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ARTICLE

An Analysis of the Correlation between Employee Compensation Policies and Operating Performance of Accounting Firms

Chia-Chi Lee

Department of Accounting Information, National Taipei University of Business, Taipei City 10051, Republic of China (Taiwan)

ABSTRACT

This paper aims to explore the impact of compensation for employees of different ranks on the overall operating performance of accounting firms (hereinafter referred to as firms) and operating performance of the business markets, and provide reference for decision making by firm managers on employee compensation. The results show that 1) judging by overall operating performance, a firm's income from professional practice increases as the average annual salary of partner accountants, manager-level heads, professional team heads and professional assistants increases, or the proportion of employees with the CPA qualification rises; the number of cases entrusted to a firm increases as the average annual salary of partner accountants and professional assistants increases, or the proportion of employees with the CPA qualification rises; 2) judging by the operating performance of business markets, the income from tax service, management consulting, business registration and other business lines increases as the average annual salary of partner accountants and professional team heads rises; the income from public issue of certification documents, tax service and business registration and other business lines increases as the average annual salary of professional assistants rises; a higher proportion of employees with the CPA qualification has a positive impact on the income from management consulting; 3) the shorter the firm age, and the greater the firm size, the better the firm's overall operating performance.

Keywords: Employee rank; Certified Public Accountant (CPA) qualification; operating performance; business market; accounting firm

*CORRESPONDING AUTHOR:
Chia-Chi Lee, Department of Accounting Information, National Taipei University of Business, Taipei City 10051, Republic of China (Taiwan); Email: cclee.vera@msa.hinet.net

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1. Introduction

In the era of knowledge-based economy, the ability of transforming the skills and knowledge possessed by employees into substantive outputs through human resource management has become the most important competitive advantage of enterprise activities [1]. [2] pointed out that human resource management is a core organizational procedure. [3] suggested that it has been an important topic in human resource management research to put the right people in the right positions and help them develop their skills and potentials. Therefore, during the process of enterprise operation, human resources play a very important role and driving force for operating. Enterprise managers in any industry should establish a set of complete human resource management policies, and assign appropriate tasks and missions based on different human resource attributes to achieve the goals of the organization.

Accounting firms (hereinafter referred to as firms) belong to the service industry with intensive professional knowledge and accumulated experience [4-7]. When a firm operates for a longer time, more human resources and customer sources are accumulated [4]. [8] pointed out that human capital of the intellectual capital has a positive impact on innovation and process capital. Innovation capital could affect process capital, process capital could affect customer capital, and customer capital could positively affect operating performance of the enterprise. [9] found that the investment of human capital is more efficient than that of tangible capital and structural capital. [10] applied the resource-based theory and found that in the dimension of human capital, enterprises should increase and retain their unique talents to improve or maintain their operating performance.

[7] pointed out that an organization may have many kinds of resources, including tangible resources and intangible resources. From the perspective of economic theory, tangible resources include land, labor and capital, while intangible resources include entrepreneurial spirit. Under the current economic environment, intangible resources have become more important than tangible resources. The key to the operating effectiveness of an organization depends on the acquisition and effective use of intangible resources, the most important of which is human capital. [7] also mentioned that accounting firms themselves belong to a knowledge-intensive service industry. The most important input factor of an accounting firm is human capital. Through their own professional intelligence and accumulated practical experience, they could provide professional customized services for customers with different attributes and business needs. However, during the whole process of providing business services, in addition to training enough professionals, accounting firms also need to have good and sound operating processes. Among them, the most important thing is to establish a complete set of compensation system to stimulate the work motivation of employees, improve job satisfaction, and then provide customers with good service quality, so that the operating performance of the firm can be improved.

According to "2018 Investigation Reports on the Accounting Firm Service Industry" published by the Financial Supervisory Commission [11], at present, the professional ranks of the accounting industry can be divided into four levels in descending order: partner accountants, manager-level heads, professional team heads and professional assistants Secondly, in terms of CPA qualification, they can be divided into those who have obtained the CPA license and those who have not obtained the CPA license. Since accounting firms have a large number of industrial clients [12], whether they have enough capabilities and professionals to provide appropriate service quality has triggered the motivation for this study. Whether the current employee structure of the accounting industry adequate to meet the needs of the public issue of certification documents, tax service, management consulting and business registration and other business lines? Which professionals should provide business services under different business market characteristics? These problems make us want to explore the relationship between these two kinds of human capital and the overall operating performance of the firm and the

operating performance of each business market in this study, and put forward specific suggestions on human capital management policies. This is also the main purpose of this paper.

[13] suggested that the amount of incentive compensation received by employees is an important factor to measure whether managers of accounting firms can motivate employees. [14] proposed that the higher the proportion of incentive compensation, the better the performance of the company. [15] asserted that along with the increasing high association between incentive compensation and performance as well as incentive provided in compensation contracts, not only agency problems can be reduced, but also positive benefits can be brought to the future performance of enterprises. [16] claimed that employee morale and work motivation could be improved through regular increases in compensation and bonus subsidies. According to the research of [17], the more fixed compensation employees get, the more willing they are to work for the organization. [18] pointed out that providing employees with higher benefits can improve job satisfaction. This paper carries out empirical analysis from the two factors of employee compensation and CPA qualification, and constructs a regression model of the overall operating performance for the income from professional practice and the number of cases entrusted to a firm. In addition, according to the characteristics of the business market, this paper further divides the overall operating performance into four parts, namely, public issue of certification documents, tax service, management consulting and business registration and other business lines, and establishes the regression models for the operating performance of the four business markets as the indicators to measure the performance of individual business markets. Based on the research results of this paper, we hope to provide specific guidance and suggestions for the managers of accounting firms when making the decision on human resource and compensation, and establish a sound set of compensation policies to strengthen employees' sense of belonging to the firm, enhance their job satisfaction and enthusiasm, and thus improve the operating performance and service quality of the firm.

2. Literature Review and Hypotheses Development

2.1. Researches on human capital

There are a lot of studies on human resource cost and performance. [19] found that labor cost includes compensation expenditure, travel expense, transportation expense, pension and employee benefits, and labor cost has a significant positive correlation with firm performance. [20] proposed that human cost is positively correlated with firm performance. Accounting firm is a professional service industry. Therefore, human capital is the core input factor of the firm. The quality of professional competence of accountants, professional leaders and professional assistants in a firm can directly and indirectly affect the audit quality and performance of the firm [21]. [22] pointed out that employee compensation is significantly positively correlated with performance, and enterprises can improve performance by increasing compensation. [23] also mentioned that human capital has a direct impact on the performance of listed companies in Australia. [24] showed in their studies that in the first few years of the establishment of an enterprise, human capital is the key to the sustainable operation of the enterprise. According to the research of [17], the more fixed compensation employees get, the more willing they are to work for the organization.

[25] assumed that human capital is positively correlated with return on assets, profitability and productivity. [18] pointed out that providing employees with higher benefits can improve job satisfaction. [6] measured human capital by dividing the total compensation by the total number of employees in the firm, and found that the more the human capital invested, the better the firm's operating performance. [12] used human cost as an important input to measure the operating efficiency of a firm. [12] claimed that in the operation of a firm, human cost plays a very important role and is the

key to determine the operation and service quality of a firm. In addition, it is also an important input factor for the firm to maintain its operation. [13] pointed out that the more the benefits provided by the firm to its employees, the better the firm's overall operating performance. [26] assumed that the higher the proportion of human resource cost invested, the higher the operating profit of a firm. [7] defined human cost as the total amount of compensation expenditures, meal expenses, employee benefits, reserve for pension, retirement fund and overtime pay. Therefore, in this paper, the average annual salary of employees of each rank was taken as the indicator to measure the firm's investment in human resources.

2.2. Researches on employee ranks

In terms of researches on employee ranks and operating performance, [27] pointed out that the higher the rank of managers, the more likely they are able to act as business partners of senior managers and take into account various functions of human resource management. [3] found that the job performance of bank employees varies significantly due to different demographic variables. Among them, employees with more than 20 years (inclusive) of service have the highest performance, followed by employees with 10 years (inclusive) to 20 years of service, and employees with five years (inclusive) to 10 years of service. Employees with less than five years of service have the lowest job performance. In addition, supervisors scored higher than non-supervisors. [28] explored the relationship between CEO's leadership behavior and enterprise performance, and found that CEO's leadership would affect the attitude of the enterprise's middle and senior managers. A more positive attitude among middle and senior managers would improve enterprise performance.

[4] found that there was a significant positive correlation between the proportion of certified public accountants in the total number of employees and technical efficiency. [13] pointed out that in terms of organizational form, partner accountants in the accounting firm lead the entire work team to provide services to clients. They suggested that partner accountants should lead manager-level heads, professional team heads and professional assistants, and adopt a specialized mechanism for division of labor, so as to improve the firm's operating performance. [13] also suggested that partner accountants and manager-level heads should jointly develop a variety of potential customer groups with different business needs, which may contribute to the diversified business operations of the firm. [7] found that the higher the proportion of main outworkers, the higher the firm's total income from professional practice, income from non-professional practice, certification income, non-certification income, main certification income, tax service income, and income from other business lines. Employees of the accounting firm to carry out audit business are mainly professional team heads and professional assistants. In response to the adoption of international accounting standards, increasing the proportion of main outworkers could not only improve work efficiency, but also increase income from professional practice and other incomes [7].

2.3. Researches on the CPA license

In terms of researches on the relationship between the CPA license and operating performance, [29] pointed out that the accumulation of professional experience and the acquisition of the CPA license are conducive to improving the firm's income from professional practice. [30] mentioned that employees with the CPA license could improve their work capabilities, allowing partner accountants have more time to develop business and service the cases, thus helping employees pass the CPA exam, and allowing the firm to expand its client base and strengthen its competitive advantage. [31] pointed out that in terms of professional licenses, enterprise managers believe that job seekers may show a more positive working attitude if they have obtained relevant professional licenses in taxation or accounting. [26] mentioned that the higher the proportion of employees with the CPA license, the higher the firm's operating profit. In the accounting industry, if an employee has the CPA license, it means that he/she has basic

professional knowledge and skills, and he/she has a considerable degree of professional literacy and training. Accounting firms belong to a very competitive service industry. Therefore, relatively speaking, reputation and service quality may be more important. The higher the proportion of employees with the CPA license in the firm, the better the professional competence and the work quality of the employees. Therefore, firms should make effective use of professionals with the CPA qualification. When communicating and interacting with clients, the business consultation and services provided by professionals with the CPA qualification can be more trusted by clients, which is conducive to improving the overall operating performance of the firm and the operating performance of various business markets.

In the manpower organization structure of accounting firms, there are four ranks from the highest to the lowest, namely, partner accountants, manager-level heads, professional team heads and professional assistants. Each rank is responsible for its own task. This paper aims to explore whether raising the compensation of the employees of these four ranks can improve the overall operating performance of the firm and the operating performance of the four business markets. In addition, this paper wants to further discuss whether the higher the proportion of employees with the CPA qualification, the better the firm's overall operating performance and business market performance will be. First of all, in this paper, income from professional practice and the number of cases entrusted to a firm have been taken as the indicators to measure the overall operating performance of the firm. H1-1 to H1-5 for the income from professional practice and H2-1 to H2-5 for the number of cases entrusted to a firm have been developed respectively as follows:

H1-1: With other conditions unchanged, the average annual salary of partner accountants has a positive impact on the income from professional practice of a firm.

H1-2: With other conditions unchanged, the average annual salary of manager-level heads has a positive impact on the income from professional practice of a firm.

H1-3: With other conditions unchanged, the average annual salary of professional team heads has a positive impact on the income from professional practice of a firm.

H1-4: With other conditions unchanged, the average annual salary of professional assistants has a positive impact on the income from professional practice of a firm.

H1-5: With other conditions unchanged, the proportion of employees with the CPA qualification has a positive impact on the income from professional practice of a firm.

H2-1: With other conditions unchanged, the average annual salary of partner accountants has a positive impact on the number of cases entrusted to a firm.

H2-2: With other conditions unchanged, the average annual salary of manager-level heads has a positive impact on the number of cases entrusted to a firm.

H2-3: With other conditions unchanged, the average annual salary of professional team heads has a positive impact on the number of cases entrusted to a firm.

H2-4: With other conditions unchanged, the average annual salary of professional assistants has a positive impact on the number of cases entrusted to a firm.

H2-5: With other conditions unchanged, the proportion of employees with the CPA qualification has a positive impact on the number of cases entrusted to a firm.

2.4. Researches on business services of accounting firms

In terms of researches on professional services and operating performance, [32] took the accounting industry in the United States from 1995 to 1999 as the sample and divided the business of accounting firms into three categories, namely, audit services, tax

services and management consulting services. They found that management consulting services are more productive than audit services and tax services. [33] pointed out that in order to expand the scope of services, accounting firms listed tax services and management consulting services as diversified service items, which could improve the operational efficiency of accounting firms. [6] pointed out that from the perspective of business characteristics, most international accounting firms still take traditional audit business as their main service items, especially paying great attention to financial certifications and tax service business. [6] suggested that the audit market in Taiwan has become saturated and suggested that accounting firm managers should develop and operate in management consulting business in the future. According to Investigation Reports on the Accounting Firm Service Industry, [6] divided the professional practice items of the accounting firm into four categories, namely, financial certification, tax service, management consulting and business registration and other business lines. [13] pointed out that through the specialized division of labor mechanism, each business category provided by the accounting firm is equipped with professionals specializing in audit, tax service, management consulting, accounting and other businesses. This can not only provide clients with complete and detailed professional consultation, but also meet the needs of one-stop service, which is conducive to the improvement of operating performance of the accounting firm. The business content provided by accounting firms is diverse and complex, and their business categories include public issue of certification documents, tax service, management consulting and business registration. In order to meet the needs of clients, diversified business operations can help improve the operating performance of the firm, and then increase the income from professional practice and the number of cases entrusted to the firm.

Based on the professional practice items and scope of accounting firms, this paper divided them into four categories: public issue of certification documents, tax service, management consulting and business registration and other business lines. These four categories of business income were taken as the measurement indicators for the market operating performance of each business of accounting firms. H3-1 to H3-5 for the business performance of public issue of certification documents, H4-1 to H4-5 for the business performance of tax service, H5-1 to H5-5 for the business performance of management consulting, and H5-1 to H5-5 for the business performance of business registration and other business lines have been set respectively as follows:

H3-1: With other conditions unchanged, the average annual salary of partner accountants has a positive impact on the income from public issue of certification documents.
H3-2: With other conditions unchanged, the average annual salary of manager-level heads has a positive impact on the income from public issue of certification documents.
H3-3: With other conditions unchanged, the average annual salary of professional team heads has a positive impact on the income from public issue of certification documents.
H3-4: With other conditions unchanged, the average annual salary of professional assistants has a positive impact on the income from public issue of certification documents.
H3-5: With other conditions unchanged, the proportion of employees with the CPA qualification has a positive impact on the income from public issue of certification documents.

H4-1: With other conditions unchanged, the average annual salary of partner accountants has a positive impact on the income from tax service.
H4-2: With other conditions unchanged, the average annual salary of manager-level heads has a positive impact on the income from tax service.
H4-3: With other conditions unchanged, the average annual salary of professional team heads has a positive impact on the income from tax service.
H4-4: With other conditions unchanged, the average annual salary of professional assistants

has a positive impact on the income from tax service.

H4-5: With other conditions unchanged, the proportion of employees with the CPA qualification has a positive impact on the income from tax service.

H5-1: With other conditions unchanged, the average annual salary of partner accountants has a positive impact on the income from management consulting.

H5-2: With other conditions unchanged, the average annual salary of manager-level heads has a positive impact on the income from management consulting.

H5-3: With other conditions unchanged, the average annual salary of professional team heads has a positive impact on the income from management consulting.

H5-4: With other conditions unchanged, the average annual salary of professional assistants has a positive impact on the income from management consulting.

H5-5: With other conditions unchanged, the proportion of employees with the CPA qualification has a positive impact on the income from management consulting.

H6-1: With other conditions unchanged, the average annual salary of partner accountants has a positive impact on the income from business registration and other business lines.

H6-2: With other conditions unchanged, the average annual salary of manager-level heads has a positive impact on the income from business registration and other business lines.

H6-3: With other conditions unchanged, the average annual salary of professional team heads has a positive impact on the income from business registration and other business lines.

H6-4: With other conditions unchanged, the average annual salary of professional assistants has a positive impact on the income from business registration and other business lines.

H6-5: With other conditions unchanged, the proportion of employees with the CPA qualification has a positive impact on the income from business registration and other business lines.

3. Research Design

3.1. Data source and sample selection process

In this paper, the data are sourced from the "2016-2018 Investigation Reports on the Accounting Firm Service Industry" database compiled and printed by the Financial Supervisory Commission. In these three years, the total number of observed values of the firm is 3,296. After excluding 478 outliers and removing 1,919 observed values with illogical data, the final number of valid observed values is 899, of which 429 come from partnership firms and 470 from sole proprietorship firms. This paper is prepared based on the above data, and the sample selection process is shown in **Table 1**:

Table 1. Sample Selection Process

Total number of original observed values	**3,296**
In stage 1, the following observed values were excluded:	
Firm age > 65 years	(11)
Number of firm employees = 0	(25)
Annual salary of firm employees < NTD 10,000	(438)
Income from professional practice = NTD 0	(4)
Subtotal	**2,818**
In stage 2, missed or illogical observed values were excluded:	
The average annual salary of partner accountants	(165)
The average annual salary of manager-level heads	(1,329)
The average annual salary of professional team heads	(387)
The average annual salary of professional assistants	(38)
Total final valid observed values	**899**
Partnership firm	429
Sole proprietorship firm	470

3.2. Variable definition

Many past studies took the accounting industry

as the research object and analyzed the operating performance, including [6-7, 12-13, 19, 26, 34-36]. Among them, [36] evaluated the operating efficiency of a firm by taking the income from professional practice and the number of cases entrusted to a firm as output items. [12] found that the higher the total technical efficiency and pure technical efficiency, the higher the income from professional practice and the total income of the firm. The income from professional practice includes four items, namely, the public issue of certification documents, tax service, management consulting and business registration and other business lines. Based on the aforementioned researches on the accounting industry, this paper takes the income from professional practice (TBR) and the number of cases entrusted to a firm (CAS) as the dependent variables for the overall operating performance of the firm, and takes the income from public issue of certification documents (FINR), the income from tax service (TAR), the income from management consulting (MCR), and the income from business registration and other business lines (COR) as the dependent variables for each business market performance of the firm, respectively.

In terms of independent variables, this study discussed from two aspects, namely, employee compensation and CPA qualification. In terms of employee compensation, there are five variables, including the average annual salary of partner accountants (PAR), the average annual salary of manager-level heads (MAN), the average annual salary of professional team heads (SEN), the average annual salary of professional assistants (ASS), and the proportion of employees with the CPA qualification (CPA).

In terms of control variables, [37] found that enterprises with longer firm ages may allocate resources more efficiently over time. [6] found that the longer the firm was established, the better the operating performance. [38] found that the longer the firm age, the more human capital and customer sources could be accumulated, and the more benefits it brings to performance. [13] pointed out that the longer the firm age, the significantly higher the total income from professional practice, and the more the total number of professional practice, the number of audit business and non-audit business, net income and employee productivity. [35] took variables such as the firm age and the organizational type of the accounting firm as the dependent variables for the business attributes of the firm. [26] pointed out that the longer the firm age, the more the client sources, which could positively help the firm's operating profit. Moreover, the longer the firm age, the more likely it would diversify its business. [7] also pointed out that there is a significant positive relationship between the firm age and the main income of certifications and management consulting. Therefore, in this paper, the time a firm has been established was measured by the firm age (PERIOD).

In [6] study, partnership firms were defined as those consisting of at least two or more certified public accountants and providing financial certification services for public companies, while sole proprietorship firms were defined as those not providing financial certification services for public companies. "Investigation Reports on the Accounting Firm Service Industry" divided the samples into partnership firms and sole proprietorship firms. [39] designed the firm type with dummy variables and found that partnership firms have better operating performance than sole proprietorship firms. [26] pointed out that when a firm's business type is a partnership firm, it will be more active in diversifying its business. Therefore, in this paper, the dummy variables are used to measure whether the firm is a partnership firm or a sole proprietorship firm in terms of business type (TYPE).

[6] mentioned that the operating performance of international accounting firms is better than that of non-international accounting firms. According to [6], who measured the size of a firm by taking the natural logarithm of the total number of employees, the larger the firm size, the better the firm's operating performance. According to [12], who took the total number of employees as the proxy variable of firm size, the larger the firm size, the higher the income from professional practice and total income of a firm. According to [13], who took the total number

of employees of a firm as an indicator to measure the firm size, the larger the firm size, the higher the total income from professional practice, total number of business cases, net income and employee productivity. According to [7], who evaluated the operating performance of the firm industry from the perspective of intellectual capital, the larger the firm size, the higher the firm's business and non-income from professional practice. Therefore, in this paper, the firm size was measured in terms of the total number of employees (EMP).

Taking the wide differences in the business type and size of the accounting industry into consideration, in this paper, firm age (PERIOD), business type (TYPE) and the total number of employees (EMP) were included in the regression model as the control variables. The definitions of all variables mentioned above are summarized as shown in **Table 2**:

Table 2. Summary of Variable Definitions

Variable property	Variable name	Variable definition
Dependent variables	Income from professional practice (TBR)	Measured by taking the natural logarithm of the annual income from professional practice of a firm (including public offering certifications, tax, management consultancy, business registration and other business). (unit: NTD)
	Number of cases entrusted to a firm (CAS)	Measured by taking the natural logarithm of the annual number of cases entrusted to a firm (including public offering certifications, tax, management consultancy, business registration and other business). (unit: case)
	Income from public issue of certification documents (FINR)	It is measured by taking the natural logarithm of the sum by adding up the income from public issue of certification documents, the income from financing certification, the income from other financial certification and the income from income tax certification and declarations. (unit: NTD)
	Income from tax service (TAR)	It is measured by taking the natural logarithm of the sum by adding up the income from tax planning, the income from tax administrative remedy, and the income from other tax service. (unit: NTD)
	Income from management consulting (MCR)	It is measured by taking the natural logarithm of the income from management consulting. (unit: NTD)
	Income from business registration and other business lines (COR)	It is measured by taking the natural logarithm of the sum by adding up the income from business registration and the income from other business lines. (Original unit: NTD)
Independent variables	Average annual salary of partner accountants (PAR)	Total salaries of partner accountants ÷ Number of partner accountants (unit: NTD)
	Average annual salary of manager-level heads (MAN)	Total salaries of manager-level heads ÷ Number of manager-level heads (unit: NTD)
	Average annual salary of professional team heads (SEN)	Total salaries of professional team heads ÷ Number of professional team heads (unit: NTD)
	Average annual salary of professional assistants (ASS)	Total salaries of professional assistants ÷ Number of professional assistants (unit: NTD)
	Proportion of employees with the CPA qualification (CPA)	Number of employees with the CPA qualification ÷ Total number of employees (Unit: percent)
Control variables	Firm age (PERIOD)	Year of survey - year of establishment + 1 (unit: Years)
	Business type (TYPE)	It is a dummy variable, which is set to 1 for partnership firms and 0 for sole proprietorship firms.
	Total number of employees (EMP)	The total number of employees in the accounting firm.

3.3. Multiple regression model

According to the research hypotheses in Part 2 above, in this paper, two sets of regression models of the firm's overall operating performance and the firm's business market performance were developed based on the human resources and compensation of the firm and the characteristics of the industrial operating. Among them, income from professional practice and the number of cases entrusted to a firm were used as indicators to measure the overall operating performance. Furthermore, according to the characteristics of the professional practice of the firm, four items, namely, public issue of certification documents, tax service, management consulting and business registration and other business lines, were taken as the indicators to measure the performance of the business market, and six multiple regression models were established as follows. Through the empirical test, we try to understand the impact of employee compensation policies on the operating performance of the firm, whether they can bring positive benefits, and put forward specific suggestions.

(1) Regression models of the firm's overall operating performance

$$TBR=\alpha_0+\alpha_1PAR+\alpha_2MAN+\alpha_3SEN+\alpha_4ASS+\alpha_5CPA+\alpha_6PERIOD+\alpha_7TYPE+\alpha_8EMP+\varepsilon_i \quad (1)$$

$$CAS=\alpha_0+\alpha_1PAR+\alpha_2MAN+\alpha_3SEN+\alpha_4ASS+\alpha_5CPA+\alpha_6PERIOD+\alpha_7TYPE+\alpha_8EMP+\varepsilon_i \quad (2)$$

(2) Regression model of the firm's business market performance

$$FINR=\alpha_0+\alpha_1PAR+\alpha_2MAN+\alpha_3SEN+\alpha_4ASS+\alpha_5CPA+\alpha_6PERIOD+\alpha_7TYPE+\alpha_8EMP+\varepsilon_i \quad (3)$$

$$TAR=\alpha_0+\alpha_1PAR+\alpha_2MAN+\alpha_3SEN+\alpha_4ASS+\alpha_5CPA+\alpha_6PERIOD+\alpha_7TYPE+\alpha_8EMP+\varepsilon_i \quad (4)$$

$$MCR=\alpha_0+\alpha_1PAR+\alpha_2MAN+\alpha_3SEN+\alpha_4ASS+\alpha_5CPA+\alpha_6PERIOD+\alpha_7TYPE+\alpha_8EMP+\varepsilon_i \quad (5)$$

$$COR=\alpha_0+\alpha_1PAR+\alpha_2MAN+\alpha_3SEN+\alpha_4ASS+\alpha_5CPA+\alpha_6PERIOD+\alpha_7TYPE+\alpha_8EMP+\varepsilon_i \quad (6)$$

In Regression Equations (1) to (6), TBR refers to the income from professional practice; CAS refers to the number of cases entrusted to a firm; FINR refers to the income from public issue of certification documents; TAR refers to the income from tax service; MCR refers to the income from management consulting; COR refers to the income from business registration and other business lines; PAR refers to the average annual salary of partner accountants; MAN refers to the average annual salary of manager-level heads; SEN refers to the average annual salary of professional team heads; ASS refers to the average annual salary of professional assistants; CPA refers to the proportion of employees with the CPA qualification; PERIOD refers to the firm age; TYPE refers to the business type; EMP refers to the total number of employees; α_0 refers to the intercept term, alpha 1; α_1, α_2, α_3, α_4, α_5, α_6, α_7, α_8 refer to the parameters of the regression model; ε_i refers to the error term.

4. Empirical Results

4.1. Descriptive Statistics

The results of the descriptive statistics of all variables in this paper are shown in **Table 3**. In terms of dependent variables, the average mean of the income from professional practice (TBR) and the number of cases entrusted to a firm (CAS) of Panel A (all firms) is 88,416,518 NTD and 700 cases respectively, while the average mean of the income from professional practice and the number of cases entrusted to a firm of Panel B (partnership firms) is 173,122,928 NTD and 1255 cases respectively. All of them are significantly higher than the average mean of the income from professional practice and the number of cases entrusted to a firm of Panel C (sole proprietorship firms) (11,099,390 NTD and 194 cases, respectively). It can be seen that the business size difference between partnership firms and sole proprietorship firms is very large.

For all firms (Panel A), the item with the highest average mean is the income from public issue of certification documents (FINR, 61,140,871 NTD), followed by the income from tax service (TAR, 13,486,466 NTD) and the income from business

registration and other (COR, 10,089,490 NTD), and the item with the lowest average mean is the income from management consulting (MCR, 3,699,690 NTD). For the partnership firms (Panel B), the income from the four business markets is also similar to that of all firms. However, for sole proprietorship firms (Panel C), the income from tax service (TAR) is 1,885,945 NTD, slightly lower than the income from business registration and other business lines (COR), which is 1,925,182 NTD. Limited by business nature, scale and legal norms, the main business items undertaken by sole proprietorship firms are different from those undertaken by partnership firms. However, for both partnership firms and sole proprietorship firms, the income from management consulting (MCR) is the item with the lowest income in the business market. Therefore, it is suggested that accounting firm managers should actively develop and operate this market so as to enhance their competitive advantages.

In terms of independent variables, in all firms (Panel A), the average annual salary of partner accountants (PAR) is 310,910 NTD, the average annual salary of manager-level heads (MAN) is 722,956 NTD, the average annual salary of professional team heads (SEN) is 598,195 NTD, and the average annual salary of professional assistants (ASS) is 388,193 NTD. It is found that, among the four ranks, the average annual salary of partner accountants is the lowest. The reason is that, in practice, the firm's income from professional practice is owned by partner accountants, so some accounting firms no longer separately list the individual practice income of partner accountants. Therefore, in the partner accountant salary item of the original data file, many firms fill in 0 NTD. This phenomenon is even more pronounced for sole proprietorship firms. In addition, we also found that the average annual salary of the employees of all the four ranks of partnership firms (Panel B) is significantly higher than that of the employee of sole proprietorship firms (Panel C).

The average mean of the proportion of employees with the CPA qualification (CPA) in partnership firms (Panel B) and sole proprietorship firms (Panel C) is 0.171 and 0.145, respectively, with very small differences. The average mean of the proportion of employees with the CPA qualification (CPA) in all firms (Panel A) is 0.157, with nearly 15% of the employees have the CPA qualification, which has become one of the necessary professional conditions to work in accounting firms.

In terms of control variables, the average firm age (PERIOD) of Panel A (all firms) is 22 years. There is little difference between the average firm age of partnership firms (23 years) and sole proprietorship firms (21 years). The longest firm age is 65 years, and the shortest firm age is less than 1 year for the newly established firms. The average mean of the business type (TYPE) of all firms (Panel A) is 0.480, which means that 48% of the research samples in this paper are partnership firms and 52% are sole proprietorship firms, and the proportion of the two kinds of samples is not much different. In terms of the total number of employees (EMP), the average mean for partnership firms (Panel B) is 104 employees and for sole proprietorship firms (Panel C) is 13 employees. There is even a partnership firm with as many as 3,780 employees, samples of the top four accounting firms, while a sole proprietorship firm has only 205 employees at most. By comparison, it can be found that the gap between partnership firms and sole proprietorship firms in terms of firm size is very large. Therefore, firm size should be included as a control variable in subsequent regression analyses.

4.2. Empirical results of the regression model

According to the suggestion of [40], the variance inflation factor (VIF) was used to detect the collinearity of variables. When the VIF value is less than 10, it indicates that there is no serious collinearity problem between the independent variables and the control variables. All the VIF values between the independent variables and the control variables of the empirical results of all the regression models below are less than 10, which indicates that there is no obvious collinearity

Table 3. Descriptive Statistics

Panel A: All firms

Variable type	Variable name	Average mean	Median	Minimum	Maximum	Standard deviation
Dependent variables	Income from professional practice (TBR)	88,416,518	11,183,160	4,370	8,016,162,378	602,030,949
	Number of cases entrusted to a firm (CAS)	700	196	0	43,093	3,115
	Income from public issue of certification documents (FINR)	61,140,871	6,686,900	0	5,829,113,521	430,617,374
	Income from tax service (TAR)	13,486,466	285,000	0	1,143,638,945	87,826,272
	Income from management consulting (MCR)	3,699,690	0	0	536,812,062	33,862,072
	Income from business registration and other (COR)	10,089,490	928,200	0	933,496,202	64,228,084
Independent variables	Average annual salary of partner accountants (PAR)	310,910	0	0	6,873,250	795,853
	Average annual salary of manager-level heads (MAN)	722,956	690,000	0	3,550,000	430,597
	Average annual salary of professional team heads (SEN)	598,195	573,700	0	3,448,065	303,089
	Average annual salary of professional assistants (ASS)	388,193	381,000	0	1,440,368	182,375
	Proportion of employees with the CPA qualification (CPA)	0.157	0.143	0.031	1.000	0.091
Control variables	Firm age (PERIOD)	22	23	1	65	11
	Business type (TYPE)	0.480	0.000	0	1	0.500
	Total number of employees (EMP)	56	12	4	3,780	296

Panel B: partnership firm

Variable type	Variable name	Average mean	Median	Minimum	Maximum	Standard deviation
Dependent variables	Income from professional practice (TBR)	173,122,928	20,488,550	1,671,800	8,016,162,378	863,801,577
	Number of cases entrusted to a firm (CAS)	1,255	299	0	43,093	4,435
	Income from public issue of certification documents (FINR)	120,555,093	12,403,000	0	5,829,113,521	618,139,449
	Income from tax service (TAR)	26,195,663	1,246,000	0	1,143,638,945	125,849,090
	Income from management consulting (MCR)	7,338,103	0	0	536,812,062	48,755,021
	Income from business registration and other (COR)	19,034,070	1,636,500	0	933,496,202	91,947,098

Table 3 continued

Variable type	Variable name	Average mean	Median	Minimum	Maximum	Standard deviation
Independent variables	Average annual salary of partner accountants (PAR)	545,417	180,000	0	6,873,250	1,010,818
	Average annual salary of manager-level heads (MAN)	828,436	780,697	0	3,538,432	414,222
	Average annual salary of professional team heads (SEN)	678,110	638,900	0	3,448,065	331,860
	Average annual salary of professional assistants (ASS)	415,626	407,800	0	1,440,368	179,429
	Proportion of employees with the CPA qualification (CPA)	0.171	0.154	0.031	1.000	0.096
Control variables	Firm age (PERIOD)	23	25	1	65	12
	Total number of employees (EMP)	104	22	4	3,780	423

Panel C: sole proprietorship firm

Variable type	Variable name	Average mean	Median	Minimum	Maximum	Standard deviation
Dependent variables	Income from professional practice (TBR)	11,099,390	6,606,425	4,370	241,641,789	22,189,272
	Number of cases entrusted to a firm (CAS)	194	126	0	3,440	296
	Income from public issue of certification documents (FINR)	6,909,592	4,178,900	0	144,985,073	13,335,273
	Income from tax service (TAR)	1,885,945	133,484	0	87,624,649	5,744,747
	Income from management consulting (MCR)	378,672	0	0	24,164,179	1,753,180
	Income from business registration and other (COR)	1,925,182	418,000	0	121,251,260	6,594,225
Independent variables	Average annual salary of partner accountants (PAR)	96,860	0	0	5,944,003	429,062
	Average annual salary of manager-level heads (MAN)	626,677	590,595	0	3,550,000	423,046
	Average annual salary of professional team heads (SEN)	525,251	507,449	0	2,946,703	253,404
	Average annual salary of professional assistants (ASS)	363,153	355,173	0	1,373,850	181,625
	Proportion of employees with the CPA qualification (CPA)	0.145	0.125	0.040	1.000	0.085
Control variables	Firm age (PERIOD)	21	21	1	52	10
	Total number of employees (EMP)	13	9	4	205	18

Note: 1. TBR: income from professional practice; CAS: number of cases entrusted to a firm; FINR: income from public issue of certification documents; TAR: income from tax service; MCR: income from management consulting; COR: income from business registration and other; PAR: average annual salary of partner accountants; MAN: average annual salary of manager-level heads; SEN: average annual salary of professional team heads; ASS: average annual salary of professional assistants; CPA: proportion of employees with the CPA qualification; PERIOD: firm age; TYPE: business type; EMP: total number of employees. 2. The total number of samples is 899 firms. 3. The unit of dependent variables (TBR, CAS, FINR, TAR, MCR, COR) and independent variables (PAR, MAN, SEN, ASS) is NTD; the unit of firm age (PERIOD) is year(s); the unit of total number of employees (EMP) is the number of people.

problem between the variables. In addition, the error term of the regression model was tested by Durbin-Watson (D-W value) in this study. If the D-W value is between 1.5 and 2.5, it means that there is no autocorrelation between the error terms. The D-W values of the empirical results of all the regression models below in this paper are between 1.5 and 2.5, which is within the acceptable range. Therefore, there is no autocorrelation problem between error terms of the regression model.

4.2.1. Overall operating performance results of a firm

The regression results of the income from professional practice in **Table 4** shows that adjusted R^2 is 0.901 and F value is 1,018.444, reaching a statistically significant level of 1%, which means that the model fit is very good. In terms of independent variables, the average annual salary of partner accountants (PAR), the average annual salary of manager-level heads (MAN), the average annual salary of professional team heads (SEN), the average annual salary of partner accountants (ASS), and the proportion of employees with the CPA qualification (CPA) have a significant positive impact on the income from professional practice (TBR). This means that a firm's income from professional practice increases as the average annual salary of partner accountants, manager-level heads, professional team heads and professional assistants increases, or the proportion of employees with the CPA qualification rises; Therefore, H1-1, H1-2, H1-3, H1-4 and H1-5 are valid.

In terms of control variables, except that firm age (PERIOD) has a significant negative impact on the total income from professional practice, both business type(TYPE) and total number of employees (EMP) have a significant positive impact on the income from professional practice (TBR). In other words, the longer the firm age, being a partnership firm, and the larger the firm size, the higher the income from professional practice of a firm.

The regression results of the number of cases entrusted to a firm in **Table 5** shows that adjusted R^2 is 0.437 and F value is 87.974, reaching a statistically significant level of 1%, which means that the goodness of fit of the model is very good. In terms of independent variables, except the insignificant and significant negative effects of the average annual salary of manager-level heads (MAN) and the average annual salary of professional team heads (SEN) respectively, which are opposite to the expected direction, the average annual salary of partner accountants (PAR), the average annual salary of professional assistants (ASS), and the proportion of employees with the CPA qualification (CPA) has a significant positive impact on the number of cases entrusted to a firm (CAS). In other words, the number of cases entrusted to a firm increases as the average annual salary of partner accountants and professional assistants increases, or the proportion of employees with the CPA qualification rises; Therefore, H2-1, H2-4 and H2-5 are valid.

In terms of control variables, except that the total number of employees (EMP) has a significant positive impact on the number of cases entrusted to a firm (CAS), all the remaining variables have a significant negative impact. In other words, the longer the firm age, being a sole proprietorship firm, and the larger the firm size, the more the number of cases entrusted to a firm.

According to the classification method of the database, in this paper, business type (TYPE) was divided into two groups of firm samples, namely, partnership firms (TYPE=1) and sole proprietorship firms (TYPE=0), and Regression Models (1) and (2) were re-applied. The results are shown in **Table 6**. The results of partnership firms (Panel A) show consistent empirical results with the overall operating performance of all firms in **Table 4** and **Table 5**. In other words, the firm's overall operating performance improves as the average annual salary of partner accountants and professional assistants increases, or the proportion of employees with the CPA qualification rises; This result means that partner accountants and professional assistants are very important human resources for partnership firms, and providing higher compensation to them can improve their job satisfaction and strengthen

their senses of belonging to the firm, which may help to increase the firm's income from professional practice and the number of cases entrusted to the firm. For partnership firms, compared with firms with a lower proportion of employees with the CPA qualification, firms with a higher proportion of employees with the CPA qualification are more likely to convey a sense of identity and credibility to clients when conducting business services. For sole proprietorship firms (Panel B), except that the proportion of employees with the CPA qualification (CPA) has no significant impact on the income from professional practice (TBR), all the remaining empirical results are roughly the same as that in **Table 4** and **Table 5**. It is also found that the proportion of employees with the CPA qualification (CPA) has no significant effect on the income from professional practice for sole proprietorship firms. Compared with partnership firms, CPA licenses have no significant effect on the increase of the income from professional practice for sole proprietorship firms. However, it can have a significant positive impact on the operating performance in terms of the number of cases entrusted to the firm for sole proprietorship firms.

In terms of control variables, the shorter the firm age and larger the firm size of the partnership firm, the more the income from professional practice and the number of cases entrusted to the firm. The larger the firm size of the sole proprietorship firm, the better the overall operating performance of the firm.

Table 4. Regression Results of the Income from Professional Practice

TBR=α0+α1PAR+α2MAN+α3SEN+α4ASS+α5CPA+α6PERIOD+α7TYPE+α8EMP+εi

Variable property	Variable name	Anticipation symbol	Coefficient value	Standard error	t value	Significance (one-tailed)	VIF	Sequence number of the hypothesis	Whether the hypothesis is valid or not
	Constant term		12.813	0.068	188.342	<0.000***			
Independent variables	PAR	+	0.000	0.000	5.314	<0.000***	1.785	H1-1	Yes
	MAN	+	0.000	0.000	6.019	<0.000***	1.523	H1-2	Yes
	SEN	+	0.000	0.000	6.568	<0.000***	1.447	H1-3	Yes
	ASS	+	0.000	0.000	11.794	<0.000***	1.323	H1-4	Yes
	CPA	+	0.365	0.162	2.251	0.013**	1.227	H1-5	Yes
Control variables	PERIOD	+	-0.002	0.001	-1.865	0.031**	1.105		
	TYPE	+	0.064	0.033	1.928	0.027**	1.553		
	EMP	+	0.987	0.021	46.296	<0.000***	2.676		
	R^2				0.902				
	Adjusted R^2				0.901				
	F value				1,018.444	<0.000***			
	D-W value				2.092				

Note: 1. TBR: income from professional practice; PAR: average annual salary of partner accountants; MAN: average annual salary of manager-level heads; SEN: average annual salary of professional team heads; ASS: average annual salary of professional assistants; CPA: proportion of employees with the CPA qualification; PERIOD: firm age; TYPE: business type; EMP: total number of employees. 2. It adopts the one-tailed test, with ***, ** and * indicating statistically significant levels less than 1%, 5% and 10%, respectively. 3. "Yes" means that the hypothesis is valid, and "No" means that the hypothesis is not valid. 4. Significance p-value<0.000 indicates a very small number. 5. The total number of samples is 899 firms.

Table 5. Regression Results of the Number of Cases Entrusted to a Firm

CAS=α0+α1PAR+α2MAN+α3SEN+α4ASS+α5CPA+α6PERIOD+α7TYPE+α8EMP+εi

Variable property	Variable name	Anticipation symbol	Coefficient value	Standard error	t value	Significance (one-tailed)	VIF	Sequence number of the hypothesis	Whether the hypothesis is valid or not
	Constant term		-3,883.047	396.095	-9.803	<0.000***			
Independent variables	PAR	+	0.001	0.000	9.142	<0.000***	1.785	H2-1	Yes
	MAN	+	-0.000	0.000	-0.536	0.296	1.523	H2-2	No
	SEN	+	-0.000	0.000	-1.491	0.068*	1.447	H2-3	No
	ASS	+	0.001	0.000	1.822	0.035**	1.323	H2-4	Yes
	CPA	+	4,806.014	945.293	5.084	<0.000***	1.227	H2-5	Yes
Control variables	PERIOD	+	-20.269	7.454	-2.719	0.004***	1.105		
	TYPE	+	-1,221.778	194.519	-6.281	<0.000***	1.553		
	EMP	+	1,636.048	124.077	13.186	<0.000***	2.676		
	R^2				0.442				
	Adjusted R^2				0.437				
	F value				87.974	<0.000***			
	D-W value				1.972				

Note: 1. CAS: number of cases entrusted to a firm; PAR: average annual salary of partner accountants; MAN: average annual salary of manager-level heads; SEN: average annual salary of professional team heads; ASS: average annual salary of professional assistants; CPA: proportion of employees with the CPA qualification; PERIOD: firm age; TYPE: business type; EMP: the total number of employees. 2. It adopts the one-tailed test, with ***, ** and * indicating statistically significant levels less than 1%, 5% and 10%, respectively. 3. "Yes" means that the hypothesis is valid, and "No" means that the hypothesis is not valid. 4. Significance p-value<0.000 indicates a very small number. 5. The total number of samples is 899 firms.

4.2.2. Business market performance results of a firm

According to the income from four business markets, this paper further carries out the regression analysis. Regression results from **Table 7** to **Table 10** show that the average annual salary of partner accountants (PAR) and the average annual salary of professional team heads (SEN) have significant positive effects on the income from tax service (TAR), the income from management consulting (MCR) and the income from business registration and other business lines (COR). The average annual salary of manager-level heads (MAN) only has a significant positive effect on the income from business registration and other business lines (COR). The average annual salary of professional associates (ASS) also has a significant positive impact on the income from public issue of certification documents (FINR), the income from tax service (TAR), and the income from business registration and other business lines (COR). In addition, the higher the average annual salary of the four ranks of employees, the higher the income from business registration and other business lines. The proportion of employees with the CPA qualification (CPA) has a significant benefit only for the management consulting business market, but it does not have a positive effect on the public issue of certification documents, tax service, management consulting and business registration and other business lines. This means that employees with the the CPA license can only bring their superiority into full play in the field of management consulting business.

Table 6. Regression Results of the Overall Operating Performance of Partnership Firms and Sole Proprietorship Firms

Panel A: Partnership firm

			Income from professional practice (TBR)				**Number of cases entrusted to a firm (CAS)**			
Variable property	Variable name	Anticipation symbol	Coefficient value	t value	Sequence number of the hypothesis	Whether the hypothesis is valid or not	Coefficient value	t value	Sequence number of the hypothesis	Whether the hypothesis is valid or not
	Constant term		12.885	167.229***			-6,950.156	-8.310***		
Independent variables	PAR	+	0.000	6.117***	H1-1	Yes	0.001	5.703***	H2-1	Yes
	MAN	+	0.000	6.709***	H1-2	Yes	0.000	0.437	H2-2	No
	SEN	+	0.000	4.808***	H1-3	Yes	-0.001	-0.920	H2-3	No
	ASS	+	0.000	11.280***	H1-4	Yes	0.002	1.963**	H2-4	Yes
	CPA	+	0.634	4.020***	H1-5	Yes	6,091.976	3.557***	H2-5	Yes
Control variables	PERIOD	+	-0.005	-4.054***			-50.100	-3.534***		
	EMP	+	1.000	53.799***			2,142.899	10.619***		
	R^2			0.949				0.497		
	Adjusted R^2			0.948				0.489		
	F value			1,112.304***				59.508***		
	D-W value			1.845				2.002		

Panel B: Sole proprietorship firm

			Income from professional practice (TBR)				Number of cases entrusted to a firm (CAS)			
Variable property	Variable name	Anticipation symbol	Coefficient value	t value	Sequence number of the hypothesis	Whether the hypothesis is valid or not	Coefficient value	t value	Sequence number of the hypothesis	Whether the hypothesis is valid or not
	Constant term		12.759	91.465***			-645.105	-9.873***		
Independent variables	PAR	+	0.000	1.669**	H1-1	Yes	0.000	3.451***	H2-1	Yes
	MAN	+	0.000	2.978***	H1-2	Yes	0.000	0.953	H2-2	No
	SEN	+	0.000	5.358***	H1-3	Yes	-0.000	-0.377	H2-3	No
	ASS	+	0.000	6.652***	H1-4	Yes	0.000	1.648**	H2-4	Yes
	CPA	+	0.061	0.204	H1-5	No	525.898	3.743***	H2-5	Yes
Control variables	PERIOD	+	0.001	0.483			0.868	0.845		
	EMP	+	0.975	20.214***			305.922	13.542***		
	R^2			0.719				0.441		
	Adjusted R^2			0.715				0.433		
	F value			168.729***				52.123***		
	D-W value			1.960				2.207		

Note: 1.TBR: income from professional practice; CAS: number of cases entrusted to a firm; PAR: average annual salary of partner accountants; MAN: average annual salary of manager-level heads; SEN: average annual salary of professional team heads; ASS: average annual salary of professional assistants; CPA: proportion of employees with the CPA qualification; PERIOD: firm age; TYPE: business type; EMP: the total number of employees.2.It adopts the one-tailed test, with ***, ** and * indicating statistically significant levels less than 1%, 5% and 10%, respectively.3."Yes" means that the hypothesis is valid, and "No" means that the hypothesis is not valid.4.429 for partnership firms and 470 for sole proprietorship firms.

Table 7. Regression Results of the Operating Performance of Public Issue of Certification Documents

FINR=α0+α1PAR+α2MAN+α3SEN+α4ASS+α5CPA+α6PERIOD+α7TYPE+α8EMP+εi

Variable property	Variable name	Anticipation symbol	Coefficient value	Standard error	t value	Significance (one-tailed)	VIF	Sequence number of the hypothesis	Whether the hypothesis is valid or not
	Constant term		11.676	0.217	53.851	<0.000***			
Independent variables	PAR	+	-0.000	0.000	-2.834	0.003***	1.785	H3-1	No
	MAN	+	-0.000	0.000	-0.043	0.483	1.523	H3-2	No
	SEN	+	0.000	0.000	1.225	0.111	1.447	H3-3	No
	ASS	+	0.000	0.000	2.542	0.006***	1.323	H3-4	Yes
	CPA	+	-0.091	0.517	-0.176	0.430	1.227	H3-5	No
Control variables	PERIOD	+	0.015	0.004	3.613	<0.000***	1.105		
	TYPE	+	0.008	0.106	0.075	0.470	1.553		
	EMP	+	1.252	0.068	18.433	<0.000***	2.676		
	R^2				0.507				
	Adjusted R^2				0.502				
	F value				114.251	<0.000***			
	D-W value				1.989				

Note: 1. FINR: income from public issue of certification documents; PAR: average annual salary of partner accountants; MAN: average annual salary of manager-level heads; SEN: average annual salary of professional team heads; ASS: average annual salary of professional assistants; CPA: proportion of employees with the CPA qualification; PERIOD: firm age; TYPE: business type; EMP: the total number of employees. 2. It adopts the one-tailed test, with ***, ** and * indicating statistically significant levels less than 1%, 5% and 10%, respectively. 3. "Yes" means that the hypothesis is valid, and "No" means that the hypothesis is not valid. 4. Significance p-value<0.000 indicates a very small number. 5. The total number of samples is 899 firms.

Table 8. Regression Results of the Operating Performance of Tax Service

TAR=α0+α1PAR+α2MAN+α3SEN+α4ASS+α5CPA+α6PERIOD+α7TYPE+α8EMP+εi

Variable property	Variable name	Anticipation symbol	Coefficient value	Standard error	t value	Significance (one-tailed)	VIF	Sequence number of the hypothesis	Whether the hypothesis is valid or not
	Constant term		3.940	1.171	3.365	0.001***			
Independent variables	PAR	+	0.000	0.000	3.139	0.001***	1.785	H4-1	Yes
	MAN	+	-0.000	0.000	-2.007	0.023**	1.523	H4-2	No
	SEN	+	0.000	0.000	2.090	0.019**	1.447	H4-3	Yes
	ASS	+	0.000	0.000	1.728	0.042**	1.323	H4-4	Yes
	CPA	+	-2.888	2.795	-1.033	0.151	1.227	H4-5	No
Control variables	PERIOD	+	-0.031	0.022	-1.425	0.077*	1.105		
	TYPE	+	0.169	0.575	0.294	0.385	1.553		
	EMP	+	1.565	0.367	4.267	<0.000***	2.676		
	R^2				0.118				
	Adjusted R^2				0.110				
	F value				14.876	<0.000***			
	D-W value				1.948				

Note: 1. TAR: income from tax service; average annual salary of partner accountants; MAN: average annual salary of manager-level heads; SEN: average annual salary of professional team heads; ASS: average annual salary of professional assistants; CPA: proportion of employees with the CPA qualification; PERIOD: firm age; TYPE: business type; EMP: the total number of employees. 2. It adopts the one-tailed test, with ***, ** and * indicating statistically significant levels less than 1%, 5% and 10%, respectively. 3. "Yes" means that the hypothesis is valid, and "No" means that the hypothesis is not valid. 4. Significance p-value<0.000 indicates a very small number. 5. The total number of samples is 899 firms.

Table 9. Regression Results of the Operating Performance of Management Consulting

MCR=α0+α1PAR+α2MAN+α3SEN+α4ASS+α5CPA+α6PERIOD+α7TYPE+α8EMP+εi

Variable property	Variable name	Anticipation symbol	Coefficient value	Standard error	t value	Significance (one-tailed)	VIF	Sequence number of the hypothesis	Whether the hypothesis is valid or not
	Constant term		-2.371	1.045	-2.269	0.012**			
Independent variables	PAR	+	0.000	0.000	2.758	0.003***	1.785	H5-1	Yes
	MAN	+	0.000	0.000	0.924	0.178	1.523	H5-2	No
	SEN	+	0.000	0.000	1.616	0.054*	1.447	H5-3	Yes
	ASS	+	0.000	0.000	0.827	0.204	1.323	H5-4	No
	CPA	+	4.481	2.493	1.797	0.037**	1.227	H5-5	Yes
Control variables	PERIOD	+	0.076	0.020	3.883	<0.000***	1.105		
	TYPE	+	1.375	0.513	2.680	0.004***	1.553		
	EMP	+	0.891	0.327	2.722	0.004***	2.676		
	R^2				0.153				
	Adjusted R^2				0.145				
	F value				20.053	<0.000***			
	D-W value				2.110				

Note: 1. MCR: income from management consulting; PAR: average annual salary of partner accountants; MAN: average annual salary of manager-level heads; SEN: average annual salary of professional team heads; ASS: average annual salary of professional assistants; CPA: proportion of employees with the CPA qualification; PERIOD: firm age; TYPE: business type; EMP: the total number of employees. 2. It adopts the one-tailed test, with ***, ** and * indicating statistically significant levels less than 1%, 5% and 10%, respectively. 3. "Yes" means that the hypothesis is valid, and "No" means that the hypothesis is not valid. 4. Significance p-value<0.000 indicates a very small number. 5. The total number of samples is 899 firms.

Table 10. Regression Results of the Operating Performance of Business Registration and Other Business Lines

COR =α0+α1PAR+α2MAN+α3SEN+α4ASS+α5CPA+α6PERIOD+α7TYPE+α8EMP+εi

Variable property	Variable name	Anticipation symbol	Coefficient value	Standard error	t value	Significance (one-tailed)	VIF	Sequence number of the hypothesis	Whether the hypothesis is valid or not
	Constant term		8.392	0.534	15.702	<0.000***			
Independent variables	PAR	+	0.000	0.000	1.562	0.060*	1.785	H6-1	Yes
	MAN	+	0.000	0.000	1.441	0.075*	1.523	H6-2	Yes
	SEN	+	0.000	0.000	1.690	0.046**	1.447	H6-3	Yes
	ASS	+	0.000	0.000	5.207	<0.000***	1.323	H6-4	Yes
	CPA	+	-0.582	1.275	-0.457	0.324	1.227	H6-5	No
Control variables	PERIOD	+	-0.025	0.010	-2.525	0.006***	1.105		
	TYPE	+	-0.121	0.262	-0.460	0.323	1.553		
	EMP	+	1.196	0.167	7.146	<0.000***	2.676		
	R^2				0.231				
	Adjusted R^2				0.224				
	F value				33.369	<0.000***			
	D-W value				1.987				

Note: 1. COR: income from business registration and other business lines; PAR: average annual salary of partner accountants; MAN: average annual salary of manager-level heads; SEN: average annual salary of professional team heads; ASS: average annual salary of professional assistants; CPA: proportion of employees with the CPA qualification; PERIOD: firm age; TYPE: business type; EMP: the total number of employees. 2. It adopts the one-tailed test, with ***, ** and * indicating statistically significant levels less than 1%, 5% and 10%, respectively. 3. "Yes" means that the hypothesis is valid, and "No" means that the hypothesis is not valid. 4. Significance p-value<0.000 indicates a very small number. 5. The total number of samples is 899 firms.

5. Conclusion and Suggestion

From the two aspects of employee compensation and CPA qualification, this paper discusses their impact on the overall operating performance and the business market operating performance of accounting firms, and finds out the significant impact factors, so as to provide references for firm managers to make decisions on employee compensation. In this paper, the overall operating performance of the firm is measured by the income from professional practice and the number of cases entrusted to the firm, and the business market operating performance of the firm is measured by the income from public issue of certification documents, the income from tax service, the income from management consulting, and the income from business registration and other business lines. It is found that judging by overall operating performance, a firm's income from professional practice increases as the average annual salary of partner accountants, manager-level heads, professional team heads and professional assistants increases, or the proportion of employees with the CPA qualification rises. The number of cases entrusted to the firm increases as the average annual salary of its partner accountants and professional assistants increases, or the proportion of its employees with the CPA qualification rises. In addition, the shorter the firm age, and the greater the firm size, the better the firm's overall operating performance.

Judging by the operating performance of the firm's four business markets, the income from tax service, management consulting, business registration and other business lines increases as the average annual salary of partner accountants and professional team heads rises. the income from public issue of certification documents, tax service and business registration and other business lines increases as the average annual salary of professional assistants rises; A higher proportion of employees with the CPA qualification has a positive impact on the income from management consulting.

Finally, it is suggested that accounting firm managers should provide more incentive compensation to their employees. This can increase the firm's income from professional practice and the number of cases entrusted to the firm. Especially for the two ranks of partner accountants and professional assistants, more incentive compensations should be provided. In addition, promotion opportunities should be increased to professional assistants. What's more, it is suggested that accounting firm managers should encourage their employees to obtain the CPA license, which can not only enhance their professional abilities, but also increase customers' trust in the professionalism of the firm's employees. Finally, fair compensation policies are the motive power for boosting the improvement of a firm's operating performance. The establishment of a sound compensation system can not only provide rewards to employees, but also enhance employees' sense of belonging to the firm, hence encouraging them to provide better service quality and strengthen the competitiveness of the firm in the industry.

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