipated individual gains as well as to motivate oneself to invest in the team work. Expectancy theories of motivation (Vroom, 1964) and Self-Determination theories (Deci & Ryan, 2008) offer explanation as they propose attitudes (such as job satisfaction) follow the rewarded behaviors (such as indicated by performance). In reviewing team theories, Kozlowski et al. (1999) highlighted the role team performance plays in team dynamics. Performance, not only taken as an outcome of work team activity, is also an indicator on the future expectations of the individual worker. When higher team performance is expected it is reasonable that the individual that is deciding to quit or not, will take that into consideration and considers it a reason to remain. This is in line with research that shows that the individual job performance is also dependent on the team performance.

3.2 Statistical analysis strategy

Data analysis follows a twofold process that starts with checking the quality of data and testing for psychometric quality of the measures. It then proceeds to test the hypotheses.

The psychometric quality is achieved when measures are both valid and reliable meaning that the scales are measuring the intended constructs (construct validity) and that such measurement is consistently done (internal consistency). Construct validity is tested via confirmatory factor analysis (CFA) with technical decisions as stated below in the section "Psychometric quality". Additionally, it is also important to test for convergent and divergent (whenever applicable) validity.

For hypotheses testing, among the several data analysis techniques available, we will use Path Analysis. Because our focal variable has a group-level nature (collective turnover) we will develop the analyses by: 1) testing individual-level model (SEM), 2) testing a cross-level model (HLM). Due to some constructs being measured at group level, data analysis should firstly test the aggregability of variables which is indicated by Rwg and Intraclass Correlation Coefficient (ICC), also detailed in the aggregation section below.

3.2.1 Data screening

We started by checking the quality of data and removed cases where monotonous answers compromised the data. Because the study design is time-lagged, cases that did not have a match in the second data collection wave, were excluded. As the minimum requirement for team inclusion was three members, we kept only those that achieve this number.

3.2.2 Psychometric quality

Construct validity was analyzed with confirmatory factor analysis (CFA) which is a technique that generates fit indices so to judge on how closely is the theoretical structure of constructs mirrored in the data.

Both for CFA and Structural Equation Modelling (SEM) it is necessary to test the fit of the measurement model, i.e. all the latent variables and respective observed items put together. The acceptability of such model is judged based on fit indices. According to Hair et al. (2019), generally, the measurement model is considered valid when the following indices achieve some thresholds: a non-significant chi-square statistic ($p<.05$), and a normed chi-square (CMIN)

below 3, plus the Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) above at least .96, plus a Residual Mean Squared Root of Approximation (RMSEA) below .07, and a Standardized Root Mean Residual (SRMR) below .08. These thresholds are subjected to adjustments based on the number of observed variables in the model as well as the sample size. In the case of this study, the sample is larger than the 250 observations cutoff and so, for simpler models (that comprehend less than 12 observed variables) a good fit occurs when: CFI or TLI are at least .96 and RMSEA falls below .07 while chi-square will have insignificant values expected but SRMR will be biased upwards. For medium complex models (comprehending between 12 to 29 observed variables) a good fit occurs when: CFI and TLI are at least .94, RMSEA falls below .07, and SRMR falls below .08 while chi-square is expected to be significant. Lastly, more complex models (comprehending 30 or more observed variables) will be considered with an acceptable fit whenever: CFI and TLI reach .92, RMSEA falls below .07, and SRMR falls below .08. Likewise, a significant p-value for chi-square is expected, meaning it is not relevant for fit decision purposes. In the special case of latent constructs measured with only three items, there is the possibility of just-identification (Byrne, 2010) i.e. of a saturated model. In such cases significant factor loading of all items are reported as indicative of a valid measure.

A measure must have convergent validity which is indicated by the Average Extracted Variance (AVE) which, according to Fornell and Larcker (1981) should achieve at least .50, which means at least 50% of the variance in the latent variable is explained by the composing observed variables. Likewise, whenever a construct includes more than one latent variable it is required that each of the latent variables are sufficiently distinguished among themselves to be considered separate, i.e. they have to have discriminant validity. This is tested with the HTMT (Henseler et al., 2015) which may be considered strictly valid if the index falls below .85 although it is also accepted up to .90.

Additionally, it is important to test whether the proposed measurement model is the most suited considering the data structure. This is achieved via a strategy of model comparison (Hair et al., 2019). The proposed model is named “baseline model” and its fit indices are sequentially compared with those generated from alternative models that fuse linked latent constructs and inspect the plausibility that some of the proposed latent variables are in fact not distinguished. The baseline model is considered better than an alternative model whenever the Chi-square difference is significant, meaning that the baseline model has better fit than the alternative. Another technical option relies on Cheung and Rensvold (2002) CFI difference which should attain .01. Lastly, it is also useful to compare the Akaike Information Criterion values (AIC)

where lower figures indicate better fit.

Regarding reliability, the most popular indicator is Cronbach alpha which should achieve at least .70 although for CFA and related data analysis techniques (such as SEM) Joreskog's (1971) Composite Reliability (CR) is usually preferred and reported.

3.2.3 Aggregation

The first step is to evaluate the degree to which different team members ratings for a given variable are interchangeable, i.e. how similar they are within the team. For such purpose we calculated the inter-rater agreement indexes (rwg(j)) for each construct (James et al., 1984, 1993; Klein et al., 2000). Additionally, we calculated the interclass correlations to evaluate to which measure the within-group variance is outweighed by the between-group variance, i.e. a measure of the interrater reliability (Bliese, 2000; Klein et al., 2000).

An ideal result showing constructs do operate at the group level is to have an average rwg of at least .70. For ICC indices, there are no absolute rules to determine what cutoffs ICC values must attain to justify aggregation (Biemann Cole Voelpel, 2012). However, the praxis has been showing some consensus among researchers where ICC1 values should be higher than the traditionally recommended cutoff of 0.12 (James, 1982) although the typical range reported in literature and being accepted as good is between .05 to .20 (DeShon et al., 2004) whereas values above .30 are uncommon. Additionally, ICC2 should attain 0.70 (Klein & Kozlowski, 2000) and must be higher than ICC1. However, there may be some cases of smaller team sizes that must be carefully judged as ICC1 is not sensitive to team size but ICC2 tends to decrease with decreasing team sizes (Klein & Kozlowski, 2000; Liao et al., 2009) and therefore the criterion of ICC2>ICC1 will suffice for small teams.

3.3 Hypotheses testing

The associations hypothesized in the conceptual model were tested with Macro PROCESS (Hayes, 2022), which is a data analysis technique based on path analysis, ran on a bootstrapping procedure to compute low and upper values of the statistics. According to recommendations, we have extracted 5000 repetitions and adopted the 95% confidence interval. We additionally use Hierarchical Linear Modelling (HLM) as it is suitable to control for effects when individual level variables are nested in group level (Woltman et al., 2012).

3.3.1 Measurement model comparison

Taking the measurement model that puts together all mentioned constructs (i.e. transformational leadership, team task cohesion, trust in team, trust in the leader, team performance, affective organizational commitment, and turnover intention), the fit indices indicate it is a valid model (X^2(1055)=2571.049, p<.001, Normed X^2=2.437; CFI=.921; TLI=.916, RMSEA=.067 CI90[.064;.070] PClose=.000, SRMR=.057). By sequentially fusing directly related constructs in the model, the alternative measurement models suitability can be gauged. We started by testing the fit indices for a model that fused transformational leadership with the most proximal constructs: trust in team and trust in the supervisor. Findings showed this measurement model had worst fit indices compared to the original conceptual model ($\Delta\chi2(\Delta df)$=451.417(7) p<.001, and ΔCFI=.023). For parsimony's sake, we reported all the alternative measurement models in Table 3.1 which also indicate clearly that our model is preferable to any of the alternatives.

3.3.2 Aggregation

Results showed high inter-rater reliability for transformational leadership taken as a second order factor (rwg = 0.95) and adequate distribution of within/between-team variance (ICC1 = 0.07 and ICC2 = 0.25). Rwg(j) is higher than .70 and among the 69 teams, only one fell below 0.70 (0.61) representing a percentage of 98.6% of teams with rwg(j) above the cutoff. The ICC1 value falls within the range of .05 to .20 (LeBreton & Senter, 2008) but ICC2 is lower than the cut-off of 0.70 (Klein & Kozlowski, 2000). However, as stated, this may have been due to the sensitivity of ICC2 to the small size of teams in our sample (Klein & Kozlowski, 2000; Liao et al., 2009) and as positive indication, ICC2 it is higher than ICC1. The F statistic is significant for p<.10 (F=1.33, p=.06). For parsimony's sake we depict all relevant indicators for aggregation purposes in the following Table 3.2 which show that all variables have rwg and ICC values that allow aggregability at team level.

Table 3.1 Average within group agreement (rwg(j)), interclass correlations ICC1 ICC2, and F-tests

Variables	Average $r_{wg(j)}$	% of units with > 0.70	ICC1	ICC2	F-value
Transf. Lead	0.95	98.6%	0.07	0.25	1.33*
Team Task Cohesion	0.87	97.1%	0.10	0.35	1.53***
Team trust	0.88	98.6%	0.09	0.32	1.47**
Team performance	0.86	97.1%	0.02	0.09	1.10 n.s.
Team satisfaction	0.73	97.3%	0.13	0.42	1.72***
Collective turnover	0.79	82.6%	0.13	0.41	1.71***

N of teams=69; *p<.10, **p<.05, ***p<.01

Table 3.2Measurement model comparison

Model	χ^2/df	CFI	TLI	RMSEA	CI90	PClose	SRMR	AIC	Holter .05/.01	$\Delta\chi^2(\Delta df)$ Baseline	ΔCFI
A Baseline (1st order factors)	2.437	.921	.916	.067	[.064; .070]	.000	.057	2849.088	142/146	-	-
B TransfL+Tteam +TLeader	2.846	.898	.892	.076	[.073;.079]	.000	.065	3346.312	121/125	451.412(7)***	.023
C Model B + TTaskCohesion	3.221	.877	.870	.083	[.080;.086]	.000	.071	3749.275	107/110	862.226(11)***	.044
D Model C + TPerformance	3.793	.845	.836	.093	[.090;.096]	.000	.076	4364.289	91/94	1483.24(14)***	.076
E Model D + AOrgCommit	4.007	.833	.824	.097	[.094;.100]	.000	.080	4597.620	86/89	1720.571(16)***	.088
F Single factor (Model E + CTI)	4.302	.816	.806	.101	[.098;.104]	.000	.069	4915.218	81/83	2040.169(17)***	.105

*** p<.001, B model (transformational leadership, trust in team and trust in the leader fused), C model (model B plus team task cohesion fused), D model (model C plus team performance fused), E model (model D plus affective organizational commitment fused), F model (single factor)

3.4 Results

The results section will start by showing the descriptive and bivariate correlations statistics for all the variables. Due to the multilevel nature of data analysis, for clarity sake we will firstly show the sociodemographic variables (also with the status of control variables) which will be correlated among themselves as well as with the variables in the conceptual model, all measured at the individual level (Table 3.3) Then, we shall proceed with the table that shows the descriptive statistics and bivariate correlations for the variables in the model, both computed at the individual level as well as group level (Table 3.4).

Table 3.3 Descriptives and bivariate statistics for sociodemograhic variables (individual level)

N=322	Max	range	M	SD	1	2	3	4	5	6
1. Gender	2	1-2	-	-	--					
2. Age	5	1-5	2.72	.956	-.023	--				
3. Education	5	1-5	2.44	.804	-.061	.022	--			
4. Organizational tenure	5	1-5	3.70	1.33	.074	.460**	.141*	--		
5. Supervisory_functions	4	1-4	1.86	.99	-.089	.348**	.338**	.335**	--	
6. Dyadic_tenure	5	1-5	3.10	1.31	.020	.380**	.048	.723**	.303**	--
7. HE	7	1-7	5.41	.96	-.120*	-.075	.034	-.133*	.087	.070
8. FD	7	1-7	5.43	1.00	-.055	-.132*	-.025	-.210**	.018	.001
9. IS	7	1-7	5.44	1.01	-.069	-.122*	.005	-.203**	-.013	-.001
10. PR	7	1-7	5.44	.98	-.073	-.122*	.031	-.224**	-.032	-.041
11. GI	7	1-7	5.45	.98	-.061	-.131*	.027	-.220**	-.029	.004
12. GV	7	2-7	5.43	1.01	-.081	-.099	-.015	-.228**	.018	.018
13. TB	7	2.8-7	5.49	.97	-.077	-.072	-.031	-.198**	.011	.028
14. Transform Leadership	7	1.4-7	5.44	.92	-.082	-.116*	.004	-.218**	.009	.012

15. Trust in Team	7	2.7-7	5.59	.92	-.113*	-.105	.047	-.156**	-.023	.008
16. Team task cohesion	7	2-7	5.73	.95	-.096	-.067	.069	-.154**	.049	.020
17. Team Performance	7	2-7	5.34	1.01	-.152**	-.059	.049	-.141*	-.001	-.002
18. Collective Turnover	7	1-5	2.66	1.21	.151**	.088	-.060	.153**	-.005	.010
19. Loyal to leader 1	7	1.8-7	5.39	.98	-.138*	-.114*	.008	-.173**	.054	-.001
20. Loyal to leader 2	7	2.7-7	5.64	.91	-.167**	.006	.104	-.089	.103	.066
21. Affective commitment	7	2-7	5.26	.92	-.131*	.003	.044	-.113*	.071	.086
22. Job satisfaction	7	1-7	5.53	1.36	-.189**	-.033	.049	-.082	.075	.091
23. Trust in the leader	7	1-7	5.32	1.08	-.101	-.100	-.037	-.220**	-.009	-.042

*p<.05, **p<.01

Table 3.4 Descriptive and bivariate statistics for the conceptual model variables (individual and group level)

	Max	range	M	SD	1	2	3	4	5	6	7	8	9	10	range	M	SD
1. Transform Lead	7	1.4-7	5.44	.92	--	.663*	.732*	.675*	-.606*	.724*	.603*	.636*	.645*	.855*	4.03-6.46	5.42	.48
2. Trust in Team	7	2.7-7	5.59	.92	.708*	--	.782*	.789*	-.453*	.823*	.649*	.599*	.590*	.628*	3.83-6.44	5.60	.49
3. Team task cohesion	7	2-7	5.73	.95	.697*	.784*	--	.773*	-.646*	.785*	.791*	.626*	.700*	.704*	4.17-6.67	5.73	.51
4. Team Performance	7	2-7	5.34	1.01	.625*	.679*	.718*	--	-.485*	.787*	.695*	.672*	.640*	.634*	4.24-6.67	5.37	.48
5. Collective Turnover	7	1-5	2.66	1.21	-.537*	-.550*	-.634*	-.544*	--	-.545*	-.672*	-.656*	-.618*	-.540*	1.22-4.25	2.67	.68
6. Loyal to leader 1	7	1.8-7	5.39	.98	.692*	.790*	.758*	.693*	-.542*	--	.722*	.700*	.309*	.695*	3.90-6.30	5.39	.48
7. Loyal to leader 2	7	2.7-7	5.64	.91	.568*	.655*	.782*	.643*	-.605*	.692*	--	.751*	.360*	.651*	4.67-6.67	5.66	.48
8. Affect commit	7	2-7	5.26	.92	.611*	.617*	.675*	.720*	-.590*	.673*	.714*	--	.342*	.599*	4.25-6.50	5.25	.46
9. Job satisfaction	7	1-7	5.47	1.08	.587*	.591*	.635*	.678*	-.620*	.579*	.595*	.620*	--	.523*	4.20-6.67	5.47	.56
10. Trust in the leader	7	1-7	5.32	1.08	.854*	.673*	.609*	.559*	-.434*	.683*	.527*	.526*	.281*	--	3.56-6.42	5.32	.55

Note: Group means, standard deviations, and correlations (n=69) are above the diagonal; individual-level means, standard deviations and correlations (n=322) are below the diagonal.

*p<0.05; **p<0.01

In analyzing the socio-demographic variables, all age-related variables are logically correlated among themselves (e.g. organizational tenure and age) and there are some patterns relating sociodemograhic variables with those used in the conceptual model. Albeit of small magnitude, there are correlations between gender and some of these variables, namely, women

seem to be more associated with collective turnover as well as being showing less job satisfaction. Age was also found to correlate with some of these variables, namely older employees tend to report lower perceptions of transformational leadership (r=-.116, p<.05) especially with some of the dimensions, as well as lower affection-based loyalty to the leader (r=-.114, p<.05). Organizational tenure is largely associated to almost all of the variables, with the same pattern of the age-based reported associations but to a wider extension. Surprisingly the dyadic tenure does not mirror the associations found for organizational tenure, which can be interpreted as the primacy of the organizational experience across the years to judge on how much the leadership is transformational over the direct personal relationship with the leader. Education level as well as supervisory functions are not associated with any of the conceptual model variables as.

Albeit job position shows no correlations with any of the variables in the conceptual model, a crosstab shows, e.g. that there are 1:2 proportion of male to female ratio in non-supervisory functions, which may help interpreting some of the apparently gender-based differences.

Overall, having been randomly chosen, the sample is assumed to be representative of the workers in the organizations, the response rate is higher than the threshold reported for recently published credited studies. The sociodemographic characteristics seem not to play an important role in the analyses as the magnitude of the association coefficients is modest, although gender and organizational tenure do seem to be relevant factors to take into account in future analyses.

The variables in the conceptual model, analyzed as the individual level, are strongly felt and reported by the participants. Transformational leadership (and all its seven composing dimensions) are reported at approximately 5.4 out of 7 maximum points. Team task cohesion has the highest means (5.7) and affective commitment the relatively lowest (5.2). Collective turnover reached a 2.7 out of the maximum of 7 points, indicating it is modestly felt but still, in the middle of the negative side of the scale thus indicating some potential for actual turnover. Overall, the correlations found between construct comprehended in the conceptual model are of a substantial magnitude and all in line with the logical relationships established in the hypotheses. This encourages the model.

At the group level measurement, means are very much like those reported for individual measures, and correlations also follow a logical pattern with expected positive associated constructs within the conceptual model that have the expected valence (positive within the conceptual model variables to the exception of turnover). These association are of a bigger magnitude which goes in line with groups' convergence on this perceptions and attitudes as well as the expectable lower measurement error stemming from multiple sources. This also

encourages the model.

In conclusion, the pattern of associations found for bivariate analyses show data is consistent both at the individual and group levels, and that the directions of the associations do encourage the conceptual model testing.

As stated, the hypotheses testing follows a two-fold approach: firstly, individual-level hypotheses are tested, followed by 2) cross-level testing with an HLM model.

3.4.1 Individual level analysis

Hypotheses have been tested simultaneously by structural equations modelling (SEM) that previews a sequential mediation comprehending parallel multiple mediators at the first step. Due to correlations found, and as a caveat, we have controlled for gender, age, education, organizational tenure, supervisor status and dyadic tenure. The SEM analysis showed acceptable fit indices (X^2(1170)=2696.959, Normed X^2=2.305; p<.001; CFI=.915; TLI=.908, RMSEA=.064 CI90[.061;.067] PClose=.000, SRMR=.072).

Table 3.5 parsimoniously reports findings, by showing in the left columns the specific relations tested, and rightwards the respective estimates and confidence intervals.

Table 3.5 SEM Estimates for conceptual model

IV1 (TL)	MV1 (LL1)	MV2 (LL2)	MV3 (JS)	MV4 (OAC)	DV (TI)	B	p-value	LBCI; UBCI	Hypotheses
TL->					TI	-.04	.580 n.s.	[-.131;.070]	H1 NS
TL->				OAC		.22	<.001	[.092;.392]	H2 OK
TL->			JS			.14	.115 n.s.	[-.033;.282]	H3 NS
TL->	LL1					.73	<.001	[.627;.797]	H4a OK
TL->		LL2				.62	<.001	[.530;.702]	H4b OK
TL->	LL1->			OAC		.59		[.370;.603]	H5 OK
TL->		LL2->	JS			.26		[.175;.428]	H6 OK
TL->	LL1->				TI	-.41		[-.510;-.303]	H7 OK
TL->		LL2->			TI	-.43		[-.560;-.349]	H8 OK
TL->	LL1->			OAC->	TI	-.39		[-.495;-.314]	H9 OK
TL->		LL2->	JS->		TI	-.18		[-.263;-.098]	H10 OK
TL->	LL1->		JS->	OAC->	TI	-.02		[-.176;.114]	H11a NS
TL->		LL2->	JS->	OAC->	TI	-.09		[-.210;-.030]	H11b OK

The first set of hypotheses established a direct effect between transformational leadership and distal outcome variables, namely turnover intention (H1), organizational affective

commitment (H2) and job satisfaction (H3). Findings showed that only the direct effect towards organizational affective commitment has a significant estimate (B=.22, p<.001, CI90 [.092;.392]) thus supporting hypothesis 2.

The second set of hypotheses established a direct effect between transformational leadership and the proximal outcomes, namely the two dimensions of loyalty to the leader, affective-based loyalty (H4a) and role-based loyalty (H4b). The respective estimates were B=.73, p<.001 CI90 [.627;.797], and B=.62, p<.011 CI90 [.530;.702] which provide support for both H4a and H4b.

The third set of hypotheses concerned simple mediations established between transformational leadership and organizational effective commitment via affective-based loyalty to the leader (H5) as well as towards job satisfaction via role-based loyalty to the leader (H6). The respective estimates for the indirect effects were B=.59, CI90 [.370;.603], and B=.26, CI90 [.175;.428] which provide support for both H5 and H6.

The fourth set of hypotheses gathers all the mediation effects that link to turnover intention. The two-stepped mediations preview the indirect effect through affective-based (H7) and through role-based loyalty to the leader (H8) which both received support. The three-stepped mediations preview the indirect effect sequentially via affective-based loyalty to the leader followed by organizational affective commitment (H9) as well as through role-based loyalty to the leader followed by job satisfaction (H10), which also received support from estimates. The last hypothesis is the most central in the conceptual model as it previews the full sequential mediation through role-based loyalty to the leader, organizational affective commitment, and job satisfaction, to explain turnover intention. Estimates found (B=-.11, CI90 [-.167;-.056]) support the hypothesis (H11).

3.4.2 Cross-level model

Because the individual variables are nested in teams, it is necessary to test whether cross-level effects play a role into explaining the individual turnover intention as well as the possible aggregated team-level turnover intention. To test this, we have deployed a hierarchical linear model that considers the variables tested in the individual level conceptual model, together with some group-level variables, namely: group-level transformational leadership, trust in team, loyalty to the leader (both affective-based and role-based), as well as subjective team performance.

The function that this study uses to design the HLM is the following:

For level-1 model we use:

$$\begin{aligned}\mathbf{INDITQij = \beta 0j + \beta 1j*(TRANSFLij) + \beta 2j*(LOYALF1ij) +}\\ \mathbf{\beta 3j*(LOYALF2ij) + \beta 4j*(AC4ITij) + \beta 5j*(JSAT1ITij) + \beta 6j*(TRUSTLij) +}\\ \mathbf{\beta 7j*(GENDERij) + \beta 8j*(AGEij) + \beta 9j*(EDUCij) + \beta 10j*(ORGTENij) +}\\ \mathbf{\beta 11j*(SUPERVij) + \beta 12j*(DYADTENij) + rij}\end{aligned} \quad (3.1)$$

INDITQij is the individual intention to leave throughout the several teams under analysis, TRANSFLij is the individual perception about their supervisor's level of transformational leadership, LOYALF1ij and LOYALF2ij refers to the individual self-reported affective-based (F1) and role-based (F2) loyalty to the leader, AC4ITij is the individual self-reported affective commitment to the organization, JSAT1ITij is the individual self-reported job satisfaction, and TRUSTLij is the individual trust in coworkers. Adding to these variables, all the control variables are also included together with the error term (rij) as:

$$\begin{aligned}\mathbf{\beta\ 7j*(GENDERij) + \beta 8j*(AGEij) + \beta 9j*(EDUCij) + \beta 10j*(ORGTENij) +}\\ \mathbf{\beta 11j*(SUPERVij) + \beta 12j*(DYADTENij) + rij}\end{aligned} \quad (3.2)$$

As to the level-2 model we use:

$$\begin{aligned}\mathbf{\beta\ 0j = \gamma 00 + \gamma 01*(TL_Mj) + \gamma 02*(TRUSTT_Mj) + \gamma 03*(TCOH3_Mj) +}\\ \mathbf{\gamma 04*(TPERF3_Mj) + \gamma 05*(JOBSAT_Mj) + u0j}\end{aligned} \quad (3.3)$$

TL_Mj is the transformational leadership level across the teams, following by the estimation of the coefficients for each variable entered at the individual level ($\beta 1j = \gamma 10$ until $\beta 12j = \gamma 120$) and an additional team-level outcome variable $CTINT_Mj = \gamma 130 + u13j$ which stands for the aggregated level of turnover intention. We have opted to center all the individual level variables around the group mean, and the outcome team-level variable around the grand mean.

Table 3.6 shows the findings that explain both individual turnover intention, and group-level turnover intention. Namely, for individual turnover intention, findings show it is predicted at the individual level by role-based loyalty (β=-0.28, p<.01) and job satisfaction (β=-0.36, p<.001) while it is also predicted at the group level by shared perception of transformational leadership within the teams (β=-0.50, p<.001), and the shared perception of team cohesion within the teams (β=-0.70, p<.001). The valence of the association coefficients indicates that individuals that are within teams that have higher sense of cohesion as well as higher perception that their supervisor performs a transformational leadership role, the lower the chances of intending to abandon the organization. Simultaneously, at the individual level, the higher the sense of being loyal to the leader based on their sense of duty as well as their overall satisfaction with their job, the lower the individual intention to abandon the organization. So, both individual and team level variables operate in preventing individual turnover intention.

Table 3.6 HLM estimates for turnover intention

	Model 1 Predicting individual turn intention		HH	Model 2 Predicting group level turnover intention		HH
	Beta (se)	t-ratio		Beta (se)	t-ratio	
Team level						
Intercept	7.34*** (0.79)	t (63)=9.204, *p*<0.001		7.63*** (0.90)	t (63)=8.441, *p*<0.001	
TransfLeadership (Team)	-0.50** (0.16)	t (63)=-3.049, *p*=0.003	H12a OK	-0.49** (0.17)	t (63)=-2.832, *p*=0.006	H12b OK
Team cohesion (Team)	-0.70*** (0.19)	t (63)=-3.720, *p*<0.001	H13a OK	-0.60** (0.21)	t (63)=-2.916, *p*=0.005	H13b OK
Job satisfaction (Team)	0.06 (0.09)	t (63)=0.647, *p*=0.520	H14a NS	-0.04 (0.10)	t (63)=0.500, *p*=.619	H14b NS
Trust in Team (Team)	0.24 (0.19)	t (63)=1.255, *p*=0.214		0.16 (0.21)	t (63)=0.784, *p*=0.436	
Team performance (Team)	0.07 (0.19)	t (63)=0.378, *p*=0.707		-0.01 (0.21)	t (63)=-0.032, *p*=.974	
Individual level						
TransfLeadership	-0.20 (0.13)	t (57)=-1.610, *p*=0.113	H1			
Loyalty_Affective	-0.14 (0.09)	t (57)=-1.593, *p*=0.117				
Loyalty_Role	-0.28** (0.09)	t (57)=-2.880, *p*=0.006				
AffectiveCommitment	-0.18 (0.09)	t (57)=-1.928, *p*=0.059				
Job Satisfaction	-0.36*** (0.07)	t (57)=-5.260, *p*<0.001				
Gender (control)	0.02 (0.12)	t (57)=0.191, *p*=0.849				
Age	0.12 (0.07)	t (57)=1.635, *p*=0.108				
Education	-0.03 (0.08)	t (57)=-0.349, *p*=0.728				
Organizational Tenure	0.01 (0.07)	t (57)=-0.060, *p*=0.952				
Supervisor role	0.02 (0.07)	t (57)=0.348, *p*=0.729				
Dyadic tenure	-0.03 (0.06)	t (57)=-0.417, *p*=0.678				

* *p*<.05; ** *p*<.01; *** *p*<.001

At the team level, taking the within-team average intention to leave, the exact same team level variables play an effective role into lowering the chances of the team as a whole wanting to leave. So, the shared perception of transformational leadership within the teams (β=-0.49, *p*<.001), and the shared perception of team cohesion within the teams (β=-0.60, *p*<.001). Interestingly, the average team job satisfaction is not associated with the team turnover intention (β=-0.04, *p*=0.619). It is noteworthy to signal that both group-level control variables (team trust and team performance) were not associated with turnover intention (β=0.16, *p*=0.436, and β=-0.01, *p*=0.974, respectively) which means the intention to leave does not really take into

consideration neither the team average trust not the collective performance level.

3.5 Discussion and conclusion

Ever since scholars that have researched employee turnover have highlighted the contagion effects, the collective turnover topic gained attention (Oh & Chhinzer, 2021; Chung et al., 2022) to become one of the most dynamic areas of research in the last years (Hausknecht, 2017). The explanatory models so far have uncovered a multitude of factors that are organized around HRM practices, shared attitudes, quality of work group and supervisory relations, job alternatives (Heavey et al., 2013) or job market drivers, organizational drivers, and individual's work variables such as salary, job satisfaction, working conditions or family-related factors (Shahsavan & Safari, 2017). Although mentioned, the role of leadership is yet under-researched in relation to collective turnover (Hom et al., 2020), and this is the main motivator for this study.

So far, the most studied leadership theory, transformational leadership (Bass, 1999) has been found to effectively prevent individual turnover intention (Caillier, 2016; Sun & Wang, 2017; Park & Pierce, 2020) but this has been mostly researched in western contexts to the exception of a few in China (Waldman et al., 2015) where other approaches to leadership were also researched in relations to turnover (Seo et al., 2018). As culture seems to also play a role (collectivism and the importance of social cues, Jackson et al., 2019) it must be considered, and thus, this leadership-collective turnover research has already produced some new findings (K.F.E Wong & Chen, 2020) but is yet under-researched in China.

The present research departed from literature review to design a multilevel model linking transformational leadership to turnover intention both considered at the individual and group level. The process model incorporated some important variables in literature that add value to the explanatory mechanisms mediating such leadership – turnover relationship.

The **first set of hypotheses** pertained to the individual level focus. The ***first hypothesis*** stated a transformational leadership perceived at the individual level directly prevents individual turnover intention, which did not receive support from our findings. This is not in line with previous findings (Caillier, 2016; Maaitah, 2018; Manoppo, 2020; Park & Pierce, 2020) but such models did not preview mediator variables with the complexity our conceptual model does, and therefore it is not surprising that the direct relations reported became non-significant when taking into consideration all these possible indirect effects. Within this set of hypotheses, some focused on three attitudinal constructs that are reported in literature to be favored by transformational leadership and relate with job embeddedness theory (Felps et al., 2009; Mitchell et al., 2001; Oh & Chhinzer, 2021): organizational affective commitment (H2), and job satisfaction (H3). The support given to the ***second hypothesis*** is in line with previous

reports (Ribeiro et al., 2018) and corroborate the reasoning that the effectiveness of transformational leadership is also explained by its emotional interpretation by followers as expression of personal concern, of building encouragement to overcome own barriers (Bass, 1985) and also by fostering positive affect between employees due to the team focus. Heightened expression of affective commitment to the organization is thus the natural reciprocation of the positive affect received from the leader. Conversely, the ***third hypothesis*** did not receive support from our findings. This was firstly taken as a surprise because this relationship is well established in the theory and also confirmed empirically in literature (Medley & Larochelle, 1995). However, job satisfaction has been placed in a sequence of attitudinal variables in our conceptual model, and thus, such indirect effects could explain why the direct one is absent and it does not truly contradict previous findings. Closely related with the affective processes mentioned but also with the role as follower in the Chinese culture, is loyalty to the leader (Farh & Cheng, 2000; Zhen et al., 2018). The ***fourth hypothesis*** established a positive relationship between transformational leadership and loyalty to the leader, which has been empirically supported in China (Wang et al., 2017) and also builds up on the value of reciprocation as previewed in the Social Exchange perspective (Cropanzano & Mitchell, 2005) also applicable to explaining turnover (Herman et al., 2013). The followers feel the transformational leader is truly concerned with their success in overcoming challenges, with their well-being, and is also someone that operates as a role model due to the integrity and kindness (Bass & Riggio, 2006) and therefore reciprocate with loyalty, which is in line with the Chinese social values (Farh & Cheng, 2000). This hypothesis four was supported in our findings, which showed the importance of this variable to understand how transformational leadership can prevent individual turnover intention.

Bringing together these variables, the hypotheses evolve to establish mediating effects. Namely, the ***fifth hypothesis*** established a mediation effect of affective loyalty to the leader in the negative relation between transformational leadership and turnover intention. This received empirical support in our findings which is in line with the positive associations between organizational commitment and loyalty to the leader reported by Chen et al. (2002) in a large Chinese sample. This can be explained again by the relational nature of leader-subordinate relationship which is rather emphasized in Chinese empirical studies (Wong, 2017).

The ***sixth hypothesis*** establish a similar status for role loyalty to the leader but emphasizing its relationship with job satisfaction. The role loyalty to the leader is known to foster idealized information processing which produces consistent job attitudes with such loyalty, namely, job satisfaction (Jiang et al., 2005). Therefore, it is quite reasonable to expect a positive relationship

between loyalty to the leader and job satisfaction. This has been documented in empirical research in China (Chen, 2001; Gyensare et al., 2017) and the assumed indirect effect leading from transformational leadership to job satisfaction via role loyalty to the leader was indeed supported in our empirical findings.

The ***seventh*** and ***eighth hypotheses*** focused on the mediating effect of loyalty to the leader in the relationship between transformational leadership and turnover intention. One concerns role loyalty while the other concerns affective loyalty (Jiang & Cheng, 2008). Both were empirically supported in our study which is in line with Wu and Wang (2012) findings that suggest loyalty to the leader mediates the relationship between leadership and turnover intention. This is explained by both the obligation to fulfil the leaders' expectation, in line with Confucian values, as well as a sense of reciprocity which the Social Exchange Theory predicts in leader-follower relationships (Mitchell et al., 2012). In a high vertical collectivistic culture, such as the Chinese (Rockstuhl et al., 2012), loyalty to the leader is expected to be a central variable in explaining these kind of behaviors especially as both the role-based behavior as well as the socioemotional exchange are deeply rooted in the Confucian values as expressed by the idea of social order and face and thus both the role-based loyalty as well as the affective loyalty to the leader (Jiang & Cheng, 2008) operated as mediators in this study.

The ***ninth*** and ***tenth hypotheses*** established a sequential mediation that involved both affect-based loyalty to the leader and organizational affective commitment and a parallel path involving role-based loyalty to the leader and job satisfaction. They are the logical result of the integration of the previous hypotheses represented in H5 to H8. Findings do support both hypotheses thus reinforcing the interpretations already made in previous discussion but, most importantly, these sequential mediations contribute to greater clarification of the complexity of the process that explains why transformational leadership is so consistently found to prevent voluntary turnover (Caillier, 2016; Maaitah, 2018; Manoppo, 2020; Park & Pierce, 2020). As for the eleventh hypothesis, the rationale follows the same logics as it represents the integration of the hypothesized relations in H9 and H10. This hypothesis split the paths going through affect-based loyalty to the leader (H11a, not supported), and role-based loyalty to the leader (H11b, supported). This is a very informative finding because it shows that the cognitive and emotional paths work differently in explaining why transformational leadership is effective to prevent turnover. A relevant, empirical finding in our study is the strong association (λ=.53, $p<.001$) between affect-role loyalty to the leader and organizational affective commitment (as implied in H5 and H9) which suggests that the affective paths do not need to go through job satisfaction but directly impact on the affective organizational commitment, which is depicted

in the conceptual model as the most proximal to turnover intention. This preferential path removes the importance of the path linking affect-based loyalty to the leader to the job satisfaction, thus making the full three-step sequential effect irrelevant. Such was not the case of role-based loyalty to the leader because it has a substantial effect on job satisfaction thus including it in the explanatory process.

Overall, these contrasting findings on ***H11a*** and ***H11b*** raise discussion on the complementary functions of the Confucian virtues relating to roles (more cognitive) and to interpersonal harmony (more affective). They are proposed as requirements for a fully functional society and organizational life, but they are scarcely thought of when they do not converge, namely, when benevolence is not present in the vertical relationship. This suggests that whenever the leader fails on the socioemotional issues, namely when the leader is not perceived as being benevolent, the effects are exerted directly by eroding the sense of affective commitment to the organization. Conversely, if the system fails to the point of the followers lowering their sense of loyalty due to the role they perform, the effects will go through lowering their job satisfaction, which in turn weakens their sense of affective commitment to the organization. This is a weaker effect compared to the one of the affect-based loyalty.

Society strives to provide a clear sense of role for everyone, but not always this role is learned or accepted by everybody which means the subjective understanding of loyalty to the leader as prescribed by a role varies and it can vary in such a way that it becomes dysfunctional (in cases where people have no sense at all of loyalty to the leader, but rather they are loyal to their career or self-interest, Baruch, 2001). Being loyal to one's own career is known to foster higher voluntary turnover (Baruch, 2006), and this means that if society shifts into a more individualistic culture, then the only way of preventing this is through the leaders' ability to exchange socioemotional rewards so to produce a sense of affective based loyalty in the employees.

From a group-level perspective, the ***twelfth hypothesis*** stated transformational leadership at the team level negatively relates to both the individual (H12a) and collective (H12b) turnover intention. The support given to this hypothesis by our findings (both to the individual and collective turnover intention) are especially informative because, as Shamir et al. (2009) rightfully states, the true nature of leadership is its shared and ascribed character thus turning its measurement at the group level far closer to reality than the individual perceptions. Our findings go in line with Chang et al. (2013) that reported a negative effect of collective level transformational leadership on the individual turnover intention. As a shared perception, transformational leadership exerts a stronger effect as is visible in the association coefficient

found (beta=-.50) compared to the one from the individual level regression (beta=-.20). This finds explanation in the job embeddedness model (Mitchell et al., 2001) because the action of a leader comprehends both the intention to favor person-organization fit as well as to foster positive relationship within the team thus mutually reinforcing functional social bonds. Also, from a psychosocial viewpoint, no action is immune to the influence of one's own group (Nowak et al., 2003) and its prevalence and strength were formatted by natural and social evolution (Van Vugt & Schaller, 2008), and therefore, a transformational leader acts both directly in the individualized relationship established with each worker (Bass, 1999) as well as through the social influence within the team via social clues (Jackson et al., 2019) and emotional processes (Nowak et al., 2003).

Unsurprisingly, the ***thirteenth hypothesis*** that stated the average team cohesion negatively relates to both the individual (H13a) and collective (H13b) turnover intention also received full support. In the same manner of leadership, team cohesion is by nature a group-level construct (Klein & Kozlowski, 2000) especially because it is coproduced by the group interaction as an emergent state (Kozlowski & Ilgen, 2006). Our findings are in line with previous research (Mitchell et al., 2001; Piper et al., 1983; Trevor & Nyberg, 2008) and they have the advantage of having being tested in a collectivistic culture where team cohesion is an important goal for transformational leaders as advocated by Bai et al. (2016) and the magnitude of the association coefficients both for individual turnover intention (beta=-.70) as well as collective turnover intention (beta=-.60) gives proof of such importance.

The ***fourteenth hypothesis*** stated average team job satisfaction negatively relates to both the individual (H14a) and collective (H14b) turnover intention and this was not supported by our findings. This goes counter to extant evidence (Medley & Larochelle, 1995; Nguyen & Tran, 2021; Trevor, 2001; Tschopp et al., 2014) but measured at the team level implies an additional factor, which is the degree of convergence in perceptions, i.e. the degree in which it is shared. In this study, it is the construct that has the lowest rwg below other reported values from research conducted in China (Lin et al., 2022) meaning it is sufficiently shared within teams but with much dispersion. This may explain our findings especially because although job satisfaction tends to remain stable (Judge et al., 2020) it is known to be sensitive to situational factors (Bowling et al., 2006; Walker, 2017) which implies it may have fluctuations that justify the relatively lower internal team consistency found in this study. Additionally, by including other variables in the model that are closely related to job satisfaction, we may have unintendedly controlled for the variance from these constructs in explaining the same dependent variable, i.e. by including organizational affective commitment and team cohesion (which is

strongly correlated to both job satisfaction and turnover intention, as shown in bivariate statistics) only the unique variance from team job satisfaction may be used to test the association with individual and collective turnover intentions. Thus, rejecting this hypothesis is not necessarily diverging from extant knowledge.

Overall, findings offer support to the conceptual model, both analyzed at the individual level as well as team and cross-level. Transformational leadership is a powerful factor to prevent not only individuals from voluntarily intending to abandon the organization but also, and most importantly, to prevent this harmful phenomenon from spreading to the whole work groups. Findings integrate extant knowledge by putting together into a single process model relevant variables that have been used to explain group-based behaviors in work settings. These were team cohesion, job satisfaction, and organizational affective commitment but also, as control variables, team trust and team subjective performance. At a central role, we have highlighted the role of loyalty to the leader, which is deeply rooted in the Chinese tradition and therefore is a better explanatory variable in this context. Our findings offer value both to theory and practice. The complexity of this model entails also several theories namely job embeddedness and social exchange (Cropanzano & Mitchell, 2005; Felps et al., 2009; Gouldner, 1960; Mitchell et al., 2012; Oh & Chhinzer, 2021) and transformational leadership itself (Bass, 1999) that has been granted the status of a theory (Wang & Howell, 2010). This is not truly novel but it helps showing how different theoretical views can offer complementary explanation for such a complex phenomenon. Likewise, putting together such high number of constructs into a multi-level model, adds to knowledge by uncovering the interplay between individual perceptions and group level influence into explaining fundamentally group-based decisions of which collective turnover is most certainly one of the most representative.

For managers, especially team leaders, these findings have great value to offer. In determining what sort of leadership approach, they should have, transformational leadership (to the example of many studies reported) is a preferential choice if they do want to prevent critical phenomena such as high employee turnover, and especially, if they do not want to go through the harshness of having to deal with collective turnover in their teams. It also adds to practice by showing that within the process of linking transformational leadership to collective turnover, some variables could be monitored so to have an early indication of the risk of such collective turnover happening. So, instead of asking workers what their intention is to remain or leave (which is per se an action that may trigger unwanted consequences by raising awareness) it might be wiser to ask for variables (namely team cohesion) that will indicate the risk of exit.

There are limitations we must consider. Despite the time-lagged design, the number of

constructs in the explanatory process implies some of the variables were measured simultaneously, thus corresponding partially to a cross-sectional design. This raises many issues about common method bias but the model comparison tests showed there is no indication of such bias and also the magnitude of the correlations between variables measured in the same wave, compared to the magnitude of the correlations between variables measured in different waves is similar. If the same-wave correlations were higher than those found from different-wave correlations, then we may suspect of such bias. But findings show otherwise. Another limitation pertains to the team size. In our sample, the participants from teams were quite modest ranging from three members up to eleven (with the mode being 4) which may have harmed the quality of aggregation but mostly the representativeness of the diversity within the work teams.

Future research may benefit from considering larger samples, and more waves but also from considering nonlinear effects within the model because some emerging literature has found curvilinear relations relating with team cohesion (Wise, 2014) thus indicating there can be optimal relations instead of maximal relations.

An important future avenue for research pertains to an ambiguity in the literature that relates with collective turnover definition itself. As explained, collective turnover is present whenever a certain number of team members voluntarily exit the organization within a certain period of time. This is the consensus, although authors do not converge about which time frame should be considered and also about how many people leaving will be necessary to consider that this is a collective phenomenon. However, for a manager's view point it is completely different to deal with a situation where part of a team (e.g. 3 people out of 6) is leaving with a certain time distance (e.g. 2 months) as against that part of the team leaving at the exact same time. The first collective phenomenon is in line with all the research published as it related to a contagion or syphoning effect. The latter is a specific situation where the phenomenon occurs as a single block. We do not yet know much about the latter but this is by far the most impactful or organizations.

Chapter 4: Study 2 - Extending Collective Turnover: Testing a Leader-Driven Block Turnover

4.1 Introduction

In collective turnover literature the rationale for distinguishing it as fundamentally an individual versus a collective phenomenon is based on the assumption that there is a contagion effect stemming from a shared perception and intention to leave, which triggers mimetic behaviors among the team members.

It is however unclear how much is the time frame we must consider to judge on the plausibility of the collective-level phenomenon. Oh and Chhinzer (2021) for example calculated collective turnover within a 6-month time frame, De Meulenaere et al. (2021) used a 1-year time span across a 5-year period, Simon et al. (2022) used a 1-year time span across a 3-year period, a varying time span within a 18-month time period (Pieper et al., 2022), or this information is not made explicit (Walumbwa et al., 2019).

Time dispersion is an important feature when thinking about collective turnover. Block turnover occurs in a short time span and has been named in literature as clustered turnover while syphoning turnover takes prolonged time and has been named as dispersed turnover (Simon et al., 2022). Because companies need time to adjust to emergent events, time dispersion is central to anticipate the coping ability and impact of collective turnover. It is logic that clustered turnover will always be more impactful and detrimental than syphoning turnover.

The role leadership plays has been largely studied as regards its style impact on retaining employees, thus preventing or mitigating employee turnover. However, the leaders' turnover intention itself has been understudied, especially linked to collective turnover. In answering the call of Porter and Rigby (2021) to further extend turnover contagion research, we reason that the contagion effects are mostly focused on peer-to-peer horizontal dynamics but they are often overlooking the vertical contagion links between leader's turnover intention and the team members turnover intention. This vertical contagion is essential to research block collective turnover.

Due to Chinese collectivistic culture block collective turnover may occur when the leader is willing to exit the organization and takes together the team. Loyalty to the leader plays an

important role here as it prevails over loyalty to the organization. Top leaders will hardly be the trigger for such collective turnover but middle level leaders can play this role easily. So, it is important to understand how much their loyalty to the leaders combined with their influence over the team and the team conditions (team cohesion) can trigger block collective turnover events.

4.2 Literature review

4.2.1 Turnover and team performance

4.2.1.1 Collective turnover and team performance

Individual turnover can have an estimated financial impact of 50% to 60% worker's annual salary just to replace him or her, it can cumulate total costs ranging from 90% to 200% such costs (Cascio, 2006). As teams are favored due to synergy effects, in this case, collective turnover may well overcome the simple sum of such costs due to the same leveraging effects.

In studying IT consultants' turnover, Duda and Zurkova (2013) reported that collective turnover leads to a productivity decrease in 50%, and that more than 90 days were needed for a new worker to achieve the level of productivity of one that exited. Voluntary turnover often leads to lower productivity while involuntary turnover often increased it (Park & Shaw, 2013).

The relationship between collective turnover and organizational performance can be examined from many theoretical perspectives, including cost interruption, human and social capital. As Hausnecht and Trevor (2011, p. 360) stated, collective turnover will lead to negative consequences, because "it entails the loss of firm-specific human and social capital, disrupts operations and collective function, saddles remaining members with newcomer socialization and training, and increases recruitment and selection costs".

Through the analysis of the influence of voluntary turnover, involuntary turnover and layoffs on organizational performance, McElroy et al. (2001) found a negative correlation between collective turnover and performance. Hausknecht and Trevor (2011) pointed out from the existing literature on the relationship between collective turnover and performance that it is not generally agreed whether the relationship between the two is linear, inverted U-shaped or weakened negative correlation. There is divergent evidence from research, but almost none of the empirical research supports the real inverted U-shaped one. According to the research of Heavey et al. (2013), collective turnover causes the loss of highly skilled talents, destruction of established interaction mode and higher cost of re-recruitment, a relatively high collective

turnover rate will inhibit the short-term and long-term performance of the organization. Wang et al. (2016) observed that collective turnover would lead to the interruption of operation, decreasing service quality and complaints from employees, which in turn would lead to institutional, strategic and structural changes. Collective turnover also leads to the recruitment cost and decline of external market share, which further affects the organizational operational and financial performance. Dess and Shaw (2001) researched on cost-effectiveness, human capital and social capital caused by turnover, and considered that high-level voluntary turnover will lead to the erosion of organizational performance. After sampling and measuring 300 correlations of turnover rates and organizational performance and samples of more than 300,000 organizations and units, Park and Shaw (2013) verified that the increase of turnover rate will bring damage to organizational performance. The correlation of the estimation was -.15, that is, the number of turnover rates increase by one standard deviation then organizational performance decreases by –.15 standard deviations. Hancock et al. (2013) meta-analyzed 48 independent samples, reported 157 estimated effects (N = 24,943), tested six hypothetical moderating variables, and calculated the average corrected correlation between collective turnover and organizational performance as –.03. More recently, Simon et al. (2022) explored the time clustering dimension of turnover event as a boundary condition in the relationship between collective turnover and performance. They predicted that block turnover (named as clustered turnover) would be more detrimental than siphoning turnover (named as dispersed turnover) and their results supported this assertion.

H1: Collective turnover intention has a negative direct effect upon team performance.

4.2.1.2 Leader turnover and team performance

By definition, leadership entails an asymmetry in influence power whenever two people interact (Vroom & Jago, 2007) which may suggest that there is a shared expectation in the team that the leader's behavior has more impact on the team that any other team's member behavior. Even in emerging informal leadership processes, there are in-degree and out-degree incongruences that create such leadership differential in a network (Zeng et al., 2022). In leadership studies it is often assumed that leaders are the key driver of each of the team members individual behavior as well as their overall collective behavior (Taggar & Ellis, 2007).

Such influence processes have been explained by many theories. For example, in Leader-Member Exchange Theory (Dansereau et al., 1975), the dyadic relationship established between the leader and each of the team members is built due to social exchange processes where leader's fairness is returned by employees as more work effort and more loyalty to the leader

(Settoon et al., 1996) as well as more commitment both to the leader and the organization (Liden et al., 2000). In social-exchange theorythe reciprocation process is universally found in human relations and is a fundamental feature (Gouldner, 1960).

Trust plays an important role in leadership influence. Among the conditions that leverage leadership influence are the shared perception that leaders are trustful due to being competent, benevolent and having integrity (C. S. Burke et al., 2007) which increases the changes of reciprocating the efforts team members put into the team objectives and performance (Liao et al., 2019). However, reciprocation conditions may not always be met as it is a two-way channel.

A leader that has thoughts of leaving the organization is already psychologically detached or under a process of detachment from the organization, which compromises the willingness to reciprocate their team members (Burris et al., 2008). The lack of reciprocation is thus a breach of a fundamental human interaction expectation and therefore it is detrimental to the establishment of trust and ascription of authority to the leader by the team members. These are two fundamental elements for a functional leadership role (Eriksen, 2001).

Turnover intentions do not happen instantly. They are rather the product of a process of psychological detachment that takes time and continuously degrades the subjective quality of interaction between the individual and the organization (Burris et al., 2008). In the case of the leader, such degrading process should be reflected by lower investment on the dyadic relations and not taking full role as a leader (Gloor et al., 2017). This will likely reduce the strength of the leader-member bonds thus decreasing member identification with the leader or the member willingness to go beyond and above the ascribed responsibilities (Hui et al., 2008). Additionally, the detachment will likely lower the investment of the leader on protecting the team's performance, which may bounce back as a shared team perception of lower competence. Experiencing being part of the competent team is a motivator that has been found to self-reinforce (Latrofa et al., 2012).

From the perspective of self-determination theory (Ryan & Deci, 2000) weakening relational bonds will fail to satisfy the need for affiliation while a sense of being integrated in a low performing team will fail on the satisfaction of the need for competence. This theory heavily builds upon Vroom (1964) Valence-Instrumental-Expectancy theory that states a given action motivates when its outcomes are attractive to the individual, when achieving those outcomes is instrumental to get desired rewards, and when there is a high probability that the effort the individual puts into the action leads to the desired outcomes. As Mai et al. (2016) reason, valence is important in explaining turnover intentions because they relate to the sense of loyalty, support (also given to other), affiliation and long-term connections.

The traditional dimensions of task-oriented and relation-oriented leadership (Blake & Mouton, 1981; Hersey & Blanchard, 1979; Reiche et al., 2017) are both compromised by a leader that is no longer wanting to remain in the organizations. Hence, such a leader exerts detrimental effect upon the team performance both by the relational path (leader-member bonds) and by the task path (protecting team work processes).

Therefore, when the leader is not intending to stay in the organization, most likely the team will perceive and is either sub-optimally managed or starts disinvesting. Therefore:

H2: Leader's turnover intention has a direct negative effect upon team performance.

4.2.2 Turnover contagion

Behavioral mimicry is a well depicted phenomenon in social and organizational life, and such mimicry can be approached from a contagion viewpoint. Turnover is such a behavior whose contagious nature was studied profusely. Turnover contagion can be defined as a "process whereby coworkers' turnover ‐ related thoughts, feelings, and/or behaviors spread amongst employees" (Porter & Rigby, 2021; 214). Bartunek et al. (2008) interviewed employees leaving organization to find that one of the emerging motives was having being activated into looking for an alternative because of their peers' job search efforts.

The contagion can spread diffusely or also in a one-to-one string fashion in what Sgourev (2011) names an exit chain, i.e. a sequence of coworkers exiting due to the willingness of former employees to help them doing that. This coupling or leavers and future leavers can be justified by a willingness from resigning employees to move out with the security of having some trusted coworkers accompanying or joining them in the same decision as found by Klotz and Zimmerman, 2015). By reviewing the theoretical foundations of collective turnover, Porter and Rigby (2021) conclude that contagion effects are the theoretical key to explain collective turnover processes.

Behavioral contagion theory (Wheeler, 1966) states that an individual prone to a certain behavior may not show it due to external constrains but by being exposed to another individual that does it without punishment, he or she may finally activate it. This theory has been mostly used to study peer mutual influence such as the recent viral challenges online (Abraham et al., 2022) or the well-known suicide contagion (Cheng et al., 2014) but it is reasonable to assume that such theory is even more critical when focusing on leader-member behavioral effects.

In studying 262 work units linking leader turnover to team turnover and team outcomes and profitability, Kacmar et al. (2006) reported a positive association (r=.32) between leader

turnover and team turnover.

Jiang et al. (2019) conducted a study on 119 teams testing the indirect effect of the leader's turnover intention upon their respective team's innovative performance. They found the indirect effect through self-sacrificing when the leader had low empathic concern. Albeit not highlighted in the findings, the bivariate statistics also show a direct effect between leader's turnover intention and the team's innovative performance.

Trainer et al. (2020) explored how events affect team membership and team dynamics. In their classification of events they distinguished between novelty, disruptiveness, and criticality. Novelty refers to the unexpected or unprecedented nature of the event, as the lack of experience and previous solutions make the event more relevant. Disruptiveness refers to magnitude of change the given event exerts on team processes and mental models while criticality refers to the extent a given event leads to a loss or gain of key resources, a shift in objective and purpose or a change in leadership. These authors extended the Event System Theory (Morgeson et al., 2015) by highlighting the joint effect of these dimensions but, most important for the current research, is the critical role they place upon leadership. Hence, the leader's turnover (or the turnover intention and matching disinvestment) is per definition considered as a critical event.

Joining both negative effects of leader's and the team's turnover intention we hypothesize that:

H3: Leader's turnover intention has an indirect negative effect upon team performance via team's turnover intention.

4.2.3 Team homogeneity as a facilitating factor

Group or team homogeneity refers "the tendency to perceive a group's member (either in-group or out-group) as relatively similar on traits or behaviors" (Harris & Fiske, 2008, p.309) but it is also a construct that expresses the objective (dis)similarity between team members labeled as team faultlines (Meyer et al., 2014) and team diversity (Horwitz & Horwitz, 2007).

Team homogeneity has been also equated as related with team cohesion. Within team research, team cohesion plays a central role as an emergent state, i.e. a "cognitive, motivational and affect states of teams" (Marks et al., 2001, p. 357). Team processes are known to be modulated by psychosocial factors that have been largely documented both at the wide social groups level as well as in small groups (Forsyth, 2019) and its presence seems to be intrinsic as advocated by the evolutionary approach that states these group processes have been modulated by evolutionary pressures experienced by mankind (Van Vugt & Schaller, 2008). Among these processes one can find social influence (Moussaid et al, 2013: Postmes et al., 2005), shared

mental models (Mathieu et al., 2000; Maynard & Gilson, 2014) or attitudinal polarization in intergroup relations (Isenberg, 1986).

Team homogeneity is a feature that many teams tend to show due to a filtering process. Jackson et al. (1991) research showed that through the process of attraction, selection and depletion, organizations will develop towards the homogenization of interpersonal relationships. In the early stage of this process, people are attracted to organizations whose members they think are similar to themselves because of the attraction effect of similarity. Their attraction to such organizations leads people to seek membership. When existing members screen potential new members, they will also be attracted to others who are similar, so they are more likely to accept new members like themselves. After entering the organization, new members and old members become more familiar with each other, and the similarity → attraction effect affects the feelings and behaviors of both parties again. Within the scope of maintaining perceived similarity, this arrangement may be considered satisfactory, and over time, these processes will create psychologically homogeneous working groups. This very same process was reported by Moon (2017) that focused on the consequences of justice climate at the organizational level. They assumed that groups or organizations integrate their personalities, attitudes and beliefs through three processes, thus becoming homogeneous entities of individuals. Firstly, the author believes that individuals may be attracted to organizations that have similar views with them. Secondly, organizations tend to choose applicants with similar characteristics. Finally, individuals who are members of other organizations are expected to leave voluntarily or involuntarily because they are in harmony with other members. Therefore, members of the same organization tend to show strong homogeneity in values, attitudes, and personalities.

This homogeneity has been reported as bringing both positive and negative outcomes. Its counterpart, team diversity, has been thought of in team research as having both the advantage of stimulating teams to become more creative but also of bringing inside the team social categorization processes that can compromise the team cohesion with a sense of ingroup and outgroup coexisting within teams (van Knippenberg & Schippers, 2007).

Steffens et al. (2012) conducted a five-year study monitoring 202 new venture teams and their performance. This study found that team homogeneity was very important in the early stages of the project initiation. Team homogeneity has a positive correlation with short-term performance results, but the effect is poor in the long run.

Conducting an experiment with a crisis simulation in nuclear power plant teams, Kaplan et al. (2013) found that although team average dispositional positive affect did not effect upon

team effectiveness, the dispositional positive affect homogeneity of the teams did show such effect.

Homogeneity can occur at different levels as illustrated by Li et al. (2018) study that targeted 75 MBA student teams in India to measure within-team emotional diversity as well as within-team social class homogeneity which was reported as being a salient dimension in Indian cultural context. Findings showed that teams with higher diversity in either positive or negative emotions will share more information when they are more homogeneous as regards social class. Likewise sharing information leads to higher team performance but only in the teams with high social class homogeneity.

Also in IT teams, Qamar and Malik (2019) explored how members' personality similarity related to their coding performance at the implementation and testing phases. Building an original similarity index, they found that as this index grows, so the number of coding bugs diminishes thus suggesting team homogeneity is a desired feature for IT coder team.

However, empirical findings do not always converge. Hong and Liu (2020) found that homogeneous teams with a professional reputation can attract and retain more patients than diverse teams. Given the high degree of professionalism in the medical field, the diversity of members affects negatively the professionalism and the sense of dissolution of the team.

As a counterpart of team homogeneity, team diversity (defined as a measure of within-group differences concerning any attributed perceived by someone about other individuals in the group, Triandis et al., 1994) research has been highlighting the many advantages diversity brings to teams and organizations. Martinez et al. (2017) researched moderations between three features of team diversity (gender, skills, education) in explaining incremental and radical innovation performance in teams. They found skills and education diversity interaction explained both incremental and radical innovation while gender diversity interacted with skills diversity to explain only radical innovation performance in team. These findings support the thesis that team diversity is positive but it also shows that not all types of diversity exert the same effects on team innovation and that there can be too much diversity, which is counterproductive. Overall, the paper states in favor of fostering team diversity to achieve stronger innovative performance and logically, team homogeneity would be detrimental for such purposes.

This literature is full of contradictory findings which some meta-analyses helped to clarify. A meta-analysis conducted by Bowers et al. (2000) on the effects of team homogeneity upon task performance reported individual studies' have clear effects but joining their effects showed a small non-significant effect. It is therefore unsurprising that team diversity effects on

creativity were found to vary a lot and do not truly support the thesis of a positive effect (van Dijk et al., 2012) which led van Knippenberg and Hoever (2017) to review literature that empirically test moderators of such direct effect and conclude that such results cannot be interpreted unambiguously. This can be further clarified by Jansen and Searle (2021) call for attention to the blurred nature of "diversity" as used in empirical studies. These, do not actually separate "surface-level diversity" from "deep-level diversity". Surface-level diversity refers to observable attributes such as gender, age or ethnicity while deep-level diversity refers to latent attributes such as personality, values, and attitudes. Although Martinez et al. (2017) paper is a step towards the right direction, team homogeneity must consider such surface and deep-level dimensions.

Relating collective turnover to group homogeneity, according to research led by Bartunek et al. (2008), one should consider a process model of collective turnover, which explains how group members decide to leave their organization collectively. In this process model, two or more group members initially experience unresolved dissatisfaction, which stimulates an escalating interactive process, in which their negative experiences are transformed into the shared feelings and opinions of cohesive groups. When members of the group think that their problems will not be solved, they will collectively decide to disconnect from their organization after having access to other opportunities. Bartunek et al. (2008) believe that team cohesion means that the members of a group are attracted to the group, having a common bond with the group, and attaching importance to the value of belonging to the group. Group cohesion strengthens the social comparison between group members and members of other groups, and group members are more likely to participate in the common interpretation and emotion of collective meaning construction. Not only did cohesion initially exist in the organizational group, but it was further enhanced as members shared their experiences and feelings with each other.

Considering the previous mediation hypothesis, and judging on the role that team homogeneity can have in modulating team outcomes, we trust the indirect effect established in hypothesis 3 should be conditioned by team homogeneity. Thus, we hypothesize that:

H4: The indirect negative effect of leader's turnover intention upon team performance via team turnover intention interacts with team homogeneity in such a way that when the team is homogeneous the effect is stronger. Conversely when the team is heterogeneous the effect is weaker or absent.

4.2.4 Transformational Leadership as a two-edge sword

Leadership main role is that of influencing team members. The name “follower” mean that one person follows the leader and gives the leader’s idea precedence upon his or her own ideas in a voluntary way. However, following a leader means that the leader is perceived as such, and this perception depends also on the way the leader is able to provide the team with required features (such as group identity, group vision, build the team) so that the team is strong and performant. Transformational leadership is one kind of leadership that aligns with people’s need to be autonomous, competent and feeling they belong to a team (Self-determination theory, Ryan & Deci, 2000).

Most of transformational leadership literature advocates its positive effects upon teams and organizations. Research on transformational leadership has reported many positive outcomes among which fostering innovation. Shafique and Kalyar (2016) found a positive and significant impact of transformational leadership on innovation in a study of 400 manufacturing SMEs in Pakistan. Transformational leadership encourages subordinates to think outside the "box" and to enhance creative and exploratory thinking, promoting creativity and reengineering of the organization. In exploring the mechanisms linking transformational leadership to innovation, Jiang and Chen (2018) found that transformational leadership fosters collaborative team norms that increase knowledge sharing, which is a central process to achieve high team innovative performance.

Many more positive outcomes have been reported such as team and organizational performance. Alharbi (2021) analyzed the impact of transformational leadership and transactional leadership on team performance separately and concluded that transformational leadership has a positive effect on team performance and that leaders must strengthen the role of transformational leadership to improve and develop team performance; Lin et al. (2022) adopted a mixed-methods approach that included quantitative and qualitative element analysis, to examine the impact of the dimensions of transformational leadership on organizational effectiveness. Their findings indicated that transformational leaders positively and significantly influence organizational effectiveness through their inspirational motivation, intellectual stimulation, and individual care. A study by Devie et al. (2021) found that transformational leadership has an impact on short-term performance (financial performance) and long-term performance (corporate reputation). According to their study, transformational leadership significantly and positively affects corporate reputation, which in turn significantly and positively affects financial performance; transformational leaders can use corporate reputation

as an intervening variable to improve financial performance.

Many other positive effects were found such as those reported by Liu et al. (2019) which showed that transformational leadership was negatively associated with emotional exhaustion, depersonalization, and reduced personal fulfillment after controlling for sociodemographic and work environment characteristics. They found that psychological empowerment played a partially mediating role on the relationship between transformational leadership and burnout. Likewise in exploring the relationship between transformational leadership and employees' organizational commitment and turnover intention in a well-known Chinese newspaper group, Southern Metropolis Daily, as an example, with a quantitative approach, Mo and Chen (2015) found that transformational leadership has a high impact on organizational commitment and fosters low employee turnover intention.

Positive effects have not been indirectly attributed to transformational leadership as a facilitator, i.e. a moderator factor. For example, Li and Yuan (2017) collected data from 75 team leaders and 464 of their subordinates, the results showed that leaders' proactive personality positively predicted career satisfaction. The bright side of transformational leadership had direct positive moderation effect on the relationship between proactive personality and career satisfaction, as transformational leaders can change their followers' values, beliefs and needs, motivate followers to self-transcend, encourage them to innovate and help them achieve greater performance. In researching the mediator role of work meaningfulness in the relation between personality and job performance, Frieder et al. (2018) reported a social contextual effect of transformational leadership where it has a facilitator effect.

Sim and Lee (2018) researched the role of transformational leadership in compensating for person-job misfit effects and found that transformational leaders were able to mitigate the positive association between employee underqualification and turnover intention, which means transformational leadership exerts positive effects as a moderator.

The underlying mechanism that explains positive effects was long ago highlighted by Bass (1985) when advocating it induces followers to transcend their own self-interest to achieve organizational goals while increasing their self-efficacy, i.e. their believe in own ability to achieve great things with extra effort. This follower transformation effect has recently resumed by Siangchokyoo et al. (2020) which pointed out the true reason for the positive effects of transformational leadership is leaders’ ability to make followers feel they belong to a team, to align their personal values with those of the team or the organization, and to feel they are more self-effective which makes them more willing to endeavor to achieve goals. This self-efficacy boosting effect can also explain moderator effects such as those reported by Sim and Lee

(2018).

However, transformational leadership, as any factor that drives action in human groups, can also exert negative effects. Albeit transformational leadership has been praised for its positive effects it has also been a subject of scrutiny about its dark side. Tourish (2013) explored this issue to highlight negative effects of transformational leadership upon the leaders themselves which signal excess of agency concomitant with narcissism, communication restraining and biasing, megalomania, and poor decision making.

One of the cited papers, Li and Yuan (2017), reports interesting findings that suggest the negative side of transformational leadership indirectly and negatively moderates active personality and career satisfaction through its effect on LLX (i.e., leader-leader exchange). In this case the negative side of transformational leaders can turn to suppression on their subordinates who question them, which is in line with Tourish (2013) focus on followers' silence. Those leaders would also be prone to have authoritarian or dictatorial tendencies, an attachment to self-aggrandizement, self-centeredness, power, and superiority, manifesting in excessive self-importance and self-appreciation, and exaggeration on their achievements, seeking of power and success, intolerance of criticism and compromise. Transformational leaders tend to spend more time and energy on managing their image than on improving performance. In some cases, they place their own interests above the collective interests of their followers and organizational goals. Transformational leaders are overconfident in their insight into key decision making, and some valuable feedback may be underestimated, leading them to make decisions that are more likely to be out of touch with reality.

So, there seems to be two faces in transformational leadership effects. Schuh et al. (2013) research provides a good example of these two faces. It showed that ethical leadership behaviors were positively related to employees' in-role and extra-role efforts, highly transformational leaders, moral leadership behaviors related positively to employees' in-role and extra-role efforts whereas authoritarian leadership behaviors related negatively to employees' in-role and extra-role efforts. Transformational leadership behaviors enhanced the positive effects of ethical leadership behaviors on subordinates' in-role and extra-role efforts, and transformational leadership behaviors also enhanced the self-centered authoritarian leadership behaviors negative effects on subordinate responses, and subordinates exhibited the least amount of in- and extra-role performance when paired with low moral leadership or high authoritarian leadership. Thus, negative effects of transformational leadership upon leaders themselves (e.g. authoritarianism) can pass unnoticed if the leader is transformational.

Acknowledging the negative side of transformational leadership has been contributing to

the integration of contradictory findings reported in literature. Chen et al. (2018) collected data with 209 dyads to find an inverted U-shaped curve relating transformational leadership with task performance. This indicates that transformational leadership is not intrinsically good or bad, but that at a certain extent it can become one or the other. So, it is fundamentally a positive feature that can lead to counterproductive effects when it is too strong. These counterproductive effects were also reported Mach et al. (2022) that found that sport teams that had previous high performance had lower performance when leaders had high scores on transformational leadership as compared when they had low scores, which they attributed to team members' overconfidence promoted by the leader. This was also an inverted U-shape functions which highlights the TMGT phenomenon (Pierce & Aguinis, 2011).

Overall, there are positive and negative outcomes from transformational leadership but these outcomes are not opposite among themselves (i.e. the positive outcomes are not in a tradeoff with the negative ones) but they emerge from unaccounted effects of transformational leadership upon the leaders and the followers themselves. Independently of this, transformational leadership is an important leveraging factor that is able to amplify whatever are the positive or negative effects stemming from leaders' action.

Likewise, considering the role of transformational leadership, we hypothesize that:

H5: The indirect negative effect of leader's turnover intention upon team performance via team turnover intention interacts with transformational leadership in such a way that when the leader is transformational the effect is stronger. Conversely when the leader has low transformational score, the effect is weaker or absent.

Because each transformational leadership dimension may operate in different ways (or with a varying magnitude) we further divide this hypothesis in its dimensions. Therefore, we hypothesize that:

H5a: The indirect negative effect of leader's turnover intention upon team performance via team turnover intention interacts with transformational leadership's ***high expectations*** in such a way that when the leader is transformation the effect is stronger. Conversely when the leader has low transformational score, the effect is weaker or absent.

H5b: The indirect negative effect of leader's turnover intention upon team performance via team turnover intention interacts with transformational leadership's ***follower development*** in such a way that when the leader is transformation the effect is stronger. Conversely when the leader has low transformational score, the effect is weaker or absent.

H5c: The indirect negative effect of leader's turnover intention upon team performance via team turnover intention interacts with transformational leadership's ***intellectual stimulation*** in

such a way that when the leader is transformation the effect is stronger. Conversely when the leader has low transformational score, the effect is weaker or absent.

H5d: The indirect negative effect of leader's turnover intention upon team performance via team turnover intention interacts with transformational leadership's ***personal recognition*** in such a way that when the leader is transformation the effect is stronger. Conversely when the leader has low transformational score, the effect is weaker or absent.

H5e: The indirect negative effect of leader's turnover intention upon team performance via team turnover intention interacts with transformational leadership's ***group identity*** in such a way that when the leader is transformation the effect is stronger. Conversely when the leader has low transformational score, the effect is weaker or absent.

H5f: The indirect negative effect of leader's turnover intention upon team performance via team turnover intention interacts with transformational leadership's ***group vision*** in such a way that when the leader is transformation the effect is stronger. Conversely when the leader has low transformational score, the effect is weaker or absent.

H5g: The indirect negative effect of leader's turnover intention upon team performance via team turnover intention interacts with transformational leadership's ***team building*** in such a way that when the leader is transformation the effect is stronger. Conversely when the leader has low transformational score, the effect is weaker or absent.

4.2.5 Conceptual model and hypotheses

Integrating the hypotheses leads to a moderated mediation conceptual model that takes leaders' turnover intention as the predictor which is expected to exert an indirect effect on team performance through collected turnover intention after considering the boundary effects of both team turnover intention homogeneity and transformational leadership. The conceptual model is depicted in Figure 4.1 below.

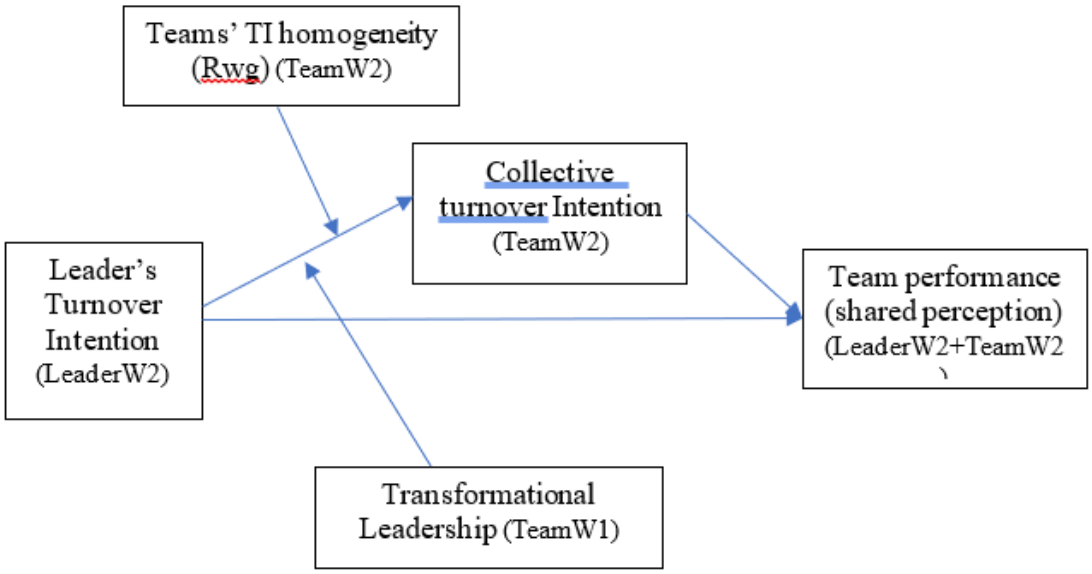


Figure 4.1 Conceptual model

4.3 Method

Because this study is a clarification of the previous one, and considering the richness of the dataset collected for the 1st study, we used the same data to further explore the block collective turnover hypothesis which was left unanswered in the first study. The data was treated so to match each team leader with the respective team members' responses. The conceptual model is very different from the one in the 1st study but the method concerning data collection procedure, and measures used is identical. For parsimony's sake we opt not to repeat them in full but to just briefly presented so that the reader can keep it in mind without the need to consult back. All the other aspects that were affected by the dyadic nature of the new database will be reported as anew.

4.3.1 Procedure and sample

A time lagged data collection procedure was deployed with a one-month distance with an initial randomly generated sample of 480 employees working in 11 companies across China, which were downsized to 322 valid responses after matching and data quality screening at the second wave, preserving 69 teams. The sample comprises 69 team leaders matched with team members, creating 253 workable leader-member dyads. The sample is diversified as regards gender and age, and has substantial high organizational tenure and education, which is also expectable in pharmaceutical industry in China.

4.3.2 Measures

Leader's turnover intention was measured with the 3-item scale from Camman et al. (1983) which comprehends a single factor (e.g. "It is very possible that I will look for a new job next year"). The CFA for this model again showed just-identification and because all items significant load on the latent factor (p<.001) and it has acceptable convergent validity (AVE=.717) as well as good reliability (CR=.882) we consider it sound. This was answered in Wave 2 by the team leaders using a 7-point Likert scale (1=Strongly disagree to 7=Strongly agree).

Collective turnover intention was measured with the 3-item scale from Camman et al. (1983) which comprehends a single factor (e.g. "It is very possible that I will look for a new job next year"). As often found with a three-item structure, the CFA for this model showed just-identification. Because all items significant load on the latent factor (p<.001) and it has acceptable convergent validity (AVE=.722) as well as good reliability (CR=.884) we consider it sound. This was answered in Wave 2 by the team members using a 7-point Likert scale (1=Strongly disagree to 7=Strongly agree).

Team's Turnover Intention homogeneity was measured with Rwg （James et al., 1984, 1993; Klein et al., 2000) per team and matched to each team member.

Transformational leadership was measured with Wang and Howell (2010) scale organized as a 2nd order factor that comprehends seven 1st order factors (High expectations, Follower development, Intellectual stimulation, Personal Recognition, Group Identity, Group vision, Team building). All 1st order factors and the 2nd order factor have high convergent validity (lowest AVE = .750) and high reliability (lowest value CR=.923) which have good fit (X^2(369)=903.271, Normed X^2=2.448; CFI=.952; TLI=.947, RMSEA=.076 CI90 [.070;.082] PClose=.000, SRMR=.027). Team members answered in a 7-point Likert scale (1=Strongly disagree to 7=Strongly agree).

Team performance was measured with three items from Gonzalez-Mulé et al. (2016) scale (e.g. "TP4. This team is very successful in terms of overall achievement) and the model was found to be just-identified. Because all items loaded significantly on the latent factor (p<.001) and it has acceptable convergent validity (AVE=.847) as well as good reliability (CR=.943) we consider it sound. This was answered in Wave 2 by the team members using a 7-point Likert scale (1=Strongly disagree to 7=Strongly agree).

Control variables comprehended organizational tenure (natural number, years), gender (1=Male, 2=Female), age (1=up to 25 years-old, 2=26-35, 3=36-45, 4=46-54, 5=55), education

(1=high school, 2=vocational, 3=college / BsC, 4=Post graduation, 5=PhD), dyadic tenure (1=up to 1 year, 2=1-2, 3=3-5, 4=6-10, 5=+10), and team size (natural number).

4.3.3 Measurement model comparison and common method

The measurement model integrating leader's turnover intention, collective turnover intention, transformational leadership, team performance showed good fit indices that indicate it is a valid model ($X^2(652)=1456.833$, $p<.001$, Normed $X^2=2.234$; CFI=.939; TLI=.934, RMSEA=.070 CI90[.065;.075] PClose=.000, SRMR=.058). Alternative measurement models were tested by sequentially fusing directly related constructs in the model. We fused team turnover intention with team performance, team turnover intention with leader turnover intention, all these together and finally, a single factor model that comprehends these plus transformational leadership. Findings showed all the alternative measurement model had worst fit indices compared to the original conceptual model (Table 4.1) which suggests that our model is preferable to any of the alternatives.

Although some care was taken as to using multiple data sources, there are paths in the conceptual model that originated from the same source or with the same method simultaneously, namely team performance, team turnover intention, and leader turnover intention. An unmeasured latent common model (Podsakoff et al., 2003) was run which indicated non-significant estimates linking the latent construct to the observed items, thus excluding significant common method variance.

Table 4.1 Measurement model comparison

Model	χ^2/df	CFI	TLI	RMSEA	CI90	PClose	SRMR	AIC	Holter .05/.01	$\Delta\chi^2(\Delta df)$ Baseline	ΔCFI
Baseline (1st order factors)	2.234	.921	.939	.070	[.065; .050]	.000	.058	1710.833	125/128	-	-
Model A TeamTI + TeamPerform	2.585	.921	.915	.079	[.075; .084]	.000	.051	1940.662	107/111	233.829(2)***	.000
Model B LeaderTI+TeamTI	2.922	.904	.897	.087	[.083; .092]	.000	.074	2162.045	95/98	457.212(3)***	.017
Model_C_LeadTI+TeamTI+TeamPer	3.282	.886	.878	.095	[.091; .100]	.000	.072	2399.155	84/87	696.322(4)***	.045
Model D Single factor	3.995	.850	.840	.109	[.105; .113]	.000	.066	2869.042	69/72	1168.209(5)***	.071

*** $p<.001$, A model (team turnover intention fused with team performance), B model (leader turnover intention fused with team turnover intention), C model (Leader turnover intention fused with both team turnover intention and team performance), D model (single factor, model C + transformational leadership).

4.3.4 Data analysis strategy

We started by testing the psychometric quality of measures which was done with confirmatory factor analyses individually for each construct and then as a whole with the overall measurement model. We considered valid only those solutions that observed the standards for fit indices (Chi-square, normed chi-square, CFI, TLI, RMSEA, SRMR according to thresholds recommended by Hair et al., 2019). Additionally, items loading in the same latent construct must have convergent validity, which is indicated by the average extracted variance (AVE equal or above 0.500). Lastly, measures are also required to have acceptable reliability (CR=0.70 or above), which was tested with Joreskog Composite Reliability. As a standard procedure, we will consider the measurement model valid only if it shows better fit indices that alternative measurement models resulting from sequential fusion of adjacent constructs in the original conceptual model.

To test the hypotheses, we opted to run PROCESS in SPSS (Hayes, 2022), which is an add-on application that conduct Path Analysis simultaneously for direct, indirect, and interaction effects. This program estimates effects based on bootstrapping technique, that consists of extracting randomly subsamples from the original sample and calculate estimates registering at the end of the process the lowest (lower bound) and highest (high bound) found and testing it for a confidence interval. According to Hayes (2018) we opted to run 5000 repetition bootstrapping with a 95% confidence interval. The interpretation consists of observing if the lower bound and upper bound estimates for each effect includes the value “zero”. In such case the association is considered meaningless, i.e. not significant.

4.4 Results

This section starts by showing descriptive and bivariate statistics to show afterwards the results from the hypotheses testing.

The bivariate statistics (Table 4.2) show that some sociodemographic variables are associated with collective turnover intention as well as with team performance thus justifying its control in further analyses. Interestingly, team size is positively associated with the leader’s turnover intention. Associations found between the main conceptual model variables indicate the leader’s turnover intention is positively associated with the team’s turnover intention (r=.180, p<.05) and negatively associated with team performance (r=-.145, p<.05). As expected, team’s turnover intention is also negatively associated with team’s performance (r=-

.453, p<.01) and this is a much stronger association that all of those reported previously. Both the leader and the team turnover intentions are consistency associated with perceived transformational leadership. Consistent with previous findings, team performance is positively associated with transformational leadership dimensions (varies between r=.714, p<.01).

As regards the hypotheses, findings showed that the direct effect of the team's collective turnover intention upon the team's performance is always significant (B=-.28, CI95 [-.36; -.20]) independently of being tested with high expectations as a moderator (Table 4.3), follower development (Table 4.4), intellectual stimulation dimension (Table 4.5), leadership personal recognition (Table 4.6), group identification (Table 4.7), group vision (Table 4.8), or Team Building dimension (Table 4.9)which supported Hypothesis 1.

Hypothesis 2 stated that the leader's turnover intention exerted a detrimental effect upon the team's performance. Such was not supported by our findings as a non-significant coefficient was found (B=-.01, CI95 [-.05; .02]) thus rejecting a direct effect of the leader's turnover intention on the team's performance.

Table 4.2 Descriptive and bivariate statistics for teams

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1. Gender	1.60	.49										
2. Age	2.72	.95	-.023									
3. Education	2.44	.80	-.061	.022								
4. Org Tenure	3.70	1.33	.074	.460**	.141*							
5. Dyadic tenure	3.10	1.31	.020	.380**	.048	.723**						
6. TeamSize	5.30	1.97	.072	-.072	-.152**	-.025	.092					
7. Leader Turnover Intent	2.72	1.35	-.018	-.051	.024	.058	.072	.230**				
8. Collect TI_NoLeader	2.67	.72	.183**	.181**	-.135*	.195**	.125*	-.080	.180**			
9. TeamPerformance	5.34	.48	-.095	-.188**	.116*	-.091	-.058	-.185**	-.145*	-.453**		
10. Team TI homogeneity	0.82	.08	.028	-.026	.056	-.087	-.129*	.022	-.087	-.004	-.307**	
11. Transform_Leadership	5.45	.47	-.157*	-.217**	.101	-.208**	-.096	.046	-.266**	-.566**	.714**	-.135*

*p<.05; **p<.01; ***p<.001

Table 4.3 Direct, indirect and interaction effects for High Expectations

	Dependent variable	Collective Turnover Intention					Team Performance					
		B	SE	t	Boot LLCI	Boot ULCI	B	SE	t	Boot LLCI	Boot ULCI	
HE	***Control variables***											
	Org. Tenure	.07	.04	1.74	-.01	.15	.01	.02	.45	-.04	.07	
	Gender	.08	.07	1.05	-.07	.23	-.02	.05	-.37	-.13	.08	
	Age	03	.04	.68	-.05	.11	-.10***	.03	-3.38	-.16	-.04	
	Education	-.06	.04	-1.45	-.16	.02	-03	.03	1.11	-.02	.10	
	Dyadic tenure	-.01	.04	-.24	-.09	.07	.01	.02	.30	-.04	.06	
	Team size	-.02	.01	-1.28	-.06	.01	-.04***	.01	-3.44	-.07	-.02	
	Direct effects											
	Constant	2.58	.23	10.78	2.11	3.58	6.50	.19	32.87	6.11	6.89	
	LTI	.11***	.03	3.44	.04	.17	-.01	.02	-.67	-.05	.02	H2ns
	RWG Team homogeneity	-.28	.42	-.66	-1.13	.56						
	TL_HE	-.50***	.08	-5.72	-.68	-.33						
	Collective TI						-.28***	.03	-7.21	-.36	-.20	H1sup
	Interaction effect											
	LTI*RWG	1.77***	.30	5.81	1.17	2.37						
	LTI*TL_HE	.13*	.06	2.08	.01	.26						
	Indirect effect						Index	BootSE		BootLLCI	BootULCI	
	LTI->CTI->TPerf						-.01	.01		-.01	.01	H3ns
	Index partial mod. mediation						Index	BootSE		BootLLCI	BootULCI	
	RWG Team homogeneity						-.50^{sig}	.10		-.69	-.30	H4sup
	TL_HE						-.03^{sig}	.02		-.08	-.01	H5sup
	R^2	40%					29%					

LTI = Leader's Turnover Intention; RWG = Team Turnover Intention Homogeneity; LT_HE=High Expectations; CTI=Collective Turnover Intention; TPerf= Team Performance
*p<.05; **p<.01; ***p<.001

Table 4.4 Direct, indirect and interaction effects for Follower Development

	Dependent variable	Collective Turnover Intention					Team Performance					
		B	SE	t	Boot LLCI	Boot ULCI	B	SE	t	Boot LLCI	Boot ULCI	
FD	***Control variables***											
	Org. Tenure	.08	.04	2.00	.01	.16	.01	.02	.45	-.04	.07	
	Gender	.09	.07	1.22	-.05	.25	-.02	.05	-.37	-.13	.08	
	Age	.01	.04	.44	-.06	.10	-.10***	.03	-3.38	-.16	-.04	
	Education	-.09	.04	-1.96	-.18	.01	-.03	.03	1.11	-.02	.10	
	Dyadic tenure	-.01	.04	-.22	-.09	.07	.01	.02	.30	-.04	.06	
	Team size	-.03	.01	-1.67	-.07	.01	-.04***	.01	-3.44	-.07	-.02	
	Direct effects											
	Constant	2.66***	.24	10.96	2.19	3.14	6.50	.19	32.87	6.11	6.89	
	LTI	.12***	.03	4.01	.06	.18	-.01	.02	-.67	-.05	.02	H2ns
	Team homogeneity	-.23	.43	-.54	-1.08	.61						
	TL_FD	-.39***	.08	-4.64	-.55	-.22						
	Collective TI						-.28***	.03	-7.21	-.36	-.20	H1sup
	Interaction effect											
	LTI*RWG	1.97***	.30	6.48	1.37	2.57						
	LTI*TL_FD	.22***	.05	3.85	.11	.34						
	Indirect effect						Index	BootSE		BootLLCI	BootULCI	
	LTI->CTI->TPerf						-.01	.01		-.01	.01	H3ns
	Index partial mod. mediation						Index	BootSE		BootLLCI	BootULCI	
	RWG Team homogeneity						-.56^{sig}	.10		-.75	-.35	H4sup
	TL_FD						-.06^{sig}	-.02		-.10	-.02	H5sup
	R^2	38%					29%					

TL_FD= Follower Development; *p<.05; **p<.01; ***p<.001

Table 4.5 Direct, indirect and interaction effects for Intellectual Stimulation

Dependent variable		Collective Turnover Intention					Team Performance					
		B	SE	t	Boot LLCI	Boot ULCI	B	SE	t	Boot LLCI	Boot ULCI	
IS	***Control variables***											
	Org. Tenure	.06	.04	1.63	-.01	.14	.01	.02	.45	-.04	.07	
	Gender	.09	.07	1.28	-.05	.24	-.02	.05	-.37	-.13	.08	
	Age	.01	.04	.31	-.07	.09	-.10***	.03	-3.38	-.16	-.04	
	Education	-.09*	.04	-2.06	-.18	-.01	.03	.03	1.11	-.02	.10	
	Dyadic tenure	-.01	.04	-.05	-.08	.07	.01	.02	-.30	-.04	.06	
	Team size	-.03	.01	-1.78	-.07	.01	-.04***	.01	-3.44	-.07	-.02	
	Direct effects											
	Constant	2.71***	.23	11.53	2.25	3.18	6.50***	.19	32.87	6.11	6.89	
	LTI Leader TI	.11***	.03	3.65	.05	.17	-.01	.02	-.67	-.05	.02	H2ns
	Team homogeneity	-.40	.42	-.96	-1.23	.42						
	TL_IS	-.53***	.08	-6.67	-.68	-.37						
	Collective TI						-.28***	.03	-7.21	-.36	-.20	H1sup
	Interaction effect											
	LTI*RWG	1.87***	.30	6.19	1.27	2.46						
	LTI*TL_IS	.18**	.06	3.18	.06	.29						
	Indirect effect						Index	BootSE		BootLLCI	BootULCI	
	LTI->CTI->TPerf						-.01	.01		-.01	.01	H3ns
	Index partial mod. mediation						Index	BootSE		BootLLCI	BootULCI	
	RWG Team homogeneity						-.53[sig]	.09		-.71	-.34	H4sup
	TL_IS						-.05[sig]	.01		-.08	-.01	H5sup
	R^2	42%					29%					

TL_IS= Intellectual Stimulation; *p<.05; **p<.01; ***p<.001

Table 4.6 Direct, indirect and interaction effects for Personal Recognition

	Dependent variable	Collective Turnover Intention					Team Performance					
		B	SE	t	Boot LLCI	Boot ULCI	B	SE	t	Boot LLCI	Boot ULCI	
PR	***Control variables***											
	Org. Tenure	.06	.03	1.68	-.01	.14	.01	.02	.45	-.04	.07	
	Gender	.06	.07	.88	-.08	.21	-.02	.05	-.37	-.13	.08	
	Age	.01	.04	.32	-.06	.09	-.10***	.03	-3.38	-.16	-.04	
	Education	-.07	.04	-1.56	-.16	.01	-.03	.03	1.11	-.02	.10	
	Dyadic tenure	-.01	.04	-.35	-.09	.06	-.01	.02	.30	-.04	.06	
	Team size	-.04*	.01	-2.26	-.07	-.01	-.05***	.01	-3.44	-.07	-.02	
	Direct effects											
	Constant	2.78***	.23	11.98	2.32	3.24	6.50***	.19	32.87	6.11	6.89	
	LTI Leader TI	.12***	.02	4.27	.06	.18	-.01	.02	-.67	-.05	.02	H2ns
	Team homogeneity	-.26	.41	-.64	-1.08	.55						
	TL_PR	-.56***	.07	-7.32	-.71	-.41						
	Collective TI						-.28***	.03	-7.21	-.36	-.20	H1sup
	Interaction effect											
	LTI*RWG	1.76***	.29	5.95	1.18	2.35						
	LTI*TL_PR	.19*	.05	3.23	.07	.30						
	Indirect effect						Index	BootSE		BootLLCI	BootULCI	
	LTI->CTI->TPerf						-.01	.01		-.01	.01	H3ns
	Index partial mod. mediation						Index	BootSE		BootLLCI	BootULCI	
	RWG Team homogeneity						-.50^{sig}	.09		-.68	-.30	H4sup
	TL_PR						-.05^{sig}	.02		-.09	-.01	H5sup
	$\mathbf{R^2}$	44%					29%					

TL_PR=Personal Recognition; *p<.05; **p<.01; ***p<.001

Table 4.7 Direct, indirect and interaction effects for Group Identification

	Dependent variable	Collective Turnover Intention					Team Performance					
		B	SE	t	Boot LLCI	Boot ULCI	B	SE	t	Boot LLCI	Boot ULCI	
GI	***Control variables***											
	Org. Tenure	.04	.03	1.27	-.02	.12	.01	.02	.45	-.04	.07	
	Gender	.06	.07	.02	-.07	.20	-.02	.05	-.37	-.13	.08	
	Age	.01	.04	.34	-.06	.09	-.10***	.03	-3.38	-.16	-.04	
	Education	-.06	.04	-1.44	-.15	.02	.03	.03	1.11	-.02	.10	
	Dyadic tenure	.01	.03	.16	-.07	.08	.01	.02	.30	-.04	.06	
	Team size	-.02	.01	-1.49	-.06	.01	-.04***	.01	-3.44	-.07	-.02	
	Direct effects											
	Constant	2.69***	.22	12.05	2.25	3.13	6.50	.19	32.87	6.11	6.89	
	LTI Leader Turn. Intention	.09***	.02	3.44	.04	.15	-.01	.02	-.67	-.05	.02	H2ns
	Team homogeneity	-.41	.40	-1.04	-1.20	.36						
	TL_GI	-.71	.08	-8.69	-.87	-.55						
	Collective TI						-.28***	.03	-7.21	-.36	-.20	H1sup
	Indirect effect						Index	BootSE		BootLLCI	BootULCI	
	LTI->CTI->TPerf						-.01	.01		-.01	.01	H3ns
	Interaction effect											
	LTI*RWG	1.76***	.28	6.126	1.19	2.32						
	LTI*TL_GI	.22***	.05	3.97	.11	.33						
	Index partial mod. mediation						Index	BootSE		BootLLCI	BootULCI	
	RWg Team homogeneity						-.49^{sig}	.09		-.67	-.32	H4sup
	TL_GI						-.06^{sig}	.02		-.98	-.02	H5sup
	R^2	48%					29%					

TL_GI= Group Identification; *p<.05; **p<.01; ***p<.001

Table 4.8 Direct, indirect and interaction effects for Group Vision

Dependent variable		Collective Turnover Intention					Team Performance					
		B	SE	t	Boot LLCI	Boot ULCI	B	SE	t	Boot LLCI	Boot ULCI	
GV	***Control variables***											
	Org. Tenure	.04	.04	1.02	-.03	.12	.01	.02	.45	-.04	.07	
	Gender	.05	.07	.65	-.10	.20	-.02	.05	-.37	-.13	.08	
	Age	.03	.04	,90	-.04	.12	-.10***	.03	-3.38	-.16	-.04	
	Education	-.08	.04	-1.79	-.17	.01	.03	.03	1.11	-.02	.10	
	Dyadic tenure	.00	.04	.05	-.07	.08	.00	.02	.30	-.04	.06	
	Team size	-.03	.01	-1.56	-.06	.01	-.04***	.01	-3.44	-.07	-.02	
	Direct effects											
	Constant	2.74	.23	11.61	2.28	3.21	6.50	.19	32.87	6.11	6.89	
	LTI Leader TI	.10***	.03	3.52	.04	.16	-.01	.02	-.67	-.05	.02	H2ns
	Team homogeneity	-.30	.42	-.70	-1.15	.54						
	TL_GV	-.49***	.07	-6.43	-.65	-.34	-.28***	.03	-7.21	-.36	-.20	H1sup
	Collective TI											
	Interaction effect											
	LTI*RWG	1.72***	.30	5.61	1.12	2.33						
	LTI*TL_GV	.17**	.05	3.28	.07	.28						
	Indirect effect						Index	BootSE		BootLLCI	BootULCI	
	LTI->CTI->TPerf						-.01	.01		-.01	.01	H3ns
	Index partial mod. mediation						Index	BootSE		BootLLCI	BootULCI	
	Team homogeneity						-.49^{sig}	.09		-.68	-.30	H4sup
	TL_GV						-.05^{sig}	.01		-.08	-.01	H5sup
	R^2	42%					29%					

TL_GV=Groupt Vision; *p<.05; **p<.01; ***p<.001

Table 4.9 Direct, indirect and interaction effects for Team Building

Dependent variable		Collective Turnover Intention					Team Performance					
		B	SE	t	Boot LLCI	Boot ULCI	B	SE	t	Boot LLCI	Boot ULCI	
TB	***Control variables***											
	Org. Tenure	.05	.04	1.28	-.02	.13	.01	.02	.45	-.04	.07	
	Gender	.06	.07	.79	-.08	.20	-.02	.05	-.37	-.13	.08	
	Age	.03	.04	.82	-.04	.11	-.10***	.03	-3.38	-.16	-.04	
	Education	-.08	.04	-1.77	-.17	.01	-03	.03	1.11	-.02	.10	
	Dyadic tenure	.00	.04	.05	-.07	.08	.01	.02	.30	-.04	.06	
	Team size	-.03	.01	-1.72	-.06	.01	-.04***	.01	-3.44	-.07	-.02	
	Direct effects											
	Constant	2.71	.23	11.68	2.25	3.17	6.50	.19	32.87	6.11	6.89	
	LTI Leader TI	.10***	.03	3.52	.04	.16	-.01	.02	-.67	-.05	.02	H2ns
	Team homogeneity	-.55	.42	-1.31	-1.38	.27						
	TL_TB	-.65***	.08	-7.55	-.82	-.48						
	Collective TI						-.28***	.03	-7.21	-.36	-.20	H1sup
	Interaction effect											
	LTI*RWG	1.76***	.29	5.88	1.17	2.35						
	LTI*TL_TB	.19**	.05	3.30	.07	.30						
	Indirect effect						Index	BootSE		BootLLCI	BootULCI	
	LTI->CTI->TPerf						-.01	.01		-.01	.01	H3ns
	Index partial mod. mediation						Index	BootSE		BootLLCI	BootULCI	
	RWG Team homogeneity						-.49^{sig}	.09		-.69	-.30	H4sup
	TL_TB						-.05^{sig}	-.02		-.08	-.02	H5sup
	R^2	43%					29%					

TL_TB=Team Building; *p<.05; **p<.01; ***p<.001

Hypothesis 3 stated the leader's turnover intention may have a detrimental effect upon the team's performance via the contagion effect on the team's turnover intention. This is encouraged by the observed direct effect of the leader's turnover intention upon the team's collective turnover intention (B=.11, CI95 [.05; .17]). However, the indirect effect is not sufficiently strong to attain statistical significance (Index=-.01, BootCI95 [-.01; .01]. Thus, findings do not support hypothesis 3.

At a more complex level, hypothesis 4 stated such indirect effect may occur when the team is sufficiently homogeneous as regards a shared intention to leave. Findings concerning the interaction effect between leader's turnover intention and team homogeneity in explaining team's collective turnover intention are encouraging this hypothesis as a significant interaction effect was found (B=1.87, CI95 [1.27; 2.46]) do support this hypothesis. In the same vein the index of the partial moderated mediation is significant (Index=-.53, BootCI95 [-.71; -.34]). This value varies due to the presence of the other moderator but it is in all cases significant. This supports the idea that the indirect effect established in the previous hypothesis (H3) is actually depending on the level of team homogeneity.

Hypothesis 5 stated a similar conditional indirect effect but concerning each one of the seven dimensions of transformational leadership. Namely that the indirect effect would be enhanced by higher transformational leadership. For transformational leadership dimension "higher expectations" the partial moderated mediation index found was -.03 which is significant (BootCI95 [-.08, -.01]) thus supporting H5a. For transformational leadership dimension "Follower Development" the partial moderated mediation index found was -.06 which is significant (BootCI95 [-.10, -.02]) thus supporting H5b. For transformational leadership dimension "Intellectual Stimulation" the partial moderated mediation index found was -.05 which is significant (BootCI95 [-.08, -.01]) thus supporting H5c. For transformational leadership dimension "Personal Recognition" the partial moderated mediation index found was -.05 which is significant (BootCI95 [-.09, -.01]) thus supporting H5d. For transformational leadership dimension "Group Identity" the partial moderated mediation index found was -.06 which is significant (BootCI95 [-.98, -.02]) thus supporting H5e. For transformational leadership dimension "Group Vision" the partial moderated mediation index found was -.05 which is significant (BootCI95 [-.08, -.01]) thus supporting H5f. Lastly, for transformational leadership dimension "Team Building Development" the partial moderated mediation index found was -.05 which is significant (BootCI95 [-.08, -.02]) thus supporting H5g. In all the cases, transformational leadership always interacts with the leader's turnover intention indirect effect upon team's performance via the team's collective turnover intention. This is also corroborated

by an additional test ran with transformational leadership index (comprehending all the dimensions into a single factor) where the partial moderated mediation index is -.05 (BootCI95 [-.09; -.02]). These findings fully support hypothesis 5.

The interactions found are shown in an aggregated way for all the cases and are depicted in figure 4.2 (with High Expectations), figure 4.3 (with Follower Development), figure 4.4 (with Intellectual Stimulation), figure 4.5 (with Personal Recognition), figure 4.6 (with Group Identity) and figure 4.7 (with Group Vision) showing the exact terms of this conditional relationship between the leader's turnover intention and the team's collective turnover intention. The graphs produced by PROCESS have the advantage of depicting the joint effects of the moderators, thus enriching our analysis.

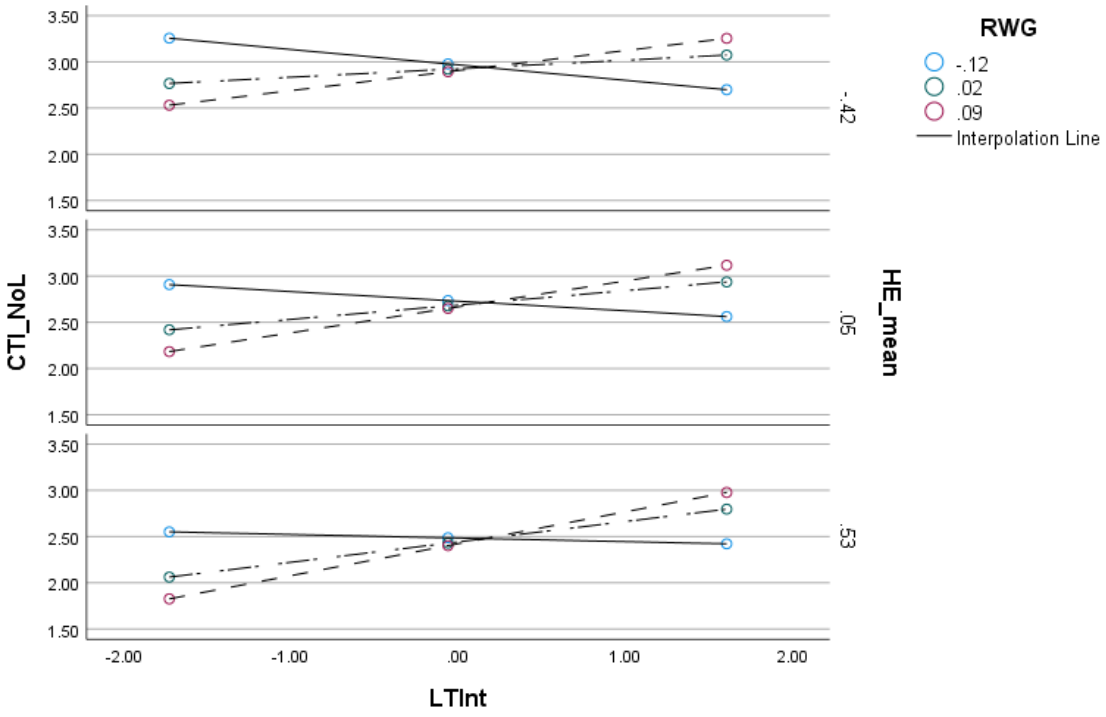


Figure 4. 2 Moderation effect of team homogeneity and TL high expectations

In this case, when the leader is not able to establish high expectations in the team and the team is not homogeneous about turnover intention (upper section), a possible exit of the leader will actually increase the chances of the team members wanting to remain. People do not take risk because they do not find in the leader a source of hope or positive expectations (high expectations) and also, they do not feel the backup of the entire team because the team comprises colleagues that are not behaving as a unit but rather have distinct intentions about remaining or leaving. In such case the team's members willingness to leave is adversely affected by the leader's willingness to leave. The team will remain although the leader may exit.

In this case, when the leader is able to establish high expectations in the team but the team is not homogeneous about turnover intention (lower section), the team's members willingness to leave is not affected by the leader's willingness to leave. In this case, the team may remain although the leader may exit.

the stronger relationship between leader's turnover intention and the team's collective turnover intention occurs when the team is homogeneous.

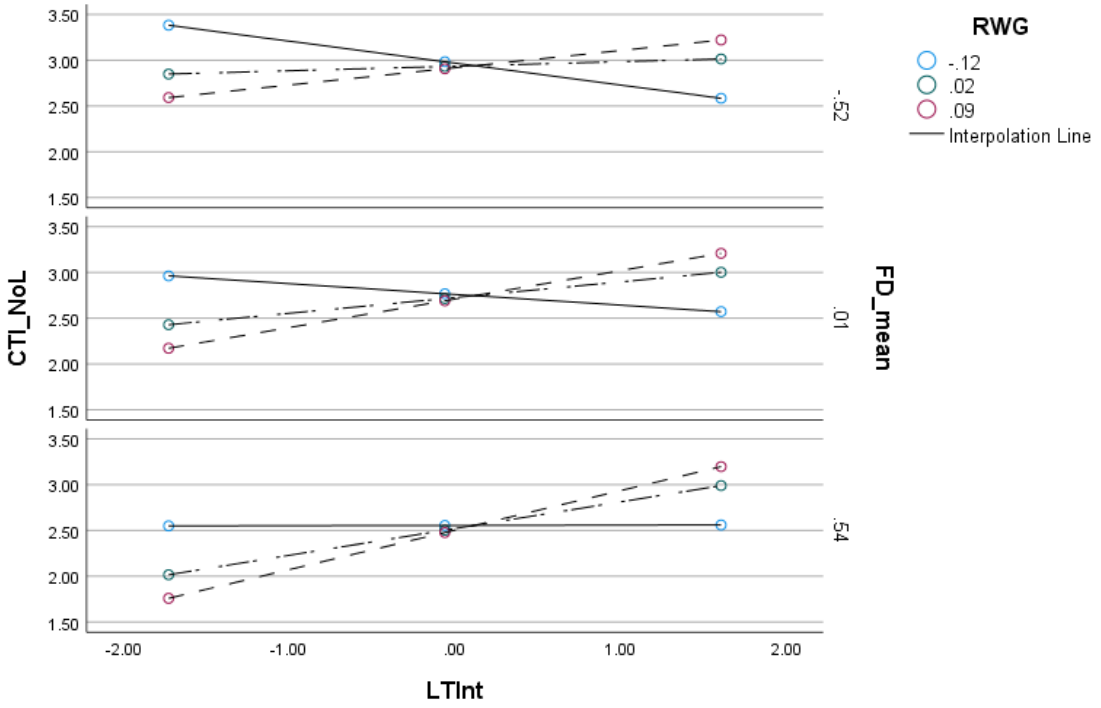


Figure 4.3 Moderation effect of team homogeneity and TL follower development

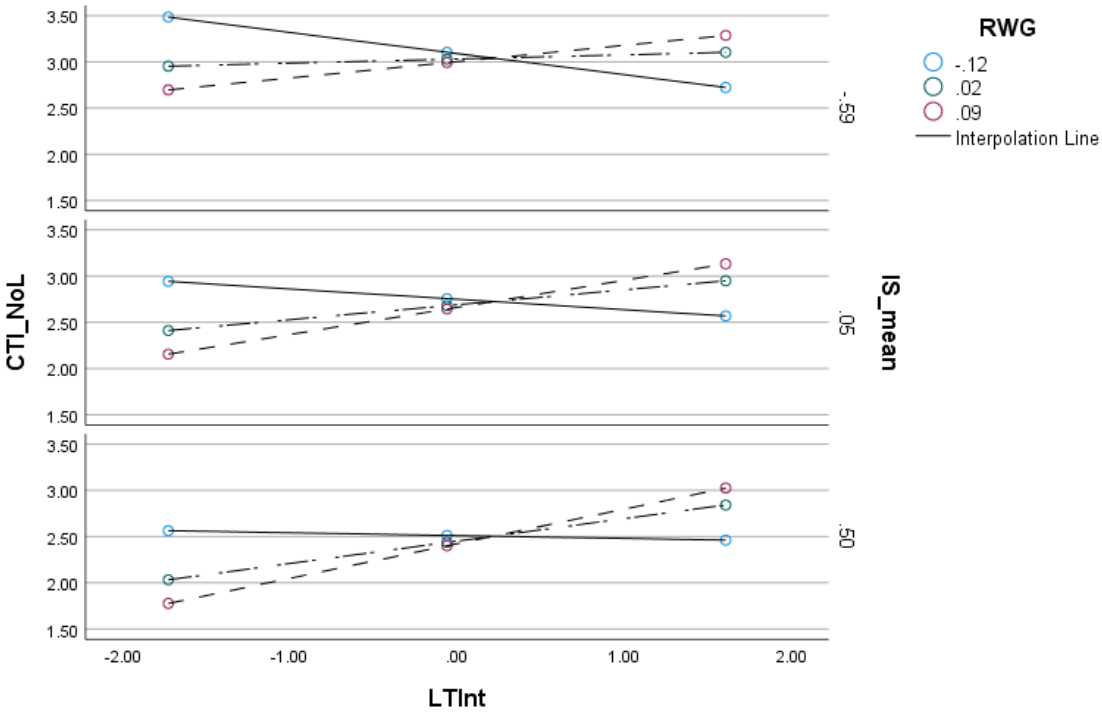


Figure 4.4 Moderation effect of team homogeneity and TL intellectual stimulation

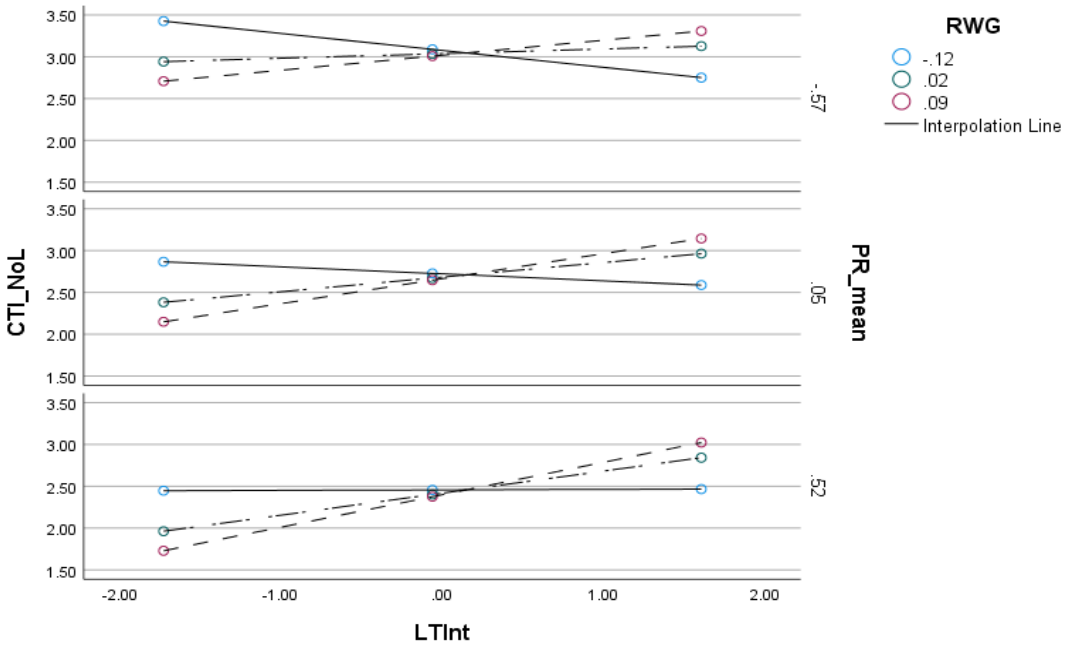


Figure 4.5 Moderation effect of team homogeneity and TL personal recognition

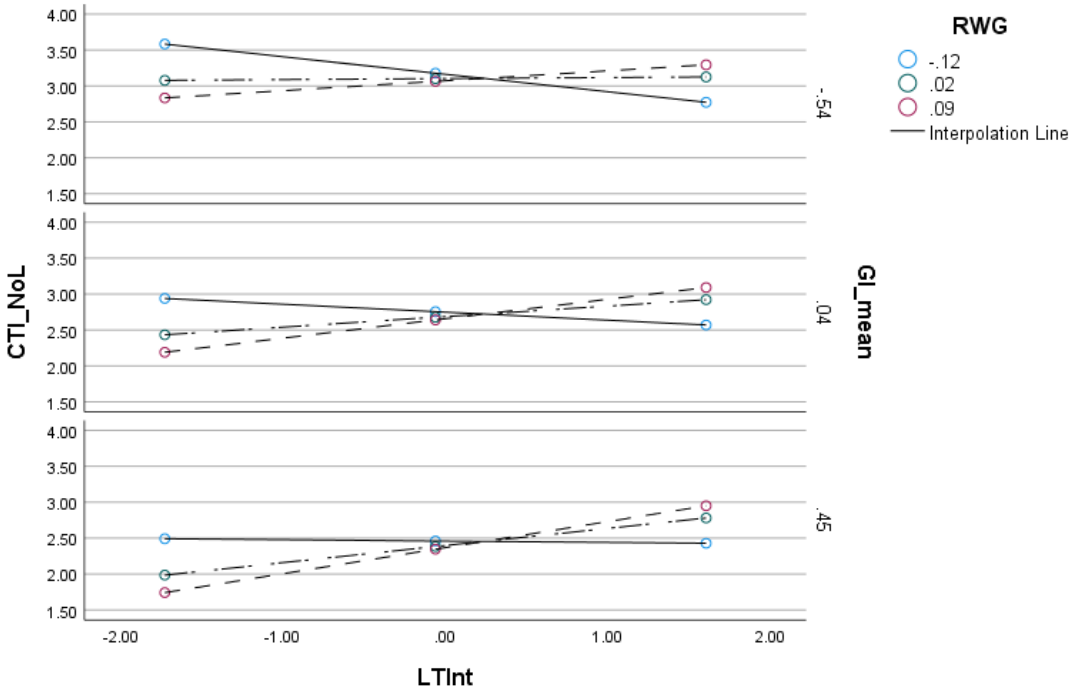


Figure 4.6 Moderation effect of team homogeneity and TL group identity

In this case, the leader's intention to leave is able to increase the team's willingness to leave the when the leader is able to establish a group identity and the group is homogeneous as regards turnover intention. This is a high risk of block collective turnover. Conversely, when the leader is not able to produce such group identity and the team has both members that are willing to go as well as some that are not willing to go, the team seems to react adversely to the leader's turnover intention. In such case, if the leader goes out, the team will remain.

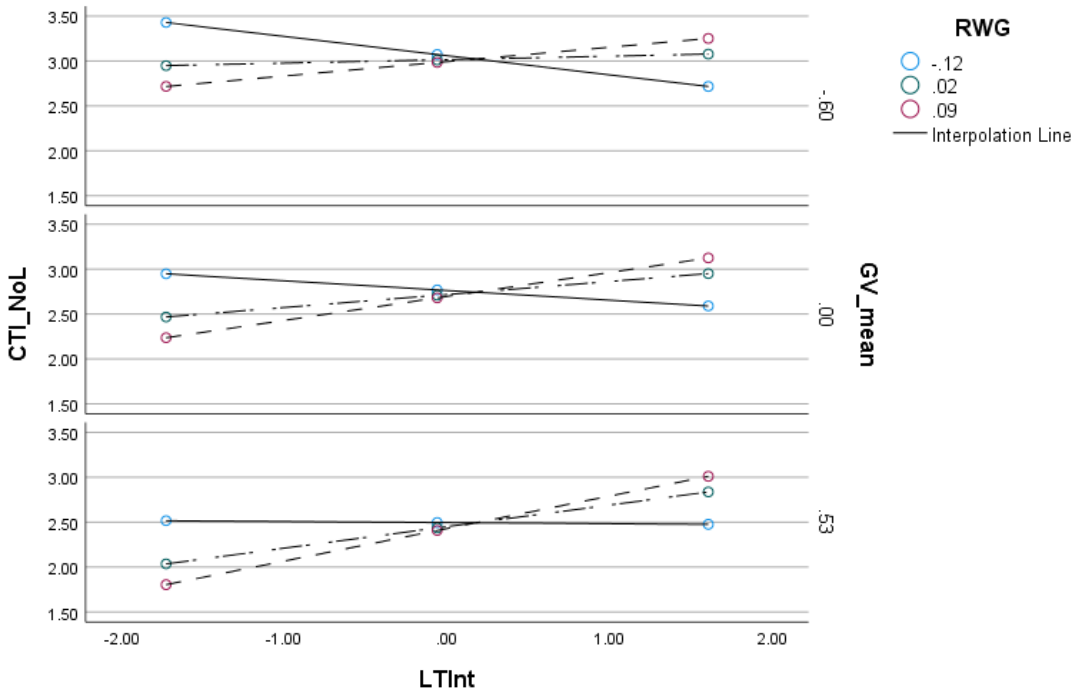


Figure 4.7 Moderation effect of team homogeneity and TL group vision

4.5 Discussion and Conclusion of Study 2

An important distinction in collective turnover literature that has been surfacing is the differentiation between block and syphoning turnover (Simon et al., 2022), i.e. how much time-dispersion should be taken into consideration to truly gauge the magnitude of the impact of collective turnover. Likewise, although there is plenty literature on transformational leadership and its positive impact on preventing employee turnover (Sun & Wang, 2017) the underlying assumption is that of a satisfied leader that does not want to leave. However, what happens when such leader wants to leave? And how much can contagion effects accounted for in collective turnover literature (Bartunek et al., 2008) be enacted or prevented due to the type of leader the team has? Its full role is not yet clarified in relation to collective turnover which can be a two-edged sword and the conceptual model tested in this study focus on a contextual bounded mediation model linking leaders' turnover intention with team performance via team's turnover intention conditioned by team homogeneity (as regards turnover intention) and the leader's degree of transformational leadership (in seven dimensions).

As commonly reported in individual turnover research, collective turnover was found to foster lower team performance in our study, thus supporting H1. This goes in line with previous findings (McElroy et al., 2001) and the relation was linear thus contributing to the discussion about the specific pattern of association between collective turnover and team performance

(Hausknecht & Trevor, 2011). Many explanations have been advanced to account for this but most of these explanations focus on the direct impact of losing human and social capital (Dess & Shaw, 2001; Duda & Zurkova, 2013).

Many other factors have been found to explain team performance but usually, turnover findings have neither controlled for nor focused on the direct effect stemming from the leader's intention to leave. Our findings did not support H2 which established this direct effect. Although there is theoretical support to expect the leader's general behavior to exert a strong impact on the team members behavior such effect may be found only through the psychosocial processes that connect the leader's behavior to the outcomes of the team work, such as team performance. They are too distal from each other to witness a direct effect and this is what we think may explain the absence of such direct effect. This interpretation goes in line with most of the theory e.g. social exchange and the reciprocation rule (Gouldner, 1960; Settoon et al., 1996) and entails mediating processes that highlight the quality of the relationship established between the leader and team members e.g. trust in leader, loyalty (Mai et al., 2016). These processes ultimately legitimate the leaders' role as someone that is ought to be followed (Gloor et al., 2017) and promote strong leader-member bonds (Hui et al., 2008).

One suitable variable to operate as an intervening process is collective turnover intention. This was previewed in H3, which was surprisingly not supported in our study. Although there is strong theory (Bartunek et al., 2008; Wheeler, 1966) and reports from empirical research that highlight the importance of contagion processes (Porter & Rigby, 2021) our findings go beyond the direct effect usually reported in literature to account for its connection to team performance. The reported correlations usually found in literature (Kacmar et al., 2006) were also found in our study as show by the bivariate correlation ($r=.180$, $p<.01$) but for the mediation to take place, both coefficients linking leaders' turnover intention with the collective turnover intention and the collective turnover intention to team performance must be sufficiently strong to attain a magnitude that will lead to a significant indirect effect. The magnitude of the association between leaders' turnover intention and collective turnover intention is indeed not very strong. On the one hand this finding corroborates previous reports but on the other hand it suggests that such reports only show a part of the whole picture or that, according to the Event System Theory (Morgeson et al., 2015) the leader's turnover intention in our sample did not reach sufficient level to become a critical event. Another possibility lies in such contagion effects outcomes operating only when certain contextual conditions are met. This was theoretically predicted by our H4.

One of the conditions for collective-level phenomena to occur is that the group members

are sufficiently similar among themselves (as regards mental maps, Barnes, 2005; shared perceptions Patterson et al., 1996, affective states, Goddard et al., 2004) to foster identity-based processes such as those predicted in the behavioral contagion theory. Our fourth hypothesis focused on the homogeneity as a moderator, and the findings did support it, showing that leader's turnover intention seemingly exert an effect upon team performance via team member turnover intention only when the team is homogeneous as regards turnover intention, i.e. when there is sufficient shared behavioral intention, the leader behavior has a fertile ground to spread in the whole group which activates the degrading processes on team outcomes. The moderated mediation effect was also found, which lends support to this integrative explanation.

In the same vein, alongside the team homogeneity, the sort of leadership is *per se* a sufficient condition to enact or hinder contagion effects. Based on literature that highlights the positive effects of transformational leadership, H5 previewed its moderation effect similarly to the one stated in H4. Findings also corroborated this moderated mediation effect for all of the transformational leadership dimensions, namely for: High Expectations, Follower development, Intellectual stimulation, Personal Recognition, Group Identification, Group vision, and Team building. This is a very strong finding as regards proposing transformational leadership is a fundamental condition to explain block turnover occurrence. Just like a lever, transformational leadership increases the amplitude of the movement created in the follower. This is often taken as positive (Mo & Chen, 2015) but in the case of collective turnover research this also entails a critical risk. When the leader is transformational, his or her influence is stronger and if such leader intends to leave and has a homogeneous group, then the likelihood of witnessing a block turnover is much higher. This highlights Tourish (2013) caveats on such transformational leadership although his focus was placed upon leaders' defective behavior or TMGT as some other papers also reported (Chen et al., 2018; Mach et al., 2022).

Findings must be interpreted considering the methodological options made and not only what the conceptual model previewed but also what it does not previewed. As an alternative to Rwg, some authors (LeBreton & Senter, 2008) advocate that AD(M) (M. J. Burke et al., 1999) is more suitable to depict intragroup agreement because it preserves the ability to interpret the results according to the original scale (as measured). However, Rwg and AD(M) are strongly correlated (approximately .90, Breton & Senter, 2007; or .95 Roberson et al., 2007). Still, future research may benefit from experimenting with different approaches to homogeneity.

Overall, findings suggest that block collective turnover can occur when the team shares the intention to leave (becoming a team level construct) and the leader also shares that intention especially when the leader has a transformational style.

Chapter 5: Study 3 – Contextualizing Loyalty to the Leader

5.1 Introduction

One of the findings from the first study pertained to the importance that loyalty to the leader (mostly affect-based loyalty) plays in the collective turnover model. This is apparently reinforced by the second study findings that showed the leader's turnover intention could activate collective turnover only when the team shares such intentions to a level that it can be aggregated to team level. By integrating both findings, we can state that loyalty to the leader in such circumstances will most likely determine block collective turnover more so than a contagion effect.

Because loyalty to the leader entails specific Chinese characteristics that may not be fully captured in a quantitative study, we endeavored to design a qualitative study that explores the role loyalty to the leader plays against the background of other individual and team dimensions.

This chapter will start by reviewing literature on loyalty to the leader both international and mostly Chinese literature to support a qualitative exploration of such dynamics.

5.2 Literature review

In literature it is quite common to read terms that are used interchangeably but often they should not. In our case loyalty to the leader also emerges in literature as commitment to supervisor and we believe they should be differentiated.

We opted to use the term "loyalty to leader" instead of "commitment to supervisor" for two reasons. (1) Loyalty is considered to be a synonym of commitment in Western contributions. (2) In Chinese society, attachment to a person is best described as loyalty, which is not a form of personal trust. In the West, loyalty to leader is defined as the subordinate's recognition and internalization of the values of his supervisor, and the subordinate has a strong emotional attachment to his supervisor. Under the Chinese background characterized by relationship orientation and differential order pattern, which emphasizes collectivism and accepts authority, loyalty to leader is more based on subordinates' compliance with ethics and obligations and respect for authority figures (Chen et al., 2002), rather than just their identification and

internalization of leaders' values (Li et al., 2017).

Loyalty to leader can be observed from two dimensions. One is from a relationship-based perspective, which refers to the relationship between leaders and followers. Based on this view, loyalty to leader is developed through the process of social exchange. If followers feel that their leaders care about and understand them, they may repay them through positive behavior. Followers have emotional attachment to their leaders, so they maintain their loyalty to leader. We call this loyalty as affective based loyalty (Jiang & Cheng, 2008). It can also be understood as "private loyalty", which emphasizes obedience to the leader, and focuses on individual's emotional attachment to the leader, willingness to make additional efforts for the leader, or even his sacrifice of personal interests in exchange for the interests of his leader. On the other hand, from a character's point of view, followers feel that their characters are obliged to maintain loyalty to their leader. We call this loyalty as role-based loyalty. It is also called "public loyalty", which emphasizes that the overall interests of organization go beyond individual interests, focuses on the interests of the general public, puts the interests of organization above personal interests, and advocates employees' initiative to pay for the organization.

There is a view that affective loyalty emphasizes followers' observation of their leader's character and how it affects the followers' vulnerability (Andrews-Lee, 2019). According to this view, followers hold certain assumptions about the characteristics of their leaders, such as authenticity, reliability, fairness, and competence, which will have an impact on the results and attitudes of work. When employees think their supervisor is reliable, capable and trustworthy, they will trust their supervisor and devote themselves wholeheartedly. If they are not recognized or responded by their supervisor, their passion will fade quickly, thus weakening their trust in their supervisor, and leaders cannot give full play to their leadership (Gostick & Elton, 2007). Therefore, the trust in leaders is an important factor in building interpersonal relations between leaders and their followers. When employees have a high degree of trust in their leaders, they tend to participate in social exchanges and are obliged to show positive mutual relations. When employees believe that their leaders regard themselves as "one of them", they may repay them with positive attitude and behavior, just as the old saying goes "the kindness of a drop of water should be rewarded by a gushing spring", which is specifically reflected in their loyalty to their leader. When followers trust their leaders, they will feel safe and rely on their leaders, thus reducing their intention to leave (Gostick & Elton, 2007).

The difference between Chinese collectivism culture with Confucian traditions as the core and Western individualism culture that attaches importance to independent personality leads to different understandings and meanings of loyalty to leader. Chinese culture emphasizes ethical

standards and harmonious social relations. In recent years, loyalty to leader has been valued by more and more Chinese scholars. In China's organizational environment, traditional culture attaches importance to social hierarchy and Loyalty to leader (Chen et al., 2002). This cultural value is completely different from that of Western society, which emphasizes the social exchange relationship between employees and leaders on the basis of social equality. In the past 40 years, although China has experienced rapid economic development and social innovation, traditional values still play an important role in the superior-subordinate relationship of modern enterprises. Mencius said, "observe human relations, act by benevolence and righteousness, not by benevolence and righteousness / 察于人伦, 由仁义行, 非行仁义也" (the four books, Mencius). Confucius insisted on "benevolence, love, self-restraint and return to propriety" (the Analects of Confucius Yan Yuan). Confucianism took "benevolence, righteousness, propriety, wisdom, faith, loyalty and filial piety" as the core category. These all reflect China's relationism thought (Chen et al., 2017).

The relationship orientation in the organization still epitomizes the uniqueness of Chinese society. The loyalty of employees to leaders may still have special significance and importance in modern times. Under the feudal bureaucratic governance that lasted for more than 2,000 years in China, it was under this relationism culture that the national governance structure of "family and country isomorphism" emerged, that is, the whole power organization of the state is similar to the family structure of patriarchy. The monarch's management of the state is like the management of his own family, and the two kinds of management with different scopes are intertwined with each other. The so-called "state" is the amplification of the "home", emphasizing the "loyalty" of the minister to the king and the "filial piety" of the son to the father. The thought of "loyalty" is deeply rooted in the Chinese culture, and its root lies in Confucianism (Farh & Cheng, 2000). In the Confucian social order, the three cardinal principles and five permanent principles are emphasized (monarch and minister, father and son, husband and wife, brother and friend). In these relationships, individuals who are in the lower position (minister, wife, son and little brother) have the obligation to obey and be loyal to their superior roles (monarch, husband, father and elder brother). On the other hand, the person who occupies the upper position (monarch, husband, father and elder brother) should be kind and friendly to those who in the lower ones. Therefore, the loyalty of the lower roles means an unreserved support for their superior roles, which is mainly reflected in their willingness to sacrifice their own interests and their complete contributions to their superior roles. At the same time, subordinates also agree with the personality and values of their superior roles, resulting in emotional attachment. Scholars believe that such emotional attachment may come from

familiarity, frequent interaction or common attraction (Chen et al., 2002).

It can be seen that in China, loyalty to leader is driven by obligation. Based on the cognition of their role, the subordinates believe that with their social role, they have the obligation to maintain loyalty to their superior, and the society is endowed with certain expectations, such as children's filial piety to their parents and subordinates' loyalty to their leaders. Subordinates who express loyalty to their superiors are fulfilling social expectations. Social character helps to maintain social order and structure. Subordinates are socialized to express their loyalty to their superiors in a way suitable for the expectations of their roles. Some scholars suggested that the emotional attachment with leaders may be based on the social norms requiring leaders to be gracious to employees or on employees' perceptions of their obligations to the authority figures (Farh & Cheng, 2000). In modern China, some social relations have changed, such as the relations between husband and wife in the family, and the relations between the monarch and his ministers have undergone thorough changes. However, the perception of social roles and their accompanying obligations remains in many people's consciousness. In contemporary Chinese family-owned enterprises and western Chinese enterprises, we can still see the traces of such patriarchal kinship. Bosses often evaluate their subordinates' salary, welfare, and efficiency and decide whether they should be promoted according to their loyalty. Literature shows that the positive effect of loyalty to leader has been widely confirmed. Leaders hope to get recognition and loyalty from their subordinates, and subordinates in Chinese organizations are usually expected to be loyal to their superiors (Zhen et al., 2018).

Loyalty based on role is similar to the research object of supervisor commitment in western countries, while loyalty based on emotion is more common in the cultural environment in China. Loyalty to individuals is more important than loyalty to institutions (Chen et al., 2002). Many studies show that in modern enterprises, many leaders often take loyalty as a key employment standard and divide subordinates into "members within their circle" and "members outside their circle". The definition of "loyalty" is more based on the traditional "patriarchal kinship" and the affinity of each other. If subordinates are "insiders", they will feel obliged to be loyal to their leaders, where they will conscientiously complete their work, be conscientious, enthusiastic, and willing to obey the decisions made by their leaders, recognize and accept the goals and values of their leaders, and be ready to make extra efforts and show unreserved dedication (Jiang & Cheng, 2008). These studies show that the concept of loyalty to leader in China goes beyond the definition of loyalty to leader in the West. In addition to the internalization of the recognition and values of the supervisor, the concept in China also includes employees' extra effort, dedication and loyalty. From here, we can see the

subordinate's attitude and behavioral intention towards the supervisor. This has gone beyond the scope of leadership-member relationship exchange studied in the West. The extended definition of loyalty to leader may not be unique to China. Chinese social relations are characterized by the emphasis on special relations (such as kinship, compatriots and classmates), reciprocity and characters' obligations (Farh & Cheng, 2000). In such a society, employees' loyalty includes not only their personal recognition and internalization of the values of the supervisor, but also their individual support and gratitude to the supervisor. That is to say, in such a collectivist society like China, values and beliefs are not as important in determining individual behavior as in an individualistic society like the United States. Value consistency may not be the meaningful basis of mutual loyalty in a collectivist society. Other factors, such as reciprocity and obligations, may be more important. Loyalty to leader may be more important than organizational commitment. Relevant literature also found that in the concept of subordinates, the loyalty to one person (supervisor) is more important than the loyalty to a system (organization). These findings are also consistent with the early research results in the West. "Loyalty to leader" has a stronger impact than "commitment to the organization", which means that the meanings and effect of "loyalty to leader" are different from "commitment to the organization" (Y.Wong et al., 2002). In fact, previous studies on Chinese enterprises also found that loyalty to leader is considered to be one of the most important obligations of subordinates, which helps to maintain harmony and order in the organization. Therefore, exploring the loyalty of subordinates to their superiors is of great theoretical, practical and cultural significance to China's organizational management (Wu et al., 2012).

In ancient China, although the word "leadership" did not exist, thoughts of leadership have already prospered (Rindova & Starbuck, 1997). The Chinese sages have explored the traits, styles, skills, systems, and arts of leadership, and a set of relatively mature theories with their own distinctive characteristics have been formed. In terms of leadership styles, it emphasizes the opinions of acting as the circumstances change, changing to achieve success, and adapting to various kinds of situations. "The power of change" is the essence of Chinese leadership, which is similar to the modern transformational leadership. The eighth chapter Variation in Tactics of The Art of War written by Sun Tzu who is known as the ancestor of strategists, offers the most wonderful interpretation of ancient Chinese leadership. It emphasizes that leaders, like commanders on the battlefield, should be good at implementing flexible strategies according to the changes of the battlefield situation, and have a good knowledge of the advantages and disadvantages of various changes and apply different strategies flexibly (Giles, 2002). In other

words, leaders should adopt different methods according to the situation involving time, place, conditions and other elements, encourage morale, inspire soldiers to be proactive and make correct decisions. Loyalty is a concept in traditional Chinese culture and is valued by Chinese corporations and enterprises even in the modern world.

5.3 Method

5.3.1 Sample

The interviewee profile (Table 5.1) was defined a priori to be diverse as regards professional experience, gender, age, and professional level of responsibility. Thus, the sample of interviewees comprehends 34 individuals, including 2 deputy general managements, 8 first level Directors, 16 managers, 1 governmental section chief, 7 professional positions. The sample purposively targeted mostly individuals holding managerial responsibilities while also comprehending some non-managerial roles to guarantee some diversity.

The sample is diverse as it comprises exact half male and female interviewees, with ages ranging from 24 to 63 although, due to the job positions, the sample is older than the average working population (44.8 as compared to 39 years-old (Center for Human Capital and Labour Market Research, Central University of Finance and Economics, Beijing) and with organizational tenure ranging from 2 to 37, averaging 14.4 years).

Table 5.1 Interviewees profile

Interv.	Gender	Age	Position	Tenure	Industry
I1	Male	45	Manager	10	Sinopharm Group Pharmaceutical Co., Ltd.
I2	Female	54	Director	15	Hapag-Lloyd Shipping (China) Co., Ltd.
I3	Male	47	Director	20	Kyowa Fermentation Kirin (China) Pharma Co., Ltd.
I4	Male	35	Director	3	Sinopharm Holding Guangzhou Co., Ltd.
I5	Female	26	Nurse	5	Stomatological Hospital Affiliated to Guangzhou Medical University
I6	Female	37	Manager	12	Guangdong Advertising Group Co., Ltd.
I7	Female	34	Manager	2	Guangdong Rongtai Pharmaceutical Co., Ltd.
I8	Female	58	Director	30	Guangdong Guangxin Holding Group Co., Ltd.
I9	Male	36	Manager	8	Guangdong No.1 Pharmacy Chain Co., Ltd.
I10	Female	32	Manager	9	Guangzhou Pharmaceutical Group Co., Ltd.
I11	Female	50	Manager	28	Shanghai SPH Huayu Pharmaceutical Co., Ltd.

I12	Male	51	Director	29	China Resources Sanjiu Pharmaceutical Co., Ltd.
I13	Female	59	Professor	37	School of Computer Science, Wuhan University
I14	Female	55	Engineer	25	Shenzhen Wanle Pharmaceutical Co., Ltd.
I15	Male	45	Researcher	20	Institute of Materia Medica Chinese Academy of Medical Science
I16	Male	50	Manager	10	Jiangsu Hengrui Pharmaceutical Co., Ltd.
I17	Male	47	Doctor	8	Guangdong Provincial People's Hospital
I18	Female	24	Purchase Staff	2	Sinopharm Holding Guangzhou Medical Management Co., Ltd.
I19	Female	49	Manager	14	Guangdong Neptunus Pharma. Group Co., Ltd.
I20	Female	48	Manager	20	Tasly Pharmaceutical Group Co., Ltd.
I21	Male	37	Manager	13	Gosuncn Technology Group Co., Ltd.
I22	Male	49	Manager	9	Beijing Novartis Pharmaceutical Co., Ltd.
I23	Male	46	Manager	12	Merck AG Guangzhou Representative Office
I24	Male	40	Manager	6	Pfizer Pharmaceuticals Ltd.
I25	Male	49	Commercial Staff	20	Sinopharm Accord Pharmaceutical Co., Ltd.
I26	Female	50	Director	16	Guangzhou Haibot Pharma. Technology Co., Ltd.
I27	Female	39	Deputy Gen. Mng.	5	Guangdong Medical Device Industry Co., Ltd.
I28	Female	40	Manager	17	Shanghai Fosun Health Technology (Group) Co., Ltd.
I29	Male	46	Section chief	10	Guangdong Provincial People's Government
I30	Male	50	Manager	8	Kangmei Pharmaceutical Co., Ltd.
I31	Female	49	Deputy Gen. Mng	25	Guangdong Guanghong Pharmaceutical Co., Ltd.
I32	Male	46	Director	10	SF Holding Co., Ltd.
I33	Female	38	Manager	13	Guangzhou Yanyu Food Technology Co., Ltd.
I34	Male	63	Director	20	Shenzhen Caiyuanzi Industrial Co., Ltd.

5.3.2 Data analysis – content analysis

According to Krippendorff (2019, p. 24) content analysis is “a research technique for making replicable and valid inferences from text (or other meaningful matter) to the contents of their use”. To achieve its full definition, content analyses should be reliable and valid. This means, its findings should be replicable independently of the coder and the procedure should be systematic and able to be subject to scrutiny.

Categories are qualitative items that result from semantic classification of text and correspond in mathematical terms to the latent constructs. According to Krippendorff (2019) They can be derived from extant literature as a priori categories and they can also emerge from the inferential analysis of text as *a posteriori* categories. Both can be combined in a mixed

categorization approach, and this is a common option among researchers because it adds the advantage of working from a solid basis (provided by models or typologies in literature) while not discarding the novelty or non-registered categories in such literature.

Categories are qualitative in nature and can be extracted from simple words, from sentences or from whole paragraphs. This is the unit of analysis. However, no unit of analysis should be interpreted without considering its context because the same word can have different connotations depending on the sentence, and the same sentence can also have different connotations depending on the paragraph.

The text results from the written material an author produced, from the transcription of an interview, from note taken during an event or any other source of information that can be registered in a verbal form. This is called the corpus in content analysis literature (Mayring, 2014).

Although content analysis is a qualitative technique, quantifying the frequencies with which each category emerged from the corpus is a regular procedure to judge on its centrality in the mind of the author of the text. Some other approaches can be seen as each category can be systematically connected to other categories according to the frequency of its joint occurrences in adjacent text, and likewise they can be depicted as a nomological maps connecting all constructs in the speech.

Content analysis requires high level cognitive processing due to the semantic nature of the categories but it also entails the basic processing of written text. Computers were firstly used to facilitate the identification of terms but with the emergence of dictionaries and semantic abilities from advanced algorithms, computers are now able to facilitate also the extraction of semantic categories. Alongside with data processing efficiency and data analysis, software for this purpose is now established among researchers as a reliable and efficient tool to conduct content analysis.

Among the most advanced software available for content analysis one can find MaxQDA which is a tool that allows for systematically coding, visualizing categories in trees and maps, graphically depicts frequencies associated with codes, summarizing findings linking categories to excerpts that offer examples of the original text supporting each category (Gizzi & Radiker, 2021).

5.3.3 Interview script

The interview started by introducing the background of the invitation so to fully inform the interviewee about what was happening, and why it would be important to accept the invitation.

We also took care that all concepts used in the interview script (e.g. transformational leader) were fully understood by the interviewees.

The first statement was:

"In a recent study involving work teams it was found that transformational leaders that have high intentions to abandon the organization have a stronger contagion effect on their team members which are willing to follow their leader out and also exit. This may be just a part of the story and we are interested in understanding what other factors would be in play."

We devised two scenarios. The first one presented a situation where a transformational leader (presented as a desirable one) wants to leave and (it is assumed) that team members may also feel tempted to follow. However, there could be reasons not to do it.

Scenario 1 (transformational leader):

"Imagine you had a leader that is perfectly transformational. Imagine that such leader wants to leave the organization and your colleagues are discussing the possibility of all of you going at the same time out. "

We asked:

Q1a. What would make you decide not to go with them?

Q1b. Among the reasons you stated there are motives related to your own autonomy, social relationships, and competence. Which ones do you think weight the most in your decision? Why?

Conversely, there could be situations where a transactional leader is also thinking about leaving, and it is assumed most team members may not want to follow. However, this may not happen and some team members actually follow the exiting leader.

Scenario 2 (transactional leader):

"Now, imagine that you have a leader that has zero transformational profile. It does not have to be a bad leader but just someone that is more focused on being fair as regards rewarding those that achieve and making the work performance good."

We asked:

Q2a. If such leader wanted to leave and your team colleagues were not willing to follow out, what would make you go together with the leader?

Q2b. And what would make you return back if the organization would contact you to return after two months?

Q2c. Among the reasons you stated there are motives related to your own autonomy, social relationships, and competence. Which ones do you think weight the most in your decision? Why?

The interview departs from our findings from the 1st study that suggest transformational leaders are more able to provoke collective turnover due to the stronger affective dimension entailed in the interaction, which could foster a stronger sense of affect-based loyalty. We thus assumed this is shared with these interviewees. As a caveat, our assumption that transformational leaders will be preferable to transactional ones (without any judgment about competency or fairness) was tested by asking how much interviewees would like more to work with the former or the latter.

5.4 Results

Results are presented following the guiding questions. Namely we started by asking ourselves if our assumption (and the overall literature conclusion) that followers prefer transformational leaders over transactional ones, was echoed in our sample. 21 cases out of the 34 interviews, participants would prefer to work with a transformational leader, while 6 stated their preference for transactional, and 7 for a mixed leadership style (that would match the full range leadership).

5.4.1 Leading question 1

The first leading question is "What retains a follower from following out a desirable leader?". Overall, we can conclude that the commonly accepted idea that transformational leaders surpass the transactional ones does have an expression in our sample.

Table 5.2 Categories and frequencies (Q1)

Dimension	Categories	Subcategories	Frequency
Loyalty to the leader			**429**
	Job status recognition & valuing		***5***
	Job-related factors		***85***
		Job content	23
		Work-Family balance	23
		Salary	20
		Person-Job fit	14
		Job satisfaction	5
	Leader-related factors		***176***
		Leader's Career Growth support	59
		Leader style (transf vs transactional)	32
		Leader's Personality & Virtues	19
		Dyadic relationship (affective bonds)	18
		Leader effectiveness	13
		Leader distance	12
		IO Circle	11
		Team leadership	8
		Dyadic tenure	4
	Leadership culture & power		***10***

	Personal-related factors	***60***
	Values	33
	Age	16
	Personality	11
	Social-related factor	***86***
	Coworker relations	22
	Work environment	12
	Team culture	17
	Team job role	11
	Coworker attitudes	9
	Social norms	5
	Team cohesion	5
	Mianzi	3
	Contextual performance (Org Citizenship Behaviors)	2
	HRM-related factors	***7***
	Performance management (appraisal & rewards)	6
	Talent management	1
Loyalty to the Organization		**75**
	Organizational culture	***11***
	Organizational reputation, Brand image, industry prestige	***45***
	Organizational structure & Organizational performance	***6***
	Sense of mission and purpose	***2***

The guiding questions are: "What retains a follower from following out a desirable leader?" and "What makes a follower following out a desirable leader?" and it is our expectation that the analysis of the answers will offer insights as regards some doubts: are the factors operating in both cases similar or do they differ as regards their nature? Are the factors equally important (same frequencies) or so they play a differential role in both cases?

Two overarching dimensions emerged from the analysis: loyalty to the leader and loyalty to the organization. By far, loyalty of the leader dominated the reasoning concerning why followers would not follow a desirable leader (n=429) mentions as against 75 for loyalty to the organization. Results showed 7 categories (Table 5.2) among which leader-related factors is the predominant (n=176), followed by social-related factors (n=86) basically at the same level of job-related factors (n=85), followed by personal-related factors (n=60) and two categories of a much lesser centrality: HRM-related factors (n=7) and job status recognition and valuing (n=5).

Results focused on the ***leader-related factors*** show that followers' career growth opportunities in the current organization is the most prevalent reason (n=59) for not following out a departing leader together with the leader's style itself (transformational vs. transactional) and, at a lesser extent, leader's personality and the affective bonds (with 19 and 18 frequencies respectively). So, the most important category refers to how much employees anticipate stronger career grow opportunities after the leader exits:

"Is it possible to give me some promotion in terms of personal development, so that I can have a sense of achievement and belonging. "(Interviewee 23: 5)

"I also hope that my new leader will find my strengths and give me a position that better suits my abilities." (Interviewee 10).

"I might as well stay in my organization, maybe they all leave one-by-one, there may be a greater chance of promotion by staying." (Interviewee01: 9)

Results focused on the ***social-related factors*** show that coworker relations (n=22), team culture (n=17) and to a lesser extent work environment (n=12) and team job role (n=11) are important in the decision.

"Then there is the interpersonal relationships" (Interviewee 19: 3)

"The third one is that I have a deeper attachment to the unit, or my connections are in this unit, and I'm definitely not going to just go with this transformational leader." (Interviewee 29: 3)

"If there are people, he takes away that I don't like, or people I don't get along with that well, so I decide not to go with them, or if I get along pretty well with the people who stay I don't go with him." (Interviewee 06: 3)

Results focused on the ***personal-related factors*** show that values prevail as the main cause (n=33) followed by one's age (n=16) and personality (n=11).

"I didn't want to live the kind of life where I could see the end at a glance for the rest of my life. That's the kind of job I'm in, having experienced transformational leadership as a style of work, and then wanting to try a transactional or other type of leadership style." (Interviewee 11: 5)

"It's this personality of my own that has to do with my age, with my experience and with my values." (Interviewee 20: 3)

"At our age, we are certainly not judging the righteousness of the world, you are definitely thinking in a mature mode of mind" (Interviewee 26: 3)

Results focused on the ***job-related factors*** dimension show that both job content and work-family balance are equally important (n=23) followed by salary (n=20). At a lesser extent, person-job fit (n=14) and surprisingly with a relatively lower frequency, job satisfaction (n=5) emerged as plausible causes.

"If there is a big change in contrast with my current job, the work is more intense than my current, need to work overtime often, maybe I am not ready for this now, maybe I am not necessarily with him to go this way ." (Interviewee 05: 5)

"How is [the leader's] work pressure, how is the performance appraisal? " (Interviewee 08: 3)

"On the other hand, it depends on whether the content of his work can attract me? " (Interviewee23: 5)

Results focused on the ***HRM-related factors*** show that performance management seems to play a role albeit minimal comparing with other factors (n=6).

"How is (...) performance appraisal?" (Interviewee 08: 3)

"And the performance management system of the new company, (...) I have to evaluate whether I can get it if I go over there." (Interviewee 09: 3)

Alongside with loyalty to the leader dimension there are references to topics that concern the loyalty to the organization. Interviewees highlighted the organizational reputation, brand image and industry prestige as relevant factors (n=45) and to a lesser extend the organizational culture (n=11).

"The third is the prospect and industrial position of the company he went to in the long run. If he is still in this industry, I will do some analysis on the company he went to" (Interviewee 24: 3).

"What is the cultural climate of the company?" (Interviewee 26: 3)

5.4.2 Leading question 2

The second leading question is "What makes a follower following out a desirable leader?". We have categorized the answers to this question and sub-questions (depicted in Table 5.3).

Table 5.3 Categories and frequencies (Q2)

Dimension	Categories	Subcategories	Frequency
Loyalty to the leader			**541**
	Job status recognition & valuing		***21***
	Job-related factors		***152***
		Salary	77
		Person-Job fit	36
		Job content	22
		Work-Family balance	14
		Job satisfaction	3
	Leader-related factors		***197***
		Leader's Career Growth support	61
		Leader style (transf vs transactional)	28
		Dyadic relationship (affective bonds)	27
		Leader effectiveness	22
		Leader's Personality & Virtues	18
		Dyadic tenure	14
		Leader distance	13
		Team leadership	9
		IO Circle	5
	Leadership culture & power		***13***

Personal-related factors		***26***
	Values	15
	Age	5
	Personality	6
Social-related factors		***112***
	Mianzi	23
	Work environment	23
	Team job role	22
	Coworker relations	17
	Team culture	8
	Social norms	8
	Coworker attitudes	7
	Contextual performance (Org Citizenship Behaviors)	2
	Team cohesion	2
HRM-related factors		***20***
	Performance mng (appraisal & rewards)	14
	Talent management	6
Loyalty to the Organization		***52***
Organizational reputation, Brand image, industry prestige		***23***
Organizational structure & Organizational performance		***14***
Organizational culture		***9***
Sense of mission and purpose		***3***

Results focused on the ***leader-related factors*** show that the main consideration falls upon the support the employee believes to receive from the leader as regards progressing in the career (n=61). These considerations are accompanied to a lesser extent, by a set of other criteria namely the leadership style itself (n=28), the nature of the dyadic relationship with the leader (n=27) and some leader's features such as leadership effectiveness (n=22) and leader's personality and values (n=18). The dyadic tenure itself emerges as a more secondary factor (n=14) together with the leaders' distance in the relationship (n=13).

"The other is good for your own personal development." (Interviewee 01: 17)

"Another reason is that maybe [the leader] recognized that I had certain areas of expertise and, like Bo Le, gave me a stage where I could realize my values and abilities." (Interviewee 07: 7)

"The salary and position [the leaders] offered me was attractive enough." (Interviewee 08: 7)

Results focused on the ***job-related factors*** show that salary considerations take precedence (n=77) followed by person-job fit (n=36), job content (n=22) and, to the lesser extent work-family balance (n=14).

"And he made it very clear to me before I went over there that you jumped ship and gave you a raise." (Interviewee02: 7)

"Either that or the pay, the package is really higher than it was and attractive enough ." (Interviewee 03: 9)

"The second factor is that the salary did not meet their expectations, or that the original promise of the boss did not materialize." (Interviewee 18: 9)

"In addition, if the work content there is the same as I have now, and the field is what I am good at, and I can handle it with ease, then I will try it" (Interviewee 08a: 7).

Results focused on the ***social-related factors*** show that there is a balance between factors that relate to keeping face (mianzi) which has the exact same frequency of work environment (n=23) closely followed by the team job role (n=229 and to a lesser extent the coworkers relations (n=17).

"Then I won't consider going back, even if I'm offered a higher salary and a higher position, a good horse won't eat the grass backwards" (Interviewee19: 13)

"But from my personal point of view if I were to return to my old company after two months, I would have offended everyone in my new team, right? Our culture doesn't allow us to do that, and we were raised to be loyal to our leaders and to our organization, and we generally don't go back if we don't have to." (Interviewee 21: 11)

"If it is two months generally will not go, I have to be responsible for myself and the reputation of the industry." (Interviewee 32: 13).

Results focused on the ***personal-related factors*** show that values (n=15) predominate over other considerations.

"In the new company, that is certainly to give me an official position, then I will also have some authority, which is also a reflection of personal value for me, it is also a reason for me to follow him, it is possible to share some benefits and power with him." (Interviewee 21: 9)

"We must have [a] similar [sense of] values, you give me money and position according to my work ability and work results, I recognize these material incentives on the line, I am sure to follow you, this is the simplest" (Interviewee 27: 9)

Results focused on the ***HRM-related factors*** show that performance management is the emerging cause (n=14) with also some consideration on talent management (n=6).

"Of course, if the old owner has changed leadership, it has also made drastic reforms, adjusted the company's strategy and performance appraisal, and is ready to bring in a lot of talent." (Interviewee 09: 10)

"Here in the transactional leadership, he can give me an instant reward in salary or position according to my ability and performance appraisal, not often just verbal praise like the transformational leadership, and we don't say in ancient times that under heavy reward, there will be brave men." (Interviewee 12: 7)

"After I learned about his salary evaluation system, I assessed that I could get the salary he offered and I could manage the position he gave me." (Interviewee 31: 7)

Alongside with loyalty to the leader dimension there are references to topics that concern the loyalty to the organization. Interviewees highlighted the organizational reputation, brand image and industry prestige as relevant factors (n=23) together with the organizational structure and performance (n=14)

"The platform he went to is very influential in the industry, and the products and services he runs are exactly what I want to do, and I admire them very much." (Interviewee 24c: 7)

5.4.3 Leading question 3

The third leading question is "Are retaining and leaving drivers the same?". The comparative frequencies for each category and sub-categories are showed in Table 5.4 below.

Table 5.4 Frequency comparison

Dimension	Not following		Following	
Categories Subcategories	Absolute freq	Relative freq	Absolute freq	Relative freq
Loyalty to the leader	**429**		**541**	
Job status recognition & valuing	***5***	***1.2%***	***21***	***3.9%***
Job-related factors	***85***	***19.8%***	***152***	***28.1%***
Job content	23		22	
Work-Family balance	23		14	
Salary	20		77	
Person-Job fit	14		36	
Job satisfaction	5		3	
Leader-related factors	***176***	***41.0%***	***197***	***36.4%***
Leader's Career Growth support	59		61	
Leader style (transf. *vs.* transactional)	32		28	
Leader's Personality & Virtues	19		18	
Dyadic relationship (affective bonds)	18		27	
Leader effectiveness	13		22	
Leader distance	12		13	
IO Circle	11		5	
Team leadership	8		9	
Dyadic tenure	4		14	
Leadership culture & power	***10***	***2.3%***	***13***	***2.4%***
Personal-related factors	***60***	***14.0%***	***26***	***4.8%***
Values	33		15	
Age	16		5	
Personality	11		6	
Social-related factors	***86***	***20.0%***	***112***	***20.7%***
Coworker relations	22		17	
Work environment	12		23	
Team culture	17		8	
Team job role	11		22	
Coworker attitudes	9		7	
Social norms	5		8	

Team cohesion	5		2	
Mianzi	3		23	
Contextual performance (Org Citiz Behav)	2		2	
HRM-related factors	***7***	***1.6%***	***20***	***3.7%***
Performance mng (appraisal & rewards)	6		14	
Talent management	1		6	
Loyalty to the Organization	**75**		**52**	
Organizational culture	***11***	***14.7%***	***9***	***17.3%***
Org. reputation, Brand image, industry prestige	***45***	***60.0%***	***23***	***44.2%***
Org. structure & Organizational performance	***6***	***8.0%***	***14***	***26.9%***
Sense of mission and purpose	***2***	***2.7%***	***3***	***5.8%***

Globally, the relative frequencies with which categories have been mentioned in the not-following case do not mirror those found for the following situation. When referring to not-following the leader, the interviewees gave more saliency to the personal factors (14% as compared to 4.8%) and leader related factors (41% as compared to 36.4%). Conversely, job related factors gained a more secondary role in the not-following situation compared to the following (19.8% as compared to 28.1%).

At a different magnitude (much lesser) job status recognition and valuing have also emerged less frequently in the not-following situation (1.2% as compared to 3.9%) which is mimicked by HRM related factors (1.6% as compared to 3.7%). Social related factors have a very similar frequency (20% as compared to 20.7%) in both situations.

In both the situations where interviewees were requested to state their intention and reasons for not following out or remaining in the organization, loyalty to the organization was always a consideration. The organizational culture was equally salient (14.7% vs. 17.3%) but references to the organizational reputation and prestige were more present in the not-following situation (60% vs. 44.2%) and conversely, less attention to organizational performance and structure in such case (8% vs. 26.9%) as well as, to a much lesser extent, sense of mission and purpose (2.7% vs. 5.8%). Still the strongest contrast lies in references to organizational reputation and prestige.

5.5 Discussion and Conclusions from the 3rd study

The overall model intended to depict the factors that act jointly to explain how loyalty to the leader will enact or detract individuals from engaging into a turnover decision (also accounting for social factors that could explain collective turnover) puts together four dimensions emerging from content analysis (Chen, 2001). The focus lies on loyalty to the leader but the analyses

indicate this sense of loyalty competes or interacts with many other considerations as regards social factors, personal factors and loyalty to organizations (Huang et al., 2014).

The main reasons stated not to follow a desirable departing leader are expressing an instrumental interest in one's own career promotion opportunities. Understanding these decisions imply the assumption that they might be dependent on personal affective attachment with the leader but self-interest considerations prevail in the judgment about what is the best decision (Avey et al., 2009).

Loyalty to the leader seems not to be conceived as a sole factor that makes the follower decide whether not to follow a transformational leader. It is gauged against the loyalty to the team (expressed as attachment to the coworkers) and also judging what sort of coworkers would follow out the departing leader (Zhen et al., 2018). Thus, following or not following out a leader takes into consideration the wider context of the collective around the leader. Following a leader seems to be conditional to what sort of coworkers follow also (Li & van Knippenberg, 2021). The action will take place only if the follower likes both the leader and the departing coworkers which imply an interaction effect in a future model that is intending to explain these decisions (Mesu & Sanders, 2022).

Personal factors concerning values, age, and one's personality emerged as important causes of the decision as age and stable personality seems to foster a remaining decision instead of risking following out the departing leader (Weber, 2010).

Two surprising findings pertaining the job-related factors are the low frequency of job satisfaction and the relatively low frequency of salary as determining factors compared to the job content itself and the work-family balance. An instrumental view would put salary as the high and single salient factor but followers seem also to be concerned with possible changes in the job contents (more demanding) as well as how the change would affect their ability to fulfill their family responsibilities (Wu et al., 2015). The profile of the sample may help explaining these results because most of the interviewees had already achieved a certain level of compensation that makes salary not such a pressing issue. Likewise, the promotion opportunities may be interpreted as a motivation that is less linked to salary improvement and more with enriching job contents and how the job gets more interesting and challenging. Future models should gauge how pressing is the monetary needs of employees in this kind of decisions.

Curiously HRM-related factors did not emerge as a main focus of the interviewees thinking. This can be due to the interview script not mentioning HRM as a focal point. Still, managerial considerations are backgrounded comparing to personal relations with the leader, the coworkers and also the benefits and costs one is expecting to take from deciding whether to stay or leave

(Cohen et al., 2007). Performance management is then naturally an emerging topic because it is more closely related to the interviewee's self-interest.

Interviewees also consider the organization where the leader is departing to, namely how positive is its reputation and position within the industry but also the organizational culture of such organization.

Leaders-related factors show two facets of the follower-leader relationship where the first concerns the opportunities the leader grants the employee to grow up in the career by assuming new positions, new title, and new responsibilities. The second concerns the quality of the personal relationship held with the leader which is deemed as positive when it is not distant, more personal, while the leader is also seen as being effective and trustable due to personality (Hogan et al., 1994).

Job-related factors are dominated by salary gains from following out the departing leader and at a lesser extent some specific considerations on how easy is it to adapt to the new job (similar content implies less effort), how competent one feels to be in the newer position, and what impact it entails to the existing balance between one's work responsibilities and family duties (the more balance the new job allows, the stronger the likelihood they will follow the leader out).

Mianzi emerged as an important factor due to a sub-question that posed the possibility of returning to the previous job two months after to which the interviewees mostly stated they would opt not to due to reputational and face issues (Buckley et al., 2010). Other motivations to either follow a departing non-transformational leader (as against co-workers decision) emerged with a more general stance highlighting the work environment, becoming a teammate, and the harmony of relationship with coworkers (Estryn-Béhar et al., 2007).

Curiously, when referring to personal values, one is usually highlighting the similarity between oneself and someone else as regards the importance that certain objectives have in a personal sense of ranking of priorities. This closely links to ethics and the sense of morality but in the case of the answers, values refer to how closely interviewees believe a leader value as much as them their own ability and recognize that with proper pay and grow opportunities.

Again, HRM-related factors were not truly emerging from the analysis with the sole exception of performance management and talent management as positive expectations about having better performance and skills grow opportunities foster decisions of following out the departing leader.

The leader's profile is important but so is the organization where the leader is departing to. Interviewees take, although not with such a high frequency, into consideration also the prestige

of the new organization and how much they identify with the organizational culture, both the current and the future organization.

As reported, individuals pay more attention to their own personal situation (values, age) when thinking about reasons for not following out a desirable leader. Likewise, leader-related factors such as the expected support received from the leader as regards one's career opportunities to grow and the leadership style itself have more weight in the not-following situation than in the following situation. This may relate with the instrumental value of the decision as regards gaining access material resources and the importance of salary. Although a transformational leader may be seen as preferable (judging from 21 out of 34 preferences stated transformational leader, and 7 a mixed), a reason not to follow such leader could only link to the fact that the transactional leadership pays closer attention to material considerations regarding salary, and career promotion. Thus, for a non-following decision, individuals accept transactional leadership as a possible 2nd-choice alternative that should be clear with the focus on material issues. Alongside leader's style age emerged as an important factor, as age was connoted both as indication of wisdom and increased risks from changing jobs. Thus, age seems to play an anchor role for not following such leader.

Social factors have the interesting findings of been equivalent in both situations, which suggests social factors are a constant in thinking about what to decide independently of been a transformational or transactional leader. The within-category relative frequency, however, suggests some minor differences that may be informative. In the not-following decision individuals seems to give more importance to coworker relations and team culture while in the following decision it is more important the work environment, team job roles and mianzi. These differences may point towards the same underlying cause: the quality of the team experience as the coworkers relations suggest that if those following out the departing leader are not in good relations with the decision maker, then he or she will simply not follow (Li & van Knippenberg, 2021). In considering not coming back after having following out a leader, Mianzi is by far the most important consideration and this is why it gained so much importance in the following situation.

The least important factors in the not-following situation when contrasted with the following one pertained to the job-related factors. Among the sub-categories it is clear the difference found for salary considerations and also for person-job fit. On the one hand, many individuals in the sample have already achieved a certain level of financial comfort that allows them not to give top priority to salary issues but still, a transactional leader would offer them a much better financial reward than a transformational leader would in the sense that the

transactional leader builds all the effectiveness of the leading process upon the fairness and attractiveness of the effort-rewards relation (Tsourvakas et al., 2007). On the other hand, those that are not so much in need of money, will take the transformational leader as one that can foster more opportunities to develop in non-monetary terms, with stronger emphasis on personal realization. Person-job fit was prevalent in the following situation because individuals reasoned that the easiness with which they could transfer their current skills to a novel job position out (due to being similar job tasks and responsibilities) would be a facilitating factor. Other dimensions that should be used to understand these findings pertain to the temporal expectations as transactional leaders could offer a short time horizon job (a job in which the individual may be expecting to remain for a short time or simply without long time perspective) while a transformational leader would always offer a job that has longer time horizons especially because the higher goals of such leaders are only expressed on the long term (Judge & Piccolo, 2004).

In stating reasons for not following a desirable departing leader, individuals highlighted more organizational reputation and prestige as they did not want to be associated with any sort of downgrading compared to the current organization where they are working.

By putting together all the emerging factors of loyalty to the leader as a focal point in explaining decision to follow out a leader (or simply remaining) we have depicted the intersection of all these factors in Figure 5.1. This figure depicts the graphical arrangement of these factors in a model.

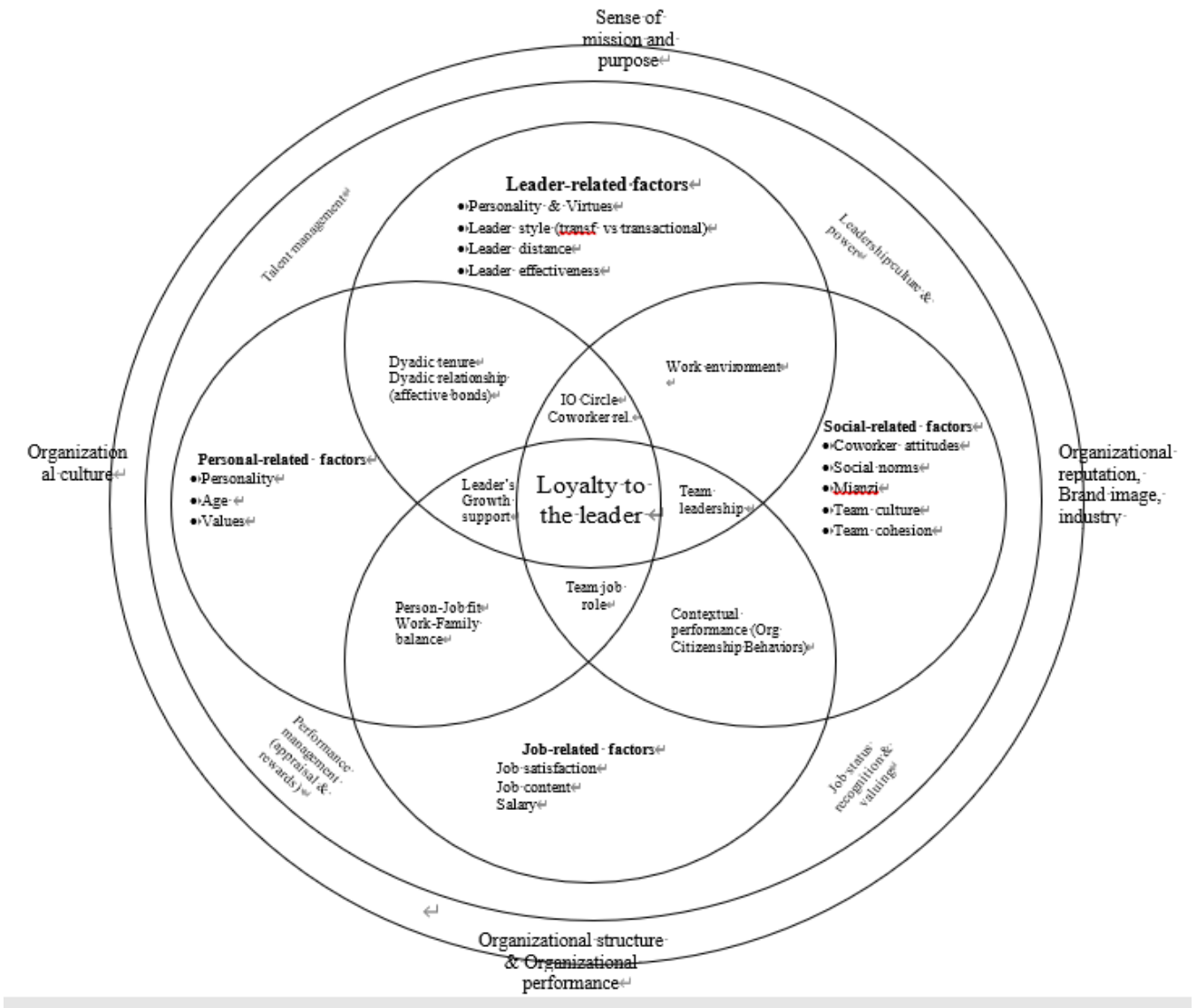


Figure 5.1 Integrated model of loyalty to the leader

Chapter 6: General Discussion and Conclusion

Employee turnover, especially the voluntary turnover, has been long researched by management scholars due to its potential negative effects upon the normal functioning of organizations. In the last decades a stronger attention was given to a special turnover event where employees' decision to leave an organization is not taken just as individual but rather conceived within the larger scope of their social interactions. Literature has documented what has become to be known as collective turnover, which precisely expresses the psychosocial nature of this phenomenon. If individual turnover can be already troublesome (e.g. when a talented employee opts to voluntary leave an organization) collective turnover can be truly disruptive because it may end up in no one from a work team remaining in the organization in a short period of time. Thus, many of the strategies to mitigate employee turnover may not be applicable in such circumstances. Within the collective turnover literature there is even a more insidious event where employees do not simply follow out their former colleagues (as in a syphon dynamics) but rather leave simultaneously as a team (as a block). This type of collective turnover has been documented in China in certain industries (e.g. high technology, pharmaceutics) where knowledge-intensive resources are immediately lost with the abandoning of whole teams. This is a top priority in managing HR as its effects upon organizations can be catastrophic.

Although the magnitude of the detrimental effects of this phenomenon is undoubtfully massive, extant literature on collective turnover is not yet consolidated on this topic in China which has its cultural idiosyncrasies as regards teamwork relations and relationship with leaders. A model is needed that accounts for the complex nature of variables that could explain such block collective turnover events.

From literature reviewed an obvious role is placed upon emergent team states (e.g. team cohesion) as well as from the influence of the team leader (namely the desired transformational leadership style). Also, job satisfaction and organizational affective commitment were also important as well as the sense of loyalty to the leader. By considering both individual level constructs and team level constructs, a conceptual multilevel model was proposed intending to explain both individual and team-level turnover intentions.

The first empirical study is focused on Pharma industry which is one of the industries that

witnesses collective turnover phenomenon in China. The nested nature of the data allowed for a team level analysis with 69 teams while considering also its comprising 322 individual data, in a multilevel model. The individual-level conceptual model is complex and entails 11 hypotheses, while adding the group level conceptual model added three model hypotheses. The HLM findings showed transformational leadership does not directly prevent individual turnover without considering the mediators in the model. Findings highlighted the emotional dimension as an important focus of the analysis due to the affective states triggered in team members by how they interpret the leaders' personal concern with the (Bass, 1985). Along this line of thought, loyalty to the leader emerged as an important variable in the model. In Chinese culture loyalty to the leader has strong roots (Farh & Cheng, 2000; Zhen et al., 2018) and is taken not only as normative but it has also a strong affective nature as a personal bond. Quite naturally, a strong positive effect was found between transformational leadership and loyalty to the leader, which has been well documented in Chinese context (Wang et al., 2017) and is aligned with the social norm of reciprocation as expected by the Social Exchange Theory (Cropanzano & Mitchell, 2005). Loyalty to the leader was measured with both a role-based subscale and an affective-based subscale (Jiang & Cheng, 2008) to find both play a mediator role between transformational leadership and job satisfaction as well as directly with turnover intention. This is in line with research conducted in China (Wu & Wang, 2012) and completely expresses the traditional Confucian views of filial piety and the social virtues. The sequential mediations found suggest a robust process linking transformational leadership to turnover intention. The asymmetric relation found between the indirect effect via role-based loyalty to the leader (which was observed) and the one via affect-based loyalty to the leader (which was not observed) in the multilevel model, suggests a dual path that does not entail the same psychological processes. Namely, that affective paths do not require job satisfaction in the equation to exert an effect but instead act directly upon affective organizational commitment.

The differential roles of normative (role-based) and affective (affect-based) loyalty to the leader open an important discussion on the convergence or divergence of Confucian virtues as a leader might or not be benevolent although filial piety may press individuals to obey.

Findings focused on the team level indicate transformational leadership counters individual turnover intention in line with Chang et al. (2013) findings, but that it is more effective in countering team level turnover intention. This can be explained by the job embeddedness model from Mitchell et al. (2001) as the transformational leader (acknowledged as such by the team) aims not only to foster better person-organization fit but also team bonds. Team cohesion as a group level construct (Klein & Kozlowski, 2000) was also found to play a role in preventing

turnover intention which is a well-established relation in literature (Mitchell et al., 2001; Trevor & Nyberg, 2008). The fact that job satisfaction was not supported as countering turnover intention was surprising if one thinks of it as an individual property. However, when conceived at a team level (i.e. when we measure the within team shared job satisfaction) one must take into consideration its degree of homogeneity and our findings did show it to have the lowest rwg. This value was below previously reported findings for similar measures in China (Lin et al., 2022) but it was not low enough to reject it at the aggregated level. Thus, we trust team level job satisfaction will only exert any significant effect in team turnover intention as long as it reaches a certain level of commonality within the team. The overall findings from the 1st study show that the model is sound both at the individual and team level. Among the variables within the conceptual model, one gained especial centrality: loyalty to the leader. This variable is interesting in the context of China because it has deep cultural roots in Chinese culture and tradition. A doubt that arises from findings pertain to the distinction between collective turnover as a string of voluntary exits within a determined time frame versus collective turnover as one event block voluntary exit of many team members (Simon et al., 2022). The effects arising from both are negative, but the latter has much higher potential to disrupt normal operations.

Reasoning that the block turnover may easily occur in a collectivistic culture like the Chinese, when certain conditions are met, we endeavored to rework data in a second empirical study that crosses a leader-team turnover intention process to team performance with two boundary conditions: transformational leadership, and team turnover intention homogeneity. Departing from a view on contagion effects (Bartunek et al., 2008) from leader towards the team. Findings rejected the direct effect of the leader's turnover intention upon the team's performance as well as the direct effect upon the team's turnover intention and thus, the mediator unconditional role of team's turnover intention was also rejected. This is seemingly divergent from previous reports in literature and it could be ascribed to the magnitude of the effect itself not being sufficiently large to determine a statistically significant indirect effect. However, by reasoning at the group level, one must accept that group homogeneity is a requisite to legitimate this analysis and by using team turnover intention homogeneity (as computed with rwg) as a proxy, an interaction effect was found that reinstated the mediation model but only when the teams had a sufficiently high shared intention to exit. This is consistent with the event systems theory (Morgeson et al., 2015) where the joint intention of the leader and the team are sufficiently aligned to attain a critical mass and thus enact the block turnover event. A similar pattern was found for transformational leadership which also moderated the mediation in such a way that corroborated our expectations. Transformational leaders are thus an asset when the

leader and the team want to stay (Mo & Chen, 2015) but they are hazardous if they want to leave because if it does happen it will be as a block turnover event.

Another topic that was highlighted by the findings from the 1st study pertains to the role of loyalty to the leader. The 3rd study, of a qualitative nature, was developed to test the extend to which loyalty to the leader was critical in explaining the individual decision to follow out or not a transformational versus a transactional leader. Findings show that the loyalty to the leader was always considered as against other factors relating to the individual him or herself (personal), relations with colleagues, team culture and cohesion (social) and the sense of loyalty to the organization itself. Unsurprisingly, findings highlighted the complex nature of such decisions. Still, a pattern of instrumental considerations was found that suggested self-interest prevails over other considerations in line with Avey et al. (2009). Such decisions are also subjected to the influence of others (not necessarily a direct one) as the profile of colleagues that would follow out the leader will provide a clue to the individual about whether to go or not (Li & van Knippenberg, 2021; Zhen et al., 2018). Mutual effects from the valence of bonds with the leader and the teammates should be accounted in further explanations on collective turnover as suggested by Mesu and Sanders (2022). Amongst the instrumental considerations, salary was surprisingly noncentral in the interviewees discourse. They seemed to gauge it against an expected change towards a more demanding set of tasks and responsibilities (job content) and how it would negatively impact the fulfilling of their family duties (Wu et al., 2015) but it is also true that the average salary of the interviewees would not put money at the center of pressing needs. The reputation and culture of the organization where they may transfer to is also a factor. Along the instrumental line of reasoning career opportunities seem to play an important role and they can work two ways: as following out can lead to a promotion, or as remaining in can open up vacant positions one can occupy. Still, most of the interviewees that expressed a willingness to follow out highlighted career considerations as critical. Another emergent factor is the consideration about how much they could return to the previous job, should be opt to leave. As expected, face keeping (mianzi) rule in China clearly showed that once taken the decision, it would be very difficult to return so to preserve face (Buckley et al., 2010).

Loyalty to the leader has been conceived as both expressing a sense of duty (role-based loyalty) and a sense of affection (affective-based loyalty) but judging from our findings there is also a dimension that, to our best judgment has been overlooked, that concerned how much the leader remains attentive to the followers' own interest (instrumental-based loyalty).

Overall loyalty to the leader is an important construct in understanding turnover intention

but it is definitely not a factor that operates without many boundary conditions pertaining to personal and social factors and alongside with normative and affective considerations, individuals put emphasis on the material consequences.

Despite limitations concerning methodological options or sampling, the overall findings from this research seem strong enough to support the conceptual model explaining collective turnover intention. They show transformational leadership is a positive asset in preventing such collective event and that many psychological variables and emergent states in teams bridge leadership to the individual and team level intention to leave. Findings highlight the transformational leadership can be also a liability when the leaders themselves have an intention to leave, because when such happens, if the team has also a shared intention to leave, then the likelihood of a block collective turnover event is higher.

Another finding that might deserve attention for future theory concerns the need to extend the typology of loyalty by adding the instrumental loyalty, which could also be explained by social exchange theory where the follower is expecting the leader to reciprocate by keeping in mind how such decisions would impact upon the material wellbeing of the follower. Although instrumental motives are usually taken as less noble, the fact is that employees seem to be considering loyalty to the family as another factor that emerged in their reasoning, and material wellbeing may play a part in such type of loyalty.

For future studies, the proposed conceptual model focused on uncovering the processes that were linking transformational leadership to turnover intention, but this focus does not preclude the importance of considering contextual variables or interaction effects that were not previewed. Such is the case for the quality of trust between the subordinate and the leader. In addition to the direct association between loyalty to the leader and turnover intention, relevant literature suggests that the quality of trust from transformational leaders moderates the association between supervisor loyalty and turnover intention (Waldman et al., 2015). Future studies may benefit from adding this variable as a moderator to the conceptual model. More studies are also needed to extend the model in the 2nd study namely in understanding on peer relations or social influence processes could better refine steps in the causal nexus.

The sheer impact of a block turnover event in an organization deserves further refinement of the model and testing it on different contexts. It is important to test this model as a guidance to future decisions on how organizations manage their leaders in such a way that they foster transformational leadership because of its well-known effects on positive outcomes among which the prevention of employee turnover. Likewise, a disgruntled middle manager is a critical liability if the team is also dissatisfied with the organization due to possible block turnover

decisions. Future research should also deploy this model to guide leaders' decisions on what to give primacy: to foster a cohesive and satisfied team with a strong affective sense of commitment to the organization and, also to the leader. Leadership style itself is important as expressed in all the dimensions of transformational leadership and so leaders should be able to create in themselves a sense of high expectations about the followers, to be concerned with their continuous development, to stimulate them intellectually and to recognize their efforts and achievement. At the team level leaders should be enabled by the organization to help the group to gain a sense of identity, to gain a vision and operate as a cohesive team.

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Annex A

The CFA for constructs

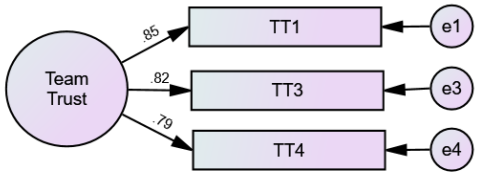


Figure a.1 Team Trust

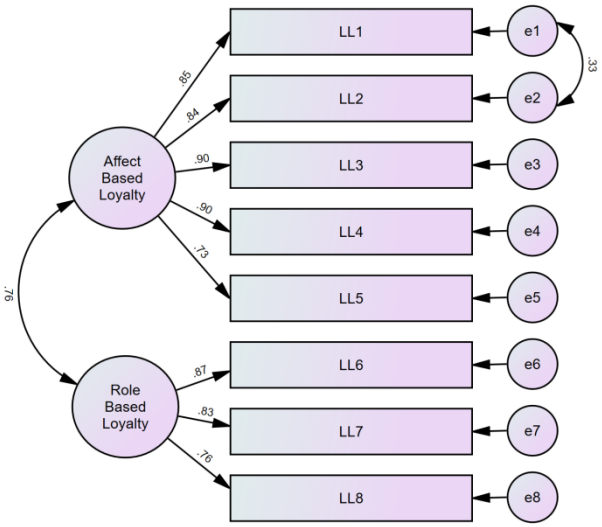


Figure a.2 Loyalty to the leader

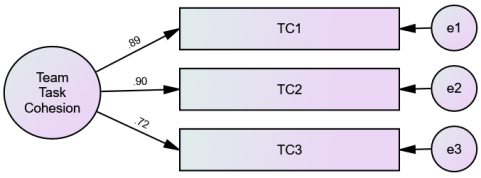


Figure a.3 Team Task Cohesion

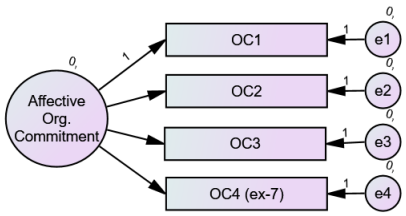


Figure a.4 Affective organizational commitment

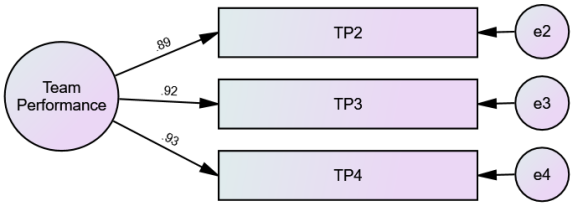


Figure a.5 Team Performance

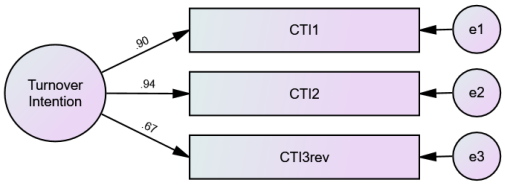


Figure a.6 Turnover Intention

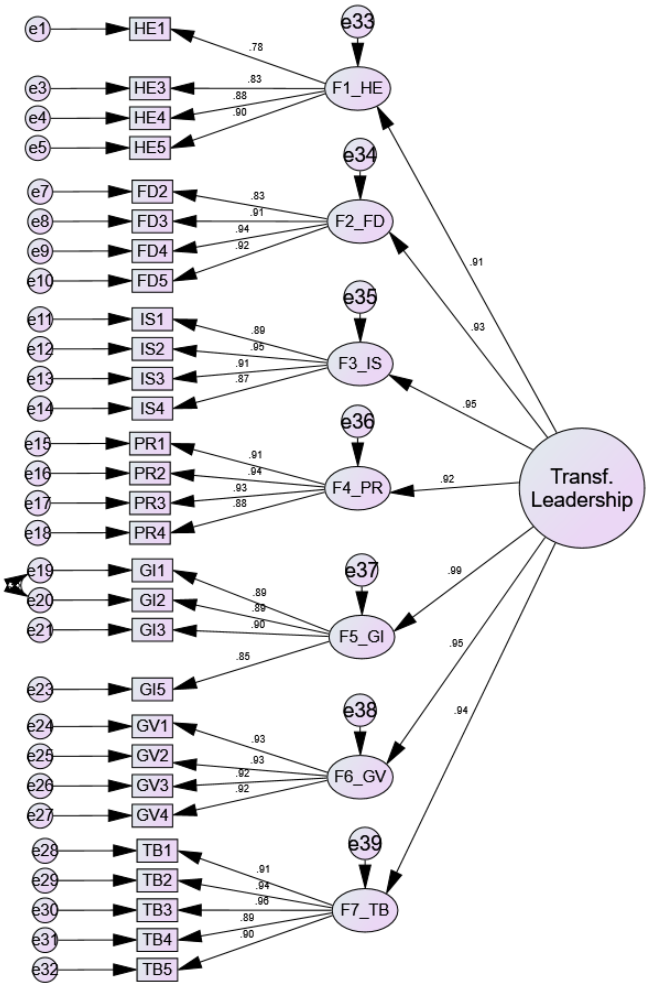


Figure a.7 Transformational leadership

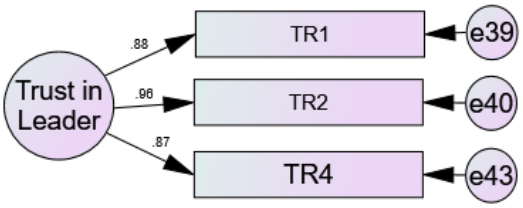


Figure a.8 Trust in the leader

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Annex B

Outputs from SEM analysis on the individual level conceptual model

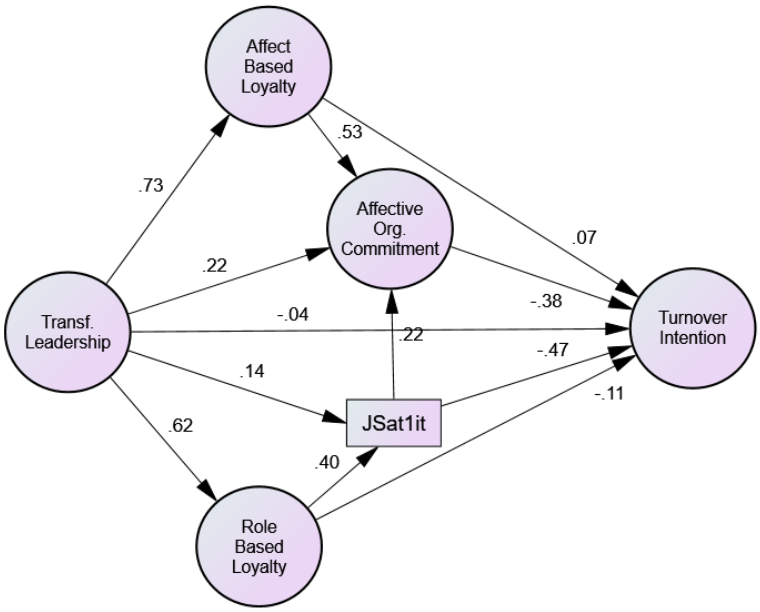


Figure b.1 Hypotheses:

Table b.1 CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	207	2696.959	1170	.000	2.305
Saturated model	1377	.000	0		
Independence model	102	19323.232	1275	.000	15.155

Table b.2 Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.860	.848	.916	.908	.915
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Table b.3 Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.918	.790	.840
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

Table b.4 NCP

Model	NCP	LO 90	HI 90
Default model	1526.959	1379.564	1682.015
Saturated model	.000	.000	.000
Independence model	18048.232	17601.762	18501.127

Table b.5 FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	8.402	4.757	4.298	5.240
Saturated model	.000	.000	.000	.000
Independence model	60.197	56.225	54.834	57.636

Table b.6 RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.064	.061	.067	.000
Independence model	.210	.207	.213	.000

Table b.7 AIC

Model	AIC	BCC	BIC	CAIC
Default model	3110.959	3190.989		
Saturated model	2754.000	3286.372		
Independence model	19527.232	19566.667		

Table b.8 ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	9.691	9.232	10.175	9.941
Saturated model	8.579	8.579	8.579	10.238
Independence model	60.832	59.442	62.243	60.955

Table b.9 HOELTER

Model	HOELTER .05	HOELTER .01
Default model	149	153
Independence model	23	24

Execution time summary

SRMR=0.729

Annex C

HLM output for individual and collective turnover intention

Program:	HLM 8 Hierarchical Linear and Nonlinear Modeling
Authors:	Stephen Raudenbush & Richard Congdon
Copyright:	Copyright © 1996-2022 Scientific Software International, Inc
Technical Support:	hlm@ssicentral.com
Website:	www.ssicentral.com
Module:	HLM2.EXE (8.2.3.2)
Date:	18 June 2022, Saturday
Time:	9: 8: 2
License:	HLM Standard
Master Key:	b7e7a05c-****-****-****-0602a23f9d71
Installation Key:	da76ad28-****-****-****-fbed406059b6
Expiration:	5/4/2023 1:37:20 PM

Specifications for this HLM2 run
Problem Title: no title

The data source for this run = trial18june
The command file for this run = C:\Users\campo\AppData\Local\Temp\whlmtemp.hlm
Output file name = C:\Users\campo\Desktop\Backup Office\DBAs_DoM\SMU\2025 Li Yuanhui TL_Trust_OP_SMU\Study1\HLM\hlm2.html
The maximum number of level-1 units = 322
The maximum number of level-2 units = 69
The maximum number of iterations = 100
Method of estimation: full maximum likelihood

Summary of the model specified
Step 2 model
Level-1 Model

$$INDITQ_{ij} = \beta_{0j} + \beta_{1j}*(TRANSFL_{ij}) + \beta_{2j}*(LOYALF1_{ij}) + \beta_{3j}*(LOYALF2_{ij}) + \beta_{4j}*(AC4IT_{ij}) + \beta_{5j}*(JSAT1IT_{ij}) + \beta_{6j}*(TRUSTL_{ij}) + \beta_{7j}*(GENDER_{ij}) + \beta_{8j}*(AGE_{ij}) + \beta_{9j}*(EDUC_{ij}) + \beta_{10j}*(ORGTEN_{ij}) + \beta_{11j}*(SUPERV_{ij}) + \beta_{12j}*(DYADTEN_{ij}) + r_{ij}$$

Level-2 Model

$$\beta_{0j} = \gamma_{00} + \gamma_{01}*(TL_M_j) + \gamma_{02}*(TRUSTT_M_j) + \gamma_{03}*(TCOH3_M_j) + \gamma_{04}*(TPERF3_M_j) + \gamma_{05}*(JOBSAT_M_j) + u_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

$$\beta_{4j} = \gamma_{40}$$

$$\beta_{5j} = \gamma_{50}$$

$\beta_{6j} = \gamma_{60}$
$\beta_{7j} = \gamma_{70}$
$\beta_{8j} = \gamma_{80}$
$\beta_{9j} = \gamma_{90}$
$\beta_{10j} = \gamma_{100}$
$\beta_{11j} = \gamma_{110}$
$\beta_{12j} = \gamma_{120}$
CTINT_M$_j = \gamma_{130} + u_{13j}$

TRANSFL LOYALF1 LOYALF2 AC4IT JSAT1IT TRUSTL GENDER AGE EDUC ORGTEN SUPERV DYADTEN have been centered around the group mean.

TL_M TRUSTT_M TCOH3_M TPERF3_M JOBSAT_M have been centered around the grand mean.
Multivariate Results - Iteration 841
NOTE: level-1 and level-2 slopes have been duplicated across all level-2 equations.
Iterations stopped due to small change in likelihood function

Σ
INDITQ /INTRCPT2 0.71026

Standard error of Σ
INDITQ /INTRCPT2 0.06315

Tau
INDITQ 0.16172 0.19710
INTRCPT1/ CTINT_M 0.19710 0.24189

Standard errors of Tau
INDITQ 0.16133 0.06017
INTRCPT1/ CTINT_M 0.06017 0.04118

Tau (as correlations)
INDITQ 1.000 0.997
INTRCPT1 / CTINT_M 0.997 1.000

Table c.1 Final estimation of fixed effects

Fixed Effect	Coefficient	Standard error	*t*-ratio	Approx. *d.f.*	*p*-value
For INDITQ /INTRCPT2					
INTRCPT2	7.346224	0.798121	9.204	63	<0.001
TL_M	-0.502384	0.164773	-3.049	63	0.003
TRUSTT_M	0.247411	0.197101	1.255	63	0.214
TCOH3_M	-0.700654	0.188337	-3.720	63	<0.001
TPERF3_M	0.070582	0.186798	0.378	63	0.707
JOBSAT_M	0.056389	0.087220	0.647	63	0.520
TRANSFL	-0.201911	0.125449	-1.610	57	0.113
LOYALF1	-0.148235	0.093054	-1.593	57	0.117
LOYALF2	-0.276766	0.096110	-2.880	57	0.006

AC4IT	-0.179064	0.092885	-1.928	57	0.059
JSAT1IT	-0.364552	0.069307	-5.260	57	<0.001
TRUSTL	0.146516	0.100450	1.459	57	0.150
GENDER	0.022063	0.115532	0.191	57	0.849
AGE	0.117150	0.071662	1.635	57	0.108
EDUC	-0.029040	0.083145	-0.349	57	0.728
ORGTEN	0.004114	0.068117	0.060	57	0.952
SUPERV	0.024236	0.069634	0.348	57	0.729
DYADTEN	-0.025374	0.060859	-0.417	57	0.678
For CTINT_M					
INTRCPT2	7.626746	0.903574	8.441	63	<0.001
TL_M	-0.491123	0.173438	-2.832	63	0.006
TRUSTT_M	0.161507	0.206032	0.784	63	0.436
TCOH3_M	-0.597353	0.204836	-2.916	63	0.005
TPERF3_M	-0.006719	0.208399	-0.032	63	0.974
JOBSAT_M	0.048931	0.097877	0.500	63	0.619

The value of the log-likelihood function at iteration 841 = -4.507999E+02

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Annex D

process (study 2)

SPSS output

Transformational leadership: HE (High expectations), FD (Follower development), IS (Intellectual stimulation), PR (Personal recognition), GI (Group identity), GV (Group vision), TB (Team Building)

We have tested model 9 for the thesis.

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.0 *****************

        Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 9
    Y  : TPerf3_m
    X  : LTInt
    M  : CTI_NoL
    W  : RWG
    Z  : TrustL_m

Covariates:
 OrgTen   gender   age     Educ     dyadten  TeamSize

Sample
Size:  253

**************************************************************************
OUTCOME VARIABLE:
 CTI_NoL

Model Summary
        R      R-sq       MSE         F       df1       df2         p
    .6144     .3775     .3396   13.2840   11.0000   241.0000     .0000

Model
            coeff         se          t          p       LLCI       ULCI
constant   2.8293     .2484   11.3919     .0000     2.3401     3.3185
```

LTInt	.1423	.0317	4.4962	.0000	.0800	.2047
RWG	-.3461	.4405	-.7858	.4328	-1.2138	.5216
Int_1	2.0233	.3108	6.5094	.0000	1.4110	2.6355
TrustL_m	-.3591	.0786	-4.5668	.0000	-.5140	-.2042
Int_2	.2164	.0535	4.0430	.0001	.1110	.3218
OrgTen	.0718	.0417	1.7237	.0860	-.0103	.1538
gender	.0813	.0796	1.0215	.3081	-.0755	.2380
age	.0408	.0446	.9163	.3604	-.0469	.1286
Educ	-.0939	.0481	-1.9507	.0523	-.1887	.0009
dyadten	-.0221	.0426	-.5183	.6048	-.1059	.0618
TeamSize	-.0540	.0199	-2.7172	.0071	-.0932	-.0149

Product terms key:

Int_1	:	LTInt	x	RWG
Int_2	:	LTInt	x	TrustL_m

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.1095	42.3726	1.0000	241.0000	.0000
X*Z	.0422	16.3460	1.0000	241.0000	.0001
BOTH(X)	.1285	24.8642	2.0000	241.0000	.0000

Focal predict: LTInt (X)
Mod var: RWG (W)
Mod var: TrustL_m (Z)

Conditional effects of the focal predictor at values of the moderator(s):

RWG	TrustL_m	Effect	se	t	p	LLCI	ULCI
-.1248	-.5715	-.2339	.0541	-4.3224	.0000	-.3405	-.1273
-.1248	.0876	-.0913	.0400	-2.2809	.0234	-.1701	-.0125
-.1248	.4487	-.0132	.0439	-.2994	.7649	-.0997	.0734
.0213	-.5715	.0617	.0435	1.4174	.1577	-.0240	.1474
.0213	.0876	.2043	.0354	5.7725	.0000	.1346	.2740
.0213	.4487	.2824	.0442	6.3848	.0000	.1953	.3696
.0917	-.5715	.2041	.0535	3.8123	.0002	.0986	.3096
.0917	.0876	.3467	.0506	6.8576	.0000	.2471	.4463
.0917	.4487	.4249	.0587	7.2420	.0000	.3093	.5404

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

```
DATA LIST FREE/
  LTInt     RWG       TrustL_m   CTI_NoL    .
BEGIN DATA.
   -1.7273    -.1248    -.5715    3.3876
    -.0606    -.1248    -.5715    2.9978
    1.6061    -.1248    -.5715    2.6079
   -1.7273    -.1248     .0876    2.9046
    -.0606    -.1248     .0876    2.7524
    1.6061    -.1248     .0876    2.6003
```

```
   -1.7273    -.1248     .4487    2.6399
    -.0606    -.1248     .4487    2.6180
    1.6061    -.1248     .4487    2.5961
   -1.7273     .0213    -.5715    2.8265
    -.0606     .0213    -.5715    2.9293
    1.6061     .0213    -.5715    3.0321
   -1.7273     .0213     .0876    2.3435
    -.0606     .0213     .0876    2.6840
    1.6061     .0213     .0876    3.0244
   -1.7273     .0213     .4487    2.0788
    -.0606     .0213     .4487    2.5495
    1.6061     .0213     .4487    3.0203
   -1.7273     .0917    -.5715    2.5561
    -.0606     .0917    -.5715    2.8963
    1.6061     .0917    -.5715    3.2365
   -1.7273     .0917     .0876    2.0731
    -.0606     .0917     .0876    2.6510
    1.6061     .0917     .0876    3.2289
   -1.7273     .0917     .4487    1.8084
    -.0606     .0917     .4487    2.5165
    1.6061     .0917     .4487    3.2247
END DATA.
GRAPH/SCATTERPLOT=
 LTInt    WITH     CTI_NoL  BY       RWG      /PANEL   ROWVAR=  TrustL_m .

**************************************************************************
OUTCOME VARIABLE:
 TPerf3_m

Model Summary
        R      R-sq       MSE         F       df1        df2          p
     .5404     .2920     .1714   12.5789    8.0000   244.0000     .0000

Model
            coeff         se          t          p       LLCI       ULCI
constant    6.5047     .1978    32.8772     .0000    6.1150    6.8944
LTInt       -.0138     .0205    -.6748     .5005    -.0542     .0265
CTI_NoL     -.2834     .0393   -7.2116     .0000    -.3608    -.2060
OrgTen       .0135     .0295     .4554     .6492    -.0447     .0716
gender      -.0209     .0556    -.3760     .7072    -.1303     .0885
age         -.1064     .0314   -3.3870     .0008    -.1683    -.0445
Educ         .0384     .0343    1.1189     .2643    -.0292     .1059
dyadten      .0091     .0296     .3075     .7587    -.0492     .0674
TeamSize    -.0486     .0141   -3.4487     .0007    -.0763    -.0208

Test(s) of X by M interaction:
         F       df1        df2          p
    2.4128    1.0000   243.0000     .1216

****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************
```

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
-.0138	.0205	-.6748	.5005	-.0542	.0265

Conditional indirect effects of X on Y:

INDIRECT EFFECT:

LTInt -> CTI_NoL -> TPerf3_m

RWG	TrustL_m	Effect	BootSE	BootLLCI	BootULCI
-.1248	-.5715	.0663	.0144	.0381	.0946
-.1248	.0876	.0259	.0129	.0031	.0542
-.1248	.4487	.0037	.0169	-.0241	.0427
.0213	-.5715	-.0175	.0104	-.0383	.0029
.0213	.0876	-.0579	.0128	-.0823	-.0321
.0213	.4487	-.0800	.0184	-.1142	-.0422
.0917	-.5715	-.0578	.0151	-.0892	-.0287
.0917	.0876	-.0983	.0182	-.1344	-.0628
.0917	.4487	-.1204	.0230	-.1656	-.0746

Indices of partial moderated mediation:

	Index	BootSE	BootLLCI	BootULCI
RWG	-.5734	.1049	-.7800	-.3648
TrustL_m	-.0613	.0198	-.0961	-.0184

********** ANALYSIS NOTES AND ERRORS **********

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

W values in conditional tables are the 16th, 50th, and 84th percentiles.

Z values in conditional tables are the 16th, 50th, and 84th percentiles.

NOTE: The following variables were mean centered prior to analysis:
RWG TrustL_m LTInt

------ END MATRIX -----

Run MATRIX procedure:

********** PROCESS Procedure for SPSS Version 4.0 **********

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

```
**************************************************************************
Model  : 9
  Y  : TPerf3_m
  X  : LTInt
  M  : CTI_NoL
  W  : RWG
  Z  : TrfL_m

Covariates:
 OrgTen   gender   age     Educ     dyadten  TeamSize

Sample
Size:  253

**************************************************************************
OUTCOME VARIABLE:
 CTI_NoL

Model Summary
        R      R-sq       MSE         F       df1        df2         p
    .6676     .4457     .3024   17.6185   11.0000   241.0000     .0000

Model
             coeff        se         t         p      LLCI      ULCI
constant    2.7230     .2313   11.7739     .0000    2.2674    3.1786
LTInt       .1016      .0304    3.3434     .0010    .0418     .1615
RWG         -.4009     .4154    -.9650     .3355    -1.2192   .4174
Int_1       1.7595     .2975    5.9133     .0000    1.1734    2.3456
TrfL_m      -.6333     .0868    -7.2932    .0000    -.8044    -.4623
Int_2       .2048      .0605    3.3855     .0008    .0856     .3239
OrgTen      .0575      .0399    1.4430     .1503    -.0210    .1361
gender      .0655      .0747    .8760      .3819    -.0818    .2127
age         .0145      .0423    .3428      .7321    -.0689    .0979
Educ        -.0732     .0457    -1.6026    .1103    -.1631    .0168
dyadten     -.0030     .0403    -.0739     .9411    -.0823    .0764
TeamSize    -.0292     .0188    -1.5524    .1219    -.0663    .0079

Product terms key:
 Int_1   :       LTInt    x       RWG
 Int_2   :       LTInt    x       TrfL_m

Test(s) of highest order unconditional interaction(s):
          R2-chng         F       df1        df2         p
X*W         .0804    34.9671     1.0000   241.0000     .0000
X*Z         .0264    11.4617     1.0000   241.0000     .0008
BOTH(X)     .0898    19.5184     2.0000   241.0000     .0000
----------
   Focal predict: LTInt    (X)
         Mod var: RWG      (W)
         Mod var: TrfL_m   (Z)
```

Conditional effects of the focal predictor at values of the moderator(s):

RWG	TrfL_m	Effect	se	t	p	LLCI	ULCI
-.1248	-.5740	-.2355	.0557	-4.2271	.0000	-.3453	-.1258
-.1248	.0324	-.1114	.0380	-2.9307	.0037	-.1862	-.0365
-.1248	.4855	-.0186	.0443	-.4196	.6751	-.1058	.0686
.0213	-.5740	.0215	.0449	.4784	.6328	-.0670	.1100
.0213	.0324	.1457	.0336	4.3384	.0000	.0795	.2118
.0213	.4855	.2385	.0471	5.0633	.0000	.1457	.3313
.0917	-.5740	.1454	.0533	2.7253	.0069	.0403	.2504
.0917	.0324	.2696	.0482	5.5906	.0000	.1746	.3646
.0917	.4855	.3623	.0608	5.9628	.0000	.2426	.4821

Data for visualizing the conditional effect of the focal predictor:

Paste text below into a SPSS syntax window and execute to produce plot.

```
DATA LIST FREE/
  LTInt     RWG       TrfL_m    CTI_NoL   .
BEGIN DATA.
   -1.7273    -.1248    -.5740    3.5465
    -.0606    -.1248    -.5740    3.1539
    1.6061    -.1248    -.5740    2.7614
   -1.7273    -.1248     .0324    2.9479
    -.0606    -.1248     .0324    2.7623
    1.6061    -.1248     .0324    2.5767
   -1.7273    -.1248     .4855    2.5007
    -.0606    -.1248     .4855    2.4697
    1.6061    -.1248     .4855    2.4388
   -1.7273     .0213    -.5740    3.0440
    -.0606     .0213    -.5740    3.0798
    1.6061     .0213    -.5740    3.1156
   -1.7273     .0213     .0324    2.4453
    -.0606     .0213     .0324    2.6882
    1.6061     .0213     .0324    2.9310
   -1.7273     .0213     .4855    1.9981
    -.0606     .0213     .4855    2.3956
    1.6061     .0213     .4855    2.7931
   -1.7273     .0917    -.5740    2.8018
    -.0606     .0917    -.5740    3.0441
    1.6061     .0917    -.5740    3.2864
   -1.7273     .0917     .0324    2.2032
    -.0606     .0917     .0324    2.6524
    1.6061     .0917     .0324    3.1017
   -1.7273     .0917     .4855    1.7560
    -.0606     .0917     .4855    2.3599
    1.6061     .0917     .4855    2.9638
END DATA.
GRAPH/SCATTERPLOT=
 LTInt    WITH     CTI_NoL  BY       RWG      /PANEL   ROWVAR=  TrfL_m   .
```

```
**************************************************************************
OUTCOME VARIABLE:
 TPerf3_m

Model Summary
        R      R-sq       MSE         F       df1       df2         p
    .5404     .2920     .1714   12.5789    8.0000  244.0000     .0000

Model
            coeff         se         t         p       LLCI       ULCI
constant   6.5047     .1978   32.8772     .0000    6.1150    6.8944
LTInt      -.0138     .0205    -.6748     .5005    -.0542     .0265
CTI_NoL    -.2834     .0393   -7.2116     .0000    -.3608    -.2060
OrgTen      .0135     .0295    .4554      .6492    -.0447     .0716
gender     -.0209     .0556    -.3760     .7072    -.1303     .0885
age        -.1064     .0314   -3.3870     .0008    -.1683    -.0445
Educ        .0384     .0343    1.1189     .2643    -.0292     .1059
dyadten     .0091     .0296    .3075      .7587    -.0492     .0674
TeamSize   -.0486     .0141   -3.4487     .0007    -.0763    -.0208

Test(s) of X by M interaction:
         F       df1       df2         p
    2.4128    1.0000  243.0000     .1216

****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Direct effect of X on Y
    Effect         se         t         p       LLCI       ULCI
    -.0138     .0205    -.6748     .5005    -.0542     .0265

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
 LTInt      ->    CTI_NoL     ->    TPerf3_m

      RWG     TrfL_m     Effect     BootSE   BootLLCI   BootULCI
    -.1248    -.5740     .0668      .0153     .0373      .0973
    -.1248     .0324     .0316      .0128     .0086      .0589
    -.1248     .4855     .0053      .0178    -.0254      .0452
     .0213    -.5740    -.0061      .0109    -.0275      .0153
     .0213     .0324    -.0413      .0111    -.0630     -.0189
     .0213     .4855    -.0676      .0182    -.1027     -.0305
     .0917    -.5740    -.0412      .0141    -.0698     -.0147
     .0917     .0324    -.0764      .0155    -.1073     -.0465
     .0917     .4855    -.1027      .0219    -.1462     -.0612

     Indices of partial moderated mediation:
          Index     BootSE   BootLLCI   BootULCI
RWG       -.4986     .0948    -.6869    -.3193
TrfL_m    -.0580     .0208    -.0966    -.0157
---
```

********** ANALYSIS NOTES AND ERRORS **********

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

W values in conditional tables are the 16th, 50th, and 84th percentiles.

Z values in conditional tables are the 16th, 50th, and 84th percentiles.

NOTE: The following variables were mean centered prior to analysis:
RWG TrfL_m LTInt

------ END MATRIX -----

Model 9

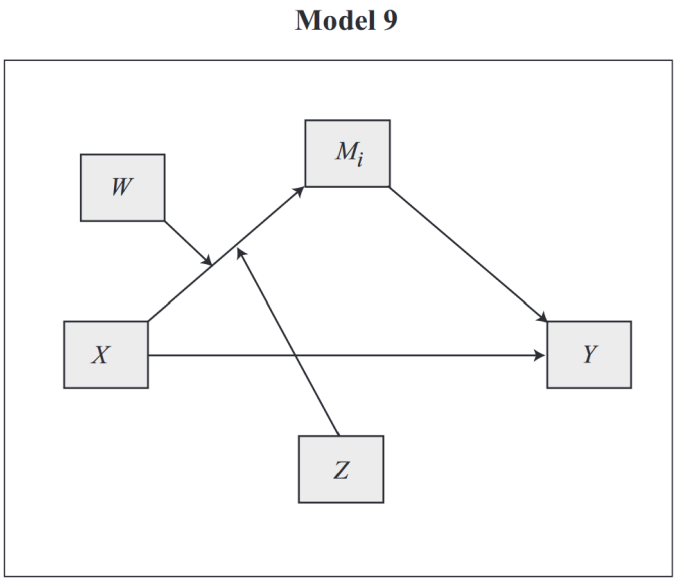


Figure d.1 Model 9

Run MATRIX procedure:

********** PROCESS Procedure for SPSS Version 4.0 **********

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

****
Model : 9
Y : TPerf3_m
X : LTInt
M : CTI_NoL

```
   W  : RWG
   Z  : HE_mean

Covariates:
 OrgTen   gender   age     Educ     dyadten  TeamSize

Sample
Size:  253

**************************************************************************
OUTCOME VARIABLE:
 CTI_NoL

Model Summary
        R       R-sq        MSE          F        df1        df2          p
    .6311      .3982      .3283    14.4988    11.0000   241.0000      .0000

Model
             coeff         se          t          p       LLCI       ULCI
constant    2.5864      .2398    10.7844      .0000     2.1139     3.0588
LTInt        .1112      .0323     3.4429      .0007      .0476      .1748
RWG         -.2838      .4298     -.6602      .5098    -1.1305      .5630
Int_1       1.7741      .3051     5.8139      .0000     1.1730     2.3751
HE_mean     -.5086      .0888    -5.7264      .0000     -.6835     -.3336
Int_2        .1351      .0647     2.0899      .0377      .0078      .2625
OrgTen       .0723      .0415     1.7415      .0829     -.0095      .1542
gender       .0824      .0779     1.0582      .2910     -.0710      .2357
age          .0302      .0441      .6852      .4939     -.0566      .1170
Educ        -.0694      .0478    -1.4518      .1479     -.1635      .0248
dyadten     -.0103      .0419     -.2466      .8055     -.0929      .0722
TeamSize    -.0254      .0198    -1.2817      .2012     -.0645      .0137

Product terms key:
 Int_1    :       LTInt    x       RWG
 Int_2    :       LTInt    x       HE_mean

Test(s) of highest order unconditional interaction(s):
          R2-chng          F        df1        df2          p
X*W          .0844     33.8016     1.0000   241.0000      .0000
X*Z          .0109      4.3676     1.0000   241.0000      .0377
BOTH(X)      .0865     17.3305     2.0000   241.0000      .0000
----------
   Focal predict: LTInt    (X)
         Mod var: RWG      (W)
         Mod var: HE_mean  (Z)

Conditional effects of the focal predictor at values of the moderator(s):

      RWG    HE_mean     Effect         se          t          p       LLCI       ULCI
   -.1248     -.4203     -.1671      .0492    -3.3950      .0008     -.2640     -.0701
   -.1248      .0485     -.1037      .0396    -2.6217      .0093     -.1817     -.0258
```

-.1248	.5297	-.0387	.0510	-.7596	.4482	-.1391	.0617
.0213	-.4203	.0921	.0400	2.3006	.0223	.0132	.1709
.0213	.0485	.1554	.0360	4.3184	.0000	.0845	.2263
.0213	.5297	.2205	.0538	4.0997	.0001	.1145	.3264
.0917	-.4203	.2170	.0512	4.2342	.0000	.1160	.3179
.0917	.0485	.2803	.0508	5.5144	.0000	.1802	.3805
.0917	.5297	.3454	.0667	5.1757	.0000	.2139	.4768

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

```
DATA LIST FREE/
  LTInt     RWG      HE_mean   CTI_NoL   .
BEGIN DATA.
   -1.7273   -.1248   -.4203    3.2556
    -.0606   -.1248   -.4203    2.9771
    1.6061   -.1248   -.4203    2.6986
   -1.7273   -.1248    .0485    2.9078
    -.0606   -.1248    .0485    2.7349
    1.6061   -.1248    .0485    2.5620
   -1.7273   -.1248    .5297    2.5507
    -.0606   -.1248    .5297    2.4862
    1.6061   -.1248    .5297    2.4216
   -1.7273    .0213   -.4203    2.7664
    -.0606    .0213   -.4203    2.9199
    1.6061    .0213   -.4203    3.0734
   -1.7273    .0213    .0485    2.4187
    -.0606    .0213    .0485    2.6777
    1.6061    .0213    .0485    2.9367
   -1.7273    .0213    .5297    2.0616
    -.0606    .0213    .5297    2.4290
    1.6061    .0213    .5297    2.7964
   -1.7273    .0917   -.4203    2.5307
    -.0606    .0917   -.4203    2.8924
    1.6061    .0917   -.4203    3.2540
   -1.7273    .0917    .0485    2.1829
    -.0606    .0917    .0485    2.6502
    1.6061    .0917    .0485    3.1174
   -1.7273    .0917    .5297    1.8259
    -.0606    .0917    .5297    2.4015
    1.6061    .0917    .5297    2.9771
END DATA.
GRAPH/SCATTERPLOT=
 LTInt    WITH     CTI_NoL  BY       RWG      /PANEL   ROWVAR=  HE_mean  .
```

****

OUTCOME VARIABLE:
TPerf3_m

Model Summary

R	R-sq	MSE	F	df1	df2	p

```
    .5404     .2920     .1714    12.5789     8.0000   244.0000     .0000

Model
          coeff       se         t         p       LLCI      ULCI
constant   6.5047     .1978    32.8772     .0000    6.1150    6.8944
LTInt      -.0138     .0205    -.6748     .5005    -.0542     .0265
CTI_NoL    -.2834     .0393   -7.2116     .0000    -.3608    -.2060
OrgTen      .0135     .0295     .4554     .6492    -.0447     .0716
gender     -.0209     .0556    -.3760     .7072    -.1303     .0885
age        -.1064     .0314   -3.3870     .0008    -.1683    -.0445
Educ        .0384     .0343    1.1189     .2643    -.0292     .1059
dyadten     .0091     .0296     .3075     .7587    -.0492     .0674
TeamSize   -.0486     .0141   -3.4487     .0007    -.0763    -.0208

Test(s) of X by M interaction:
       F       df1       df2         p
   2.4128    1.0000   243.0000     .1216

****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Direct effect of X on Y
    Effect        se         t         p       LLCI      ULCI
    -.0138     .0205    -.6748     .5005    -.0542     .0265

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
 LTInt      ->    CTI_NoL     ->    TPerf3_m

      RWG    HE_mean     Effect     BootSE   BootLLCI   BootULCI
    -.1248    -.4203     .0474     .0132     .0215     .0735
    -.1248     .0485     .0294     .0143     .0048     .0602
    -.1248     .5297     .0110     .0223    -.0266     .0626
     .0213    -.4203    -.0261     .0100    -.0461    -.0066
     .0213     .0485    -.0440     .0125    -.0685    -.0191
     .0213     .5297    -.0625     .0219    -.1039    -.0164
     .0917    -.4203    -.0615     .0148    -.0919    -.0331
     .0917     .0485    -.0794     .0170    -.1135    -.0465
     .0917     .5297    -.0979     .0249    -.1470    -.0484

    Indices of partial moderated mediation:
          Index     BootSE   BootLLCI   BootULCI
RWG        -.5028     .1002    -.6982    -.3015
HE_mean    -.0383     .0240    -.0835     .0124
---

********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
 95.0000
```

Number of bootstrap samples for percentile bootstrap confidence intervals:

5000

W values in conditional tables are the 16th, 50th, and 84th percentiles.

Z values in conditional tables are the 16th, 50th, and 84th percentiles.

NOTE: The following variables were mean centered prior to analysis:

RWG HE_mean LTInt

------ END MATRIX -----

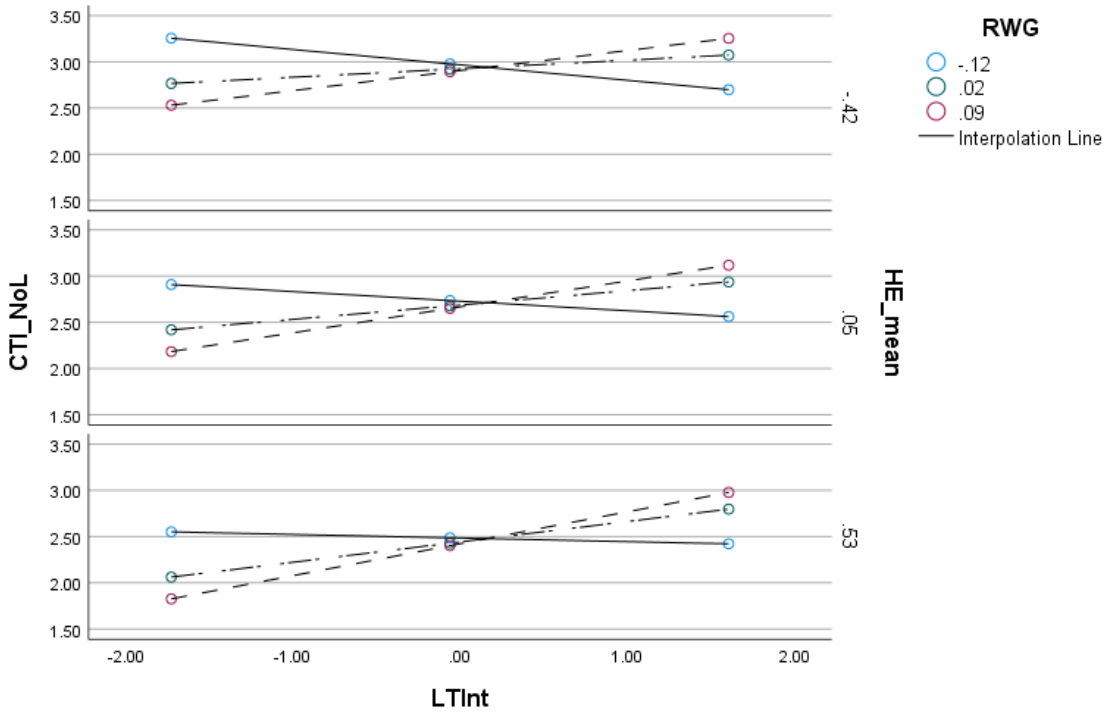


Figure d.2 Moderation effect of team homogeneity and TL high expectations

Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.0 *****************

Written by Andrew F. Hayes, Ph.D. www.afhayes.com

Documentation available in Hayes (2022). www.guilford.com/p/hayes3

****

Model : 9

Y : TPerf3_m

X : LTInt

M : CTI_NoL

W : RWG

Z : FD_mean

Covariates:
OrgTen gender age Educ dyadten TeamSize

Sample
Size: 253

****

OUTCOME VARIABLE:
CTI_NoL

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6211	.3858	.3351	13.7592	11.0000	241.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.6699	.2436	10.9621	.0000	2.1901	3.1496
LTInt	.1272	.0317	4.0120	.0001	.0648	.1897
RWG	-.2346	.4321	-.5429	.5877	-1.0859	.6166
Int_1	1.9781	.3052	6.4808	.0000	1.3769	2.5794
FD_mean	-.3915	.0843	-4.6449	.0000	-.5575	-.2254
Int_2	.2292	.0595	3.8532	.0001	.1120	.3464
OrgTen	.0841	.0419	2.0048	.0461	.0015	.1667
gender	.0958	.0784	1.2213	.2232	-.0587	.2503
age	.0199	.0448	.4441	.6574	-.0684	.1082
Educ	-.0949	.0482	-1.9696	.0500	-.1898	.0000
dyadten	-.0097	.0427	-.2278	.8200	-.0938	.0744
TeamSize	-.0334	.0199	-1.6794	.0944	-.0726	.0058

Product terms key:
Int_1 : LTInt x RWG
Int_2 : LTInt x FD_mean

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.1070	42.0009	1.0000	241.0000	.0000
X*Z	.0378	14.8468	1.0000	241.0000	.0001
BOTH(X)	.1261	24.7352	2.0000	241.0000	.0000

Focal predict: LTInt (X)
Mod var: RWG (W)
Mod var: FD_mean (Z)

Conditional effects of the focal predictor at values of the moderator(s):

RWG	FD_mean	Effect	se	t	p	LLCI	ULCI
-.1248	-.5226	-.2395	.0542	-4.4192	.0000	-.3463	-.1327
-.1248	.0108	-.1172	.0403	-2.9120	.0039	-.1965	-.0379
-.1248	.5358	.0031	.0479	.0650	.9482	-.0912	.0974
.0213	-.5226	.0495	.0447	1.1064	.2697	-.0386	.1376
.0213	.0108	.1717	.0345	4.9732	.0000	.1037	.2398

.0213	.5358	.2921	.0486	6.0074	.0000	.1963	.3879
.0917	-.5226	.1888	.0545	3.4641	.0006	.0814	.2961
.0917	.0108	.3110	.0491	6.3403	.0000	.2144	.4076
.0917	.5358	.4314	.0618	6.9802	.0000	.3096	.5531

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

```
DATA LIST FREE/
  LTInt     RWG      FD_mean   CTI_NoL   .
BEGIN DATA.
   -1.7273   -.1248   -.5226    3.3824
    -.0606   -.1248   -.5226    2.9833
    1.6061   -.1248   -.5226    2.5841
   -1.7273   -.1248    .0108    2.9625
    -.0606   -.1248    .0108    2.7671
    1.6061   -.1248    .0108    2.5717
   -1.7273   -.1248    .5358    2.5491
    -.0606   -.1248    .5358    2.5543
    1.6061   -.1248    .5358    2.5595
   -1.7273    .0213   -.5226    2.8490
    -.0606    .0213   -.5226    2.9315
    1.6061    .0213   -.5226    3.0140
   -1.7273    .0213    .0108    2.4290
    -.0606    .0213    .0108    2.7153
    1.6061    .0213    .0108    3.0015
   -1.7273    .0213    .5358    2.0157
    -.0606    .0213    .5358    2.5025
    1.6061    .0213    .5358    2.9893
   -1.7273    .0917   -.5226    2.5919
    -.0606    .0917   -.5226    2.9065
    1.6061    .0917   -.5226    3.2211
   -1.7273    .0917    .0108    2.1720
    -.0606    .0917    .0108    2.6903
    1.6061    .0917    .0108    3.2087
   -1.7273    .0917    .5358    1.7586
    -.0606    .0917    .5358    2.4775
    1.6061    .0917    .5358    3.1965
END DATA.
GRAPH/SCATTERPLOT=
 LTInt    WITH     CTI_NoL  BY      RWG      /PANEL   ROWVAR=  FD_mean  .
```

****

OUTCOME VARIABLE:
TPerf3_m

Model Summary

R	R-sq	MSE	F	df1	df2	p
.5404	.2920	.1714	12.5789	8.0000	244.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	6.5047	.1978	32.8772	.0000	6.1150	6.8944
LTInt	-.0138	.0205	-.6748	.5005	-.0542	.0265
CTI_NoL	-.2834	.0393	-7.2116	.0000	-.3608	-.2060
OrgTen	.0135	.0295	.4554	.6492	-.0447	.0716
gender	-.0209	.0556	-.3760	.7072	-.1303	.0885
age	-.1064	.0314	-3.3870	.0008	-.1683	-.0445
Educ	.0384	.0343	1.1189	.2643	-.0292	.1059
dyadten	.0091	.0296	.3075	.7587	-.0492	.0674
TeamSize	-.0486	.0141	-3.4487	.0007	-.0763	-.0208

Test(s) of X by M interaction:

F	df1	df2	p
2.4128	1.0000	243.0000	.1216

********** DIRECT AND INDIRECT EFFECTS OF X ON Y **********

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
-.0138	.0205	-.6748	.5005	-.0542	.0265

Conditional indirect effects of X on Y:

INDIRECT EFFECT:

LTInt -> CTI_NoL -> TPerf3_m

RWG	FD_mean	Effect	BootSE	BootLLCI	BootULCI
-.1248	-.5226	.0679	.0143	.0399	.0962
-.1248	.0108	.0332	.0127	.0104	.0608
-.1248	.5358	-.0009	.0189	-.0322	.0419
.0213	-.5226	-.0140	.0113	-.0359	.0084
.0213	.0108	-.0487	.0109	-.0698	-.0264
.0213	.5358	-.0828	.0187	-.1174	-.0443
.0917	-.5226	-.0535	.0157	-.0851	-.0232
.0917	.0108	-.0881	.0159	-.1190	-.0567
.0917	.5358	-.1222	.0223	-.1654	-.0783

Indices of partial moderated mediation:

	Index	BootSE	BootLLCI	BootULCI
RWG	-.5606	.1008	-.7533	-.3555
FD_mean	-.0650	.0207	-.1035	-.0208

********** ANALYSIS NOTES AND ERRORS **********

Level of confidence for all confidence intervals in output:

95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:

5000

W values in conditional tables are the 16th, 50th, and 84th percentiles.

Z values in conditional tables are the 16th, 50th, and 84th percentiles.

NOTE: The following variables were mean centered prior to analysis:
RWG FD_mean LTInt

------ END MATRIX -----

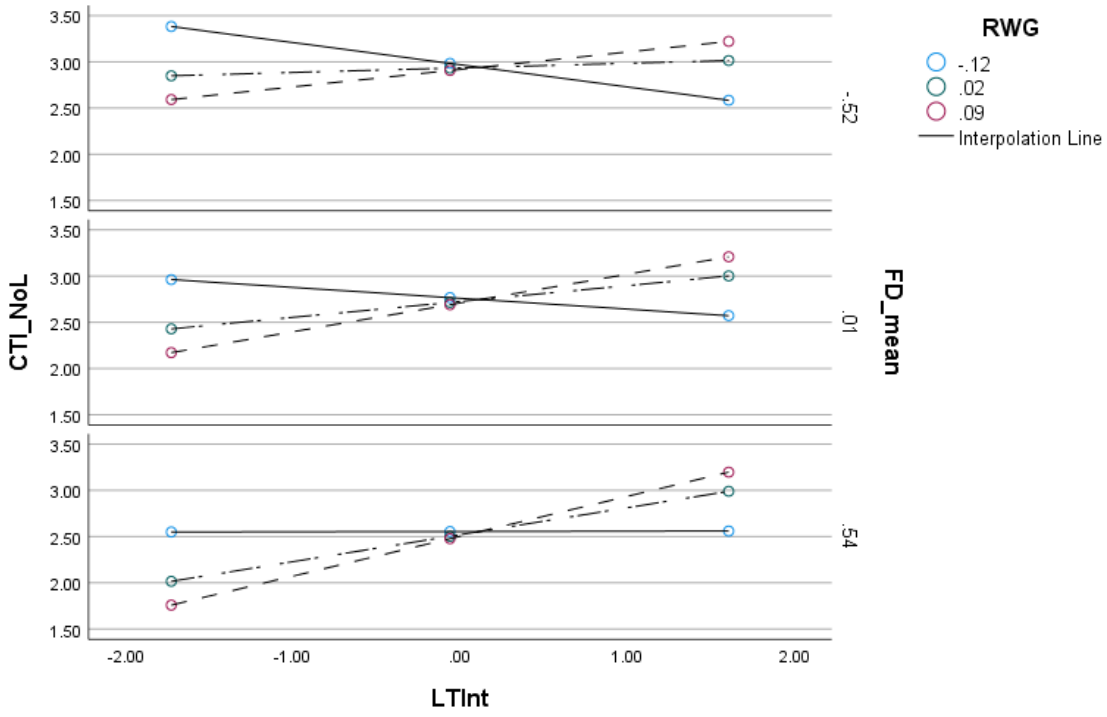


Figure d.3 Moderation effect of team homogeneity and TL follower development

Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.0 *****************

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

****
Model : 9
Y : TPerf3_m
X : LTInt
M : CTI_NoL
W : RWG
Z : IS_mean

Covariates:
OrgTen gender age Educ dyadten TeamSize

Sample
Size: 253

****

OUTCOME VARIABLE:
CTI_NoL

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6507	.4234	.3145	16.0908	11.0000	241.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.7179	.2355	11.5392	.0000	2.2539	3.1819
LTInt	.1122	.0307	3.6598	.0003	.0518	.1726
RWG	-.4041	.4201	-.9619	.3371	-1.2316	.4235
Int_1	1.8713	.3020	6.1966	.0000	1.2764	2.4662
IS_mean	-.5300	.0794	-6.6729	.0000	-.6864	-.3735
Int_2	.1810	.0568	3.1838	.0016	.0690	.2929
OrgTen	.0664	.0406	1.6358	.1032	-.0136	.1464
gender	.0985	.0759	1.2984	.1954	-.0510	.2480
age	.0138	.0433	.3191	.7500	-.0715	.0992
Educ	-.0954	.0463	-2.0617	.0403	-.1866	-.0043
dyadten	-.0023	.0411	-.0559	.9555	-.0832	.0786
TeamSize	-.0342	.0191	-1.7888	.0749	-.0718	.0035

Product terms key:
Int_1 : LTInt x RWG
Int_2 : LTInt x IS_mean

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0919	38.3983	1.0000	241.0000	.0000
X*Z	.0243	10.1365	1.0000	241.0000	.0016
BOTH(X)	.0986	20.6119	2.0000	241.0000	.0000

Focal predict: LTInt (X)
Mod var: RWG (W)
Mod var: IS_mean (Z)

Conditional effects of the focal predictor at values of the moderator(s):

RWG	IS_mean	Effect	se	t	p	LLCI	ULCI
-.1248	-.5914	-.2284	.0562	-4.0657	.0001	-.3391	-.1177
-.1248	.0515	-.1121	.0388	-2.8891	.0042	-.1885	-.0357
-.1248	.5015	-.0306	.0440	-.6962	.4870	-.1174	.0561
.0213	-.5914	.0450	.0446	1.0070	.3149	-.0430	.1329
.0213	.0515	.1613	.0339	4.7521	.0000	.0944	.2282
.0213	.5015	.2427	.0464	5.2325	.0000	.1514	.3341
.0917	-.5914	.1767	.0531	3.3259	.0010	.0720	.2814
.0917	.0515	.2930	.0487	6.0170	.0000	.1971	.3890

```
    .0917     .5015     .3745     .0604     6.2025     .0000     .2555     .4934
```

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

```
DATA LIST FREE/
  LTInt     RWG       IS_mean    CTI_NoL    .
BEGIN DATA.
   -1.7273    -.1248    -.5914    3.4841
    -.0606    -.1248    -.5914    3.1034
    1.6061    -.1248    -.5914    2.7227
   -1.7273    -.1248     .0515    2.9425
    -.0606    -.1248     .0515    2.7557
    1.6061    -.1248     .0515    2.5689
   -1.7273    -.1248     .5015    2.5633
    -.0606    -.1248     .5015    2.5122
    1.6061    -.1248     .5015    2.4612
   -1.7273     .0213    -.5914    2.9529
    -.0606     .0213    -.5914    3.0278
    1.6061     .0213    -.5914    3.1027
   -1.7273     .0213     .0515    2.4112
    -.0606     .0213     .0515    2.6801
    1.6061     .0213     .0515    2.9489
   -1.7273     .0213     .5015    2.0321
    -.0606     .0213     .5015    2.4366
    1.6061     .0213     .5015    2.8412
   -1.7273     .0917    -.5914    2.6968
    -.0606     .0917    -.5914    2.9914
    1.6061     .0917    -.5914    3.2859
   -1.7273     .0917     .0515    2.1552
    -.0606     .0917     .0515    2.6436
    1.6061     .0917     .0515    3.1320
   -1.7273     .0917     .5015    1.7761
    -.0606     .0917     .5015    2.4002
    1.6061     .0917     .5015    3.0243
END DATA.
GRAPH/SCATTERPLOT=
 LTInt    WITH     CTI_NoL  BY      RWG     /PANEL   ROWVAR=  IS_mean  .

************************************************************************
OUTCOME VARIABLE:
 TPerf3_m

Model Summary
        R       R-sq       MSE         F        df1        df2         p
     .5404     .2920     .1714    12.5789     8.0000   244.0000     .0000

Model
            coeff         se          t          p       LLCI       ULCI
constant     6.5047     .1978    32.8772     .0000     6.1150     6.8944
LTInt       -.0138     .0205     -.6748     .5005     -.0542     .0265
```

CTI_NoL	-.2834	.0393	-7.2116	.0000	-.3608	-.2060
OrgTen	.0135	.0295	.4554	.6492	-.0447	.0716
gender	-.0209	.0556	-.3760	.7072	-.1303	.0885
age	-.1064	.0314	-3.3870	.0008	-.1683	-.0445
Educ	.0384	.0343	1.1189	.2643	-.0292	.1059
dyadten	.0091	.0296	.3075	.7587	-.0492	.0674
TeamSize	-.0486	.0141	-3.4487	.0007	-.0763	-.0208

Test(s) of X by M interaction:

F	df1	df2	p
2.4128	1.0000	243.0000	.1216

********** DIRECT AND INDIRECT EFFECTS OF X ON Y **********

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
-.0138	.0205	-.6748	.5005	-.0542	.0265

Conditional indirect effects of X on Y:

INDIRECT EFFECT:

LTInt -> CTI_NoL -> TPerf3_m

RWG	IS_mean	Effect	BootSE	BootLLCI	BootULCI
-.1248	-.5914	.0647	.0152	.0359	.0957
-.1248	.0515	.0318	.0133	.0080	.0601
-.1248	.5015	.0087	.0171	-.0213	.0462
.0213	-.5914	-.0127	.0102	-.0327	.0068
.0213	.0515	-.0457	.0103	-.0651	-.0246
.0213	.5015	-.0688	.0162	-.0990	-.0357
.0917	-.5914	-.0501	.0135	-.0777	-.0244
.0917	.0515	-.0830	.0145	-.1112	-.0550
.0917	.5015	-.1061	.0197	-.1442	-.0674

Indices of partial moderated mediation:

	Index	BootSE	BootLLCI	BootULCI
RWG	-.5303	.0958	-.7162	-.3469
IS_mean	-.0513	.0177	-.0851	-.0150

********** ANALYSIS NOTES AND ERRORS **********

Level of confidence for all confidence intervals in output:

95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:

5000

W values in conditional tables are the 16th, 50th, and 84th percentiles.

Z values in conditional tables are the 16th, 50th, and 84th percentiles.

NOTE: The following variables were mean centered prior to analysis:
RWG IS_mean LTInt

------ END MATRIX -----

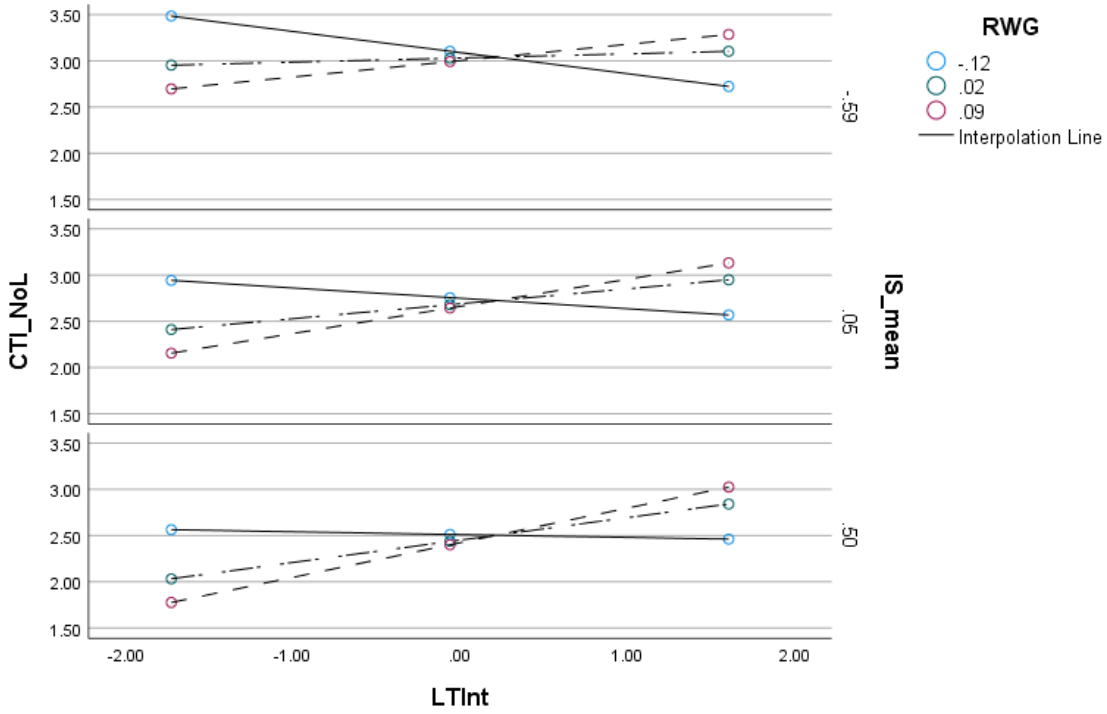


Figure d.4 Moderation effect of team homogeneity and TL intellectual stimulation

Run MATRIX procedure:

********** PROCESS Procedure for SPSS Version 4.0 **********

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

****
Model : 9
Y : TPerf3_m
X : LTInt
M : CTI_NoL
W : RWG
Z : PR_mean

Covariates:
OrgTen gender age Educ dyadten TeamSize

Sample
Size: 253

****

OUTCOME VARIABLE:

CTI_NoL

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6684	.4468	.3018	17.6917	11.0000	241.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.7843	.2323	11.9860	.0000	2.3267	3.2419
LTInt	.1270	.0297	4.2789	.0000	.0685	.1854
RWG	-.2652	.4141	-.6403	.5226	-1.0808	.5505
Int_1	1.7667	.2967	5.9542	.0000	1.1822	2.3512
PR_mean	-.5664	.0773	-7.3282	.0000	-.7186	-.4141
Int_2	.1905	.0588	3.2392	.0014	.0746	.3063
OrgTen	.0668	.0396	1.6888	.0926	-.0111	.1448
gender	.0664	.0747	.8894	.3747	-.0807	.2135
age	.0140	.0423	.3299	.7418	-.0694	.0973
Educ	-.0716	.0457	-1.5691	.1179	-.1616	.0183
dyadten	-.0144	.0403	-.3569	.7215	-.0939	.0651
TeamSize	-.0423	.0187	-2.2659	.0243	-.0791	-.0055

Product terms key:

Int_1 : LTInt x RWG

Int_2 : LTInt x PR_mean

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0814	35.4530	1.0000	241.0000	.0000
X*Z	.0241	10.4927	1.0000	241.0000	.0014
BOTH(X)	.0892	19.4377	2.0000	241.0000	.0000

Focal predict: LTInt (X)

Mod var: RWG (W)

Mod var: PR_mean (Z)

Conditional effects of the focal predictor at values of the moderator(s):

RWG	PR_mean	Effect	se	t	p	LLCI	ULCI
-.1248	-.5725	-.2026	.0536	-3.7814	.0002	-.3082	-.0971
-.1248	.0525	-.0836	.0376	-2.2231	.0271	-.1576	-.0095
-.1248	.5213	.0057	.0457	.1250	.9006	-.0844	.0958
.0213	-.5725	.0555	.0423	1.3105	.1913	-.0279	.1388
.0213	.0525	.1745	.0333	5.2471	.0000	.1090	.2400
.0213	.5213	.2638	.0486	5.4242	.0000	.1680	.3596
.0917	-.5725	.1798	.0511	3.5184	.0005	.0792	.2805
.0917	.0525	.2989	.0480	6.2323	.0000	.2044	.3934
.0917	.5213	.3882	.0620	6.2655	.0000	.2661	.5102

Data for visualizing the conditional effect of the focal predictor:

Paste text below into a SPSS syntax window and execute to produce plot.

```
DATA LIST FREE/
  LTInt     RWG       PR_mean   CTI_NoL   .
BEGIN DATA.
   -1.7273    -.1248    -.5725    3.4261
    -.0606    -.1248    -.5725    3.0884
    1.6061    -.1248    -.5725    2.7506
   -1.7273    -.1248     .0525    2.8664
    -.0606    -.1248     .0525    2.7272
    1.6061    -.1248     .0525    2.5879
   -1.7273    -.1248     .5213    2.4467
    -.0606    -.1248     .5213    2.4562
    1.6061    -.1248     .5213    2.4658
   -1.7273     .0213    -.5725    2.9415
    -.0606     .0213    -.5725    3.0340
    1.6061     .0213    -.5725    3.1264
   -1.7273     .0213     .0525    2.3819
    -.0606     .0213     .0525    2.6728
    1.6061     .0213     .0525    2.9636
   -1.7273     .0213     .5213    1.9622
    -.0606     .0213     .5213    2.4019
    1.6061     .0213     .5213    2.8416
   -1.7273     .0917    -.5725    2.7080
    -.0606     .0917    -.5725    3.0078
    1.6061     .0917    -.5725    3.3075
   -1.7273     .0917     .0525    2.1484
    -.0606     .0917     .0525    2.6466
    1.6061     .0917     .0525    3.1447
   -1.7273     .0917     .5213    1.7287
    -.0606     .0917     .5213    2.3757
    1.6061     .0917     .5213    3.0227
END DATA.
GRAPH/SCATTERPLOT=
 LTInt    WITH     CTI_NoL  BY      RWG     /PANEL   ROWVAR=  PR_mean  .

**************************************************************************
OUTCOME VARIABLE:
 TPerf3_m

Model Summary
        R       R-sq        MSE          F        df1        df2          p
     .5404      .2920      .1714    12.5789     8.0000   244.0000      .0000

Model
            coeff         se          t          p       LLCI       ULCI
constant    6.5047      .1978    32.8772      .0000     6.1150     6.8944
LTInt       -.0138      .0205     -.6748      .5005     -.0542      .0265
CTI_NoL     -.2834      .0393    -7.2116      .0000     -.3608     -.2060
OrgTen       .0135      .0295     .4554       .6492     -.0447      .0716
gender      -.0209      .0556    -.3760       .7072     -.1303      .0885
```

```
age         -.1064     .0314    -3.3870     .0008     -.1683     -.0445
Educ         .0384     .0343     1.1189     .2643     -.0292      .1059
dyadten      .0091     .0296     .3075      .7587     -.0492      .0674
TeamSize    -.0486     .0141    -3.4487     .0007     -.0763     -.0208

Test(s) of X by M interaction:
         F       df1        df2          p
    2.4128    1.0000   243.0000      .1216

****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Direct effect of X on Y
    Effect         se          t          p       LLCI       ULCI
    -.0138      .0205     -.6748      .5005     -.0542      .0265

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
 LTInt      ->    CTI_NoL     ->    TPerf3_m

      RWG    PR_mean     Effect     BootSE   BootLLCI   BootULCI
    -.1248    -.5725      .0574      .0145      .0281      .0855
    -.1248     .0525      .0237      .0125      .0008      .0500
    -.1248     .5213     -.0016      .0186     -.0341      .0395
     .0213    -.5725     -.0157      .0108     -.0380      .0053
     .0213     .0525     -.0495      .0115     -.0718     -.0262
     .0213     .5213     -.0748      .0193     -.1122     -.0351
     .0917    -.5725     -.0510      .0145     -.0804     -.0232
     .0917     .0525     -.0847      .0162     -.1165     -.0528
     .0917     .5213     -.1100      .0230     -.1554     -.0648

     Indices of partial moderated mediation:
           Index     BootSE   BootLLCI   BootULCI
RWG        -.5007     .0963     -.6834     -.3005
PR_mean    -.0540     .0212     -.0925     -.0101
---

********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
 95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
 5000

W values in conditional tables are the 16th, 50th, and 84th percentiles.

Z values in conditional tables are the 16th, 50th, and 84th percentiles.

NOTE: The following variables were mean centered prior to analysis:
        RWG      PR_mean  LTInt
```

------ END MATRIX -----

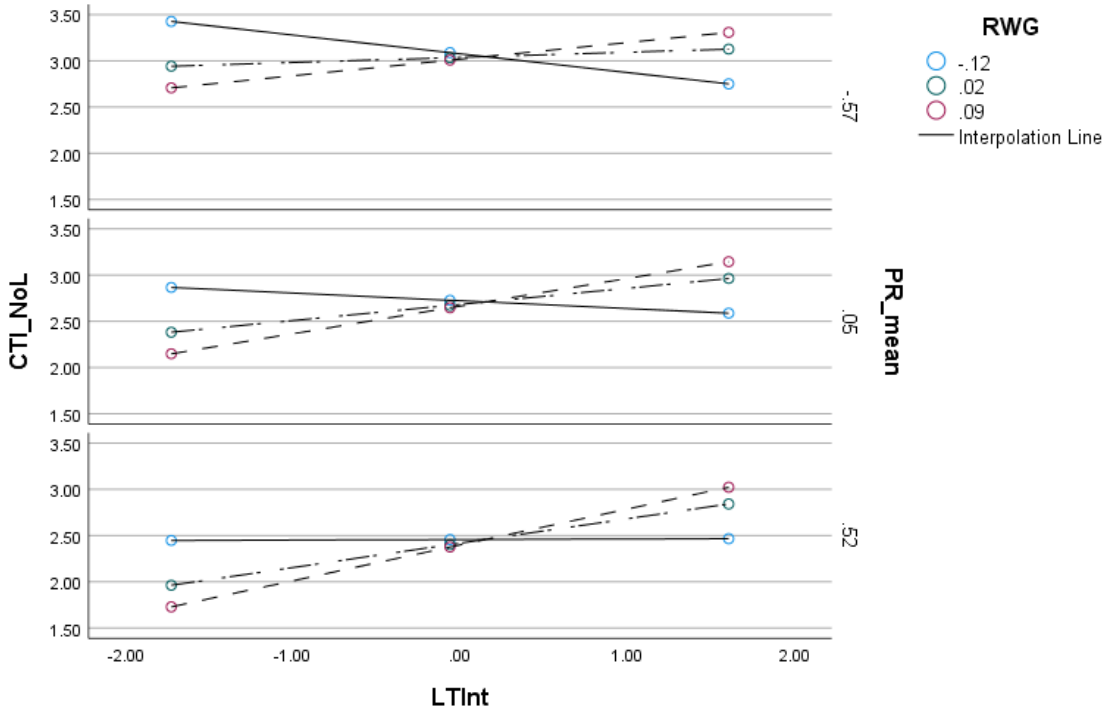


Figure d.5 Moderation effect of team homogeneity and TL personal recognition

Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.0 *****************

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

****
Model : 9
Y : TPerf3_m
X : LTInt
M : CTI_NoL
W : RWG
Z : GI_mean

Covariates:
OrgTen gender age Educ dyadten TeamSize

Sample
Size: 253

****
OUTCOME VARIABLE:
CTI_NoL

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6937	.4812	.2830	20.3190	11.0000	241.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.6904	.2232	12.0533	.0000	2.2507	3.1301
LTInt	.0994	.0289	3.4429	.0007	.0425	.1563
RWG	-.4194	.4001	-1.0485	.2955	-1.2075	.3686
Int_1	1.7623	.2860	6.1620	.0000	1.1989	2.3256
GI_mean	-.7117	.0819	-8.6954	.0000	-.8730	-.5505
Int_2	.2267	.0571	3.9717	.0001	.1143	.3392
OrgTen	.0490	.0385	1.2735	.2041	-.0268	.1249
gender	.0668	.0722	.9247	.3560	-.0755	.2091
age	.0140	.0408	.3437	.7314	-.0664	.0945
Educ	-.0641	.0442	-1.4492	.1486	-.1513	.0230
dyadten	.0066	.0389	.1692	.8658	-.0701	.0833
TeamSize	-.0271	.0182	-1.4937	.1366	-.0629	.0087

Product terms key:

Int_1	:	LTInt	x	RWG
Int_2	:	LTInt	x	GI_mean

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0817	37.9700	1.0000	241.0000	.0000
X*Z	.0340	15.7742	1.0000	241.0000	.0001
BOTH(X)	.0968	22.4712	2.0000	241.0000	.0000

Focal predict: LTInt (X)
Mod var: RWG (W)
Mod var: GI_mean (Z)

Conditional effects of the focal predictor at values of the moderator(s):

RWG	GI_mean	Effect	se	t	p	LLCI	ULCI
-.1248	-.5414	-.2433	.0525	-4.6320	.0000	-.3468	-.1398
-.1248	.0419	-.1110	.0367	-3.0222	.0028	-.1834	-.0387
-.1248	.4482	-.0189	.0410	-.4620	.6445	-.0996	.0618
.0213	-.5414	.0142	.0423	.3345	.7383	-.0692	.0975
.0213	.0419	.1464	.0318	4.5979	.0000	.0837	.2091
.0213	.4482	.2385	.0422	5.6484	.0000	.1553	.3217
.0917	-.5414	.1382	.0507	2.7262	.0069	.0383	.2381
.0917	.0419	.2705	.0458	5.9041	.0000	.1802	.3607
.0917	.4482	.3626	.0555	6.5332	.0000	.2533	.4719

Data for visualizing the conditional effect of the focal predictor:

Paste text below into a SPSS syntax window and execute to produce plot.

```
DATA LIST FREE/
```

```
  LTInt     RWG      GI_mean   CTI_NoL   .
BEGIN DATA.
   -1.7273    -.1248    -.5414    3.5833
    -.0606    -.1248    -.5414    3.1778
    1.6061    -.1248    -.5414    2.7724
   -1.7273    -.1248     .0419    2.9397
    -.0606    -.1248     .0419    2.7546
    1.6061    -.1248     .0419    2.5696
   -1.7273    -.1248     .4482    2.4915
    -.0606    -.1248     .4482    2.4599
    1.6061    -.1248     .4482    2.4284
   -1.7273     .0213    -.5414    3.0774
    -.0606     .0213    -.5414    3.1010
    1.6061     .0213    -.5414    3.1246
   -1.7273     .0213     .0419    2.4337
    -.0606     .0213     .0419    2.6778
    1.6061     .0213     .0419    2.9218
   -1.7273     .0213     .4482    1.9855
    -.0606     .0213     .4482    2.3830
    1.6061     .0213     .4482    2.7806
   -1.7273     .0917    -.5414    2.8335
    -.0606     .0917    -.5414    3.0639
    1.6061     .0917    -.5414    3.2943
   -1.7273     .0917     .0419    2.1899
    -.0606     .0917     .0419    2.6407
    1.6061     .0917     .0419    3.0915
   -1.7273     .0917     .4482    1.7417
    -.0606     .0917     .4482    2.3460
    1.6061     .0917     .4482    2.9503
END DATA.
GRAPH/SCATTERPLOT=
 LTInt    WITH     CTI_NoL  BY      RWG     /PANEL   ROWVAR=  GI_mean  .

**************************************************************************
OUTCOME VARIABLE:
 TPerf3_m

Model Summary
        R      R-sq       MSE         F       df1       df2         p
     .5404     .2920     .1714   12.5789    8.0000   244.0000     .0000

Model
            coeff        se         t         p       LLCI       ULCI
constant    6.5047     .1978    32.8772     .0000    6.1150    6.8944
LTInt       -.0138     .0205    -.6748     .5005    -.0542     .0265
CTI_NoL     -.2834     .0393   -7.2116     .0000    -.3608    -.2060
OrgTen       .0135     .0295     .4554     .6492    -.0447     .0716
gender      -.0209     .0556    -.3760     .7072    -.1303     .0885
age         -.1064     .0314   -3.3870     .0008    -.1683    -.0445
Educ         .0384     .0343    1.1189     .2643    -.0292     .1059
dyadten      .0091     .0296     .3075     .7587    -.0492     .0674
```

```
TeamSize    -.0486     .0141   -3.4487     .0007    -.0763    -.0208

Test(s) of X by M interaction:
         F       df1       df2         p
    2.4128    1.0000  243.0000     .1216

****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Direct effect of X on Y
    Effect        se         t         p      LLCI      ULCI
    -.0138     .0205    -.6748     .5005    -.0542     .0265

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
 LTInt      ->   CTI_NoL    ->   TPerf3_m

      RWG    GI_mean     Effect     BootSE   BootLLCI   BootULCI
    -.1248    -.5414     .0689     .0150     .0396     .0990
    -.1248     .0419     .0315     .0126     .0076     .0572
    -.1248     .4482     .0054     .0157    -.0231     .0396
     .0213    -.5414    -.0040     .0103    -.0239     .0166
     .0213     .0419    -.0415     .0100    -.0611    -.0215
     .0213     .4482    -.0676     .0151    -.0971    -.0367
     .0917    -.5414    -.0392     .0133    -.0662    -.0144
     .0917     .0419    -.0767     .0141    -.1054    -.0503
     .0917     .4482    -.1028     .0186    -.1403    -.0673

     Indices of partial moderated mediation:
           Index     BootSE   BootLLCI   BootULCI
RWG        -.4994     .0914    -.6796    -.3205
GI_mean    -.0643     .0183    -.0993    -.0274
---

********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
 95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
 5000

W values in conditional tables are the 16th, 50th, and 84th percentiles.

Z values in conditional tables are the 16th, 50th, and 84th percentiles.

NOTE: The following variables were mean centered prior to analysis:
        RWG      GI_mean  LTInt

------ END MATRIX -----
```

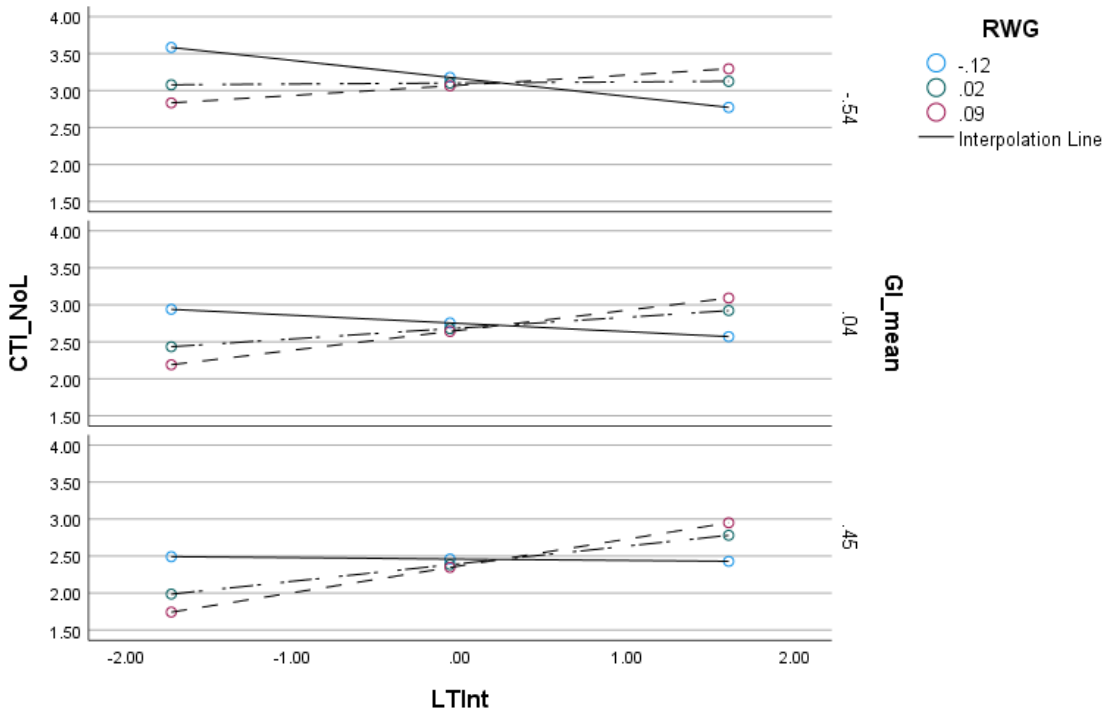


Figure d.6 Moderation effect of team homogeneity and TL group identity

Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.0 *****************

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

****
Model : 9
Y : TPerf3_m
X : LTInt
M : CTI_NoL
W : RWG
Z : GV_mean

Covariates:
OrgTen gender age Educ dyadten TeamSize

Sample
Size: 253

****
OUTCOME VARIABLE:
CTI_NoL

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6487	.4208	.3160	15.9204	11.0000	241.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.7499	.2367	11.6158	.0000	2.2836	3.2162
LTInt	.1087	.0308	3.5261	.0005	.0480	.1694
RWG	-.3047	.4294	-.7096	.4787	-1.1506	.5412
Int_1	1.7275	.3078	5.6119	.0000	1.1211	2.3339
GV_mean	-.4984	.0775	-6.4305	.0000	-.6511	-.3457
Int_2	.1782	.0543	3.2822	.0012	.0713	.2852
OrgTen	.0419	.0408	1.0283	.3048	-.0384	.1223
gender	.0505	.0768	.6573	.5116	-.1008	.2017
age	.0387	.0429	.9025	.3677	-.0458	.1232
Educ	-.0835	.0465	-1.7954	.0738	-.1751	.0081
dyadten	.0024	.0410	.0575	.9542	-.0784	.0831
TeamSize	-.0300	.0192	-1.5610	.1198	-.0679	.0079

Product terms key:

Int_1	:	LTInt	x	RWG
Int_2	:	LTInt	x	GV_mean

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0757	31.4940	1.0000	241.0000	.0000
X*Z	.0259	10.7731	1.0000	241.0000	.0012
BOTH(X)	.0848	17.6386	2.0000	241.0000	.0000

Focal predict: LTInt (X)
Mod var: RWG (W)
Mod var: GV_mean (Z)

Conditional effects of the focal predictor at values of the moderator(s):

RWG	GV_mean	Effect	se	t	p	LLCI	ULCI
-.1248	-.5999	-.2139	.0560	-3.8223	.0002	-.3241	-.1037
-.1248	-.0033	-.1075	.0393	-2.7347	.0067	-.1850	-.0301
-.1248	.5325	-.0121	.0437	-.2755	.7831	-.0982	.0741
.0213	-.5999	.0385	.0447	.8610	.3901	-.0496	.1266
.0213	-.0033	.1448	.0338	4.2851	.0000	.0783	.2114
.0213	.5325	.2403	.0465	5.1701	.0000	.1488	.3319
.0917	-.5999	.1601	.0539	2.9736	.0032	.0541	.2662
.0917	-.0033	.2665	.0489	5.4482	.0000	.1701	.3628
.0917	.5325	.3619	.0610	5.9308	.0000	.2417	.4822

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

```
DATA LIST FREE/
  LTInt     RWG       GV_mean    CTI_NoL    .
BEGIN DATA.
   -1.7273    -.1248    -.5999    3.4291
    -.0606    -.1248    -.5999    3.0726
```

```
    1.6061    -.1248    -.5999    2.7162
   -1.7273    -.1248    -.0033    2.9481
    -.0606    -.1248    -.0033    2.7688
    1.6061    -.1248    -.0033    2.5896
   -1.7273    -.1248     .5325    2.5160
    -.0606    -.1248     .5325    2.4960
    1.6061    -.1248     .5325    2.4759
   -1.7273     .0213    -.5999    2.9486
    -.0606     .0213    -.5999    3.0128
    1.6061     .0213    -.5999    3.0770
   -1.7273     .0213    -.0033    2.4676
    -.0606     .0213    -.0033    2.7090
    1.6061     .0213    -.0033    2.9504
   -1.7273     .0213     .5325    2.0356
    -.0606     .0213     .5325    2.4362
    1.6061     .0213     .5325    2.8367
   -1.7273     .0917    -.5999    2.7171
    -.0606     .0917    -.5999    2.9840
    1.6061     .0917    -.5999    3.2509
   -1.7273     .0917    -.0033    2.2361
    -.0606     .0917    -.0033    2.6802
    1.6061     .0917    -.0033    3.1243
   -1.7273     .0917     .5325    1.8041
    -.0606     .0917     .5325    2.4073
    1.6061     .0917     .5325    3.0106
END DATA.
GRAPH/SCATTERPLOT=
 LTInt    WITH     CTI_NoL  BY       RWG      /PANEL   ROWVAR=  GV_mean  .

************************************************************************
OUTCOME VARIABLE:
 TPerf3_m

Model Summary
        R      R-sq       MSE         F       df1        df2          p
     .5404     .2920     .1714   12.5789    8.0000   244.0000     .0000

Model
            coeff         se          t          p       LLCI       ULCI
constant    6.5047     .1978    32.8772     .0000    6.1150    6.8944
LTInt       -.0138     .0205    -.6748     .5005    -.0542     .0265
CTI_NoL     -.2834     .0393   -7.2116     .0000    -.3608    -.2060
OrgTen       .0135     .0295     .4554     .6492    -.0447     .0716
gender      -.0209     .0556    -.3760     .7072    -.1303     .0885
age         -.1064     .0314   -3.3870     .0008    -.1683    -.0445
Educ         .0384     .0343    1.1189     .2643    -.0292     .1059
dyadten      .0091     .0296     .3075     .7587    -.0492     .0674
TeamSize    -.0486     .0141   -3.4487     .0007    -.0763    -.0208

Test(s) of X by M interaction:
         F        df1        df2          p
```

```
    2.4128     1.0000   243.0000      .1216

****************** DIRECT AND INDIRECT EFFECTS OF X ON Y ****************

Direct effect of X on Y
    Effect         se          t          p       LLCI       ULCI
    -.0138      .0205     -.6748      .5005     -.0542      .0265

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
 LTInt      ->    CTI_NoL     ->    TPerf3_m

       RWG    GV_mean      Effect     BootSE   BootLLCI   BootULCI
    -.1248    -.5999      .0606      .0146      .0323      .0902
    -.1248    -.0033      .0305      .0116      .0083      .0545
    -.1248     .5325      .0034      .0153     -.0238      .0366
     .0213    -.5999     -.0109      .0100     -.0312      .0079
     .0213    -.0033     -.0410      .0101     -.0613     -.0212
     .0213     .5325     -.0681      .0165     -.1006     -.0350
     .0917    -.5999     -.0454      .0135     -.0738     -.0205
     .0917    -.0033     -.0755      .0149     -.1062     -.0471
     .0917     .5325     -.1026      .0207     -.1447     -.0618

      Indices of partial moderated mediation:
            Index     BootSE   BootLLCI   BootULCI
RWG        -.4896      .0949     -.6837     -.3045
GV_mean     -.0505      .0167     -.0823     -.0159
---

********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

W values in conditional tables are the 16th, 50th, and 84th percentiles.

Z values in conditional tables are the 16th, 50th, and 84th percentiles.

NOTE: The following variables were mean centered prior to analysis:
         RWG      GV_mean  LTInt

------ END MATRIX -----
```

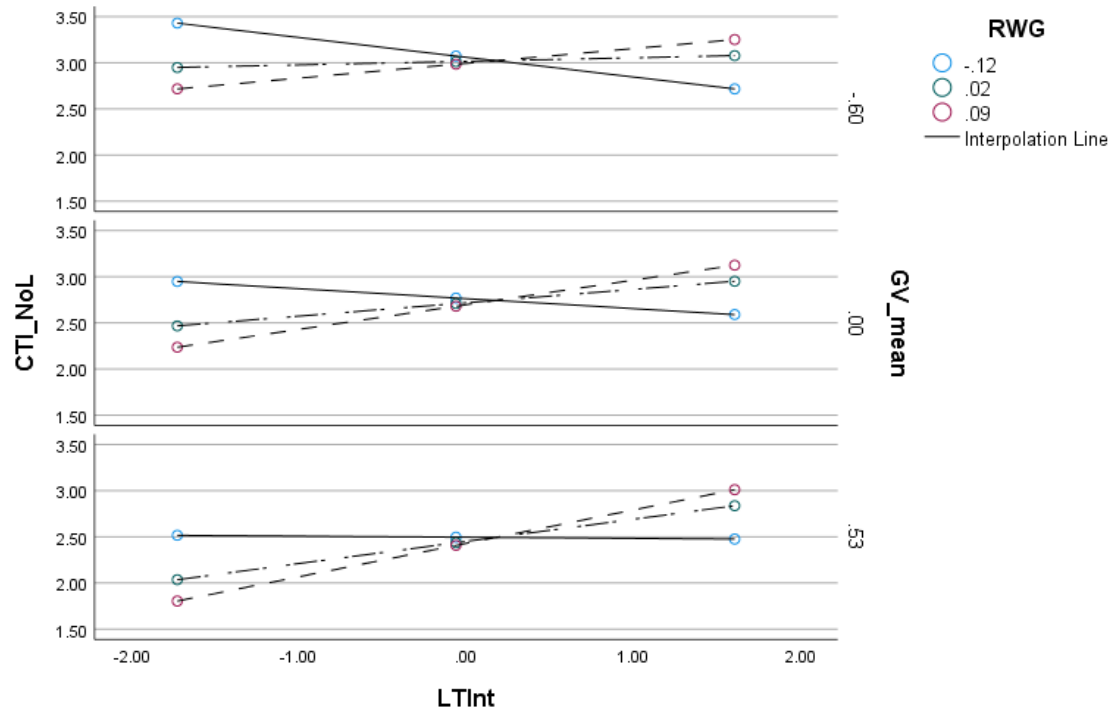


Figure d.7 Moderation effect of team homogeneity and TL group vision

Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.0 *****************

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

****
Model : 9
Y : TPerf3_m
X : LTInt
M : CTI_NoL
W : RWG
Z : TB_mean

Covariates:
OrgTen gender age Educ dyadten TeamSize

Sample
Size: 253

****
OUTCOME VARIABLE:
CTI_NoL

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6616	.4377	.3068	17.0549	11.0000	241.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.7172	.2325	11.6863	.0000	2.2591	3.1752
LTInt	.1065	.0302	3.5202	.0005	.0469	.1661
RWG	-.5516	.4207	-1.3110	.1911	-1.3803	.2772
Int_1	1.7609	.2994	5.8812	.0000	1.1711	2.3506
TB_mean	-.6525	.0864	-7.5536	.0000	-.8226	-.4823
Int_2	.1924	.0582	3.3061	.0011	.0778	.3071
OrgTen	.0516	.0401	1.2885	.1988	-.0273	.1306
gender	.0604	.0755	.7999	.4246	-.0883	.2091
age	.0350	.0423	.8267	.4092	-.0484	.1183
Educ	-.0814	.0458	-1.7772	.0768	-.1717	.0088
dyadten	.0023	.0404	.0578	.9540	-.0773	.0819
TeamSize	-.0325	.0189	-1.7241	.0860	-.0697	.0046

Product terms key:

Int_1	:	LTInt	x	RWG
Int_2	:	LTInt	x	TB_mean

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0807	34.5885	1.0000	241.0000	.0000
X*Z	.0255	10.9303	1.0000	241.0000	.0011
BOTH(X)	.0898	19.2353	2.0000	241.0000	.0000

Focal predict: LTInt (X)
Mod var: RWG (W)
Mod var: TB_mean (Z)

Conditional effects of the focal predictor at values of the moderator(s):

RWG	TB_mean	Effect	se	t	p	LLCI	ULCI
-.1248	-.4972	-.2090	.0524	-3.9895	.0001	-.3122	-.1058
-.1248	.1028	-.0936	.0380	-2.4640	.0144	-.1684	-.0188
-.1248	.4362	-.0294	.0421	-.6989	.4853	-.1123	.0535
.0213	-.4972	.0482	.0418	1.1535	.2499	-.0341	.1306
.0213	.1028	.1637	.0342	4.7881	.0000	.0963	.2310
.0213	.4362	.2278	.0436	5.2262	.0000	.1420	.3137
.0917	-.4972	.1722	.0513	3.3547	.0009	.0711	.2733
.0917	.1028	.2877	.0490	5.8675	.0000	.1911	.3842
.0917	.4362	.3518	.0577	6.0976	.0000	.2381	.4655

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

```
DATA LIST FREE/
  LTInt     RWG       TB_mean    CTI_NoL    .
BEGIN DATA.
   -1.7273    -.1248    -.4972    3.4761
    -.0606    -.1248    -.4972    3.1278
```

```
    1.6061    -.1248    -.4972    2.7794
   -1.7273    -.1248     .1028    2.8852
    -.0606    -.1248     .1028    2.7293
    1.6061    -.1248     .1028    2.5734
   -1.7273    -.1248     .4362    2.5569
    -.0606    -.1248     .4362    2.5079
    1.6061    -.1248     .4362    2.4589
   -1.7273     .0213    -.4972    2.9512
    -.0606     .0213    -.4972    3.0316
    1.6061     .0213    -.4972    3.1120
   -1.7273     .0213     .1028    2.3603
    -.0606     .0213     .1028    2.6331
    1.6061     .0213     .1028    2.9059
   -1.7273     .0213     .4362    2.0320
    -.0606     .0213     .4362    2.4117
    1.6061     .0213     .4362    2.7915
   -1.7273     .0917    -.4972    2.6983
    -.0606     .0917    -.4972    2.9853
    1.6061     .0917    -.4972    3.2723
   -1.7273     .0917     .1028    2.1073
    -.0606     .0917     .1028    2.5868
    1.6061     .0917     .1028    3.0662
   -1.7273     .0917     .4362    1.7791
    -.0606     .0917     .4362    2.3654
    1.6061     .0917     .4362    2.9517
END DATA.
GRAPH/SCATTERPLOT=
 LTInt    WITH     CTI_NoL  BY       RWG      /PANEL   ROWVAR=  TB_mean  .

************************************************************************
OUTCOME VARIABLE:
 TPerf3_m

Model Summary
        R      R-sq       MSE         F       df1        df2          p
     .5404     .2920     .1714   12.5789    8.0000   244.0000     .0000

Model
            coeff         se          t          p       LLCI       ULCI
constant    6.5047     .1978   32.8772     .0000    6.1150    6.8944
LTInt       -.0138     .0205    -.6748     .5005    -.0542     .0265
CTI_NoL     -.2834     .0393   -7.2116     .0000    -.3608    -.2060
OrgTen       .0135     .0295     .4554     .6492    -.0447     .0716
gender      -.0209     .0556    -.3760     .7072    -.1303     .0885
age         -.1064     .0314   -3.3870     .0008    -.1683    -.0445
Educ         .0384     .0343    1.1189     .2643    -.0292     .1059
dyadten      .0091     .0296     .3075     .7587    -.0492     .0674
TeamSize    -.0486     .0141   -3.4487     .0007    -.0763    -.0208

Test(s) of X by M interaction:
         F        df1        df2          p
```

```
    2.4128     1.0000   243.0000      .1216

****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Direct effect of X on Y
    Effect         se          t          p       LLCI       ULCI
    -.0138      .0205     -.6748      .5005     -.0542      .0265

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
 LTInt      ->    CTI_NoL     ->    TPerf3_m

       RWG    TB_mean     Effect     BootSE   BootLLCI   BootULCI
    -.1248     -.4972      .0592      .0153      .0295      .0902
    -.1248      .1028      .0265      .0127      .0035      .0529
    -.1248      .4362      .0083      .0143     -.0183      .0393
     .0213     -.4972     -.0137      .0100     -.0333      .0062
     .0213      .1028     -.0464      .0106     -.0676     -.0256
     .0213      .4362     -.0646      .0144     -.0932     -.0373
     .0917     -.4972     -.0488      .0135     -.0762     -.0228
     .0917      .1028     -.0815      .0154     -.1129     -.0530
     .0917      .4362     -.0997      .0188     -.1375     -.0645

      Indices of partial moderated mediation:
            Index     BootSE   BootLLCI   BootULCI
RWG        -.4990      .0984     -.6965     -.3087
TB_mean    -.0545      .0166     -.0879     -.0211
---

********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

W values in conditional tables are the 16th, 50th, and 84th percentiles.

Z values in conditional tables are the 16th, 50th, and 84th percentiles.

NOTE: The following variables were mean centered prior to analysis:
         RWG      TB_mean  LTInt

------ END MATRIX -----
```

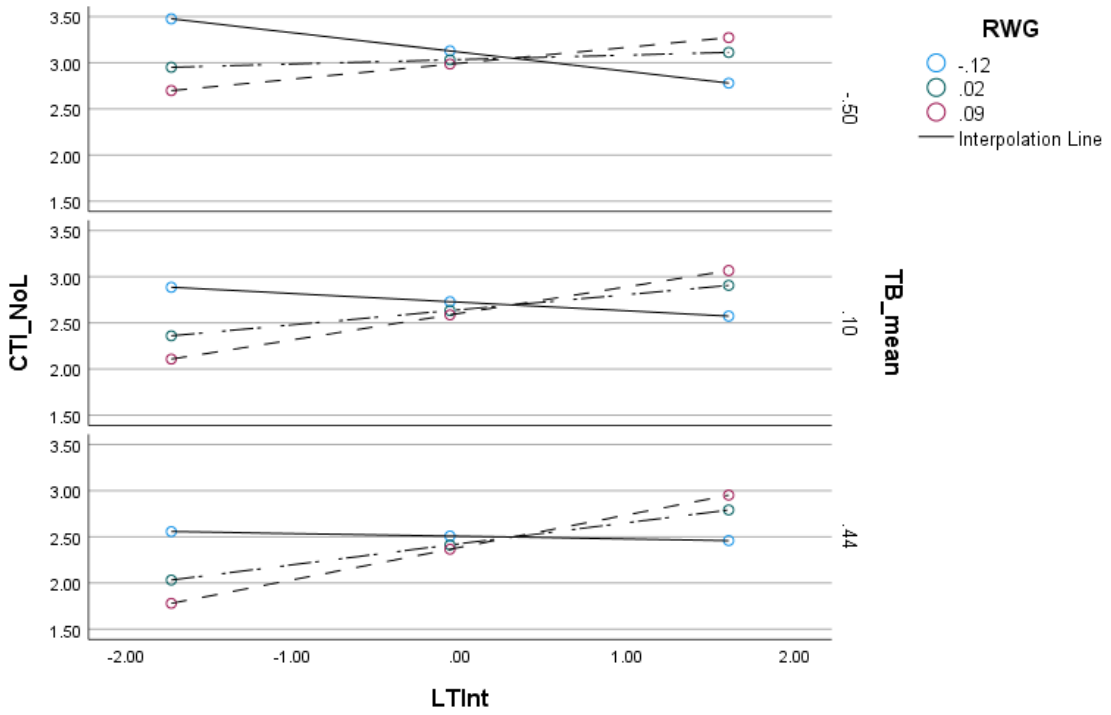


Figure d.8 Moderation effect of team homogeneity and TL team building

Annex E

Full information tables

Some tables were shown with partial information. For comprehensiveness' sake the full information tables are disclosed here.

Table e.1 Full information of Descriptives and bivariate statistics for variables

		Max	range	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	range	M	SD
1.	HE	7	1-7	5.41	.96	--	.891**	.861**	.893**	.873**	.817**	.818**	.936**	.631**	.652**	.602**	-.562**	.720**	.570**	.619**	.611**	.818**	3.56-6.35	5.39	.51
2.	FD	7	1-7	5.43	1.00	.846**	--	.925**	.843**	.875**	.795**	.796**	.932**	.590**	.662**	.624**	-.496**	.683**	.515**	.543**	.624**	.760**	3.69-6.33	5.40	.51
3.	IS	7	1-7	5.44	1.01	.825**	.893**	--	.867**	.906**	.820**	.857**	.949**	.606**	.687**	.665**	-.557**	.710**	.541**	.558**	.632**	.771**	3.81-6.58	5.42	.52
4.	PR	7	1-7	5.44	.98	.806**	.827**	.846**	--	.911**	.813**	.818**	.935**	.688**	.724**	.648**	-.609**	.719**	.596**	.640**	.613**	.820**	3.88-6.44	5.43	.53
5.	GI	7	1-7	5.45	.98	.801**	.851**	.875**	.879**	--	.910**	.902**	.970**	.662**	.740**	.649**	-.622**	.693**	.596**	.614**	.603**	.798**	4.25-6.50	5.42	.48
6.	GV	7	2-7	5.43	1.01	.777**	.810**	.851**	.806**	.903**	--	.908**	.924**	.611**	.690**	.628**	-.571**	.638**	.560**	.607**	.595**	.814**	4.25-6.63	5.40	.56
7.	TB	7	2.8-7	5.49	.97	.793**	.831**	.846**	.812**	.893**	.899**	--	.927**	.569**	.654**	.617**	-.568**	.595**	.588**	.599**	.570**	.835**	4.40-6.47	5.47	.48
8.	Transform Lead	7	1.4-7	5.44	.92	.898**	.931**	.944**	.918**	.953**	.930**	.933**	--	.663**	.732**	.675**	-.606**	.724**	.603**	.636**	.645**	.855**	4.03-6.46	5.42	.48
9.	Trust in Team	7	2.7-7	5.59	.92	.643**	.651**	.648**	.667**	.676**	.665**	.660**	.708**	--	.782**	.789**	-.453**	.823**	.649**	.599**	.590**	.628**	3.83-6.44	5.60	.49
10.	Team task cohesion	7	2-7	5.73	.95	.652**	.628**	.649**	.641**	.670**	.662**	.637**	.697**	.784**	--	.773**	-.646**	.785**	.791**	.626**	.700**	.704**	4.17-6.67	5.73	.51
11.	Team Performance	7	2-7	5.34	1.01	.568**	.556**	.572**	.587**	.614**	.586**	.581**	.625**	.679**	.718**	--	-.485**	.787**	.695**	.672**	.640**	.634**	4.24-6.67	5.37	.48
12.	Collective Turnover	7	1-5	2.66	1.21	-.488**	-.484**	-.495**	-.505**	-.533**	-.507**	-.482**	-.537**	-.550**	-.634**	-.544**	--	-.545**	-.672**	-.656**	-.618**	-.540**	1.22-4.25	2.67	.68
13.	Loyal to leader 1	7	1.8-7	5.39	.98	.678**	.631**	.640**	.643**	.641**	.642**	.631**	.692**	.790**	.758**	.693**	-.542**	--	.722**	.700**	.309**	.695**	3.90-6.30	5.39	.48
14.	Loyal to leader 2	7	2.7-7	5.64	.91	.561**	.482**	.506**	.541**	.542**	.534**	.532**	.568**	.655**	.782**	.643**	-.605**	.692**	--	.751**	.360**	.651**	4.67-6.67	5.66	.48
15.	Affect commit	7	2-7	5.26	.92	.561**	.529**	.551**	.567**	.600**	.599**	.567**	.611**	.617**	.675**	.720**	-.590**	.673**	.714**	--	.342**	.599**	4.25-6.50	5.25	.46
16.	Job satisfaction	7	1-7	5.47	1.08	.540**	.546**	.527**	.541**	.559**	.565**	.544**	.587**	.591**	.635**	.678**	-.620**	.579**	.595**	.620**	--	.523**	4.20-6.67	5.47	.56
17.	Trust in the leader	7	1-7	5.32	1.08	.766**	.761**	.769**	.788**	.804**	.818**	.849**	.854**	.673**	.609**	.559**	-.434**	.683**	.527**	.526**	.281**	--	3.56-6.42	5.32	.55

Table e.2 Full information of measurement model comparison

Model	χ^2	*df*	χ^2/df	CFI	TLI	RMSEA	CI90	PCLose	SRMR	AIC	Holter .05/.01	$\Delta\chi^2(\Delta df)$ Baseline	ΔCFI
Baseline (1st order factors)	1456.833	652	2.234	.921	.939	.070	[.065; .050]	.000	.058	1710.833	125/128	-	-
Model A TeamTI + TeamPerformance	1690.662	654	2.585	.921	.915	.079	[.075;.084]	.000	.051	1940.662	107/111	233.829(2)***	.000
Model B LeaderTI+TeamTI	1914.045	655	2.922	.904	.897	.087	[.083;.092]	.000	.074	2162.045	95/98	457.212(3)***	.017
Model C LeaderTI + TeamTI + TeamPerformance	2153.155	656	3.282	.886	.878	.095	[.091;.100]	.000	.072	2399.155	84/87	696.322(4)***	.045
Model D Single factor (Model C + TransfLeadership)	2625.042	657	3.995	.850	.840	.109	[.105;.113]	.000	.066	2869.042	69/72	1168.209(5)***	.071

Table e.3 Full information of categories and frequencies (Q1)

Dimension	Categories	Subcategories	Frequency	Example
Loyalty to the leader			**429**	
	Job status recognition & valuing		***5***	Plus I like the work climate in my current company, we are happy together. I am pretty satisfied with my position and income now, given consideration to my age, I prefer to be stay at the same place. (I12: 3)
	Job-related factors		***85***	
		Job content	23	And job content and work pressure, (I17: 5)
		Work-Family balance	23	In addition, there may be a family factor, whether there is a certain degree of autonomy in working hours. If there it is, you can take care of your family. This is also very important. (I24: 5)
		Salary	20	The 4th one should be salary. (I04: 5)
		Person-Job fit	14	And if I am familiar with the job content, if I am competent. (I30: 3)
		Job satisfaction	5	I am pretty satisfied with my current job, and I have bigger advantages in the current company and platform. (I22: 5)
	Leader-related factors		***176***	
		Leader's Career Growth support	59	a lot of people choose to leave, thus more job opportunities may have been left, so I could get the chance to be promoted. (I12: 3)
		Leader style (transf vs transactional)	32	I will mainly consider if I like his personality, leadership style and management mode, if I feel the leader is nice, I will leave with him (I23: 3)
		Leader's Personality & Virtues	19	First, it's the leader's personality, competence and his leadership style (I26: 3)
		Dyadic relationship (affective bonds)	18	And this leader, what about his personality? Is his management style the kind that I like? How is his relationship with me? Is he close to me? (I25: 2)
		Leader effectiveness	13	I think the leader's (…) working competence (I21: 5).
		Leader distance	12	The other one is how my relationship with the leader is, and whether the relationship is very close (I01: 3).
		IO Circle	11	Am I in his inner circle (I25: 4)
		Team leadership	8	It may have something to do with the leader's personality and ability, as well as his personal charisma and management style. Because this leader has a strong charm and has worked with me for many years and has a good relationship with each other, he may leave (I29: 5).
		Dyadic tenure	4	Surely, I've worked with him for some years, and I've worked with him before as well (I26: 3).
	Leadership culture & power		***10***	Whether there are political conflicts between leaders (I24: 3)
	Personal-related factors		***60***	
		Values	33	I think these are influenced by my age, personality and sense of values (I26: 5).
		Age	16	At my age, I certainly wouldn't dare to go with him easily. (I25: 2)
		Personality	11	My personality is more stable (I25: 2)
	Social-related factors		***86***	
		Coworker relations	22	I think interpersonal relationship is pretty important (I24: 5).
		Work environment	12	There is also working environment, working atmosphere, relationship between colleagues, teamwork and so on, (I17: 3)
		Team culture	17	Cultural climate of the team (I27: 5)
		Team job role	11	If I have a good relationship with him and everyone is acting in concert, it is possible that others will just decide without considering so much (I24: 5).
		Coworker attitudes	9	In addition to recognition from my direct leader, I think there will be more recognition to my competence from other leaders or other departments in the company as there are higher-level leaders or brother and sister-department in the company (I28: 3)
		Social norms	5	Another question is whether there will be prohibition clause in the same trade, because now many such leaders leave their jobs to go to a new company and run the same business as the original one. (I21: 3)

	Team cohesion	5	Transformational leadership can create a particularly good atmosphere and strong cohesion (I11: 3).
	Mianze	3	Also, I am a junior manager here, but I may still be a junior manager there, my position has not changed, or my work content is still the same, so I don't feel necessary to follow him. (I16: 3)
	Contextual performance (Org Citizenship Behaviors)	2	But after all, on this platform, I have my ability and value proved to be here. In addition to the approval of the direct leadership of the department, more people will actually see my value and recognize my ability in my company. So, I think I can still keep my original post and do my original job. (I28: 3)
HRM-related factors		***7***	
	Performance management (appraisal & rewards)	6	What is my job content? How is my future development? What is the cultural climate of the company? How about the performance appraisal? (I26: 3)
	Talent management	1	What about talent, vision and culture of the company he went to (I24: 3)
Loyalty to the Organization		**75**	If I recognized the organization instead of the leader himself, then I might choose to stay in the original organization more likely (I26: 3).
Organizational culture		***11***	What is the cultural climate of the company? (I26: 3)
Organizational reputation, Brand image, industry prestige		***45***	The third is the prospect and industrial position of the company he went to in the long run. If he is still in this industry, I will do some analysis on the company he went to, (I24: 3).
Organizational structure & Organizational performance		***6***	What is the cultural climate of the company? How about office politics and so on. (I30: 4)
Sense of mission and purpose		***2***	What about talent, vision and culture of the company he went to? Because I am in sales department, I will think more about whether the products or businesses he runs have core competitiveness, whether there is a political conflict between leaders, the salary assessment plan in the past and the future, the salary that can be obtained and the future development space. (I24: 3)

Table e.4 Full information of categories and frequencies (Q2)

Dimension	Categories	Subcategories	Frequency	Example
Loyalty to the leader			**541**	
	Job status recognition & valuing		***21***	Maybe I don't get along well with my new company and colleagues, I can't adapt to the new environment and work, and people and things don't go well in my new company, and I can't meet my original expectations. Or I didn't think clearly before, (I33b: 11)
	Job-related factors		***152***	
		Salary	77	If this is the case, it may be obvious, I could just need to buy a car or a house, and the transactional leader just promised me a higher salary (I07a: 7).
		Person-Job fit	36	In addition, if the work content there is the same as I have now, and the field is what I am good at, and I can handle it with ease, then I will try it (I08a: 7).
		Job content	22	I also like the work content, and I am competent and satisfied with my work (I24c: 9).
		Work-Family balance	14	Also, the original company may be closer to my home, so I can take better care of my children and my family. (I11c: 9)
		Job satisfaction	3	I also like the job content, and I am competent and satisfied with my work (I24c: 9).
	Leader-related factors		***197***	
		Leader's Career Growth support	61	The third is that he gives me opportunities for growth and promotion, and a stage to display my talents (I04a: 7).
		Leader style (transf vs transactional)	28	Actually, I quite like this kind of transactional leadership (I23a: 8).
		Dyadic relationship (affective bonds)	27	The relationship with the leader could intimate or not. Maybe I am the person he cultivated, and I am the person who shares the best relationship with him. He also takes special care of me. So for my feelings to him, I will go with him (I24c: 7).
		Leader effectiveness	22	When the leader goes to a new company, he also needs to have his own team to give full play to his own leadership effectiveness, so that he can control the key positions and things and his influence can be exerted quickly. (I16a: 7)
		Leader's Personality & Virtues	18	I can trust both his personality and competence (I19a: 7).
		Dyadic tenure	14	The second is to have a long time period working with the leader. He knows me very well, and I trust him very much. I believe that his promise to me will definitely be fulfilled, and there is such a tacit understanding (I30a: 6).

		Leader distance	13
		Team leadership	9
		IO Circle	5
	Leadership culture & power		***13***
	Personal-related factors		***26***
		Values	15
		Age	5
		Personality	6
	Social-related factors		***112***
		Mianzi	23
		Work environment	23
		Team job role	22
		Coworker relations	17
		Team culture	8
		Social norms	8
		Coworker attitudes	7
		Contextual performance (Org Citizenship Behaviors)	2
		Team cohesion	2
	HRM-related factors		***20***
		Performance management (appraisal & rewards)	14
		Talent management	6
Loyalty to the Organization			***52***
	Organizational reputation, Brand image, industry prestige		23
	Organizational structure & Organizational performance		***14***
	Organizational culture		***9***
	Sense of mission and purpose		***3***

After all, the leading will be a stronger factor, that is, his leadership style, and his followers are in favor of his leadership style, usually close to him and share a good friendship. (I16a: 7)

On the other hand, at work, I have seen his outstanding advantages. He has the resources I really want, and I can learn from his words. For example, like Cai Chongxin, can he go to Ma Yun because he sees the future, right? So he can give up his original high income and follow Ma Yun because he sees the hope of the future from that man. If I also see these qualities in transactional leaders, as my main focus is on the future, then I will do the same. (I03a: 7)

First of all, if he is a transactional leader, I am willing to go with him. There must be many common interests. I am a person in his circle (I01c: 13).

If I go, I can get a higher position and even had some power. In our tradition, there is a saying that I would rather be the head of a chicken than the tail of a phoenix. Maybe I can be the head of a chicken when I go, but I can only be the tail of a phoenix on the original platform (I29b: 7).

In fact, it is just the sense of values of leader and my personal sense of values. If our ideas are close, then everyone is willing to get together and do something. Without these, it may be very easy for the team to break up. (I16a: 7)

First of all, it is the influence of my age, personality and values. If I recognize this leader, I will go with him (I26a: 7).

It is also possible that my age and my own personality are making myself not good at getting along well with new people, or that I am a slow-witted person, and I am serious about things, and I am not too happy with the people in my new company. (I17a: 11)

Now that I've left, I won't consider going back, mainly for reasons of Mianzi (the face). If I go back, then it'd not be very pleasant for both sides. It turns out that people in the original company will think that I am capricious and must be unable to get along outside, which is why I consider coming back (I06a: 13).

The working environment here is also better. (I24c: 9).

I admire his personality and have a good personal relationship with him. It is possible to cooperate with him for a long time and become a teammate, or even a business partner. (I10b: 7)

Not as happy as in the previous company, to be specific, the interpersonal relationship with colleagues. Not as harmonious as the original one. (I14c: 13)

Second, there is no hope in the new company, there is no clear mission and goal, or the goal is too ambitious. I don't think the existing conditions can be realized, and I don't like the team culture of the new company very much (I10b: 9).

Then I won't consider going back, even if I am given a higher salary and a higher position. A good horse will never turn around for an old pasture (I19a: 13).

The second factor is that I can't integrate into the work team of the new company, and the team atmosphere is poor. They are on guard against me, crowd me out, and know that I am the one who came here with the leader, so I can't integrate into their team again (I23a: 12).

The factors that attract me back may be a good tacit understanding between colleagues in the original company, and the smooth cooperation and good soft environment may attract me back. (I13a: 15)

Birds of a feather flock together. I am willing to go with him as I definitely like his management style. (I12b: 9)

After I learned about his salary assessment system, I assessed that I could get the salary he offered and I am eligible the position he offered (I31c: 7).

For example, the performance management and assessment of the procurement, logistics, and administrative department, as well as the recruitment, training and career planning of outstanding talents. (I19a: 11)

The second reason is that I still have affect for my old company. I recognize this platform, so when this platform invites me again, I will still choose to go back (I26a: 11).

The platform he went to is very influential in the industry, and the products and services he runs are exactly what I want to do, and I admire them very much. (I24c: 7)

It may be that the old company has changed leadership, and the whole organizational structure and performance appraisal have changed a lot (I16a: 9).

Actually, I still like the culture and interpersonal relationship of the original company. (I12b: 13)

Secondly, I'll see if my old company has changed greatly in these two months, such as whether the boss, the direct superior has changed, whether his company or his mission vision has changed (I25a: 12).

Table e.5. Full information of frequency comparison

Dimension	Categories	Subcategories	Not following		Following	
			Absolute freq	Relative freq	Absolute freq	Relative freq
Loyalty to the leader			**429**		**541**	
	Job status recognition & valuing		***5***	***1.2%***	***21***	***3.9%***
	Job-related factors		***85***	***19.8%***	***152***	***28.1%***
		Job content	23		22	
		Work-Family balance	23		14	
		Salary	20		77	
		Person-Job fit	14		36	
		Job satisfaction	5		3	
	Leader-related factors		***176***	***41.0%***	***197***	***36.4%***
		Leader's Career Growth support	59		61	
		Leader style (transf. *vs.* transactional)	32		28	
		Leader's Personality & Virtues	19		18	
		Dyadic relationship (affective bonds)	18		27	
		Leader effectiveness	13		22	
		Leader distance	12		13	
		IO Circle	11		5	
		Team leadership	8		9	
		Dyadic tenure	4		14	
	Leadership culture & power		***10***	***2.3%***	***13***	***2.4%***
	Personal-related factors		***60***	***14.0%***	***26***	***4.8%***
		Values	33		15	
		Age	16		5	
		Personality	11		6	
	Social-related factors		***86***	***20.0%***	***112***	***20.7%***
		Coworker relations	22		17	
		Work environment	12		23	
		Team culture	17		8	
		Team job role	11		22	
		Coworker attitudes	9		7	
		Social norms	5		8	
		Team cohesion	5		2	
		Mianzi	3		23	
		Contextual performance (Org Citiz Behav)	2		2	
	HRM-related factors		***7***	***1.6%***	***20***	***3.7%***
		Performance mng (appraisal & rewards)	6		14	
		Talent management	1		6	
Loyalty to the Organization			**75**		**52**	
	Organizational culture		***11***	***14.7%***	***9***	***17.3%***
	Org. reputation, Brand image, industry prestige		***45***	***60.0%***	***23***	***44.2%***
	Org. structure & Organizational performance		***6***	***8.0%***	***14***	***26.9%***
	Sense of mission and purpose		***2***	***2.7%***	***3***	***5.8%***

Annex F

Wave 1

Dear Madam/Mr:

Hello! This is an anonymous academic research questionnaire for a doctor in management research. The purpose is to understand your views on the "leader-member relationship and team trust's influence on team performance and job satisfaction and its moderating effect". This will take about 15 minutes. Your answer is related to the quality of this research and we will invite you again in the future to fill in the second part of the survey, which is also very small and quick to answer. The contents of this questionnaire are strictly confidential and are purely for academic research purposes. There is no right or wrong answer. Please feel free to fill it out. Sincerely thank you for your support and cooperation, and I would like to express my deepest gratitude to you!

Q1：性别(gender)

○男（Male）

○女（Female）

Q2：年龄(age)

○25 岁及以下（25 years old and below）

○26-35 岁（26-35 years old）

○36-45 岁（36-45 years old）

○46-54 岁（46-54 years old）

○55 岁及以上（55years old and above）

Q3：教育程度(education level)

○中专、高中及以下（Technical secondary school, high school and below）

○大专（Junior college）

○大学本科（Undergraduate）

○硕士研究生（Postgraduate）

○博士研究生（PhD）

Q4：在公司工作年限(Working years in the company)

○ 1 年及以下(up to 1 year)

○. 1-2 年（1-2 years）

○. 3-5 年（3-5 years）

○. 6-10 年（6-10 years）

○. 10 年以上（more than 10 years）

Q5：职位类型(type of job)

○一般员工（General Staff）

○基层管理者（Grassroots managers）

○中层管理者（Middle manager）

○高层管理者（Senior management）

Q6：与直接上司共事年限(Years of working with your direct leader)

○ 1 年以下(less than 1 year)

○ 1-2 年(1-2 years)

○ 3-5 年(3-5 years)

○ 6-10 年（6-10 years）

○ 10 年以上（more than 10 years）

Questionnaire 1 Transformational Leadership& Trust in Leader(answered by Team members)

Please signal how well the following sentences describe how your direct supervisor related with you. Mark the most suitable number in the following scale: A. Strongly disagree, B. Disagree very much, C. Disagree, D. Neither agree nor disagree, E. Agree, F. Agree very much, G. Strongly agree.

HE1.Encourages me to set high goals for myself.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

HE2.Communicates high performance expectations to me.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

HE3.Shows confidence in my ability to meet performance expectations.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

HE4.Demonstrates total confidence in me.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

HE5.Encourages me to live up to my potential.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

FD1.Helps me develop my strengths.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

FD2.Suggests training to improve my ability to carry out my job.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

FD3.Provides me with career experiences.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

FD4.Provides feedback to help me develop my abilities.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

11. FD5.Provides guidance to help me improve my job performance

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

IS1.Leads me to look at problems from many different angles.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

IS2.Challenges me to think about old problems in new ways

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

IS3.Challenges me to be innovative in my approach to work assignments.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

IS4.Encourages me to think independently.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

PR1.Commends me when I achieve my goals.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

PR2.Gives me positive feedback when I perform well.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

PR3.Gives me special recognition when I perform brilliantly.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

PR4.Acknowledges improvement in my quality of work.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

GI1.Encourages team members to be proud of our team.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

GI2.Says things that make us feel proud to be members of this team

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

GI3.Says positive things about the team.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

GI4.Encourages others to place the interest of the team prior to their own.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

GI5.Emphasizes the uniqueness of the team.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

GV1.Articulates a compelling vision of the future for our team.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

GV2.Talks optimistically about the future of our team.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

GV3.Talks enthusiastically about what needs to be accomplished by our team.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

GV4.Communicates a clear direction of where our team is going.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TB1.Fosters collaboration among team members.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TB2.Encourages group members to be 'team players'.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TB3.Develops a team attitude and spirit among team members.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TB4.Gets the team to work together for the same goal.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TB5.Resolves friction among team members in teamwork。

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TR1.You share freely with your supervisor your thoughts, feelings and hopes.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TR2.You talk freely with your supervisor about the difficulties you met in work, and you know he/she would love to be a listener.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TR3.You would both feel a sense of loss if one of your team was transferred and you could no longer work together

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TR4.If you shared your problems with your direct supervisor, you know he/she would respond constructively and caringly

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

Wave 2

Dear Madam/Mr:

Hello! I thank you for having participated in the first survey and now it is very important to the academic research that you kindly fill in this survey also. This is the second and last part and will will take 15 minutes only. It is also anonymous and confidential and voluntary.

The purpose is to understand your views on the "leader-member relationship and team trust's influence on team performance and job satisfaction and its moderating effect". Your answer is related to the quality of this research. There is no right or wrong answer. Please feel free to fill it out. Sincerely thank you for your support and cooperation, and I would like to express my deepest gratitude to you!

Questionnaire 2 Team trust (answered by Team members)

Please signal how well the following sentences describe what you think about your work team. Mark the most suitable number in the following scale: A. Strongly disagree, B. Disagree very much, C. Disagree, D. Neither agree nor disagree, E. Agree, F. Agree very much, G. Strongly agree.

TT1.We absolutely respect each other's competence.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TT2.Every executive present shows absolute integrity.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TT3.We expect the complete truth from each other.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TT4.We are all certain that we can fully trust each other.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TT5.We count on each other to fully live up to our word.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

Questionnaire 3 Loyalty to leader (answered by team members)

Please signal how well the following sentences describe how you feel about your direct supervisor. Mark the most suitable number in the following scale: A.Strongly disagree, B.Disagree very much,C. Disagree,D.Neither agree nor disagree, E.Agree, F. Agree very much,G. Strongly agree..

LL1.Since starting this job, my personal values and those of my supervisor have become more similar.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

LL2.My values and those of my supervisor are similar.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

LL3.I praise my current supervisor in front of my friends as a great supervisor to work with.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

LL4. The reason why I prefer my current supervisor to others is because of what he/she stands for, that is, his/her values.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

LL5.When someone praises my supervisor, I feel like it is a personal compliment.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

LL6.Being a subordinate, I have an obligation to perform well and let my supervisor be free of worries。

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

LL7.I do my assigned work well and efficiently; this is what a subordinate should do.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

LL8.Being a subordinate, I am willing to sacrifice personal time to accomplish tasks my supervisor assigned to me

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

Questionnaire 4 Job satisfaction (answered by team members)

Please signal how well the following sentences describe what you feel. Mark the most suitable number in the following scale: A. Strongly disagree, B. Disagree very much, C. Disagree, D. Neither agree nor disagree, E. Agree, F. Agree very much, G. Strongly agree.

JS1.In general, I don't like my job.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

JS2.Generally speaking, I am satisfied with my job.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

JS3.Generally speaking, I like working here.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

Questionnaire 5 Team performance (answered by team supervisor and team members)

Please signal how well the following sentences describe what you think about your team. Mark the most suitable number in the following scale: A. Strongly disagree, B. Disagree very much, C. Disagree, D. Neither agree nor disagree, E. Agree, F. Agree very much, G. Strongly agree.

TP1.This team achieves its goals.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TP2.This team achieves high performance.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TP3.This team makes a great contribution to the company.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TP4.This team is very successful in terms of overall achievement.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

Questionnaire 6 Collective turnover intention(answered by team supervisor and team members)

Please use the following 3 descriptions to evaluate and judge your intention to leave your job based on your actual feelings and experiences, and mark the number that best matches with a ○. The criteria for evaluation and judgement are as follows:

A. Strongly disagree, B. Disagree very much, C. Disagree, D. Neither agree nor disagree, E. Agree, F. Agree very much, G. Strongly agree.

CTI1 I often think of leaving the organization.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

CTI2.It is very possible that I will look for a new job next year.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

CTI3.If I may choose again, I will choose to work for the current organization.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

Questionnaire 7 Team Cohesion & Organizational Commitment

TC1.Everyone tries to help if team members encounter problems.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TC2.Our team is united in trying to reach its goals for performance.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TC3.We all take responsibility for any poor performance of the team.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TC4.Team members communicate freely about each other's responsibility.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TC5.Team members unit together outside of the team project.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TC6.Team members rarely socialize together.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TC7.Team members like to spend time together in their spare time

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TC8.Team members rather go out on their own than as a team.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

TC9.For me, this team is one of the most important social groups I belong to.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

OC1.I would be very happy to spend the rest of my career with this organization.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

OC2.I enjoy discussing about my team with others.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

OC3.I really feel as if this organization’s problems are my own

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

OC4.I think that I could easily become as attached to another organization as I am to this one.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

OC5.I do not feel like ‘part of the family’ at my organization.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

OC6.I do not feel ‘emotionally attached’ to this organization.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

OC7.This organization has a great deal of personal meaning for me.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree

OC8.I do not feel a ‘strong’ sense of belonging to my organization.

A. Strongly disagree

B. Disagree very much

C. Disagree

D. Neither agree nor disagree

E. Agree

F. Agree very much

G. Strongly agree