

DISENTANGLING THE IMPACT MECHANISM OF CEO AGE ON EMPLOYEE TURNOVER

Zhang Chang-Zheng¹

Xi'an University of Technology, China

Zhang Xin-Yue

Xi'an University of Technology, China

Received 06 July 2020; Revised 16 July 2020; Accepted 18 July 2020

ABSTRACT

The paper addresses the research gap on the forming mechanism of employees' turnover from the new perspective of CEO age. Taking Chinese A-share listed companies during the period of 2011 to 2016 composing of 3296 observations as the research sample, empirical analysis has reached three valuable findings. First, CEO age, on the whole, has an significant and positive impact on employees' turnover rate; Second, there is a weaker positive link between CEO age and employees' turnover rate in knowledge-intensive enterprises than that in labor-intensive enterprises; Third, independent directors play a positive moderating role in affecting the link between CEO age and employees' turnover rate. Rich robustness tests and endogeneity tests have confirmed the validity of the findings. Moreover, higher employees' compensation level is strongly accompanied with higher employees' turnover rate. Theoretical and practical implications are discussed in the end.

Keywords: CEO age, Employees' turnover rate, Upper echelons, Knowledge-intensive enterprises, Labor-intensive enterprises.

INTRODUCTION

The whole population of the employees within an enterprise tends to be increasingly getting younger, and the competition for high talents among modern firms is getting more and more fierce. With the emergence of such two facts, the turnover rate of employees is getting much higher. With the radical development of network information technology and the rapid diversification of interpersonal communication methods, the negative ripple effects of employees' turnover have been magnified infinitely (Hesford et al., 2016; Wong et al., 2015). In this case, it is more practical to address the mechanisms of employees' turnover behavior. How to attract and retain excellent talents and further take effective measures to reduce their turnover rate, without doubt, has become a core topic of a top priority among various topics in human resource management within modern enterprises.

¹Correspondence to: Zhang Chang-Zheng, School of Economics & Management, Xi'an University of Technology, Xi'an 710054, China, E-mail: zcz7901@163.com

At present, a flood of literature has examined the influencing factors of employees' turnover behavior by adopting multiple research methods and various empirical samples. According to existing findings, three kinds of factors that affect employees' turnover behavior have been found, which include the environmental factors in macro-level, the organizational factors in micro-level and the employees' characteristics factors in individual level (Lee & Mitchell, 1991; Mobley, 1977; Price, 1977; Weng & McElroy, 2016; Zopiatis et al., 2014). In recent years, scholars have made new valuable contributions by studying the employees' turnover behavior from various new perspectives of job embeddedness, employee career management and psychological contract, etc., which are mainly rooted in the organizational-level factors. Quite a few researchers strongly agree that organizational-level factors are playing an increasingly irreplaceable role in determining employees' turnover behavior, which have become the most valuable antecedents worthy of further in-depth investigations on employees' turnover behavior (Dawley et al., 2010). Among the organizational-level factors, the leadership style of top managers is one of the academic circles' focuses in recent years.

The view that there is a strong relationship between employees' turnover and their (direct) managers' leadership styles is found to widely distribute in articles across various business magazines, public media and academic literature. Statistics show that about 40%-50% of the employees will propose to quit because of the poor working environment and working atmosphere shaped by their managers who cannot perform their management responsibilities with suitable leadership styles. Hence, a consensus among scholars is that the bad leadership styles of the employees' direct managers with whom the employees directly contact at daily work are basically the most direct and critical reasons why they choose to leave. In line with the upper echelon theory, the leadership styles of the managers in each organizational level are determined and shaped by the CEOs to a large degree (Hambrick & Mason, 1984). What is more, the upper echelon theory strongly argues that the CEOs' demographic profiles affect their strategic choices, talents (definition and) selection and thus the responding enterprises' competitive edge (Thitima & Piruna, 2015). According to such a logic, CEOs' demographic profiles can determine both the leadership style of the employees' direct managers and the rationality of the enterprises' strategy, which are two critical factors of employees' turnover behavior. Considering the three following points, we choose CEO age from the multiple demographic characteristics as the focal variable of employees' turnover behavior:

- There is a "black-box" in the link between CEO age and employees' turnover, which has not been revealed by the existing literature;
- CEO age plays a critical role in shaping CEOs' attitudes, values and beliefs under the background of China, which is famous for Confucian culture (Soojin Yim, 2013);
- The last but not the least, we have great interest and enthusiasm in exploring the impact of CEO age.

CEOs' age can reflect their growth experiences and living environment backgrounds, which has a direct effect on CEOs' capabilities, goals and preferences when they make and execute strategic decisions for their enterprises. In the field of social psychology and business management, a few scholars have ever used age as an objective indicator to measure and capture the individuals' risk preferences, the degree of career concerns, the values, and the richness in experiences when they are

in the processes of strategies formulation and selection. At present, the literature on the effect of CEO age focuses on the issues including strategic choice, risk-taking, executive compensation and corporate performance, and so on (Kunze et al., 2013; Huang et al., 2012; Soojin Yim, 2013). The existing research results show that CEO age can indeed have different effects on multiple organizational processes and outcome variables, which have proved that CEOs of different ages do have different values, attitudes and decision preferences, as well as different strategic investment decisions, leadership styles and management capabilities. In addition, the most closely related research stream is the research literature on the relationship between the age composition of senior management team and the turnover behavior of senior managers. Quite a few scholars have studied whether the age composition of senior management team can affect the turnover behavior of senior managers from the perspective of social identity theory. According to social identity theory, since senior managers' age, as a critical demographic characteristic, can reflect individuals' values, beliefs and attitudes, then age differences among senior managers can be regarded as a separating factor (Kunz et al., 2013), which are not conducive to the positive interactions among senior managers. Instead, the separating factors would lead to interpersonal conflicts, as well as the decline of cohesion. Such factors eventually increase the turnover rate of senior managers (Williams & O' Reilly, 1998). On the other hand, senior managers of the similar ages usually have similar experiences and values and hold similar ideas on corporate strategy. In this case, the sense of belonging and cohesion among senior managers increases, which eventually leads to much lower intention of leaving. Therefore, it can be naturally reasoned that there is a potential link between CEO age and employees' turnover behavior, which has not been examined by existing studies.

To sum up, drawing on the framework of upper echelon theory, we expect that CEO age is an important antecedent affecting employees' turnover, and simultaneously based on the literature review, we find that the relationship between CEO age and employees' turnover has not been explored. Therefore, this study intends to empirically explore the determining mechanism of employees' turnover behavior from the perspective of CEO age based on the data of Chinese listed companies. The research findings of this paper are expected to enrich the theoretical knowledge of upper echelon and make up the research gaps on the influencing factors of employees' turnover.

LITERATURE REVIEW AND HYPOTHESES

A large number of research findings in the fields of psychology science and behavioral science show that the time background of an individual's birth and the cultural & physical environment of an individual's growth will determine his or her personalities and preferences, and further produce different cognitive abilities, thinking patterns and values (Malmendier & Geoffrey, 2011; Driesch et al., 2015). These differences can affect individual behavior decision-making, and ultimately reflect in the business decision-making process, thus affecting employees' behavior choice. As an important demographic characteristic of CEO, age has a complex and diverse impact on CEO's behavior, strategic choice and management style in the process of duty performing, showing the characteristics of non-linear change. From different theoretical perspectives, the impact of CEO age on employees' turnover has two completely opposite expectations, but each has its own internal logic possibility, that is, positive impact and negative impact. This paper attempts to put forward the competitive hypotheses of the

relationships between the two and intends to test and compare the correctness of the two possible logical paths in practice through empirical data.

THE POSITIVE LINK BETWEEN CEO AGE AND EMPLOYEES' TURNOVER

First, according to the overconfidence theory, younger CEOs generally have a higher level of overconfidence, which would show as that they are keener to take risks and support changes than senior CEOs do. The more confident young CEOs are, the stronger their preferences for innovation (or R&D) projects. They hope to prove their abilities and competencies through the successful implementation of innovation initiatives (Malmendier & Tate, 2003). According to this logic, younger CEOs are more likely to use their own capabilities to promote the implementation and performance of innovation projects. Some studies have found that CEOs' characteristic of overconfidence is positively linked with higher level of risk-taking intentions, which is conducive to improving the efficiency of capital allocation and the improvement of enterprises' value, establishing a good public image of the enterprises, and further building employees' self-confidence and accountability. As for the daily internal operation and management style, overconfident younger CEOs tend to adopt technology-oriented and innovation-oriented strategies with a higher possibility, and further attempt to guide the enterprises' objectives, management methods, profit patterns, organizational structure, and so on, to operate around such differentiation strategies with the purpose of maintaining the vitality of the enterprises. In this process, younger CEOs also provide employees with meaningful and inspiring opportunities and platforms, which would help employees realize their self-worth during the process of pursuing the strategic objectives of their responding enterprises. In this case, employees have lower intention of leaving.

Second, from the perspective of psychological contract theory, with the ever-increasing development and innovation of management concepts and management methods, the emergence of a new type of employment practice has resulted in subtle changes in the relationship between organizations and employees (Meckler et al., 2003). Psychological contract plays a more and more important role in the organization, which has become an invisible commitment between the organization and employees maintaining the relationship between the organization and its members. Such a bilateral commitment becomes the binding force of both sides. Organizations and employees need to invest in each other in order to achieve a balance between the expectations of the organizations on employees and those of the employees on organizations. Under the condition of the new type of employment practice, young CEOs have stronger desires to pursue for super firm performance by engaging themselves into firm operation activities with the eager expectation of obtaining good reputation and recognition from multiple stakeholders. This is consistent with the front-line employees' eager ambitions of improving their abilities and realizing their self-worth. It is especially true when the employees born after 1995 enter the workplace. Facing the younger CEOs inspired by healthy psychological contract, most of the employees also have the willingness to cooperate with younger CEOs to achieve corporate strategic goals which are actually in alignment with their own personal goals. In this process, younger CEOs would provide their employees with more opportunities of realizing self-worth and higher growth discretion by persistently involving them into challenging, changing and innovating initiatives. Therefore,

employees are more willing to stay in such kinds of organizations.

Third, from the perspective of human capital theory, with the increase of age, the extraversion and flexibility of an individual in terms of intellectual efficiency and enterprising ability, the core components of human capital, gradually get weakened. With the increase of age, on the one hand, senior CEOs' mental ability, energy and learning capability would decline significantly; on the other hand, senior CEOs are becoming more rigid and resistant to change. As a result, senior CEOs' competencies in effectively promoting changes and innovation by integrating, organizing and controlling multiple resources and complex information are getting gradually weakened. Under such rigid leadership, the organizations may face higher risk of being eliminated, and thus the position safety of employees will be affected negatively. In addition, in order to obtain more income and stronger ability in the future, employees need to invest and accumulate their human capital. With the growth of CEOs' age, their accumulation rate of human capital decreases, and their human capital structure is getting aging and even outdated. The senior CEOs' rigid leadership styles cannot provide employees with suitable learning platform and sufficient room for improving their human capital, which is necessary for young employees to achieve growth and future career success. In this case, it is difficult for senior CEOs to help employees accelerate human capital accumulation, which is more likely to create the risk of passive resignation for younger employees. Hence, according to human capital theory, (younger) employees are more willing to work with younger CEOs with faster human capital update.

Finally, according to the leadership style theory, each generation has the specialized characteristics of the times embedded in the workplace. The growth environment has shaped a typical "Authoritative" leadership style of senior CEOs, which tends to concentrate the decision-making power into their own hands. In this case, senior CEOs focus on work efficiency and quantitative objectives, showing strict attitudes towards their subordinates and lacking necessary concerns on employees' subjective welfare. As the same time, employees are also wary and hostile to senior CEOs. senior CEOs who adopt "Authoritative" leadership style like to set team work goals by themselves, and do not give their subordinate employees the right to participate in decision-making or express their voice. This kind of leadership style tends to suppress the initiative and enthusiasm of employees, which would lead to negative psychological phenomena such as "unfairness" and "nothing to do with me", resulting in employees' negative non-cooperative behavior (Uzonwanne, 2016). The care and support of senior leaders to employees are an important prerequisite for employees to be willing to stay in and contribute to their organizations (Dawley et al., 2010). When employees recognize that they are supported by leaders, they show greater satisfaction and stronger organizational commitment (Clark et al., 2008), which can produce higher job performance and less turnover intention. On the contrary, the "Authoritative" leadership style is difficult to establish a mutually beneficial relationship between superiors and subordinates, which will bring dissatisfaction to employees, and then lead to the possibility of employees' turnover.

Based on the above discussion, this paper proposes the following hypothesis:

H1a: CEO age has a positive impact on employees' turnover rate.

THE NEGATIVE LINK BETWEEN CEO AGE AND EMPLOYEES' TURNOVER

First, from the perspective of social capital theory, there is a positive link between CEO age and the quality of CEOs' social network. With the growth of CEO age, the richness of the available external material or non-material resources embedded in the CEOs' social network would be improved gradually (Driesch et al., 2015). Information resource derived from senior CEOs' social network is beneficial to setting the right strategy, material resource and financial resource derived from senior CEOs' social network can expand the potential strategic choice scope, and human resource and policy resource derived from senior CEOs' social (and governmental) network can enhance the execution performance of the strategy. CEO age gives older CEOs resources to improve corporate performance. Employees benefit from these resources brought by the social capital of senior CEOs in many ways. Therefore, the age of CEO will be accompanied by the decrease of employees' turnover intention.

Second, from the perspective of risk-aversion theory, there is a moderate negative correlation between CEO age and CEOs' risk-taking. With the growth of age, senior CEOs pursue more stable living conditions and less risky business environment, and their decision-making pattern tends to be stable. For an example, vroom and Pahl (1971) have ever compared the influence of age on a manager's risk preference of financial decision-making, and finally confirmed that the older the manager is, the more he/she agrees with the plan with lower risk. For another example, Ackert et al. (2002) have found that senior CEOs hold lower proportion of risky assets, and their risk aversion attitudes increase with age. A recent research has confirmed that real estate investment trusts managed by CEOs with short managerial decision horizons have a lower standard deviation of return on assets (Yung et al., 2017). Because younger CEOs have a higher desire for career success, they not only tend to overestimate their operation ability and their correctness of information processing, but also, they tend to overestimate the earnings and underestimate the risks in the process of strategic decision-making. Such facts are likely to cause higher probability of decision-making errors. Hence, younger CEOs with excessive risk-taking, on the whole, have a negative impact on corporate performance. The stock price of their companies fluctuates more, and the decline of performance directly affects the material interests of employees (Hirshleifer, 2012). When younger CEOs' aggressive decisions negatively affect employee's interest and thus employees' expectations on future individual growth cannot be fulfilled, employees would think that the organization violates the psychological contract between them, and will make a series of actions to express dissatisfaction or even protest, which may be manifested as resignation. Therefore, the senior CEOs' accurate self-awareness and moderate risk aversion can ensure the stable development of the enterprise to the best degree, which is beneficial to ensuring the vital interests of employees and reducing the turnover rate.

Finally, from the perspective of stewardship theory, senior CEOs are more inclined to create a stable internal environment and a harmonious atmosphere to ensure the stability of employees. According to the stewardship theory, the older the CEOs are, the stronger the sense of their social responsibility is, and the more attention is paid to moral behavior (Huang, et al., 2012). Senior CEOs can strictly require themselves and team members to complete their duties efficiently under the drive of sense of responsibility without too much external supervision and material

incentives. Their behavioral and decision-making objectives are highly consistent with the strategic objectives of the enterprises. Senior CEOs, especially those close to retirement, have stronger motivation to leave a better operation platform (or environment) for their successors. Meanwhile, they are more tolerant of young employees, showing higher tolerance of young employees' mistakes and providing more opportunities for young employees' career growth. When senior CEOs are going to leave office, they would try their best to ensure a good corporate governance environment and reduce the turnover rate of employees.

Based on the above discussion, this paper proposes the competing hypothesis of H1a: H1b: CEO age has a negative impact on employees' turnover rate.

METHODOLOGY

Sample and data

A-share listed companies in China are taken as the initial sample framework. Considering the fact that the knowledge intensity of each industry varies to a large degree, which would moderate the link between CEO age and employees' turnover rate because the characteristics of employees in different industries have significant differences, the paper attempts to divide the whole samples into knowledge-intensive enterprises and labor-intensive enterprises.

Referring to the Catalogue of Statistical Classification of High-tech Industries published by the National Bureau of Statistics of China, the classification of high-tech enterprises in the latest Chinese Statistical Yearbook of 2016, and a large number of research articles on knowledge-based enterprises (Foo & Hepworth, 2000; Ngah & Wong, 2020; Vandergriff, 2006; Wenping, 2004), the enterprises belonging to the following industries are selected as the research samples of knowledge-intensive enterprises: Electrical Machinery and Equipment Industry, Chemical Raw Materials and Chemicals Industry, Computers, Communications and other Electronic Equipment Industry, Automobiles Industry, Petroleum processing, Coking and Nuclear Fuel Processing Industry, Railways, Ships, Aerospace and Other Transportation Equipment Industry, Pharmaceutical Industry, and Instruments and Special Equipment Industry. The enterprises belonging to the following industries are selected as the research samples of labor-intensive enterprises: Agriculture, Forestry, Animal Husbandry and Fishery Industry, Textile Industry, Wholesale and Retail Industry, Wood Processing and Wood, Rattan and Palm Grass Products Industry and Accommodation and Catering Industry.

The following steps are executed to refine our final research sample: (1) To select the listed companies belonging to the above knowledge-intensive industries and labor-intensive industries; (2) To select the listed companies during the period of 2011-2016; (3) To select the companies that have not ever been publicly punished during the sampling years; (4) To select the companies that have not ever been marked with ST or PT during the sampling years; (5) To remove the listed companies with unexplained performance decline during the sampling years or with more than three zero-paid executives during the sampling years; (6) To select listed companies which fully disclose the required data in the responding years.

Most of the sample data of this paper come from CSMAR and the annual reports of listed companies disclosed by Cninfo.com. Part of the sample data, including the data needed to calculate the employees' turnover rate, have been

collected from the Chinese National Statistical Yearbook over 2011-2016. After selecting the data, the main continuous variables have been arranged in ascending order, and the extreme values on both sides are processed with 1% winsorize tail reduction to eliminate the potential distortions of extreme data on empirical results. Based on the above procedures, a panel data consisting of 3296 firm-year observations are reached as the final research samples. The data processing tool is SPSS23 and STATA12.

VARIABLES

CEO age (CAGE): Referring existing literature on CEO age (Ginesti, 2019; Haider et al., 2019; Naseem et al., 2020), CAGE is measured by the physiological age of the CEOs disclosed in the annual reports of the sample companies in each responding sample years.

Employees' turnover rate (ETR): Referring to the suggestions of existing literature (Chun-fang, 2009; Xiaoyun, 2016), based on the interviewing results with the human resource managers on the practices of employees' retention and recruitment, ETR is calculated according to the Equation (1).

$$ETR = (\text{Number of Budget Employees} - \text{Number of Employees at the end of the year}) / \text{Number of Budget Employees}$$

Equation (1) In Equation (1), Number of Budget Employees (of a sample listed company) is calculated according to

Equation (2) $\text{Number of Budget Employee} = (1 + \text{Average Industry Recruitment Ratio}) * \text{Number of Employees at the beginning of the year.}$

Equation (2) In Equation (2), Average Industry Recruitment Ratio is calculated according to Equation (3). We expect that in order to maintain the sustainable development of the industry, the minimum recruitment ratio of the industry would be at least the average turnover rate of the same industry. Otherwise, such an industry would shrink.

$$\text{Average Industry Recruitment Ratio} = \frac{\text{Average Number of Employees of the industry across this year} - \text{Average Number of Employees of the industry across last year}}{\text{Total Number of Registered Employees in the industry in last year.}}$$

Equation (3) Average Number of Employees of the industry across this year is the average of the employees' number of the industry at the beginning of this year and the employees' number of the industry at the end of this year. In a similar way, Average Number of Employees of the industry across last year is the average of the employees' number of the industry at the beginning of last year and the employees' number of the industry at the end of last year. When the difference between the Average Number of Employees of the industry in this year and the Average Number of Employees of the industry in last year is negative, average industry recruitment ratio is set as zero. The data needed in Equation (3) can be reached in China Statistical Yearbook of each year.

Control variables: According to existing literature on antecedents of employees' turnover rate (Basnyat & Clarence, 2019; Malek et al., 2018; O'Halloran, 2012; Santhanam et al., 2017), ten control variables have been chosen. (1) SSSJ measures the years' number since the sample firm went public, which is expected to be negatively related to ETR; (2) SIZE is set as the

logarithm of total assets, which is expected to be negatively related to ETR; (3) SGR means the growth rate of total sales measured by the difference between total sales in t year and total sales in t-1 year, which is expected to be negatively related to ETR; (4) ROA means firm performance measured by return on total assets, which is expected to reduce ETR; (5) EPAY means employees' average pay level measured by the logarithm of the average compensation of non-executive employees, which is expected to be negatively related to ETR; (6) TRADE is set as 1 when a sample firm belongs to knowledge-intensive enterprises, otherwise, TRADE is set as 0. TRADE is expected to positively predict ETR; (7) TENURE is measured by the years' number since the CEO took his or her highest position, which is expected to be positively related to ETR; (8) IDR means the ratio of independent directors, which is expected to be negatively related to ETR; (9) SPP is set as 1 when CEO duality appears, otherwise SPP is set as 0. SPP is expected to be positively related to ETR. (10) OSP is set as 1 when a CEO holds the share of the company; otherwise, OSP is set as 0. OSP is expected to be negatively linked with ETR.

DESCRIPTION OF DATA CHARACTERISTICS

Variable description in distribution characteristics

We have executed the descriptive statistical analysis of all research variables designed for this study. (1) The average CEO age is 53.08 years old; the minimum CEO age is 25 years old, and the maximum CEO age is 78 years old. The age gap between the oldest CEO and the youngest CEO exceeds 50 years old. (2) The standardized deviation of Employees' turnover rate (ETR) is 0.227, and the full range of ETR is over 0.9. It can be known there are significant differences in employees' turnover rate among sample companies, which proves the validity of our measure method of calculating ETR and further highlights the practical significance of this study. In addition, the average listing age (SSSJ) is about 12.55 years old, the average return on assets (ROA) is about 4.2%, the average sales growth rate (SGR) is about 31%, the average of the ratio of independent directors (IDR) is about 37.9%, the possibility of CEO duality (SPP) is about 21%, the possibility of holding firm shares for the CEOs is about 43%, about 53% sample firms belong to knowledge-intensive enterprises, and the average CEO tenure is about 5.8 years.

We also have carried out the normal distribution test of the research variables by adopting Kolmogorov-Smirnov test, P-P Figures and Q-Q Figures. Results show that part of the research variables cannot pass the Kolmogorov-Smirnov test, while most of the variables can be regarded as being close to normal distribution through the tests of P-P Figures and Q-Q Figures, including CAGE and ETR. In other words, the sample data of this paper is suitable for empirical analysis by adopting regression analysis.

CORRELATION ANALYSIS

The results of Pearson correlation analysis among research variables are shown in Table1. There is significant positive correlation between CAGE and ETR ($P < 0.05$), which initially meets the expectation of H1a. However, more accurate conclusion needs to be verified by further rigorous empirical analysis.

SSSJ and EPAY are positively related with ETR ($P < 0.01$), while SIZE, ROA, SGR and OSP are negatively related with ETR ($P < 0.01$). Most of the correlations confirm to prior research results, and such a fact have also verified the rationality of variable design and data selection in this paper. However, contrary to our expectation, the positive link between EPAY and ETR draws our interest, which needs further verification in the next empirical analysis (**Table 1**).

Table 1. Correlation results among research variables.

	SGR	SIZE	ROA	EPAY	SSSJ	AGE	TURNOVER	TURNOVER	AGE	SSSJ	EPAY	ROA	SIZE	SGR	IDR	SPP	OSP	TRADE	TENURE
SGR	-0.092***	-0.056***	-0.169***	0.060***	0.165***	0.038**	1.000												
SIZE	-0.077***	0.130***	0.005	-0.029**	0.047***	1.000													
ROA	-0.008	0.223***	-0.171***	0.111***	1.000														
EPAY	0.113**	-0.032***	0.013**	1.000															
ROA	-0.049**	-0.056***	1.000																
SIZE	-0.028**	1.000																	
SGR	1.000																		
IDR																			
SPP																			
OSP																			
TRADE																			
TENURE																			

TENURE	TRADE	OSP	SPP	IDR
0.021*	-0.021	-0.074***	0.001	-0.003
0.370***	-0.052**	0.150***	-0.062***	-0.050***
0.054***	-0.019	-0.313***	-0.205***	-0.025**
-0.029**	-0.013	-0.024*	-0.034**	-0.032**
0.071***	-0.095***	0.130***	0.032**	-0.041**
0.083***	-0.017	0.017	-0.104***	-0.005
-0.055***	0.057***	-0.033**	-0.028**	0.016
-0.019	0.073***	0.050***	0.138***	1.000
0.052***	0.005	0.164***	1.000	
0.243***	0.111***	1.000		
-0.055***	1.000			
1.000				

Note : *, **, and ***. respectively represents the coefficients are significant at the level of 0.1, 0.05 and 0.01(Bilateral)

MULTICOLLINEARITY ANALYSIS

In regression, multicollinearity refers to the extent to which independent variables are correlated. Multicollinearity exists when one independent variable is correlated with another independent variable, or when one independent variable is correlated with a linear combination of two or more independent variables. The analysis of regression coefficients is contingent on the extent of multicollinearity. If the set of independent variables is characterized by a little bit of multicollinearity problem, the analysis of regression coefficients should be valid and straightforward. If there is a lot of multicollinearity problem, the analysis will be hard to interpret and can be skipped. Hence, the analysis of regression coefficients should be preceded by an analysis of multicollinearity.

Two methods are adopted to deal with the problem of multicollinearity, one is correlation coefficients examination, and the other is Variance Inflation Factor (VIF). As for the correlation coefficients examination, all the coefficients in Table 1 are less than 0.5, which indicates that there is very limited multicollinearity problem needing to be concerned. As for the VIF method, the maximum value of VIF in Model (1), an empirical model designed for testing H1a and H1b, is 1.265, which is far smaller than 5. The fact indicates an acceptable multicollinearity problem.

$$ETP_{i\tau} = \alpha + \alpha_1 CAGE_{i\tau} + \alpha_2 SSSJ_{i\tau} + \alpha_3 SIZE_{i\tau} + \alpha_4 SGR_{i\tau} + \alpha_5 ROA_{i\tau} + \alpha_6 EPA\Psi_{i\tau} + \alpha_7 TRADE_{i\tau} + \alpha_8 TENURE_{i\tau} + \alpha_9 SPP_{i\tau} + \alpha_{10} OSP_{i\tau} + \alpha_{11} IDR_{i\tau} + \varepsilon_{i\tau} \quad \text{Model (1)}$$

AUTOCORRELATION PROBLEMS ANALYSIS

Autocorrelation is a mathematical representation of the degree of similarity between a given time series and a lagged version of itself over successive time intervals. The main consequence is that although the estimator of the regression coefficient may be unbiased, it does not have the minimum variance. It may underestimate the variance of error term and result in that the regression equation cannot predict explained variables effectively. In other words, high degree of autocorrelation would lead to invalid prediction.

There are two main methods of autocorrelation test, i.e., Durbin-Watson test and Generalized Least Square test. In this paper, the result of Durbin-Watson test, i.e., DW value is used to judge the potential autocorrelation problem. DW values of all empirical models in this paper are calculated, and all of the DW values are very close to 2, which indicate that the autocorrelation problem is weak and the model designed in this paper is effective.

RESULTS

Hypotheses test based on OLS regression

Hypotheses test with whole sample: This section will fit the whole sample data with Model (1), and empirically test the relationship between CEO age and employees' turnover rate. The regression results are shown in **Table 2**. In **Table 2**, the standardized coefficient of CEO age on employees' turnover rate (ETR) is 0.049 ($P < 0.01$), indicating there is a positive impact of CEO age on employees' turnover rate. H1a is confirmed, while H1b does not hold.

When it comes to the regression results of control variables, most of the control variables do play the expected roles in affecting employees' turnover rate. However, the coefficients of SSSJ ($\beta = 0.104$, $p < 0.01$) and EPAY ($\beta = 0.062$, $p < 0.01$) are inconsistent with our expected results. We try to explain the unexpected result of SSSJ as follows: If one listed company went public earlier, then its decision-making system and management style are relatively rigid and inflexible, and the enterprise's entrepreneurial consciousness and innovation tendency will be restrained, which is not conducive to the growth of employees. We try to explain the unexpected results of EPAY as follows: Higher pay of one employee means higher individual performance and higher contribution to the his or her enterprise, which are derived from the employee's specialized human capital or valuable social capital. In human resource market, such employees are welcomed by the other enterprises, especially their competitors. These companies will offer higher salaries than the current level to attract such excellent employees. Faced with more and better external job-hopping opportunities, highly paid employees are likely to choose to leave even if they are not dissatisfied with the company.

Hypotheses test with knowledge-intensive and labor-intensive enterprises

To remove TRADE from Model (1), Model (2) is built, which is adopted to respectively simulate the sub-sample data of knowledge-intensive enterprises and labor-intensive enterprises. Regression results are shown in **Table 2**.

Regression coefficient of CAGE on ETR in labor-intensive enterprises ($\beta = 0.059$, $p = 0.034$) is obviously greater than that in knowledge-intensive

enterprises ($\beta=0.45$, $p=0.055$). The fact shows that industry characteristics can moderate the link between CEO age and employees' turnover rate. For knowledge-based enterprises, there are more stringent requirements in selecting CEOs. Determined by the knowledge-based nature of such enterprises, their CEOs have higher knowledge level, cultural competence and comprehensive capability. At the same time, their values are increasingly diversified under the influence of the knowledge-based industry environment. In this case, the effects of CEO age will be weakened by the other demographic characteristics of CEOs adjusted by knowledge, such as educational background, values, cultural competence and other characteristics. Therefore, the impact of CEO age on employee turnover rate will be weakened. In addition, employees of knowledge-intensive enterprises also have obvious characteristics that employees of other industries do not have. Compared with other industries, employees of knowledge-intensive enterprises have a greater influence on top leaders' decision-making. In other words, not only CEOs unilaterally affect employees, but also, they are more and more reversely affected by employees. Therefore, in this case, the effects of CEOs' age itself on multiple enterprise operation issues would be weakened by other knowledge-related factors.

As for the control variables, it is found that there is no significant link between EPAY and ETR ($\beta=0.031$, $p=0.212$), while there is a much stronger positive link between the two ($\beta=0.094$, $p=0.000$). In knowledge-intensive enterprises, employees' compensation level has higher impact on their turnover behavior. Such a fact further proves our explanation from the perspective of "external employment opportunities" on the positive link between EPAY and ETR. Employees in knowledge-intensive enterprises with higher compensation than their peers would face more temptations of external high-quality posts than their peers in labor-intensive enterprises, since the former enterprises have more prospect growth opportunities and pay more strategic attention to acquiring excellent talents.

Hypotheses test considering year effects and industry effects

Five-year dummy variables and fifteen industry dummy variables are introduced into Model (2), in which the variable named "TRADE" related to industry characteristics has been removed from the control variables. Model (3) is constructed. The regression results of Model (3) have confirmed H1a again even simultaneously considering the year effects and industry effects.

Robustness test

Robustness test on the change of CEO age's measure: Considering the in homogeneity and discontinuity of the impact of CEO age on employees' turnover behavior, we set a dummy variable for CEO age (CAGE_DUMMY). CAGE_DUMMY is set as 1 when CEO age of a given sample firm is higher than the mean of CEO age in the whole sample (i.e., 53.08 years old); otherwise, CAGE_DUMMY is set as 0. In model (1), CAGE is changed into AGE_DUMMY, and Model (4) is built. Regression results of Model (4) is shown in **Table 3**. Results show that there is a positive relationship between CAGE_DUMMY and ETR ($\beta=0.073$, $p=0.000$), indicating that the empirical results do not change with the change of CEO age's measures. H1a still holds.

Robustness test on changing the measure of employees' turnover rate

Two alternative measures of employees' turnover rate are used to execute the robustness test. ETR_DIFF is calculated by the difference between the

Table 2. Empirical results of relationship between CEO age and employees' turnover under.

TNURE	TRADE	EPAY	ROA	SGR	SIZE	SSSJ	CAGE	(Constants)	Sample		
									B	(1)	Labor-intensive sample
0.001	-0.015	0.040	-1.002	-0.050	-0.043	0.005	0.002	0.054	B	(1)	Whole Sample
0.001	0.008	0.011	0.103	0.008	0.008	0.001	0.001	0.105	Standard error		
0.017	-0.034	0.062***	-0.166***	-0.107***	-0.089***	0.104***	0.049***		Beta		
0.911	-1.987	3.606	-9.705	-6.298	-5.125	5.941	2.671	0.517	t		
0.362	0.047	0.000	0.000	0.000	0.000	0.000	0.008	0.605	P		
-0.016		0.031	-0.150***	-0.084***	-0.073***	0.088***	0.059**	0.923	Beta	(2)	Labor-intensive sample
0.567		0.212	0.000	0.001	0.004	0.001	0.034		P		
0.048*		0.094***	-0.178***	-0.127***	-0.108***	0.119***	0.047*	0.786	Beta	(2)	Knowledge-intensive sample
0.052		0.000	0.000	0.000	0.000	0.000	0.055		P		

F(Sig.)	Aj-R ²	IDR	OSP	SPP
24.155(.00)	0.069	-0.001	-0.022	0.009
		0.052	0.008	0.010
		0.000	-0.047***	0.016
		-0.019	-2.599	0.921
		0.985	0.009	0.357
7.457(.000)	0.040	0.022	-0.044	-0.003
		0.392	0.108	0.912
17.266(.000)	0.086	-0.022	-0.046	0.033
		0.341	0.060	0.171

employees' average number in t-1 year and the employees' average number in t year. To replace ETR in Model (1) with ETR_DIFF, Model (5) is built. ETR_DUMMY is set as 1 when ETR_DIFF is positive, otherwise,

Table 3. Robustness test results adopting alternative measure of CEO age (CAGE_DUMMY).

SSSJ	(Constants)	Model (4)
0.005	0.131	B
0.002	0.102	
0.102***		Std.
5.798	1.283	Beta
0.000	0.200	P

IDR	TENURE	OSP	SPP	SGR	SIZE	ROA	EPAY
0.002	0.001	-0.021	0.009	-0.050	-0.045	-1.005	0.041
0.052	0.001	0.008	0.010	0.007	0.008	0.103	0.011
0.001	0.017	-0.046***	0.017	-0.107***	-0.092***	-0.167***	0.063***
0.046	0.950	-2.525	0.954	-6.314	-5.331	-9.752	3.696
0.963	0.342	0.012	0.340	0.000	0.000	0.000	0.000

F(Sig.)	Adj-R ²	CAGE_DUMMY	TRADE
		0.034	-0.015
		0.008	0.008
22.378(0.000)	0.067	0.073***	-0.034**
		4.147	-1.974
		0.000	0.048

ETR_DUMMY is set as 0. To replace ETR in Model (1) with ETR_DUMMY, Model (6) is built. Regression results of Model (5) and Model (6) are shown in Table 4. H1a still holds.

Table 4. Robustness test results adopting alternative measures of employee turnover rate.

SSSJ	(Constants)	Model	Beta
0.004	0.129	B	
0.001	0.073	(5): Std.	
0.124***		ETR_DIFF	Beta
		t	
7.113	1.767	P	
.000	.077	B	
.014	1.062	(6): Std.	
.002	0.225	ETR_DUMMY	Beta
		t	
0.147***		P	
8.474	4.722		
.000	.000		

AGE	TRADE	IDR	TERM	OSP	SPP	SGR	SIZE	ROA	EPAY
0.025	-0.010	0.022	0.000	-0.017	0.008	-0.035	-0.037	-0.843	0.032
0.006	0.006	0.037	0.001	0.006	0.007	0.006	0.006	0.074	0.008
0.073***	-0.031*	0.010	0.010	-0.051***	0.019	-0.103***	-0.105***	-0.194***	0.068***
4.202	-1.823	0.598	0.573	-2.873	1.122	-6.122	-6.151	-11.450	4.045
0.000	0.068	0.550	0.567	.004	0.262	.000	.000	.000	.000
0.004	-0.002	0.223	-0.006	-0.043	0.027	-0.059	-0.125	-2.585	0.036
0.001	0.017	0.111	0.002	0.018	0.021	0.017	0.018	0.221	0.024
0.059***	-0.002	0.034**	-0.047**	-0.044**	0.022	-0.059***	-0.118***	-0.198***	0.025
3.258	-0.147	2.006	-2.546	-2.433	1.296	-3.484	-6.902	-11.678	1.507
0.001	0.883	0.045	0.011	0.015	0.195	0.001	.000	.000	.132

Robustness test by adopting Independent Sample T Test

The whole sample is divided into two “independent” sub-samples according to the value of CAGE_DUMMY. If CAGE_DUMMY is 1, the sub-sample is named as senior CEO sample (SC_Sample), and the other sub-sample is named as younger CEO sample (YC_Sample). The Independent Sample T Test result is shown in Table 5. It can be known that there is a significant difference in means of employees’ turnover rate (ETR) between YC_Sample and SC_Sample.

To be specific, the mean of ETR in SC_Sample is higher than that in YC_Sample. H1a is confirmed once again.

Table 5. Independent sample t test on ETR between YC_Sample and SC_Sample.

		T-test of mean equivalence				
		t	df	Sig. (Bilateral)	Mean differences	Std.
ETR	Assumed equal variance	-3.803	3297	0.000	-0.03113	0.00818
	Assumed variance is not equal	-3.718	2306.695	0.000	-0.03113	0.00837

Robustness test by adopting STATA

Stata12 is used to construct the Least Squares Dummy Variable Model to analyze whether the Goodness of fit of Fixed Effect Model or Random Effect Model is better than the Least Square Regression Model. The results show that the Goodness of fit of Fixed Effect Model is not necessarily superior to the Least Square Regression Model, while the Goodness of fit of Random Effect Model is superior to the Least Square Regression Model. Therefore, we run the regression analysis by adopting Random Effect Model with Model (1). Results are shown in Table 6. The test result of H1a does change with the change of empirical analysis methods and analysis tools.

Table 6. Robustness test results by running Random Effect Regression Analysis.

Model (1)	Coef.	Std. Err.	z	P> z
CAGE	0.0129*	0.0067	1.91	0.057
SSSJ	0.0049***	0.0007	6.86	0.000
EPAY	0.0328***	0.0114	2.87	0.004
ROA	-0.9931***	0.1084	-9.16	0.000
SIZE	-0.0384***	0.0090	-4.27	0.000
SGR	-0.0461***	0.0081	-5.64	0.000
IDR	-0.0020	0.0514	-0.04	0.968
SPP	0.0204**	0.0097	2.09	0.037
OAP	-0.0129	0.0085	-1.51	0.132
TENURE	0.0057	0.0010	0.53	0.596
TRADE	0.0465**	0.0199	2.34	0.019

_cons	0.1066	0.1047	1.02	0.309
Adj R-sq		0.1092		
F(Sig.)	230.35(0.000)			

Endogeneity test

When a firm's employees' turnover rate is too high, more senior CEOs may be chosen as the new CEO in order to improve operation quality of the enterprise and restore the enterprise-employee relationship, since shareholder and boards may hold higher recognition of senior CEOs' management competence. Considering the potential endogeneity problem of Model (1), especially the endogeneity derived from the possible reciprocal causation between CEO age and employees' turnover rate, two methods are used to address it, respectively the One-period Lagged-Term Regression and Two-stage Least Square Regression.

$$ETR_{i(t+1)} = \alpha + \alpha_1 CAGE_{i,t} + \alpha_2 SSSJ_{i,t} + \alpha_3 SIZE_{i,t} + \alpha_4 SGR_{i,t} + \alpha_5 ROA_{i,t} + \alpha_6 EPA\Psi_{i,t} + \alpha_7 TRADE_{i,t} + \alpha_8 TENURE_{i,t} + \alpha_9 SPP_{i,t} + \alpha_{10} OSP_{i,t} + \alpha_{11} IDR_{i,t} + \varepsilon_{i,t} \quad \text{Model (7)}$$

One-period Lagged-Term Regression takes Model (7) as the regression model adopting the method of OLS. Regression results of Model (7) show that CEO age in t year would have higher impact on employees' turnover rate in t+1 year, and the standardized coefficient of $CAGE_t$ on ETR_{t+1} ($\beta=0.074$, $p<0.01$) is higher than that of $CAGE_t$ on ETR_{t+1} ($\beta=0.062$, $p<0.01$). The fact shows that the effect of CEO age on employees' turnover behavior a rather strong time lag. Results of Two-stage Least Square Regression also confirm H1a again with a positive coefficient ($B=0.0018$, $P<0.01$). It is found that, even considering the potential endogeneity problem, H1a still holds.

Further exploration on the moderating role of independent directors in the relationship between CEO age and employees' turnover rate.

Empirical results in this study find no link between independent directors and employees' turnover rate, which is not confirmed with our expectation. Considering the uniqueness of independent directors in corporate governance mechanisms, we further explore the moderating role of independent directors in the link between CEO age and employees' turnover rate. Model (8) is constructed by introducing the interaction item of $CAGE$ and IDR ($ZSCORE_CAGE*ZSCORE_ZIDR$) into model (1).

$$ETR_{i,t} = \alpha + \alpha_1 SSSJ_{i,t} + \alpha_2 SIZE_{i,t} + \alpha_3 SGR_{i,t} + \alpha_4 ROA_{i,t} + \alpha_5 EPA\Psi_{i,t} + \alpha_6 TRADE_{i,t} + \alpha_7 TENURE_{i,t} + \alpha_8 SPP_{i,t} + \alpha_9 OSP_{i,t} + \alpha_{10} IDR_{i,t} + \alpha_{11} CAGE_{i,t} + \alpha_{12} ZIDR_{i,t} * ZCAGE_{i,t} + \varepsilon_{i,t} \quad \text{Model (8)}$$

Results in **Table 7** show that the regression coefficient of $ZCAGE*ZIDR$ on ETR is significantly positive ($\beta=0.037$, $p<0.05$), indicating independent directors would enhance the positive link between CEO age and employees' turnover rate. The fact that CEOs have absolute right to appoint independent directors makes independent directors dependent and obedient to CEOs, which has weakened the monitoring and advice effectiveness of independent directors.

Table 7. Moderating effect of Independent Director on the relationship between CEO age and employees' turnover rate.

	B	Std.	Beta	t	P
(Constants)	0.067	0.105		0.640	0.522
SSSJ	0.005	0.001	0.103***	5.839	0.000
EPAY	0.040	0.011	0.062***	3.610	0.000
ROA	-1.006	0.103	-0.167***	-9.745	0.000
SIZE	-0.044	0.008	-0.091***	-5.260	0.000
SGR	-0.050	0.008	-0.108***	-6.314	0.000
SPP	0.010	0.010	0.017	0.998	0.319
OSP	-0.021	0.008	-0.047**	-2.577	0.010
TENURE	0.001	0.001	0.019	0.990	0.322
TRADE	-0.015	0.008	-0.034**	-1.984	0.047
IDR	0.005	0.052	0.002	0.102	0.918
CAGE	0.002	0.001	0.048**	2.580	0.010
ZCAGE*ZID	0.008	0.004	0.037**	2.160	0.031
R					
Aj-R²	0.065				
F(Sig.)	20.023(0.000)				

CONCLUSION

Theoretical findings

The research objective is to examine the role of CEO age in determining employees' turnover rate. The research sample is a set of panel data from Chinese A-share listed companies during 2011 to 2016 consisting of 3296 observations. The Multiple Linear Regression based on OLS, Random Effect Regression Analysis, Independent Sample T Test, One-period Lagged-Term Regression and Two-stage Least Square Regression are used to empirically analyze the data. According to the empirical study, it can be concluded as follows:

- (1) CEO age has positive effect on employees' turnover rate. Though older CEOs may have higher social capital, which would probably improve firm performance, they show the weakness of too conservative decision-making preferences and being not good at flexible leadership, which would determine employees' turnover decisions to a larger degree. In other words, the "similarity-attraction" effect plays the critical role in the age-dynamic between CEOs and employees.
- (2) CEO age play a more important role in resulting in employees' turnover rate knowledge-intensive enterprises than it does in labor-intensive enterprises.
- (3) Independent directors have no direct effect on employees' turnover; however, it can indirectly result in higher employees' turnover rate by positively moderating the link between CEO age and employees' turnover rate. (4) Employees' compensation level is accompanied with much higher employees' turnover rate, which can be explained from the perspective of external talents

competition by the other enterprises.

The originality of this study is to add the new research perspective of CEO age into the traditional determinants model of turnover behavior, and further verify the rationality of this perspective in explaining and predicting employee turnover behavior, which is beneficial to enriching the research on the forming mechanisms of employees' turnover behavior and expanding the upper echelon theory.

Practical suggestions

According to the findings, several meaningful suggestions would be proposed as follows.

- (1) For the board and shareholders, when it comes to the appointment of new CEOs, the age-match between CEOs and non-executive employees should be considered with caution. The difference between CEO age and the average of employees' age should be narrowed to an acceptable degree. Otherwise, the leadership style and thinking minds between the new CEOs and employees would not align with each other, which would lead to higher internal conflicts and weaker execution of firm strategy, resulting in higher employees' turnover rate.
- (2) For senior CEOs, they should pay more attention to new venturing initiatives with the attempt of avoiding too conservative intention and try to learn and practice the flexible leadership style marked with excellent communication and care on persons. By doing so, the positive link between CEO age and employees' turnover rate would be avoided to a large degree. When senior CEOs head a labor-intensive enterprise, or lead an enterprise mostly composed of young persons, such a suggestion is especially effective.
- (3) For regulatory authorities of listed companies, they should try to set proper mechanism of appointing independent directors by changing the existing way of appointing independent directors by CEOs. It is suggested that an organization similar to the "Association of Independent Directors" should be established, in which the members are qualified independent directors. The CSRC supervises the organization, which is responsible for appointing appropriate independent directors to each listed company according to the proportion requirements. The expenses of independent directors are fixed allowances, which are paid by the listed company to the association of independent directors. The association of independent directors is responsible for assessing the responsibility performance of independent directors and paying corresponding remuneration to them accordingly. This mechanism not only makes the independent director independent from the listed companies (and the CEOs), but also economically.

Research limitations

There are few research limitations in this study. First, the measure of employee's turnover rate has not considered the distinction between voluntary turnover behavior and passive resignation behavior. There is a strong need to investigate and compare the antecedents of the two behaviors, especially from the perspective of CEO age, since each of the two turnover behaviors have rather different consequences. Second, the moderating role of independent directors in the link between CEO age and employees' turnover rate has been identified in

this study, which indicates the contingent nature of the relationship between the two. Therefore, it is of good theoretical significance for further studies to explore the moderating mechanisms of some other corporate governance mechanisms on the link between CEO age and employees' turnover rate. For instance, it can be expected that share concentration degree, CEO duality or ownership attributes may have moderating effects on the links between the two. Third, the links between CEO age and employees' turnover rate would be different from each other in various culture backgrounds, which needs further exploration.

ACKNOWLEDGEMENTS

This research was supported by the National Natural Science Foundation of PRC under Grant "71872149" and "71972154".

REFERENCES

- Ackert, L.F., Church, B.K. & Englis, B. (2002). The Asset Allocation Decision and Investor Heterogeneity: A Puzzle. *Journal of Economic Behavior and Organization* 47(4), 423-433.
- Basnyat, S. & Lao, C.S. (2019). Employees' perceptions on the relationship between human resource management practices and employee turnover: A qualitative study. *Employee Relations* 42(2), 453-470.
- Clark R.A., Hartline M.D. & Jones K.C. (2008). The effects of leadership style on hotel employees' commitment to service quality. *Cornell Hospitality Quarterly* 50(2), 209-231.
- Dawley D., Houghton J.D., & Bucklew N.S. (2010). Perceived organizational support and turnover intention: The mediating effects of personal sacrifice and job fit. *The Journal of Social Psychology* 150(3), 238-257.
- Driesch, T.V.D., Costa, M.V.S., Flatten, T.C., & Brettel, M. (2015). How experience, personality and network affect firms' dynamic capabilities. *European Management Journal*, 33(4): 245-256.
- Fang, C.C. (2009). Probe into the calculation and application of the demission rate at the start-up stage of enterprise. *Sci-tech Information Development & Economy* 19(4), 199-209.
- Foo, S. & Hepworth, M. (2000). The implementation of an electronic survey tool to help determine the information needs of a knowledge-based organization. *Information Management & Computer Security* 8(2), 53-64.
- Ginesti, G. (2019). Top management characteristics and intellectual capital performance in small Italian companies. *Corporate Governance* 19(6), 1153-1166.
- Haider I., Sultana N., Singh H. & Tham Y.H. (2019). CEO age and analysts forecast properties. *Asian Review of Accounting* 28(1), 1-23.
- Hambrick, D.C. & Mason P.A. (1984). Upper echelons: The organization as a reflection of its top managers. *Social Science Electronic Publishing* 9 (2), 193-206.
- Hesford J.W., Malina M.A. & Pizzini, M. (2016). Turnover and unit-level financial performance: An analysis of the costs and benefits of voluntary and involuntary turnover in unskilled jobs. *Advances in Management Accounting* 26, 35-65.
- Hirshleifer D., Low, A. & Teoh, S.H. (2012). Are overconfidents better innovators? *The Journal of Finance* 67(4), 1457-1498.
- Huang, H.W., Green, E.R., & Lee, C. (2012). Age and financial reporting quality. *Accounting Horizons* 26(4), 725-740.
- Kunze, F., Boehm, S. & Bruch, H. (2013). Organizational performance consequences of age diversity: Inspecting the role of diversity-friendly hr policies and top managers' negative age stereotypes. *Journal of Management Studies* 50(3), 413-442.
- Lee T.W., & Mitchell T.R. (1991). The unfolding effects of organizational commitment and anticipated job satisfaction on voluntary employee turnover. *Motivation and emotion* 15(1), 99-121.
- Malek K., Kline S.F. & DiPietro R. (2018). The impact of manager training on employee turnover intentions. *Journal of Hospitality and Tourism Insights* 1(3), 203-219.
- Meckler, M., Drake, B.H. & Levinson, H. (2003). Putting psychology back into psychological contracts. *Journal of Management Inquiry* (12), 217-228.
- Mobley, W.H. (1977). Intermediate linkage in the relationship between job satisfaction and employee turnover. *Journal of Applied Psychology*, 62(2): 237-240.

Zheng & Yue

- Naseem M.A., Lin J., Rehman R.U., Ahmad M.I. & Ali, R. (2020). Does capital structure mediate the link between CEO characteristics and firm performance? *Management Decision* 58(1), 164-181.
- Ngah R. & Wong K.Y. (2020). Linking knowledge management to competitive strategies of knowledge-based SMEs. *The Bottom Line* 33(1), 42-59.
- O'Halloran P. L. (2012). Performance pay and employee turnover. *Journal of Economic Studies* 39(6), 653-674.
- Price, J.L. (2001). Reflections on the determinants of voluntary turnover. *International Journal of Manpower* 22(7), 600-624.
- Robinson, I., Kraatz, M.S. & Rousseau, D.M. (1994). Changing obligations and the psychological contract: A longitudinal study. *Academy of Management Journal* (37), 137-152.
- Santhanam, N.T.J.K., Dyaram, L., & Ziegler, H. (2017). Impact of human resource management practices on employee turnover intentions: Moderating role of psychological contract breach. *Journal of Indian Business Research* 9(3), 212-228.
- Sitthipongpanich, T. & Polsiri, P. (2015). Do and board characteristics matter? A study of Thai family firms. *Journal of Family Business Strategy* 6(2), 119-129.
- Ulrike, M. & Tate, G. (2011). Overconfidence and early-life experience: The effect of managerial traits on corporate financial policies. *Journal of Finance* (5), 35-53.
- Ulrike, M., & Tate, G. (2003). Who makes acquisitions? Overconfidence and the market's reaction. *Journal of Financial Economics* 89(1), 20-43.
- Uzonwanne, F.C. (2016). Influence of age and gender on decision-making models and leadership styles of non-profit executives in Texas, USA. *International Journal of Organizational Analysis* 24(2), 186-203.
- Vandergriff, L.J. (2006). Unified approach to agile knowledge-based enterprise decision support. *VINE* 36(2), 199-210.
- Vroom, V. & Pahl, B. (1971). Relationship between age and risk taking among managers. *Journal of Applied Psychology* 55(5), 399-405.
- Weng, Q., & McElroy, J.C. (2016). Organizational career growth, affective occupational commitment and turnover intentions. *Journal of Vocational Behavior* 80 (2), 256-265.
- Wenping, W. (2004). Organic mechanism and capacity grey set optimization for knowledge-based enterprise. *Kybernetes* 33(2), 372.
- Williams, K.Y. & Reilly III, C.A. (1998). Demography and diversity in organizations: A review of 40 years of research. *Research in Organizational Behavior* 20, 77-140.
- Wong, Y.T., Wong, Y.W. & Wong, C.S. (2015). An integrative model of turnover intention: Antecedents and their effects on employee performance in Chinese joint ventures. *Journal of Chinese Human Resource Management* 6(1), 71-90.
- Xiaoyun, S. (2016). A study on the relationship among internal compensation gap, employee turnover behavior and enterprise performance. Dissertation for Master Degree, Liaoning University.
- Yim, S. (2013). The acquisitiveness of youth: Age and acquisition behavior. *Journal of Financial Economics* 108, 250-273.
- Yung, K., Li, D.D. & Jian, Y. (2017). Managerial decision horizon and real estate investment trusts (REITs). *Review of Behavioral Finance* 9(1), 63-78.
- Zopiatis, A., Constanti, P. & Theodorou, A.L. (2014). Job involvement, commitment, satisfaction and turnover: Evidence from hotel employees in Cyprus. *Tourism Management* 41(1), 129-140.