RES MILITARIS
REVUE EUROPEENNE D ETUDES EUROPEAN JOURNAL OF MILITARY STUDIES
Social Science Journal

The Impact of TMT Functional Heterogeneity on Corporate Performance and the Mediating role of Compensation Gap on New Energy in China

By

Li Chong
Faculty of Business and Communication, Inti International University, Persiaran Perdana BBN, Putra Nilai, 71800, Nilai, Negeri Sembilan, Malaysia

Asokan Vasudevan
Faculty of Business and Communication, Inti International University, Persiaran Perdana BBN, Putra Nilai, 71800, Nilai, Negeri Sembilan, Malaysia
*Corresponding Author Email: asokan.vasudevan@newinti.edu.my

Toong Hai Sam
Faculty of Business and Communication, Inti International University, Persiaran Perdana BBN, Putra Nilai, 71800, Nilai, Negeri Sembilan, Malaysia

Kumarashvari Subramaniam
Faculty of Business and Communication, Inti International University, Persiaran Perdana BBN, Putra Nilai, 71800, Nilai, Negeri Sembilan, Malaysia

Walton Wider
Faculty of Business and Communication, Inti International University, Persiaran Perdana BBN, Putra Nilai, 71800, Nilai, Negeri Sembilan, Malaysia

Prashanth Beleya
Faculty of Business and Communication, Inti International University, Persiaran Perdana BBN, Putra Nilai, 71800, Nilai, Negeri Sembilan, Malaysia

Xue Rui Teng
Rising Capital Sdn. Bhd., 27-1, Jalan Eco Santuari 8/1C, Persiaran Eco Santuari, 42500, Telok Panglima Garang, Selangor, Malaysia

Abstract

Purpose- The study aims to further improve and enrich the research scope of top management team heterogeneity by revealing the TMT heterogeneity affecting corporate performance and seeking evidence of the pay gap as a mediating variable. Design/methodology/approach- The Upper Echelons Theory states that heterogeneity of TMT determines the cognition and values of TMT members, which in turn affects business decisions and corporate performance. The quantitative research paradigm of empirical analysis was conducted using structural equation modelling from 30 new energy companies in China. Findings- Empirical results showed a significant influence of all dimensions of TMT heterogeneity on corporate performance. EL, AGE, CE, OB and GB signification influence CP. Empirical evidence has not supported that TE signification influence CP. Research results supported that CG mediates the relationship between EL, AGE, CE, OB, GB and CP. However, this research result did not support that CG mediates the relationship between TE and CP. Practical implications- The relationship between the top management team and company performance is evaluated based on the Upper echelons theory in China and has some creative value and realistic demand. This study will further improve and enrich the research scope of top management team heterogeneity by revealing the TMT heterogeneity affecting corporate performance and seeking evidence of the pay gap as a mediating variable.

Keywords: TMT heterogeneity, corporate performance, compensation gap, new energy industry

1 Introduction

The rapid expansion of the global economy in a globalized economy, which is less restricted by government policies, tariffs, and other artificial factors, brings both opportunities and challenges for companies (Bai, 2021). Consumers' needs tend to be diversified, and technological advancement has been overgrowing since the beginning of the 21st century—the rapid development of science and technology and the growth of economic growth throw globalization (Liu, 2021). In an unpredictable internal and external market and an arid competition environment, conventional management approaches and instruments are powerless and require the organization's overall process to respond quickly and adapt to environmental changes (Xia, 2021). In the current complex and dynamic environment, businesses face problems by constantly developing new strategies for retaining competitive advantages and improving business efficiency (Li, Lu & Cai, 2021). The conventional strategic leadership model, in which leading decision-makers control a single group in the top management of Chinese companies (Lin & Ma, 2021). China's GDP is increasing, from 410,354.1 billion RMB in 2010 to 100,878.2 billion RMB in 2020 (National Bureau of Statistics, 2022), as shown in Table 1.

Table 1: *GDP of China from 2010 to 2020*

Year	SC	ST	Total
2016	5,134	1,195	6,329
2017	4,238	984	5,222
2018	4,490	1,073	5,563
2019	6,659	1,759	8,418
2020	6,895	1,849	8,744

Source: *National Bureau of Statistics (National Bureau of Statistics, 2022)*

As China's economy enters a new normal (Abdul-Rahaman & Yao, 2020), the role of TMT in developing enterprises is becoming increasingly critical. The new normal of China's economy is the symmetric state of economic structure. Sustainable economic development is based on the symmetric form of the financial system, including sustainable and steady economic growth (Abdul-Rahaman & Yao 2020). Increasingly depleting traditional energy and increasingly prominent environmental pollution problems, the new energy industry has attracted much attention (Lv & Sun, 2020). In China's "14th Five-Year Plan", the new energy industry has been taken as a strategic emerging industry (Abdul-Rahaman & Yao, 2020). As a renewable and clean energy source, hydropower occupies a significant position in China's history of energy development, supporting the sustainable development of the economy and society. At the same time, wind and nuclear energy have also been vigorously developed. Hydropower electricity production has increased from 698.94 billion kWh in 2011 to 1304.4 billion kWh in 2019 (National Bureau of Statistics, 2022). Nuclear power generation has grown from 86.35 billion kWh in 2011 to 348.35 billion kWh in 2019 (National Bureau of Statistics, 2022). Wind power production went from 70.33 billion kWh in 2011 to 406.03 billion kWh in 2019 (National Bureau of Statistics, 2022), as shown in Table 2.

Through the innovation and development of science and technology, the new energy industry has made remarkable achievements and formed a particular scale (Yuan & Yan, 2019). The new energy enterprises are getting more and more attention. There are few studies based on the impact of new energy TMT heterogeneity on corporate performance in China (Jia, 2021). One hundred ninety new energy companies are listed on the A-share market in China (Eastmoney, 2021). By 2013, China had overtaken the European Union and the United States to become the world's top investor in the new energy industry, and its share of global new

energy investment rose rapidly from 5.6% in 2004 to 40% in 2015, making it the most deserving new energy power (Wang H. , 2021).

Table 2: *New Energy of China from 2011 to 2019*

	Hydroelectric Production Power (Billion kWh)	Nuclear production power (Billion kWh)	Wind power production power (Billion kWh)
2011	698.94	86.35	70.33
2012	872.11	97.39	95.98
2013	920.29	111.61	141.20
2014	1072.88	132.54	159.98
2015	1130.27	170.79	185.77
2016	1184.05	213.29	237.07
2017	1197.87	248.07	297.23
2018	1231.79	294.36	365.97
2019	1304.44	348.35	406.03

Source: *National Bureau of Statistics (National Bureau of Statistics, 2022)*

2.0 Literature Review

2.1 Corporate performance

Performance refers to the benefits or results an organization achieves during its business, and performance can be examined in terms of efficiency and effectiveness (Lang & Stulz, 1994). Lang & Stulz (1994) believes that: First, performance is organizational behaviour and is influenced by systemic factors; Second, performance is a result and is closely linked to organizational goals; Third, performance is a unity of the organization's behaviour and the results of that behaviour, and the prerequisite for results is behaviour.

Corporate performance is an essential external reflection of a company's operating conditions, profitability, level of development, competitive strength, and governance system, so it is crucial to compensation attention to corporate performance issues (Feng, 2004). Corporate performance can be measured in various ways, with the most common classifications being financial and non-financial performance. Return on investment (Liu, 2018), return on assets (Wang, Wang & Zhang, 2021), return on equity (Cai & Wu,2021), revenue growth (Min & Li, 2021), economic value added (Liu, He, Zhu, Qin & Wang, 2020), sales growth (Miao, 2020), and corporate profitability rate (Li & Wang, 2014) are commonly used measures of corporate financial performance to explain the historical operating performance of a company.

Members of the executive team may be different in terms of age, gender, education level, tenure, professional background, overseas background, and so on (Han & Guo, 2020). The executive team is pivotal as the makers, organizers, and implementers of corporate strategic decisions (Deng & Li, 2021). Making strategic choices is an intricate process that requires a combination of all aspects to be considered, and it is not up to a single top manager to decide the direction of the business (Deng, Tang & Deng, 2019). Executives' decision-making process is heavily influenced by the heterogeneity of the entire executive team (Han & Guo, 2020).

According to Han (2020), conflicts may arise in strategic decisions due to differences in cognitive perceptions and the possibility of expressing opposing views even when dealing with the same issue. The impact of conflict on corporate performance has to be seen in two ways. New energy companies have more choices to select from, which will positively impact

the development of enhanced innovation and facilitate the right strategic decisions to improve corporate performance. The conflict caused by heterogeneity in the team hinders team communication (Sun, Liu & Xie, 2019). Conflict can negatively affect organizational cohesion, waste more resources on internal consumption and be detrimental to business performance.

2.2 TMT Functional Heterogeneity

Heterogeneity in the characteristics of the top management team is manifested in many ways, including differences in the age profile, tenure, level of education, professional background, compensation, government background, overseas background, and so on. Six of these dimensions were chosen in this study to measure executive team heterogeneity. The level of education reflects an individual's cognitive ability, with higher levels of education indicating a solid ability to learn and an ability to adapt to change, maintain clarity of thought, and make comprehensive and innovative decisions in an intensely changing and complex environment (Song, Wong, Zhong & Chen, 2020). A higher level of education also indicates a higher ability to access the information they need (Zhou, 2019). The average level of education of the top management team is an essential factor influencing the choice of corporate strategy. According to Zhong (2019), the level of education of the top management team is an antecedent variable of the team's strategic decisions, and the results of the study show that companies with a higher average level of education in their top management team have greater visibility, scope and speed of strategic action, and react more quickly when attacked by competitors.

The age of a manager is related to his or her management experience, adaptability, and innovative spirit (Zhang & Dong, 2020). The average older top management team is less likely to make strategic changes, while younger managers are more adaptable, innovative, and more likely to make changes to corporate strategy (Wu, 2020). Top management teams with a lower average age are more confident in managing a business in a complex environment and are more willing to promote international diversification (Tihanyi, Ellstrand, Daily & Dalton, 2000).

The tenure of TMT members is an essential factor in determining the effectiveness of collaboration within the team and in achieving information sharing (Luo, Liu & Jiao, 2019). Studies have shown that when the length of tenure of TMT members is similar, i.e., the more homogeneous the tenure, the higher the loyalty of TMT members to the organization and the lower the TMT replacement rate (Fan & Sui, 2019). Although teams with tenure homogeneity have deficient levels of conflict and good communication patterns, these teams can lack a healthy and rich diversity of perspectives (Li, 2019). The social and organizational experience of the TMT, which is made up of managers with different tenures, invariably constitutes an asset to the company's diversity (Chen, 2019).

Managers' experience working in different industries, in different companies, and different functions within the same company influences their knowledge composition, conceptual formation, and work orientation (Wu & Yi, 2017). Managerial experience is linked to the type of strategy a company successfully implements, and leaders with experience in research and development can improve the performance of strategic operating units by developing innovative strategies (Su, Kang & Tao, 2020). According to Han (2017), heterogeneity of professional experience is positively associated with strategic corporate innovation.

In recent years, with the rapid development of China's economy and the continuous optimization of the employment and entrepreneurial environment, the return of overseas talents has shown rapid growth. According to the China of Education Ministry (Study Abroad Service Centre Ministry of Education, 2018), in the 12 years from 2007 to 2018, the number of students

studying abroad each year rose from 144,000 to 662,000, a growth rate of 359%, while the number of students returning to China rose from 44,000 to 519,000, a growth rate of 1079%. Thousands of experts working in China have become important in developing China's modernization and construction (Liu, 2021). Overseas qualified people bring diverse perspectives and thinking to China's social and economic development, promoting international knowledge flows, technological innovation, and spillovers (Song & Zhang, 2021).

TMT's government background is defined as "government relations" (Wu, Wu & Rui, 2009). Leuz and Gee (2006) studied Indonesian firms and showed that government relations could help firms improve their performance. Hellman, Jones, and Kaufmann (2003) found that top managers with a government background led to more excellent protection of corporate products and services. The study also found that by building government relationships, firms could improve access to resources and business performance (Hellman, Jones & Kaufmann, 2003).

2.3 Compensation Gap

The compensation gap within a company can positively affect the company's performance, and as the compensation gap increases, the company's performance be further improved (Eriksson, 1999). Research on the impact of the compensation gap on corporate performance is mainly based on tournament theory (Gao & Wu, 2019). The compensation gap for top corporate management is generally divided into two types: cash gap and equity gap (Huo, Li & Qiu, 2019). When the compensation of TMT is lower than the average TMT compensation in the same industry, TMT members will have the incentive to compensation comparison (Huo, Li & Qiu, 2019). This is detrimental to the executive team's harmony and harms the company's performance. Zhao et al. (2014) examined the period 2007-2011 and selected 52 listed companies in the energy sector, considering the availability and continuity of data. The compensation gap was positively related to corporate performance (Zhao, Zhang, Hu & Chen, 2014).

There is a linear negative relationship between the compensation gap and the level of performance within a company, i.e., the higher the compensation gap, the lower the performance of the company, and vice versa, the higher the performance of the company (Yang & Wang, 2014). A widening compensation gap is also detrimental to the need for collaboration within the organization, and a high level of collaboration is positively associated with employee satisfaction (Ail, Anis & Yadav, 2015). Wu (2011) found that compensation inequality undermines the positive impact of tenure diversity and educational diversity on organizational change, leading to competition within the TMT and discouraging team effectiveness.

The relationship between the compensation gap and corporate performance is in an inverted U-shape (Yang & Xiao, 2019). Yang and Klaas (2011) analyzed data from a survey of Korean firms and found an inverted U-shaped curve between compensation gap and financial performance, with a moderate size compensation gap having the most significant positive effect on firm performance. Gao and Lu (2015) also confirm an inverted U-shaped relationship between compensation gap and firm performance, where only a certain compensation gap has a positive effect on performance.

2.4 Underlying theory

The Upper Echelons theory and Tournament theory were employed for this study. The Upper Echelons theory suggests the relationship between the top management team heterogeneity and corporate performance. The relationship between the compensation gap and corporate performance is mainly based on Tournament theory. Hambrick and Mason (1984)

introduced the Upper Echelons theory, which has started many scholars exploring top management teams. Carpenter (2004) improves on the Upper Echelons theory by adding executive team members' perceived levels and values to the research framework. The most important logic of the Upper Echelons theory is that the individual characteristics of TMT influence their judgment of the business process, influencing their choice of strategy and, ultimately, their performance.

Upper Echelons theory emphasizes that managers, as finite rational beings, are faced with decision-making where it is often difficult for one person to perceive all aspects of the business both inside and outside. Especially during strategic adjustments or changes, their capabilities cannot meet the needs of the business. Researchers have looked at executive teams rather than focusing on one individual (Hambrick, 2007). The Upper Echelons theory focuses on the easily observable characteristics of managers (Chen & Yan, 2019). The Upper Echelons theory considers these factors as reflecting the preferences of managers at work (Cai & Wu, 2021). The core of the theory is that the characteristics of the top management team influence corporate performance and the choice of corporate strategies through which corporate performance is determined (Deng & Li, 2021).

Upper Echelons theory states that top management heterogeneity receives both external and internal environmental influences (Hambrick, 2007). Top managers are subject to the dual role of the internal and external environment, and their objective and psychological characteristics are consequently influenced (Sun, Liu & Xie, 2019). Based on different perceptions and values, the executive team may behave differently from one executive member to another when developing relevant strategic plans (Deng, Tang & Deng, 2019). Regarding age profile, older executive members are likely to be more risk-averse and conservative in their decision-making opinions, while younger executive members are more adventurous, innovative, and sensitive to environmental changes (Chen & Yan, 2019).

The tournament theory developed by Lazear and Rosen in 1981 provides an essential empirical hypothesis for the compensation gap problem. Specifically, it is a way to motivate participants by having prizes in the tournament to increase participants' level of effort and maximize tournament production. A key idea of tournament theory is clear winners and losers (Lazear & Rosen, 1981). Any participant has the possibility of winning a prize. It is a function of the participant's willingness and ability to compete and the size of the competition. It is determined by its breadth (i.e., the number of competitors) and its depth (i.e., the level of possibility) (Li & Jiao, 2021). If the difference in prize money is too small, participants will be less motivated or even incentivized to compete, reducing the overall output of the competition (Zhang & Liu, 2020).

Tournament theory suggests that a widening compensation gap can motivate employees to work harder and improve the company's business performance; company managers will also work diligently (Sun, Ye & Tang, 2019). Also, when the compensation gap widens, the company's performance indicators, such as return on total assets, stock return, and sales margin, increase. Applied to the top management teams, tournament theory views business executives as competitors in a tournament, with compensation being the reward for winning the competition (Zhang & Liu, 2020). Therefore, for executives in a tournament to achieve higher levels of play, they must win the tournament and earn it through promotion, and only those executives who perform well will be promoted and rewarded with the higher compensation that comes with their new position. The incentive effect of the tournament model is determined by a combination of the likelihood of promotion and the increase in income received after promotion (Ruan, Sun & Peng, 2019). As promotion becomes more complex and less likely as

the position increases, the increase in compensation before and after promotion should accelerate as the position increases. Tournament theory, therefore, encourages good competition within the company, and executives can only win if they give their all and give their best in the competition (Zhang & Liu, 2020).

Therefore, based on the literature review above, this study aims to gain insight and better understand the compensation gap mediating between TMT heterogeneity and corporate performance in the theoretical framework in Figure 1.

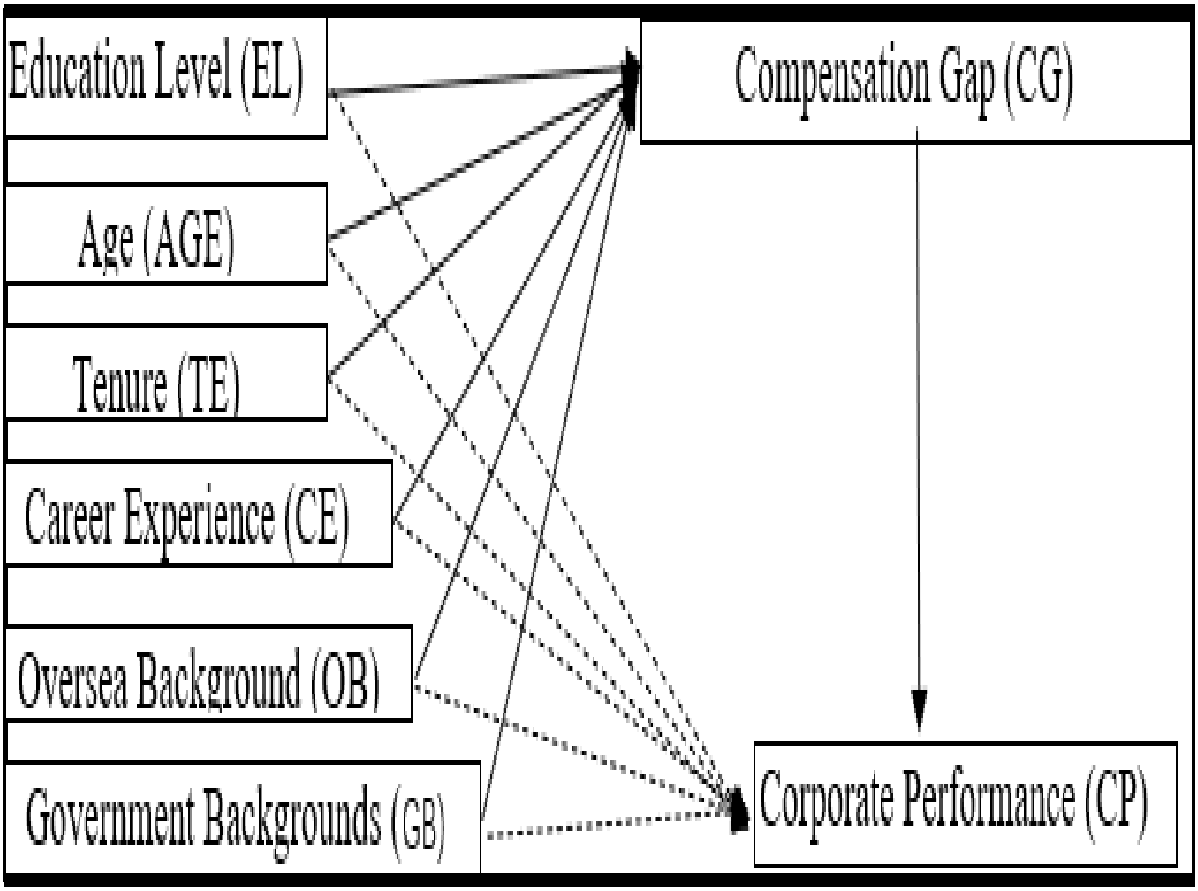

Figure 1: *Theoretical framework (Creation by author*

3.0 Methodology

In statistical surveys, questionnaires are mainly used to collect the required information (Dong & Li, 2021). As a tool for collecting survey information, the questionnaire plays a pivotal role in ensuring the validity and reliability of the survey (Wang & Gao, 2019). To ensure the content validity of the study, the questionnaire is pre-research reviewed and pretested by experts to ensure good reliability and validity (Creswell & Creswell, 2018). Pretest feedback is used to rephrase questions or items and the structure of the questionnaire to avoid ambiguity and misinterpretation by respondents. The term "validity" refers to the extent to which a test or meaningful instrument performs its intended function (Creswell & Creswell, 2018). The questionnaire of the pilot study Questionnaires for the pretest test is distributed and collected by email and WeChat. The questionnaire questions are as non-private as possible and are not tendentious or suggestive. Then 80 samples were distributed as of pilot study among TMT. Data from the pilot study were analyzed to check its reliability, and the result indicated that the

loading score of above 0.7 and the constructs AVE were greater than 0.50, as shown Table 3.

Table 3: *Summary of Variables*

	Construct	Items	Average Variance Extracted	Cronbach's Alpha
Independent Variables	Education Level (EL)	6	0.649	0.890
	AGE (AGE)	6	0.725	0.923
	Tenure (TE)	6	0.658	0.894
	Career Experience (CX)	6	0.628	0.881
	Oversea Background (OB)	6	0.610	0.871
	Government Background (GB)	6	0.709	0.918
DM ed	Compensation Gap (CG)	6	0.758	0.936
	Corporate Performance (CP)	6	0.604	0.869

Source: *Creation by Author*

According to Gong (2019), an operational definition of the top management team is designed for the research object; that is, the "top management team" referred to in this study is composed of senior managers of listed companies with the titles of vice president, chief accountant, chief economist, chief financial officer, chief engineer or above. This study will be a cross-sectional study, also known as a cross-sectional survey, which objectively reflects the distribution of findings at a point in time because the descriptive information obtained is collected at a point in time or within a shorter interval (Huang, 2020). Hiller and Vance (2006) have conducted extensive research and concluded that more than 50% of executives must complete the questionnaire in person, or 74% of the team must participate to ensure the accuracy of the data derived from the questionnaire. According to Cohen, Morrison & Manion's (2017) research, 2741 questionnaires would require a minimum of 338 sample size questionnaires to be returned for data analysis.

Systematic sampling, also known as equidistant sampling, is an evolved form of pure random sampling, in which samples are arranged in a particular order based on random sampling, and a suitable interval is determined for sampling by the ratio of the total capacity of individuals to the sample to be selected (Li, 2012). In this study, equidistant sampling will be performed at intervals of 5 based on the ratio between the population and sample sizes.
Smart PLS 3.0 was employed because it runs multiple regression models. The process involves separate assessments of the measurement models and the structural model. This included descriptive statistical analysis of the variables for the sample data, correlation analysis between the variables, and testing of hypotheses using multiple regression statistical analysis (Hair,F.J., Hult Ringle & Sarstedt, 2014).

4.0 Results

Based on Henseler et al. (2012), data analysis by Smart PLS has two steps: the measurement model and structural model assessment. The measurement was tested using indicator reliability, internal consistency, convergent validity and discriminant validity. Table 4 is the model diagram and the path to be tested.

Composite reliability (CR) and CB alpha tests were used to determine the dependability of the constructs (measurement model). CR values varied from 0.902 to 0.950, whereas CB alpha values ranged from 0.868 to 0.936. The results of both outcomes were much higher than the 0.70 threshold value advised by Hair et al. (2016). As a result, it is possible to infer that the variables are more trustworthy and acceptable (Hair, Hult, Ringle & Sarstedt, 2014), as shown in Table 4. The thumb rule has been strictly followed, and the variables adapted in this study

have reached acceptable scores for AVE and CR. This signifies that each construct measured for this study complies with the convergent validity prerequisite. All of the constructs (measurement models) were found to be dependable. Confirmatory factor analysis CFA was used to assess two-dimensional validity (convergent and discriminant), as shown in Table 5. The average variance extracted (AVE) values were utilized to examine the constructs' convergent validity.

Table 4: *AVE and CR Values for Both 1st Order and 2nd Order Constructs*

Construct	Item	Scale	Loadings	AVE	CR
Education Level	EL1	Reflective	0.934	0.649	0.917
	EL2		0.825		
	EL3		0.729		
	EL4		0.719		
	EL5		0.778		
	EL6		0.829		
Age	AGE1	Reflective	0.770	0.725	0.940
	AGE2		0.815		
	AGE3		0.797		
	AGE4		0.897		
	AGE5		0.918		
	AGE6		0.899		
Tenure	TE1	Reflective	0.905	0.658	0.920
	TE2		0.744		
	TE3		0.770		
	TE4		0.706		
	TE5		0.848		
	TE6		0.876		
Career Experience	CX1	Reflective	0.743	0.628	0.910
	CX2		0.817		
	CX3		0.852		
	CX4		0.729		
	CX5		0.770		
	CX6		0.834		
Oversea Background	OB1	Reflective	0.830	0.610	0.903
	OB2		0.782		
	OB3		0.771		
	OB4		0.741		
	OB5		0.728		
	OB6		0.828		
Government Background	GB1	Reflective	0.852	0.709	0.936
	GB2		0.827		
	GB3		0.835		
	GB4		0.841		
	GB5		0.872		
	GB6		0.823		
Compensation Gap	Second Order				
	CG1	Reflective	0.876	0.758	0.950
	CG2		0.825		
	CG3		0.912		
	CG4		0.897		
	CG5		0.885		
	CG6		0.826		
Corporate Performance	CP1	Reflective	0.777	0.604	0.902
	CP2		0.787		
	CP3		0.802		
	CP4		0.771		
	CP5		0.769		
	CP6		0.757		

Source: *Creation by Author*

The results of path analysis are exhibited in Table 6. The first variable, age, positively

correlates with corporate performance (t 3.677, p 0.000). The second variable, education level, positively correlates with corporate performance (t 2.379, p 0.018). The third variable, career experience, positively correlates with corporate performance (t 2.230, p 0.026). The fourth variable, tenure, negatively correlates with corporate performance (t 1.933, p 0.054). The fifth variable, oversea background, positively correlates with corporate performance (t 2.346, p 0.019). The sixth variable, government background, positively correlates with corporate performance (t 2.690, p 0.007). The R-square values are 0.744, 0.468, respectively. While the R-Square Adjusted gives 0.723, 0.479. It is possible to conclude that the values of R-square in two constructions have a "significant" influence. Furthermore, R-square values larger than zero indicate that the two estimated models have a high predictive significance. Lastly, the effect of independent variables is significant in the overall sample.

Table 5*: Discriminant Validity (Fornell –Larker Criterion)*

Fornell-Larker Criterion	Age	Career Experience	Compensation Gap	Corporate Performance	Education Level	Government Background	Oversea Background t	Tenure
Age	0.851							
Career Experience	0.371	0.792						
Compensation Gap	0.607	0.577	0.871					
Corporate Performance	0.495	0.551	0.697	0.777				
Education Level	0.269	0.479	0.554	0.478	0.806			
Government Background	0.443	0.437	0.639	0.529	0.296	0.842		
Oversea Background	0.415	0.361	0.618	0.519	0.371	0.439	0.781	
Tenure	0.367	0.310	0.651	0.532	0.423	0.503	0.485	0.811

Source: *Creation by Author*

Table 6: *Sample Mean, Standard Deviation, t-Value and p-Value for Structural Model*

Relationship	Sample Mean (Structural Model)	Std dev. (Structural Model)	t-value	p-value
AGE → CP	0.165	0.046	3.677	0.000
EL → CP	0.123	0.051	2.378	0.018
CE → CP	0.127	0.054	2.230	0.026
TE → CP	0.169	0.088	1.933	0.054
OB → CP	0.131	0.054	2.346	0.019
GB → CP	0.142	0.052	2.690	0.007

Source: *Creation by Author*

Table 7: *R^2 Criterion*

	R Square	R Square Adjusted
Compensation Gap	0.744	0.723
Corporate Performance	0.486	0.479

Source: Creation by Author

Table 8: *Mediation Analysis Outcome*

Research Hypotheses	Research Findings	t-value	p-value	Confidence Intervals	
				LL 2.5%	UL 97.5%
EL → CG → CP	Supported	2.414	0.016	0.023	0.222
AGE → CG → CP	Supported	3.684	0.000	0.077	0.254
TE → CG → CP	Not Supported	1.955	0.051	0.015	0.351
CE → CG → CP	Supported	2.284	0.023	0.024	0.233
OB → CG → CP	Supported	2.592	0.010	0.025	0.221
GB → CG → CP	Supported	2.663	0.005	0.045	0.254

Source: *Creation by Author*

The study intends to determine if CG mediated TMT heterogeneity towards CP. The results are included in Table 8. The outcome of the analysis indicates that the entire mediation analysis seems to be significant; a part of TE through CG shows a zero relationship. The results of the hypothesis testing indicated that (a) EL, AGE, CE, OB and GB were the significant predictors of CP (H1, H2, H4, H5, H6) in the SM platform; (b) CG mediates the relationship (H7) between EL and CP; (c) CG mediates the relationship (H8) between AGE and CP; (d) CG mediates the relationship (H10) between CE and CP; (e) CG mediates the relationship (H11) between OB and CP; (f) CG mediates the relationship (H12) between GB and CP.

Table 9: *Results of all the Hypotheses Testing*

Research Objective (RO)	Hypothesis	Path	Results
RO2 (a prominent predictor of performance)	H1	EL → CP	Supported
	H2	AGE → CP	Supported
	H3	TE → CP	Not Supported
	H4	CE → CP	Supported
	H5	OB → CP	Supported
	H6	GB → CP	Supported
RO3 (influence of mediators between the independent and dependent variable)	H7	EL → CG → CP	Supported
	H8	AGE → CG → CP	Supported
	H9	TE → CG → CP	Not Supported
	H10	CE → CG → CP	Supported
	H11	OB → CG → CP	Supported
	H12	GB → CG → CP	Supported

Source: *Creation by Author*

5. Discussion

Upon completion of the bootstrapping procedure, the structural model was performed.

The education Level of TMT members' significance influences Corporate Performance.

The test of H1 proposes that EL signification influence CP (EL-->CP). People with higher qualifications are better learners, more thorough in their thinking, and more rigorous in their planning. The average level of education of the TMT is an essential factor influencing the choice of corporate strategy. The greater the heterogeneity in EL, the better it is for team members to work together and prevent in-group preferences among team members, thus ensuring and improving corporate performance (Zhu, Qiu & Zhao, 2019). The finding from this empirical study suggests that EL directly influence CP as the p-value is less significant than 0.05 (P with a path coefficient of 0.018).

The age of TMT members' signification influences Corporate Performance.

H2 propose that AGE signification influence CP (AGE-->CP). Age heterogeneity refers to the fact that there are age differences in the composition of the entire top management team (Cai & Wu, 2021). Age heterogeneity is a significant factor that affects the team's effectiveness to a large extent and impacts the members' ability to work. Age heterogeneity determines the differences in education and so on, and therefore the perceptions of individuals differ significantly, which can lead to conflicts in the company's management (Chen, 2019). Empirical evidence has supported the proposition whit a p-value of 0.000.

Tenure of TMT members' signification influences Corporate Performance.

The H3 propose the TE signification influence CP (TE-->CP). Heterogeneity in tenure is reflected in differences between members of senior management in terms of the length of their tenure (Fan & Sui, 2019). Wang (2019) argues that tenure variability in TMT also affects the team's communication, which influences corporate performance. However, empirical evidence has not supported the proposition with a p-value of 0.054.

Career Experience of TMT members' signification influences Corporate Performance.

The H4 propose the CE signification influence CP (CE-->CP). Highly career experience in heterogeneous top management teams with non-overlapping experience skills and knowledge bases and a more comprehensive and insightful view of issues can improve the effectiveness of strategic decisions and contribute to corporate performance (Han & Guo, 2020). Implementation of strategic decisions by TMT members will be more integrated and holistic, which in the long run will contribute to the company's long-term performance (Tao, Ji & Tao, 2016). Empirical evidence has supported the proposition with a p-value of 0.026.

Oversea Background of TMT members' signification influences Corporate Performance.

The H5 propose the OB signification influence CP (OB-->CP). An empirical examination of China's photovoltaic industry by Luo (2012) found that corporate executives with overseas education or work experience significantly improved their firms' technological innovation capabilities and patent protection and had significant technological effects on firms. Wright (2011) concluded that the overseas study and work experience of executives can bring about knowledge and technology effects for the firm and that such effects lead to an increase in the innovation capacity of high-tech firms. Empirical evidence has supported the proposition with a p-value of 0.019.

Government Background of TMT members' signification influences Corporate Performance.

The H6 propose the GB signification influence CP (OB-->CP). A top management team with a government background can help improve company performance (Huang & Zhu, 2016). TMT with a government background can better understand government policies and operating rules. Furthermore, they know how to communicate with the government more efficiently (Deng, Tang & Deng, 2019). More socially responsible companies are more recognized by the market, which improves corporate performance. Empirical evidence has supported the proposition with a p-value of 0.007.

The mediating role of Compensation Gap between TMT heterogeneity and Corporate Performance.

The H7 propose that the CG mediates between EL and CP(EL-->CG-->CP). The H8 propose that the CG mediates between AGE and CP(AGE-->CG-->CP). However, the H9 propose that the CG mediates between TE and CP(TE-->CG-->CP). The H10 propose the CG

mediated between CE and CP(CE-->CG-->CP). The H11 propose that the CG mediates between OB and CP(OB-->CG-->CP). The H12 propose that the CG mediates between GB and CP(GB-->CG-->CP). The top management team compensation gap mediates the effect of firm TMT heterogeneity on corporate performance (Cai, Chen & Ren, 2019). The TMT compensation gap mediates the effect of average education level on firm performance. There is a positive relationship between professional background heterogeneity and functional background heterogeneity, and corporate performance (Huo, Li & Qiu, 2019). The implementation of a compensation gap is sole because differences in professional and functional backgrounds would induce a sense of inequity among individual TMT members (Huo, Li & Qiu, 2019). With the compensation gap as a mediating variable, the compensation gap would have a reinforcing effect on the relationship between professional background heterogeneity and functional background heterogeneity of the TMT and the performance of firms (Wang, Wang & Zhang, 2021). Among executives with overseas and government backgrounds, the compensation gap as a mediating variable affects corporate performance (Song, 2021). Accordingly, this research result supported that CG mediates the relationship between EL, AGE, CE, OB, GB and CP, with a p-value of 0.016, 0.000, 0.023, 0.010, 0.005. Therefore, H7, H8, H10, H11 and H12 were supported. However, this research result did not support that CG mediates the relationship between TE and CP, with a p-value of 0.051. The H9 was not ***supported.***

6.0 Limitations and Future Research

In order to carry out this research, the sectional method was adopted in which the samples were examined at a specific time. Therefore, the causal relationship between variables will not be fully reflected. Reflecting corporate performance requires a long-term process. The data used in this study span a short period, and the effect of TMT on corporate performance will only show up over a certain period with a lag. In particular, the effect of heterogeneity on corporate performance is not significant in a short time, and it takes longer for effect to show up. Therefore, future studies taking into account of the longitudinal method will help examine the causal influences among the variables that are being observed. Since the data were collected using questionnaires, it is challenging to exclude respondents from filling out the questionnaires subjectively in this way. Therefore, future research should encourage and monitor respondents to complete questionnaires objectively.

7. Conclusion

Based on the findings obtained from this study, this study examines the impact of TMT members' heterogeneity on firm performance in the context of the Upper Echelon theory. Further explores the role of the compensation gap as a mediating variable in the impact of TMT heterogeneity on corporate performance. The variables of TMT heterogeneity, including age, education level, career experience, government background, and overseas background, are all significantly and positively associated with firm performance and compensation gap. However, tenure does not show a signification influence on corporate performance. Moreover, the compensation gap does not mediate between the tenure of TMT and corporate performance. The findings of this study have solid practical implications: TMT heterogeneity can contribute to compensation gaps, and heterogeneity can positively impact corporate performance. The findings have important implications for how to weigh the heterogeneity of TMT in terms of age, educational level, career experience, overseas background and government background, and how to build effective TMT to arrange reasonable levels of compensation gap and improve corporate performance.

Acknowledgment

The authors offer special gratitude to INTI International University for the opportunity to conduct research and publish the research work. In particular, the authors would like to thank INTI International University for funding to publish this research work.

References

Abdul-Rahaman,A.R. & Yao,H.X. (2020). China's new normal and the implications to domestic and global business. International Journal of Finance & Economics, 25(2), 157-171.

Aboramadan, M. (2020, 7 13). Top management teams characteristics and firms performance: literature review and avenues for future research. International Journal of Organizational Analysis, pp. 1-26.

Angela,K. & Guo,J.H. (2021, 3 5). Corporate social responsibility and innovation: the moderating role of executive team tenure and its heterogeneity. Forum on Science and Technology in China, pp. 133-142+180.

Angela,K. & Guo,J.H. (2021, 3 5). Corporate social responsibility and innovation: the moderating role of executive team tenure and its heterogeneity. Forum on Science and Technology in China, pp. 133-142+180.

Artha,L. & Joseph,D. (2000). Global leaders are team players: Developing global leaders through members hip on global teams. Human Resource Management, 3(39), 195-208.

Bai, J. (2021). An Empirical Study of the Effect of Executive Team Heterogeneity on the Performance of Cross-Border Mergers and Acquisitions of Chinese Listed Companies. Journal of Shaanxi University of Technology (Social Sciences), 39(04), 22-28.

Bai, J. (2021). An Empirical Study of the Effect of Executive Team Heterogeneity on the Performance of Cross-Border Mergers and Acquisitions of Chinese Listed Companies. Journal of Shaanxi University of Technology (Social Sciences), 39(04), 22-28.

Bai,J.K. & Li,S.S. (2015, 9 15). A study of executive team heterogeneity, quality of strategic decisions and innovation performance. Journal of Dongbei University of Finance and Economics, pp. 3-9.

Bell,E., Bryman,A. & Harley,B. (2018). Business Research Methods (1th Edition ed.). New York: Oxford, United Kingdom.

Boeker, W. (1997). Strategic Change : The Influence of Managerial Characteristics and Organizational Growth. Academy of Management Journal, 40(1), 152-170.

Box, M. & Larsson Segerlind, T. (2018, 8 2). Entrepreneurial teams, gender and new venture survival: contexts and institutions. Sage Open, 8(2), 1-17.

Cai, J.Y. & Dang,X.H. (2015). Entrepreneurial orientation and innovation performance: the impact of executive team characteristics and market dynamics. Journal of Management Science, 28(5), 42-53.

Campbell, J. (1990). Modeling the performance prediction problem in industrial and organizational psychology. (1 ed.). Palo Alto: Consulting Psychologists Press.

Campbell, J. (1990). Modeling the performance prediction problem in industrial and organizational psychology. (1 ed.). Palo Alto: Consulting Psychologists Press.

Carpenter, M. (2002). The implications of strategy and social context for the relationship between top management team heterogeneity and firm performance. Strategic Management Journal, 23(3), 275-284.

Carpenter, M. (2002). The implications of strategy and social context for the relationship between top management team heterogeneity and firm performance. Strategic Management Journal, 23(3), 275-284.

Chaganti, R.S., Watts, A.D., Chaganti, R. & Zimmerman-Treichel, M. (2008, 23 1). Ethnic-immigrants in founding teams:effects on prospector strategy and performance in new internet ventures. Journal of Business Venturing, 23(1), 113-139.

Chai, H. (2010). Study of reliability and validity testing methods in survey questionnaire design. World Sci-Tech R & D, 32(04), 548-550.

Chang, J. (2014, 8 25). Internal Pay Gap and Firm Performance - An Empirical Study Based on Listed Companies. South China Journal of Economics, pp. 71-90.

Chen, L. (2019, 1 18). A study on the impact of executive team heterogeneity on corporate value under the new normal. Modern Business, pp. 125-128.

Chen,L.Y. & Pan,S.Y. (2021). The Impact of Executive Team Characteristics on Corporate Value in Sino-Foreign Joint Venture Listed Companies. Science & Technology and Economy, 34(03), 61-65.

Cheng, K. (2006, 5 30). Characteristics and applications of structural equation models. Statistics & Decision, pp. 22-25.

Cheng, L. (2019, 1 18). Research on the impact of executive team heterogeneity on corporate value under the new normal. Modern business, pp. 125-128.

Cheng,L. & Wang,P.X. (2005, 6 30). Research on the integration of traditional performance evaluation system and EVA. Science and Technology Progress and Policy, pp. 36-38.

Clark, M. (1994). Phenomenological Research Methods (1st ed.). Thousand Oaks: SAGE Publications,Inc.

Cohen,L., Morrison,K. & Manion,L. (2017). Research Methods in Education 8th. Routledge.

Commission, C. S. (2021). China Securities Regulatory Commission. Retrieved 9 18, 2021, from http://www.csrc.gov.cn/pub/csrc_en/

Creswell,W.J. & Creswell,D.J. (2018). Research design: qualitative, quantitative, and mixed methods approaches (3th Edition ed.). California: Thousand Oaks.

Dai, Z. (2021, 2 18). Executive Team Heterogeneity and Corporate Strategic Change - A Study Sample of Chinese A-Share Listed Companies. Modern Business, pp. 67-69.

Dai, Z. (2021, 2 18). Heterogeneity of top management team and corporate strategic change: A case study of Chinese A-share listed companies. Modern Business, pp. 67-69.

Deng,X.M., Liu,Y., Long,X.Y., Ye,Z. & Luo,H. (2020). The relationship between functional heterogeneity of top management team and firm performance: A mediating analysis based on manager perception and team conflicting. Journal of Management Engineering, 34(03), 32-44.

Diao,Y.Z. & Lv,J.L. (2021, 07 05). The influence of executive traits and decision contexts on business model choice - empirical evidence from manufacturing firms. Shandong Social Sciences, pp. 132-139.

Dong,H.J. & Li,X.Y. (2021). Standardization of Questionnaire Survey: Necessity, Dilemma and Solution. Journal of Social Science of Hunan Normal University, 50(02), 135-143.

Eastmoney. (2021). eastmoney. Retrieved 6 24, 2021, from http://quote.eastmoney.com/center/boardlist.html#boards2-90.BK0493

Eastmoney. (2021). Eastmoney. Retrieved 9 18, 2021, from http://quote.eastmoney.com/center/boardlist.html#boards2-90.BK0493

Eriksson, T. (1999). Executive compensation and tournament theory: Empirical tests on Danish data. JOURNAL OF LABOR ECONOMICS, 17(2), 262-280.

Faccio, M. (2006). Politically Connected Firms. The American Economic Review, 96(1), 369-386.

Fan, M. & Jiao,L.B. (2011, 8 20). A study on the relationship between TMT characteristics and their heterogeneity and corporate performance. Journal of Commercial Economics, pp. 97-99.

Fan, Y.D. & Sui,X. (2019, 5 15). Research on the correlation between the characteristics of top

management team and firm performance: from the perspective of firm life cycle. Journal of Graduate School of Chinese Academy of Social Sciences, pp. 53-64.

Fan,Y.D. & Sui,X. (2019, 5 15). Research on the correlation between the characteristics of top management team and firm performance: from the perspective of firm life cycle. Journal of Graduate School of Chinese Academy of Social Sciences, pp. 53-64.

Feng, L. (2004, 8 25). A study of corporate performance and its determinants. Journal of Changsha University of Science and Technology (Social Science), pp. 65-67.

Feng,L.J. & Zhou,W.J. (2020, 6 19). Does executive team heterogeneity enhance corporate performance? --A study of the threshold effect based on executive shareholding. Finance & Economics of Xinjiang, pp. 53-61.

Gao, C.Y. & Wu,M. (2019). A Study on the Impact of Executive Team Heterogeneity on Corporate Performance - Based on the Moderating Effect of Pay Gap. Science-Technology and Management, 21(01), 33-40.

Gong, Q. (2019, 12 23). Demographics-based study on the characteristics of top management teams of high-tech enterprises and their relationship with corporate performance. Journal of Brand Research, pp. 88-90.

Gu, J. (2008, 5 20). Corporate Performance Measurement Study. Communication of Finance and Accounting (Financing Version), pp. 33-34.

Hair,F.J., Hult,M.T.G., Ringle,M.C. & Sarstedt,M. (2014). A Prime on Partial Least Squares Structural Equation Modeling (PLS-SEM). Sage.

Hambick D.C. & Mason P.A. (1984, 9 2). Upper Echelons: The Organization as a Reflection of Its Top Managers. Academy of Management Review, 9(2), 193-206.

Hambrick, D. (2007). Upper Echelons Theory: An Update. The Academy of Management Review, 32(2), 334-343.

Hambrick, D.C, Cho, T.S & Chen, M.J. (1996). The Influence of Top Management Team Heterogeneity on Firms 'competitive Moves'. Administrative Science Quartely, 41(4), 659-684.

Hayes, F. (2021). The Process Macro for SPSS, SAS, and R. Retrieved from http://processmacro.org/index.html

He, M. (2020, 8 1). Functional background of top management team, innovation investment and firm performance. Journal of Industrial Technological Economics, 39(8), pp. 3-12.

Hellman, JS., Jones,G. & Kaufmann,D. (2003). Seize the state, seize the day: state capture and influence in transition economies. Journal of Comparative Economics, 31(4), 751-773.

Hu,B.L., Tian,M. & Yan,S. (2020). Executive Team Heterogeneity, Network Capabilities and Business Model Adaptation. Science Research Management, 41(1), 265-273.

Hu,D.M., Zhao,L. & Chen,W.Z. (2021, 9 1). A study on the mechanism and effect of heterogeneous characteristics of executive teams of listed companies on organizational resilience. Social Science Research, pp. 73-83.

Hu,Y.Y., Hu,K.Q. & Yang,M. (2021, 8 10). The impact of executive team characteristics on corporate R&D expenditure. Sci-Tech & Development of Enterprise, pp. 111-113.

Huang, Q. (2021, 2 15). Key indicators for corporate performance evaluation and their methodological application. Accounting Learning, pp. 158-159.

Huang, X. (2020, 10 30). A new understanding of sensitivity issues in questionnaire surveys and design methodology research. Journal of Western, pp. 61-63.

Huang, Y. (2019, 12 07). Open-mindedness in qualitative research and practice. Study & Exploration, pp. 19-27.

Huang, Y. (2019, 12 07). Open-mindedness in qualitative research and practice. Study & Exploration, pp. 19-27.

Huang,Y. & Han,C. (2013, 4 20). An empirical study on the impact of R&D investment on

firm performance: An empirical analysis based on the data of listed new energy companies in China. Friends of Accounting, pp. 37-41.
Huo, X.P., Li,H.W. & Qiu,S. (2019, 9 4). Shareholding Structure, Executive Compensation Gap and Corporate Performance. Friends of Accounting, pp. 25-31.
I., R. (2019, 12 29). TMT diversity and innovation ambidexterity in family firms: The mediating role of open innovation breadth. Journal of Family Business Management, pp. 377-392.
Jia, Q. (2021, 3 1). The impact of R&D investment on the performance of new energy companies. Co-Operative Economy & Science, pp. 130-131.
Jia, Q. (2021, 3 1). The impact of R&D investment on the performance of new energy companies. Co-Operative Economy & Science, pp. 130-131.
Jiang,G.P. & Wan,G.B. (2022, 2 22). A Review of Research on Managerial Characteristics and Business Development. Management and Administration, pp. 129-133.
Jing,R.T., Gao,X. & Liu,Y.J. (2008). Review on Questionaire Survey in China: Situation and Suggestion. China Management Magazine, 1(01), 53-57+97.
Ju, H. (2015). A Study on the Correlation between Executive Pay Gap and Corporate Performance in SOEs - Based on Management Power Perspective. Journal of Mianyang Teachers' College, 34(9), 38-43.
Kakarika, M. (2013, 34 4). Staffing an entrepreneurial team: diversity breeds success. Journal of Business Strategy, 34(4), 31-38.
Kane,MB. & Mitchell,Ruth. (1996). Implementing Performance Assessment: Promises, Problems, and Challenges. (1 ed.). Mahwah: Lawrence Erlbaum Associates.
Kenji,K., Kazutoshi,E. & Masayuki,H. (2013). The effect of social capital of the relationship between the CIO and top management team on firm performance. Journal of Management Information Systems, 1(30), 15-56.
Kor, Y. (2003, 14 6). Experience-based on top management team competence and sustained growth. Organization Science, 14(6), 707-719.
Lai,Y., Yang,L. & Zhang,H. (2020, 3 10). Overseas background of executives, power distance and CSR information disclosure. Friends of Accounting, pp. 58-64.
Le,Y., Wan,J.Y. & Zhang,Y. (2021). Executive Team Heterogeneity, Government Support, and Major Project Performance. Science Research Management, 42(8), 201-208.
Le,Y., Wan,J.Y. & Zhang,Y. (2021). Executive Team Heterogeneity, Government Support, and Major Project Performance. Science Research Management, 42(08), 201-208.
Lee,T., Liu,W.T. & Yu, J.X. (2021). DoesTMTcomposition matter to environmental policy and firm performance? The role of organizational slack. CORPORATE SOCIAL RESPONSIBILITY AND ENVIRONMENTAL MANAGEMENT, 28(1), 196-213.
Lei,Q., Wang,L.C. & Bian,J.H. (2021, 1 15). Executive Heterogeneity and Corporate Core Competitiveness - An Empirical Study Based on A-Share Firms on the Shenzhen Main Board. China Collective Economy, pp. 115-116.
Li, F. (2016). A study of the impact of demographic characteristics of executive teams on organizational performance. Journal of Chifeng University (Natural Science Edition), 32(23), 158-160.
Li, K. (2012, 11 25). Overview of common sampling methods. Marketing Research, pp. 38-39.
Li, K.F., Song,P.P. & Wang,M.M. (2014, 5 30). Research on the Performance of Listed Companies in China's New Energy Industry. Friends of Accounting, pp. 52-56.
Li, N. (2021, 3 19). An empirical study of executive team background and corporate M&A performance. China Collective Economy, pp. 64-66.
Li, W. (2009, 9 10). An empirical study of corporate executive team heterogeneity and strategic choice. Chinese & Foreign Entrepreneurs, pp. 199-200.
Li, Z. (2019, 4 15). A Study on the Impact of Executive Team Heterogeneity on Corporate

Innovation Performance - A Case Study of Listed Companies in Strategic Emerging Industries. Management and Administration, pp. 60-63.

Li, Z. (2019, 4 15). A Study on the Impact of Executive Team Heterogeneity on Corporate Innovation Performance - A Case Study of Listed Companies in Strategic Emerging Industries. Management and Administration, pp. 60-63.

Li,H.X. & Cheng,X.N. (2020, 10 29). Internal Control and Financing Constraints of Energy Enterprises - A Comparison Based on Traditional Energy and New Energy Enterprises. Communication of Finance and Accounting, pp. 62-65+100.

Li,Z.W., Lu,X.J. & Cai,S.R. (2021). Executive Education, Executive Compensation and Performance of Listed Companies - An Empirical Analysis Based on the Nature of Property Rights of Listed Companies in China. Social Sciences in Shenzhen, 4(05), 35-48.

Liang, Q. (2019). An empirical study on the relationship between executive team characteristics, heterogeneity and team performance - the case of central enterprise G Group. Science & Technology and Economy, 32(3), 75-79.

Liang,G.B. & Cui,Y.H. (2021). Executive team characteristics, executive shareholding and corporate innovation investment - A case study of Chinese private listed companies. Commercial Science Research, 28(04), 45-56.

Liang,S.K., Zhang,Y. & Wang,Y.C. (2019, 4 25). Internal pay gap and company value - a new exploration based on life cycle theory. Journal of Financial Research, pp. 188-206.

Lin,L., Tao,S. & Chen,C.H. (2021, 1 1). Research on knowledge graph and hot trends of team conflict management research based on bibliometric analysis from 1996 to 2020. Journal of Management, pp. 148-158.

Lin,M.F. & Ma,J. (2021, 8 18). Demographic Background Characteristics of Executive Team and Innovation Intensity of Firms - A Study Based on Listed Companies in Guangdong Province. China Circulation Economy, pp. 90-92.

Liu, K. (2018, 11 05). An empirical study on the relationship between CEO compensation and corporate performance of listed companies in China. Accounting Learning, pp. 155-157.

Liu, Z. (2021, 4 15). A study of the impact of executive team characteristics, true surplus management on corporate performance. Market Modernization, pp. 146-148.

Liu, Z. (2021, 2 28). Overseas experience of senior executives and corporate R&D investment. Market Modernization, pp. 89-91.

Liu,G., Wang,D. & Li,J. (2017). Executive team heterogeneity, business model innovation and corporate performance. Research on Economics and Management, 38(4), 105-114.

Liu,L., Cao,R. & Wang,J.F. (2021, 1 15). Executive Heterogeneity, Overconfidence and Cost Stickiness. Finance and Accounting for International Commerce, pp. 75-87.

Liu,X.L., Tao,L.Y. & Zhao,Y.M. (2020). Application of data analysis in qualitative research. Chinese Journal of Pediatrics, 58(11), 944-944.

Lu, S. (2020). Industry-finance integration, senior management team characteristics and innovation efficiency. Journal of South China Agricultural University (Social Science Edition), 19(03), 94-104.

Lu,Q. & Jia,L.D. (2009). Top Management Team Demographics, Power and Diversification Strategy. Science of Science and Management of S.& T., 30(05), 181-187.

Lu,T.Y. & Zhuang,G.J. (2021). The impact of channel diversification on cross-channel conflict and firm performance. Chinese Journal of Management, 18(11), 1679-1685.

Lu,X.F. & Han,L.M. (2007, 7 20). Mediator, Moderator and Covariate Variables: Concepts,Statistical Testing, and Comparison. Journal of Psychological Science, pp. 934-936.

Lv, J. (2014, 1 5). Heterogeneous firms, pay gaps and firm performance. Research on Financial

and Economic Issues, pp. 71-79.
Lv,K.J. & Sun,H. (2020, 3 20). The internal mechanism of the impact of government subsidies on enterprise innovation performance: A study based on new energy enterprises. Science and Technology Management Research, pp. 54-62.
Ma,W.J., Zhang,L.L. & Gong,L.J. (2020, 2 28). The Impact of Matching Outward-Oriented Open Innovation Orientation and Model on Firm Performance. China Soft Science, pp. 167-173.
Menz, M. (2012). Functional Top Management Team Members: A Review, Synthesis, and Research Agenda. Journal of Management, 1(38), 45-80.
Miao, Z. (2020). Exploring the performance appraisal of commercial groups under the traditional department store industry. Modern Business Trade Industry, 41(22), 41-42.
Mu, J. (2020, 11 15). Study on the application of EVA in the performance evaluation of J enterprises. Contemporary Accounting, pp. 114-116.
National Bureau of Statistics. (2022). National Bureau of Statistics. Retrieved 1 10, 2022, from http://www.stats.gov.cn/
National Bureau of Statistics, . (2021). National Bureau of Statistics. Retrieved 10 25, 2021, from http://www.stats.gov.cn/
Ni,C.H., Liang,S.S. & Shao,L.P. (2019, 6 25). Enterprise performance definition, measurement and structural integration. Journal of Mudanjiang Normal University (Social Sciences), pp. 8-18.
Nie, X. (2019). Executive Team Heterogeneity, Equity Concentration and Financial Performance of Listed Companies - Based on Data of GEM Listed Companies from 2010-2017. Journal of Nanjing University of Aeronautics and Astronautics (Social Sciences), 21(4), 44-50.
Nie, X. (2019). Executive Team Heterogeneity, Equity Concentration and Financial Performance of Listed Companies - Based on Data of GEM Listed Companies from 2010-2017. Journal of Nanjing University of Aeronautics and Astronautics (Social Sciences), 21(4), 44-50.
Pan, M. (2020, 3 10). Analysis of the impact of the educational background characteristics of top management on corporate value. Hebei Enterprises, pp. 10-11.
Richard,O.C. & Shelor,R.M. (2002). Linking top management team age heterogeneity to firm performance: juxtaposing two mid-range theories. The International Journal of Human Resource Management, 13(6), 958-974.
Rossiter, J. (2002). The C-OAR-SE procedure for scale development in marketing. International Journal of Research in Marketing, 19(4), 305-335.
Saunders,N.K.M., Lewis,P. & Thornhill,A. (2019). Research Methods for Business Students (2nd Edition ed.). New York: Pearson Education.
Securities Association of China. (2022). Securities Association of China. Retrieved 2 28, 2022, from https://www.sac.net.cn/
Sekaran,U. & Bougie,R. (2014). Research Methods for Business (6th Edition ed.). Haddington: John Wiley & Sons Ltd.
Shao,J.B. & Wu,S. (2021, 3 10). A study of the impact of executive team pay gap on dual innovation - empirical evidence from high-tech companies. Securities Market Herald, pp. 39-49.
Shen, Z. (2013, 3 28). Using hierarchical analysis to construct a performance evaluation system for state-owned enterprises. Auditing Research, pp. 106-112.
Song, W. (2021, 2 19). Key Executive Compensation Gap, R&D Investment and Corporate Performance. Communication of Finance and Accounting, pp. 50-53.
Song, W. (2021, 2 19). Key executives pay gap, R&D investment and firm performance. Communication of Finance and Accounting, pp. 50-53.

Song,L. & Zhang,D. (2021). A study on the synergistic effect of executive political affiliation and overseas background on corporate innovation capability. Modern Economic Science, 41(06), 98-107.

Stephen,P.R., Mary,C. & Agna,F. (2019). Management (14 ed.). PEARSON INDIA.

Study Abroad Service Centre Ministry of Education. (2018). Blue Book on Employment in China for Returning Students 2018 (1 ed.). Beijing: China Yan Shi Press.

Su,T.Y., Mao,Y.F. & Shan,Z.W. (2021). Executive Team Heterogeneity, Dual Innovation and Firm Growth - Moderating Effects of Industry Competition and Redundant Resources. Scientific Management Research, 39(06), 75-81.

Sun,H. & Ren,G. (2019, 3 13). The effect of TMT team process and teamwork on the quality of strategic decision making in mixed-ownership firms: Based on the moderating effect of team reflexivity. Science-Technology and management, pp. 90-97.

Sun,J.C., Ye,C.G. & Tang,J. (2019, 4 23). Executive-employee compensation gap, management power and corporate performance. Communication of Finance and Accounting, pp. 10-13.

Susan,V.C., Belverd,E.N. & Powers,M. (2012). Principles of accounting (12 ed.). Mason: Cengage Learning.

Tanikawa,T. & Jung,Y. (2016, 24 3). Top management team (TMT) tenure diversity and firm performance: examining the moderating effect of TMT average age. International Journal of Organizational Analysis, pp. 454-470.

Tao, W. (2021, 10 13). Internal Executive Pay Gap and Corporate Performance - Mediating Effects Based on Investment Efficiency. Management and Administration, pp. 121-127.

Tian,H. & Luo,F. (2021). Research on the application of statistical analysis methods in the era of big data. Journal of Machine Design, 38(5), 149.

Tsui, A. (1987). Defining the Activities and Effectiveness of the Human-resource Department-A multiple constituency approach. Human Resource Management, 26(1), 35-69.

Wang, C. (2021, 12 25). Proper understanding of the use of quantitative research. The Guide of Science & Education, pp. 107-109.

Wang, C. (2021, 12 25). Proper understanding of the use of quantitative research. The Guide of Science & Education, pp. 107-109.

Wang, D. (2021, 4 25). A study on the impact of internal pay gap on the added value of a company - a research perspective based on stakeholder theory. Friends of Accounting, pp. 117-123.

Wang, H. (2021). Analysis of the problems and countermeasures in the development of new energy industry. Electronic Technology, 50(10), 40-41.

Wang, J. (2021, 3 22). Top management characteristics, innovation input and business performance: Based on empirical evidence of listed retail companies in China. Journal of Commercial Economics, pp. 176-179.

Wang, L. (2020, 1 15). R&D Investment, Government Subsidies and Corporate Performance - Experiences from Listed New Energy Vehicle Companies. Management and Administration, pp. 44-49.

Wang, X. (2019, 11 28). A Review of Research on the Effectiveness of the Pay Gap. China Circulation Economy, pp. 115-116.

Wang,D. & Gao,Y. (2019). Design of Questionnaire based on Quality Analysis and Problems to be Noticed. Quality Exploration, 16(04), 77-81.

Wang,D., Wang,Y.J., Qin,J. & He,Y.Q. (2015). An empirical research of top—level leader's psychological capital and social capital on corporate performance: The mediating role of risk Taking behavior. Chinese Journal of Management, 5(12), 687-694.

Wang,K. & Tong,S.J. (2020). TMT heterogeneity, competition relations research enthusiasm

and competitive advantage. Journal of South China University of Technology, 22(06), 55-65.

Wang,W.F., Wang,C.F. & Li,X.W. (2008, 7 20). Government background and corporate value of senior executives of Chinese private listed companies. Economic research, pp. 130-141.

Wang,Y.N. & Ge,Y.H. (2020). A study on the relationship between equity balance, characteristics of top management team and firm performance: Evidence from listed manufacturing companies in China. Journal of Shenyang University of Technology (Social Science Edition), 13(6), 514-520.

Wen, N. (2019, 11 10). The Impact of Executive Team Background Characteristics on Corporate Performance - A Perspective Based on Strategic Emerging Industries. HeBei Qiye, pp. 40-41.

Wu, H. (2020, 5 15). What are the characteristics of an executive team that create the best corporate performance? Sino Foreign Management, pp. 88-91.

Wu, H. (2020, 5 15). What characteristics of top management team can create the best corporate performance? The Chinese and foreign management, pp. 88-91.

Wu, J. (2013, 7 15). A review study of the relationship between corporate performance and executive characteristics. Management & Technology of SME, pp. 41-43.

Wu, L. (2010). Applicability of the resource-based and dynamic-capability views under environmental volatility. Journal of Business Research, 63(1), 27-21.

Wu,J., Richard,O.C., Zhang,X.H. & Macaulay,C. (2019). Top Management Team Surface-Level Diversity, Strategic Change, and Long-Term Firm Performance: A Mediated Model Investigation. JOURNAL OF LEADERSHIP & ORGANIZATIONAL STUDIES, 26(3), 304-318.

Wu,W.F., Wu,C.F. & Rui,M. (2009, 3 15). Government background and tax preference of senior executives of Chinese listed companies. Management World, pp. 134-142.

X,Lee., T,Liu., W,T. & Yu,J. (2021, 9 14). Does TMT composition matter to environmental policy and firm performance? The role of organizational slack. Corporate Social Responsibility and Environmental Management, pp. 196-213.

Xia, H. (2021, 9 9). Executive Experience Across Borders, Managerial Motivation and Corporate Innovation. Science Research Management, pp. 1-9.

Xiang, W.R., Li,W.L. & Li,Y.X. (2021, 1 14). TMT heterogeneity, team conflicting and firm green performance: An integrated analytical framework moderated by differentiated CEO leadership styles. Scientific and technological progress and countermeasures, pp. 1-10.

Xiang,Y.M., Yang,R.P. & Zhu,S. (2019). The impact of TMT heterogeneity on business model innovation: the mediating role of knowledge creation. Science and Technology Management Research, 39(14), 172-179.

Xiao,P. & Liu, M.Y. (2020). Research on the relationship between the degree of internationalization and firm performance - based on the moderating effect of market environment uncertainty. Journal of Shandong Technology and Business University, 34(1), 100-112.

Xu,Z.L. & Xu,K. (2021). Paradigm Debate and Methodological Discussion on "Mixed-Methods Research" in Social Sciences. Journal of Renmin University of China, 35(05), 159-170.

Yan, X. (2019). An empirical study on the correlation between social responsibility, employee satisfaction and performance in private enterprises. Journal of Qingdao University (Natural Science Edition), 32(04), 140-144.

Yan, Y. (2020, 12 5). Problems with corporate performance evaluation and strategies to deal with them. Business Culture, pp. 78-79.

Yang, L. (2013). Executive Team Heterogeneity, Corporate Ownership and Entrepreneurial Strategy Orientation - Empirical Evidence Based on Chinese SME Board Listed Companies. Science of Science and Management of S.& T., 34(9), 159-171.

Ye,J.M., Zhang,Y., & Wan,Y.Q. (2021). Executive Team Risk Preference, Failure Reinvention Behavior and Reinvention Performance: An Empirical Study Based on Listed Companies in China's Pharmaceutical Manufacturing Industry. Statistical Research, 38(08), 59-67.

Ye,Q.T. & Liang,Y.T. (2021, 8 10). A study on the impact of executive team characteristics and strategic change. Commercial Accounting, pp. 9-14.

Yin,X.Z, Fang,H., Zhang,Y.S., Kou,J.T. & Ran,Y.X. (2020). A study of the impact of executive team structure on team performance: a shared mindfulness perspective. Journal of Wuhan University of Technology, 42(5), 453-458+466.

Yu, Y. (2019, 5 15). Study on customer satisfaction measurement and influencing factors. Chinese & Foreign Entrepreneurs, pp. 218-219.

Yu,C.P., Lin,C.P., Zhang,Z.G. & Ye,B.S. (2020). Specialized Knowledge Search, Management Innovation, and Firm Performance: The Moderating Role of Cognitive Evaluation. Management World, 36(01), 146-166+240.

Yu,X.Y., Zhang,Y.M., Chen,Y.Y. & Jia,Y.Y. (2020). Founding member turnover rates, executive team heterogeneity and startup growth. Journal of Management Science, 33(2), 3-16.

Yuan,J. & An,Y.X. (2020, 5 25). How can China's new energy industry achieve sustainable development. People's Tribune, pp. 174-175.

Yuan,X.P. & Yan,T. (2019, 9 18). Corporate Characteristics, Institutional Environment and Corporate Performance: A Case Study of New Energy Listed Companies in China. Reform and strategy, pp. 116-124.

Yuan,X.P. & Yan,T. (2019, 9 18). Corporate Characteristics, Institutional Environment and Corporate Performance: A Case Study of New Energy Listed Companies in China. Reformation & strategy, pp. 116-124.

Zhang, G. (2021, 8 11). Applications and perspectives of research methods in higher education. Education and Teaching Forum, pp. 10-13.

Zhang, P. (2006, 2 10). Top Management Team Heterogeneity and Corporate Performance in a Diversified Business Environment. Science of Science and Management of S.& T., pp. 114-118.

Zhang, W. (2020, 8 15). Key indicators for corporate performance evaluation and their methodological application. Enterprise Reform and Management, pp. 93-94.

Zhang, Y. (2014, 11 5). Reflections on corporate performance evaluation systems. Research on Financial and Economic Issues, pp. 107-111.

Zhang,C.J., Chen,Y.Q. & Wen,Z.M. (2020). Executive Team Characteristics, Environmental Regulation, and Corporate Environmental Performance. Journal of Environmental Economics, 5(03), 98-114.

Zhang,C.J., Cheng,Y.Q. & Wen,Z.M. (2020, 9 20). Characteristics of senior management team, environmental regulation and corporate environmental performance. Journal of Environmental Economics, pp. 98-114.

Zhang,M., Tong,L.J. & Xu,H.R. (2015, 11 15). Social Networks and Enterprise Risk Taking: Based on Empirical Evidence of Listed Companies in China. Management World, pp. 161-175.

Zhang,N. & Dong,Y.H. (2020, 9 28). Executive background characteristics, internal pay gap and earnings management. Communication of Finance and Accounting, pp. 34-36+41.

Zhang,X.H. & Li,Y.Y. (2020, 5 15). Quantitative and Qualitative Research in Education: Dichotomy and Reconciliation. Modern Education Science, pp. 28-33.

Zhang,Y. & Zhang,J.Q. (2016). A study of the impact of social networks and top management team heterogeneity on the opportunity-seeking ability of private entrepreneurs. Chinese Journal of Management, 13(12), 1801-1807.

Zhao, R. (2012). Executive-Employee Pay Gap and Corporate Performance - An Empirical Study Based on Panel Data of Listed Chinese Manufacturing Companies. Business Management Journal, 34(5), 96-104.

Zhao, Y. (2020, 8 25). A study on the relationship between the traditional cultural background of top management team and the capital structure of enterprises -- a case study of listed companies in Shandong Province. Enterprise Reform and Management, pp. 193-194.

Zhen,J., Xie,Z.X., Li,K.H. & Lin,R.H. (2020). Information security governance and firm performance: a moderated mediating role model. Nankai Business Review, 23(1), 158-168.

Zheng, L. (2010). Political affiliation of independent directors and corporate performance. Contemporary Economic Management, 32(11), 20-25.

Zheng,P., Chen,L. & Xiong,W. (2022). Executive Team Heterogeneity, Management Autonomy and Corporate Innovation Performance - An Empirical Study Based on Shanghai and Shenzhen A-Share Listed Companies. Journal of Baoding University, 35(01), 1-8.

Zhou, L. (2013, 7 25). Influencing factors of growth Tobin's Q of listed companies. Finance and economy, pp. 69-71.

Zhou, X. (2019, 8 5). A study on the background characteristics of the executive team of listed companies. Co-Operative Economy & Science, pp. 126-127.

Zhou,W. & Rosini, E. (2015, 5 1). Entrepreneurial team diversity and performance: toward an integrated model. Entrepreneurship Research Journal, 5(1), 31-60.

Zhu,X.M. & Yang,S. (2019). A paradigm for writing management review articles. Foreign Economics & Management, 41(07), 137-152.

Zhu,Y.J. & Wang,X.F. (2022). Misconceptions and case studies of empirical research in education. Chinese Journal of Chemical Education, 43(03), 5-9.

Zhu,Y.M., Qiu,W.J. & Zhao,J. (2019, 10 10). Organizational Structure Inertia, Heterogeneity of Top Management Team and Firm Performance. Finance and Accounting Monthly, pp. 8-14.