An Analysis of Operating Strategies to Promote Performance in the CPA Industry in Taiwan

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Abstract

This paper investigates the impact of four factors, including business location and business style, market regional distribution, human configuration and business specialization or diversification, on the operating performance of an accounting firm. The data is obtained from the "2011 accounting firm service industry survey report" compiled by the Financial Supervisory Commission (FSC), which provides 571 valid firms as a sample. This paper conducts a two-stage empirical test using multiple-regression analysis combined with a univariate statistical test. The dependent variable, to measure operating performance, is total business revenue. The independent variables include the number of business locations, resident CPA service, regular resident CPA service, resident professional service, city concentration, region concentration, human configuration concentration and business specialization. The control variables include the number of employees, period since establishment and partnership or sole proprietorship. According to the findings of this paper, more business locations and higher human configuration concentration result in better operating performance; and branch firms adopting two business styles, such as resident CPA service and resident professional service and higher region concentration experience poorer operating performance. The findings of this paper provide a reference for practical decision-making in terms of operation orientation, internal manpower distribution, and business strategies and form the basis of future improvements and the formulation of operating strategy.

Keywords: accounting firm; operating performance; operating strategy; service industry

1. INTRODUCTION

In many industries, service quality and the convenience of the location of the business are major concerns for customers when it comes to their perceptions. According to Etzel et al. (2001), service quality is measured from the customer's perspective and refers to the comparison between the level of service expected by the customer and the perceived levels of service. The service industry sells intangible products that cannot be stored and customers are highly involved in service processes, making perceived service quality a key success factor for the sustainable business operations of the service industry (Barcia and Striuli 1996). The accounting firm aims at providing the "services" of accounting and auditing. Taiwan's "2011 accounting firm service industry survey report" suggests that in 2011 there were 1,012 accounting firms, including 769 sole proprietorship firms (accounting for 76%) and 243 partnership firms (accounting for 24%) in Taiwan. Compared to other industries with IPOs, the number of accounting firms is significantly higher. Meanwhile, the number of firms in the accounting industry has been increasing year by year, indicating high levels of competition and the difficulty of survival. Maintaining a stable

business space in this highly competitive environment is therefore a major concern facing accounting firm management, who need to consider highlighting certain business features and service advantages.

Parasuraman et al. (1988) argue that perceived service quality is similar to an attitude that reflects customers' overall assessment of the accounting firm. Some accounting firms establish branch firms in order to provide more convenient service channels to customers. From the perspective of marketing, this also represents the establishment of different business locations. Business locations have their own operating models and styles. In the accounting industry, the establishment of branch firms is also the establishment of business locations. From the perspectives of business location and business style, this paper discusses the impact of the number of business locations, and whether the business location has a resident certified public accountant (CPA) or professional on firm operating performance. This is the first research purpose of this paper.

Taiwan's accounting firms mainly serve national listed or OTC companies, most of which are headquartered in bustling cities; including New Taipei City, Taipei City, Taichung City, Tainan City and Kaohsiung City. The important regions include the northern region, the central region, the southern region, and the eastern region. The question whether accounting firms should focus on a specific city or region for marketing or should scatter to various cities and regions to better facilitate operating performance. Regardless of concentration or distribution, there are advantages and disadvantages. From the perspective of market regional distribution, this paper explores how accounting firm managers balance and make optimal market distribution decisions to enhance operating performance. This is the second research purpose of this paper.

Accounting firms exist in a "labor" and "knowledge" intensive service industry, where "manpower" is the most important and vital input, and can determine the direction and performance of operations. Therefore, the configuration of human resources is a key point to consider. The accounting firm's four business fields each require sufficient professionals and appropriate distribution of manpower in order to smoothly and efficiently provide customers with excellent service quality. These four fields include auditing, taxation, management consultation and accounting. This paper explores how to recruit talent and configure professionals according to the four business fields, whether to concentrate them in a specific field or distribute them evenly across different fields, and the kind of manpower configuration that improves operating performance. From the perspective of human configuration, this paper explores how accounting firm managers should optimally configure manpower in order to facilitate operating performance. This is the third research purpose of this paper.

The services provided by accounting firm can be divided into four categories: financial audit and attesting, taxation, management consultation, business registration and other business to implement. The first two services are the most common in the market and the accounting industry is highly competitive. This paper explores how gaining a competition advantage in the market and maintaining long-term, stable relationships with customers depend on prudent planning on the behalf of accounting firm managers, as well as the health and size of the business, and appropriately planned marketing to highlight unique features of the form to clients. From the perspective of business specialization or diversification, this paper explores the business features and expertise or diversification strategies that should be taken by accounting firm managers to optimize operating performance, maintain customer relationships and provide good service quality. This is the fourth research purpose of this paper.

The main aims of this paper can be summarized into three points: (1) to identify important factors that affect operating performance; (2) to investigate the impact of business location and business

style, market regional distribution, human configuration and business specialization or diversification on operating performance; and (3) to make recommendations on key management practices and implications for accounting firm managers as a reference for future decision-making.

2. LITERATURE REVIEW

This paper develops the research hypotheses along four dimensions; including business location and business style, market regional distribution, human configuration and business specialization or diversification.

2.1. Channel and Performance

Gaski (1984) defines channel cooperation performance as the degree of contribution of dealers to the achievement of a supplier's goals. Gaski and Nevin (1985) point out that channel benefits refer to the degree of contribution made by the relationship between the supplier and the dealer to the achievement of the goals set by the suppliers. Mohr and Nevin (1990) identify channel communication strategies; including communication strategy, communication direction, communication content and communication media. Rosenbloom and Anderson (1985) identify channel performance assessment factors; including the number of sales, inventory levels, sales capabilities, channel members' attitudes toward manufacturers and the sale of products. Lusch and Brown (1996) argue that channel performance could be measured by sales growth, profit growth, overall profitability, liquidity, employee productivity, cash flow and other indicators. Zettelmeyer (2000) points out that the manufacturer can provide different levels of product information through different channels, and segment customers, thus increasing market competition forces. He et al. (2013) suggest that the adjustment of export channel options according to the market positioning capabilities at the enterprise level and the distance between mechanisms can generate better export performance. Xue et al. (2014) indicate that the supply chain partnership indicates the distribution of power between different levels of the agents, which implies an influence on pricing and channel decision-making, and ultimately affects end-customers.

Some accounting firms establish branch firms to provide customers with required services. Branch firms are similar to the concept of alternate business locations. With reference to research of previous scholars, business location can also be regarded as a channel concept. When an accounting firm has established more business locations, it can help headquarters to share some of the business load and thereby increase its market competitiveness and reputation as well as rapidly increase the market penetration of the firm. Therefore, it can help headquarters to establish communication with clients, speed up the flow of relevant information, rapidly respond to customer demands, and thus positively contribute to operating performance. Therefore, more business locations are better able to facilitate the operations of accounting firm and thus create better operating performance, and thus proposes hypothesis H1-1.

In addition, the location of the accounting firm may provide a resident CPA service, a regular resident CPA service, and a resident professional service. Although the establishment of more locations is able to enhance the market competitiveness of an accounting firm, the resident or regular service of CPAs or other professionals at different location may impact on the configuration of manpower at the firm headquarters and may divert the focus of CPAs from firm headquarters' business. Resident professionals in various locations thus reduce the manpower based at firm headquarters. However, what this means is that in high season, due to a lack of manpower, each unit will be overloaded, which may affect service quality and result in poorer operating performance. Therefore, this paper proposes hypotheses H1-2, H1-3 and H1-4 as

follows:

H1-1: More business locations can result in greater total business revenues.

H1-2: The total business revenue of a branch firm with a resident CPA service is lower than that with non-resident CPA service.

H1-3: The total business revenue of a branch firm with a regular resident CPA service is lower than that with non-regular resident CPA service.

H1-4: The total business revenue of a branch firm with a resident professional service is lower than that with non-resident professional service.

2.2. City/Region and Commercialization

Christaller (1993) proposes the Central Place Theory with several hypotheses about the region that need to be verified: (1) there should be a boundless and consistent large plane; (2) the plane should be evenly populated; (3) customers will acquire products and services in the nearest, most central place; (4) these products and services are supplied by economic persons in pursuit of maximum profit; (5) all customers have the same revenue and the same demand for products and services; (6) transportation in every direction is equally convenient and transportation fees increase (or decrease) proportionally to distance. Berry and Garrison (1958) argue that a spatial structure is incomplete in terms of form, and thus propose the "the metropolitan area of commercial space structure model" in order to divide the commercial space into the center, the belt and the special function business areas, each of which is further divided into further sub-categories. The business centers of the center business area have a significant hierarchical relationship. Research on the Central Place Theory by Craig et al. (1984) argues that the theory provides powerful explanations for the spatial distribution of retail facilities, market centers and market areas. Shilton and Webb (1995) find that the enterprise headquarters in New York are not located in the sub-center like the cluster of industries of specialized office employment. When the sub-center becomes increasingly urbanized, the downtown office employment industries become increasingly specialized. Chan and Lin (2013) point out that from the perspective of industrial and time dynamics, most newly installed firms choose areas of higher geographic concentration for the location of their factories.

In regard to the financial industry, some scholars discuss the impact of region and urbanization degree on loan default probability. Archer et al. (2002) suggest that the loan default probability of collaterals located in areas of lower urbanization is higher. Lin et al. (2011) conduct a case study of a financial institution by dividing the real estate in Taiwan by land planning and urban renewal projects located (or not located) in the metropolitan area into five regions: A, B, C, D and E. Region A is the best region followed by B, C, D and E. Since areas with urban renewal development are comparatively better in terms of living conditions, real estate transactions and price stability, the default probability of borrowers with collaterals in better areas is comparatively lower.

In general, the urban area is more densely populated than the suburbs and has a more active employment market. More large enterprises are located in downtown areas than in non-downtown areas. Therefore, the busy area or metropolitan area generally has more business opportunities and employment opportunities. If accounting firms can create business opportunities in downtown or other regions to establish a market structure and client base, then as accounting firms increase their client base, this increases business revenues. Therefore, on the one hand, operating performance will improve if an accounting firm establishes business markets in different cities or regions; and that, on the other, if an accounting firm concentrates its business in a specific region, then contributions to the growth of operating performance will be limited. Therefore, this paper proposes the following hypotheses H2-1 and H2-2 as follows:

H2-1: With a higher degree of city concentration, total business revenue decreases.

H2-2: With a higher degree of region concentration, total business revenue decreases.

2.3. Human Resources

Lucas (1988) argues that human capital can promote technical change and productivity; Crawford (1991) points out that the intellectual capital's core feature is human capital. Stewart (1997) suggests that intellectual capital is an intangible asset that can create a competitive advantage for an organization and is characterized by production elements. Edvinsson and Malone (1997) mention that sales people are on the front-line, create value for an organization, and are irreplaceable. That is, sales-people are the important form of human capital in the insurance industry. Wah (1999) proposes that the financial service industry recognize the unique value of customer relationships and customer knowledge and that most of these values depend on front-line employees. Lee (2013) suggests that human capital positively contributes to firm performance, and according to Liu et al. (2014), strategic human capital study emphasizes the importance of human capital as a resource to maintain a competitive advantage.

To sum up, human capital is the major and most important input factor in all enterprises. The accounting firm is a "knowledge" service industry; the professionals in a firm provide necessary consultations and related services as the main products of an accounting firm. The professionals in an accounting firm can be divided into experts in four areas; including auditing, taxation, management consultation and accounting. The knowledge required by each of the four areas is the benchmark of branch firm human capital categorization. From the viewpoint of the manager, employment entails costs and additional training and education mechanisms. It is an important human configuration decision, therefore, to determine how much manpower should be allocated to each professional field and how to concentrate or distribute human resources in a specific area.

From the perspective of the services provided by an accounting firm, these can be divided into four categories; including the public offering financial auditing and attesting, taxation, management consultation and business registration and other business to implement. Service customers are diverse and may have diverse demands. In order to satisfy all the possible needs of customers, the firm must allocate manpower to each of the four special areas; including auditing, taxation, management consultation and accounting. This is helpful in terms of the diverse development of the accounting firm in the market and helps the firm to respond to trends in relation to diversified business strategy. Therefore, when the accounting firm distributes manpower across the various special fields, firm performance is better; and when the accounting firm concentrates manpower in a specific area, this is not good for operating performance because it results in a limited service range. Hence, this paper proposes hypothesis H3 as follows:

H3: A higher degree of human configuration concentration results in lower total business revenue.

2.4. Literature Relating to Diversification

Eukeria and Favourate (2014) argue that diversification is a strategic choice for many managers to improve firm performance. Demsetz and Strahan (1997) point out that the degree of diversification of banking shareholder companies is proportionally related to asset size. In other words, if size is greater, then the degree of diversification is higher. Stiroh (2004) suggests that American community banks undertaking different types of loans can enhance profit and reduce bankruptcy risks. Moreover, the diversification of loan portfolios can be helpful to community banks. Stiroh (2005) finds that the diversification of revenues' impact on risk decreases with increasing size and then increased, suggesting that the effect of risk distribution by diversification is in a non-linear relationship with size. Using Taiwanese firms as research subjects, Chen and Lin (2007) divide the services of accounting firms into auditing, accounting, taxation,

management consultation and business registration services, indicating that firm business diversification can enhance technical efficiency. Lee (2012) divides firm business revenue items into financial audit and attesting, taxation business, management consultation, business registration and other business to measure the degree of diversification, finding that more diverse business items can enhance productivity. Lee (2013) explores the impact of business diversification on firm performance, and uses the Herfindahl-Hirschman Index (HHI)[1] in order to measure the impact of the degree of business diversification on an accounting firm while using it as a control variable in the empirical model. The study finds that if a firm provides more diverse business services, then it can satisfy customer demand on purchase of service and reduce the additional costs of finding new customers. In addition, business diversification of the accounting firm can absorb more customers without being limited by providing traditional audit businesses. The audit or financial audit and attesting businesses are in a highly competitive and saturated state. The accounting firm is faced with a bottleneck in seeking business opportunities in this market. Only the diversification business strategy can attract different types of customers and enhance a firm's competitive advantage. Therefore, a diversified business strategy will result in better firm performance; and that if a firm is specialized in specific services, the improvement of operating performance will be more limited. Hence, this paper proposes hypothesis H4 as follows:

H4: A higher degree of business specialization can result in lower total business revenue.

3. METHODOLOGY

3.1 Data Source and Sample Selection

The "2011 accounting firm service industry survey report" database compiled by the Financial Supervisory Commission (FSC) is the data source of this paper. The sample consists of 1,012 accounting firms. In order to ensure the completeness and integrity of the sample, 441 samples with irrational data or illogical data are eliminated. Therefore, the remaining 571 valid samples are the subjects of this empirical study.

3.2 Variable Definition

In this paper, total business revenue (PFOR) is used as the proxy variable for operating performance, and the independent variables, derived from the four dimensions, include business location and business style, market regional distribution, human configuration and business specialization or diversification. The variables in the last three dimensions are computed using HHI. The value of HHI is in between 0~1. When it is closer to 0, this means that the market structure (or concentration degree) is more distributed; when it is closer to 1, this means that the market structure (or concentration degree) is more concentrated. In addition, according to Lee (2013) the regression model of operating performance uses firm size and period since establishment as control variables. Lee (2014) investigates whether the operating efficiency affects total business revenues and total revenues by incorporating the total number of employees as a control variable in the regression model. With reference to Lee (2013) and Lee (2014), the number of employees and period since establishment are included in the empirical model of this paper. Due to the classification of accounting firms by business style, including partnership and sole proprietorship, the above three control variables are included in the regression model to obtain a more objective model design, so that the measurement of the correlation between the

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[1] Concentration degree measures the distribution of manufacturers by size. Hirschman (1964) explains that the relative concentration degree's HHI (Herfindahl-Hirschman Index) is the square sum of manufacturer market share: $HHI = \sum_{i=1}^{n} s_i^2$, $1/n \leq HHI \leq 1$, s_i=the market share of No. i manufacturer, n=the number of manufacturers in the market, when the HHI value is closer to 1/n, this means that n manufacturers are closely perfect competition.

independent variables and the dependent variable is more prudent.

Definitions of the dependent variable, independent variables and control variables are listed as shown in Table 1.

Table 1. Summary of Variable Definitions

Variable type	Dimension	Variable description	Variable definition
Dependent variable	Performance	Total business revenue (PFOR)	Measured by the logarithm of the public offering auditing and attesting revenue + financing audit and attesting revenue + other financial audit and attesting revenue + income tax audit, attesting and reporting revenue + taxation planning revenue + taxation administrative remedy revenue + other taxation business revenue + management consultation revenue + business registration revenue + other business revenues. (Original unit: NTD)
Independent variables	Business location and business style	The number of business locations (BRA)	The number of branch firms. (Original unit: number of firms)
		Resident CPA service (CPAL)	This is a proxy variable, it is set as 1 when the branch firm business type has a resident CPA service; and is set as 0 otherwise.
		Regular resident CPA service (CPAF)	This is a proxy variable, it is set as 1 when the branch firm business type has a regular resident CPA service; and is set as 0 otherwise.
		Resident professional service (PROL)	This is a proxy variable, it is set as 1 when the branch firm business type has a resident professional service; and is set as 0 otherwise.
	Market regional distribution	City concentration (CITY)	(New Taipei City's total annual business revenue ÷ five cities' total annual business revenues)^2 + (Taipei City's total annual business revenue ÷ five cities' total annual business revenues)^2 + (Taichung City's total annual business revenue ÷ five cities' total annual business revenues)^2 + (Tainan City's total annual business revenue ÷ five cities' total annual business revenues)^2 + (Kaohsiung City's total annual business revenue ÷ five cities' total annual business revenues)^2
		Region concentration (REGI)	(The northern region's total annual business revenue ÷ five regions' total annual business revenues)^2 + (the central region's total annual business revenue ÷ five regions' total annual business revenues)^2 + (the southern region's total annual business revenue ÷ five regions' total annual business revenues)^2 + (the eastern region's total annual business revenue ÷ five regions' total annual business revenues)^2 + (other region's total annual business revenue ÷ five regions' total annual business revenue)^2
	Human configuration	Human configuration concentration (HUM)	(The number of employees providing audit service ÷ the number of employees providing four categories of services)^2 + (the number of employees providing

			taxation service ÷ the number of employees providing four categories of services)^2 + (the number of employees providing management consultation service ÷ the number of employees providing four categories of services)^2 + (the number of employees providing accounting service ÷ the number of employees providing four categories of services)^2
	Business specialization or diversification	Business specialization (BUSS)	(Public offering financial auditing and attesting revenue ÷ total business revenues)^2 + (taxation business revenue ÷ total business revenues)^2 + (management consultation revenue ÷ total business revenues)^2 + (business registration and other business revenue ÷ total business revenues)^2
Control variables		Number of employees (EMP)	Measured by the logarithm of the total number of employees. (Original unit: persons)
		Period since establishment (PERD)	The year of data survey—the year when the firm was established + 1 (Original unit: years)
		Partnership or sole proprietorship (TYPE)	This is a proxy variable, it is set as 1 when the firm is a partnership; if the firm is a sole proprietorship, it is set as 0.

3.3 Multiple Regression Model

According to the research hypotheses developed in the second section, this paper develops the multiple-regression model as illustrated by the following equation (1) as a reference for the accounting firm in terms of business management and service strategy development:

$$PFOR = \beta_0 + \beta_1 BRA + \beta_2 CPAL + \beta_3 CPAF + \beta_4 PROL + \beta_5 CITY + \beta_6 REGI + \beta_7 HUM + \beta_8 BUSS +$$

$$\beta_9 EMP + \beta_{10} PERD + \beta_{11} TYPE + e_i \tag{1}$$

In regression equation (1), PFOR is the total business revenue, BRA is the number of business locations, CPAL is the resident CPA service, CPAF is the regular resident CPA service, PROL is the resident professional service, CITY is the city concentration, REGI is the region concentration, HUM is the human configuration concentration, BUSS is the business specialization, EMP is the number of employees, PERD is the period since establishment, TYPE is the partnership or sole proprietorship, β_0 is the intercept, β_1, β_2, β_3, β_4, β_5, β_6, β_7, β_8, β_9, β_{10} and β_{11} are the parameters of regression model, and e_i is an error item.

4. RESULTS

4.1 Descriptive Statistics

Table 2 shows the descriptive statistics. The mean value of total business revenue (PFOR) is 42,345,216 NTD, which is far greater than the median value at 5,811,000 NTD. The maximum value is 7,006,723,917 NTD, and the minimum value is 35,000 NTD, indicating that the business revenues of accounting firm industry vary considerably with a "Matthew Effect".

Regarding the independent variables, in the dimensions of business location and business style, the mean value of the number of business locations (BRA) is 0.194 branch firms, and the median value is 0.000 firms, indicating that at least half of all accounting firms have no branch firms. The

maximum value is 9.000 firms. In other words, some accounting firms have 9 branch firms with widely distributed business locations to provide services to customers. The mean values of the resident CPA service (CPAL), regular resident CPA service (CPAF) and resident professional service (PROL) are 0.145, 0.037 and 0.049 respectively. It can thus be learned that most branch firms provide resident CPA services, namely CPA invests more time in branch firm's management and dominate decisions in the operational dimension.

In the dimension of market regional distribution, the mean values of city concentration (CITY) and region concentration (REGI) are 0.732 and 0.877; and the median values are 0.711 and 1.000. The mean value and the median value are greater than $0.20(1/n=1/5)$, suggesting that the accounting firms implement business in one or more specific cities or regions. With reference to Table 3, most of the business implementation revenues come from Taipei City (19,972,998 NTD) and the northern region (6,229,770 NTD), and the distribution is not even across various cities or regions.

In the dimension of human configuration, the mean value of the human configuration concentration (HUM) is 0.603; and the median value is 0.531, both of which are greater than $0.25(1/n=1/4)$. This suggests that the managers distribute employees in one or more specific services; including financial auditing, taxation, management consultation and accounting services.

In the dimension of business specialization or diversification, the mean value of business specialization (BUSS) is 0.533, and the median value is 0.502, both of which are greater than $0.25(1/n=1/4)$, suggesting that business revenues mainly come from one or more services out of public offering financial auditing and attesting, taxation, management consultation and business registration and other business to implement. This indicates that accounting firms should focus on specific business rather than all business.

Regarding the control variables, the mean value of the number of employees (EMP) is 29.799 persons, and the minimum value is 1.000 people, indicating that firms with sole proprietorship may have only one employee. The maximum value is 3,224 persons in a partnership firm. The mean value of the period since establishment (PERD) is 15.914 years, indicating that the average period since establishment is about 16 years and the median value is 15.000 years. In other words, at least half of all accounting firms are established in the past 15 years. The mean value of the partnership or sole proprietorship (TYPE) is 0.345, indicating that 34.5% accounting firms involve partnerships.

Table 2. Descriptive Statistics of Variables

Dimension	Variable description	Mean	Median	Minimum	Maximum	Std. Dev.
Dependent variable	Total business revenue (PFOR)	42,345,216	5,811,000	35,000	7,006,723,917	379,455,590
Business location and business style	The number of business locations (BRA)	0.194	0.000	0.000	9.000	0.672
	Resident CPA service (CPAL)	0.145	0.000	0.000	1.000	0.353
	Regular resident CPA service (CPAF)	0.037	0.000	0.000	1.000	0.188
	Resident professional service (PROL)	0.049	0.000	0.000	1.000	0.216

Market regional distribution	City concentration (CITY)	0.732	0.711	0.231	1.000	0.212
	Region concentration (REGI)	0.877	1.000	0.289	1.000	0.196
Human configuration	Human configuration concentration (HUM)	0.603	0.531	0.250	1.000	0.230
Business specialization or diversification	Business specialization (BUSS)	0.533	0.502	0.278	1.000	0.166
Control variables	Number of employees (EMP)	29.799	8.000	1.000	3,224	189.020
	Period since establishment (PERD)	15.914	15.000	1.000	58.000	9.769
	Partnership or sole proprietorship (TYPE)	0.345	0.000	0.000	1.000	0.476

Notes: 1. Variables are defined in Table 1. 2. The number of samples is 571.

Table 3. Descriptive Statistics of Total Annual Business Revenue

City/Region	Mean	Median	Minimum	Maximum	Std. Dev.
New Taipei City	5,188,981	558,865	0	982,662,000	47,276,356
Taipei City	19,972,998	1,580,000	0	3,045,493,044	193,525,321
Taichung City	2,600,388	0	0	277,117,119	17,668,906
Tainan City	1,200,801	0	0	245,052,030	12,831,662
Kaohsiung City	2,117,233	0	0	374,855,556	17,868,873
The northern region	6,229,770	195,000	0	1,310,258,267	62,225,584
The central region	1,277,868	0	0	217,425,386	10,096,459
The southern region	598,974	0	0	39,455,010	2,721,006
The eastern region	106,702	0	0	10,873,356	769,561

Notes: 1. The number of samples is 571. 2. The unit of the total annual business revenue is NTD.

4.2 Correlation Coefficient Analysis

Table 4 is a correlation coefficient matrix. The left lower corner represents the Pearson correlation coefficient; the right upper corner represents the Spearman correlation coefficient. The Pearson correlation coefficient suggests that the independent variables of the number of business locations (BRA), resident CPA service (CPAL) and resident professional service (PROL) are significantly and positively correlated with total business revenue (PFOR); city concentration (CITY), region concentration (REGI), human configuration concentration (HUM) and business specialization (BUSS) are significantly and negatively correlated with total business revenue (PFOR). Regarding the control variables, numbers of employees (EMP), period since establishment (PERD), and partnership or sole proprietorship (TYPE) are significantly and positively correlated with total business revenue (PFOR). In addition, except for regular resident CPA service (CPAF), the impact of the independent and control variables on the dependent variable reaches the 1% statistical significance level.

According to the Spearman correlation coefficient, the independent variables including the number of business locations (BRA), resident CPA service (CPAL), regular resident CPA service (CPAF) and resident professional service (PROL) are significantly and positively correlated with total business revenue (PFOR); city concentration (CITY), region concentration (REGI), human configuration concentration (HUM) and business specialization (BUSS) are significantly and negatively correlated with total business revenue (PFOR). The control variables including the number of employees (EMP), period since establishment (PERD) and partnership or sole proprietorship (TYPE) are significantly and positively correlated with total business revenue (PFOR). In addition, except for the regular resident CPA service (CPAF), which reaches the 10% statistical significance level, the impact of the rest of the independent and control variables on the dependent variable reach the 1% statistical significance level.

By further comparing the correlation coefficient results, the insignificant positive correlation of the regular resident CPA service (CPAF) in Pearson changes into the significant positive correlation in Spearman, the correlation direction and significance level of the rest of the independent and control variables against the dependent variable are almost the same.

Table 4. Correlation Coefficients of Variables

Variables	PFOR	BRA	CPAL	CPAF	PROL	CITY	REGI	HUM	BUSS	EMP	PERD	TYPE
PFOR	1.000	0.401***	0.287***	0.073*	0.134***	-0.311***	-0.356***	-0.217***	-0.318***	0.887***	0.409***	0.582***
		(0.000)	(0.000)	(0.082)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
BRA	0.479***	1.000	0.600***	0.345***	0.401***	-0.272***	-0.250***	-0.049	-0.152***	0.416***	0.156***	0.348***
	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.246)	(0.000)	(0.000)	(0.000)	(0.000)
CPAL	0.327***	0.524***	1.000	0.078*	0.228***	-0.205***	-0.201***	-0.085**	-0.152***	0.313***	0.069*	0.328***
	(0.000)	(0.000)		(0.063)	(0.000)	(0.000)	(0.000)	(0.042)	(0.000)	(0.000)	(0.099)	(0.000)
CPAF	0.064	0.318***	0.078*	1.000	0.343***	-0.022	-0.038	0.027	0.041	0.098**	0.006	0.073*
	(0.126)	(0.000)	(0.063)		(0.000)	(0.599)	(0.360)	(0.518)	(0.324)	(0.020)	(0.885)	(0.079)
PROL	0.157***	0.285***	0.228***	0.343***	1.000	-0.053	-0.102**	-0.015	-0.077*	0.179***	0.025	0.176***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.209)	(0.015)	(0.727)	(0.066)	(0.000)	(0.551)	(0.000)
CITY	-0.324***	-0.272***	-0.200***	-0.017	-0.041	1.000	0.180***	0.132***	0.135***	-0.335***	-0.133***	-0.237***
	(0.000)	(0.000)	(0.000)	(0.679)	(0.325)		(0.000)	(0.002)	(0.001)	(0.000)	(0.001)	(0.000)
REGI	-0.361***	-0.253***	-0.224***	-0.054	-0.099**	0.183***	1.000	0.069	0.168***	-0.332***	-0.162***	-0.221***
	(0.000)	(0.000)	(0.000)	(0.200)	(0.018)	(0.000)		(0.102)	(0.000)	(0.000)	(0.000)	(0.000)
HUM	-0.222***	-0.070*	-0.098**	0.000	-0.030	0.140***	0.073*	1.000	0.212***	-0.233***	-0.088**	-0.141***
	(0.000)	(0.097)	(0.019)	(0.992)	(0.475)	(0.001)	(0.080)		(0.000)	(0.000)	(0.036)	(0.001)
BUSS	-0.340***	-0.123***	-0.142***	0.028	-0.081*	0.123***	0.171***	0.245***	1.000	-0.262***	-0.103**	-0.238***
	(0.000)	(0.003)	(0.001)	(0.507)	(0.054)	(0.003)	(0.000)	(0.000)		(0.000)	(0.014)	(0.000)
EMP	0.905***	0.517***	0.374***	0.090**	0.202***	-0.332***	-0.354***	-0.253***	-0.274***	1.000	0.407***	0.581***
	(0.000)	(0.000)	(0.000)	(0.031)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)
PERD	0.393***	0.206***	0.084**	0.015	0.042	-0.132***	-0.162***	-0.078*	-0.089*	0.399***	1.000	0.181***
	(0.000)	(0.000)	(0.045)	(0.719)	(0.318)	(0.002)	(0.000)	(0.063)	(0.033)	(0.000)		(0.000)
TYPE	0.533***	0.295***	0.328***	0.073*	0.176***	-0.230***	-0.220***	-0.149***	-0.231***	0.545***	0.177***	1.000
	(0.000)	(0.000)	(0.000)	(0.079)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	

Notes: 1. Variables are defined in Table 1. 2. The bottom left is the Pearson correlation coefficient, while the upper right is the Spearman correlation coefficient. 3. The figures in ( ) denote the p value. 4. *p<0.1, **p<0.05, ***p<0.01. 5. The number of samples is 571.

4.3 Analysis of Empirical Regression Results

According to suggestions made by Neter et al. (1990), if the Variance Inflation Factor (VIF) is below 10, then the independent and control variables have no serious collinearity. As shown in Table 5, the VIF values of the various independent and control variables are all below 10, suggesting that there is no serious collinearity in between the independent and control variables. The model's explanatory power Adjusted R^2 is 0.832, and the F-statistic is 258.301, reaching a 1% statistical significance level. Furthermore, the regression results shown in Table 5, in respect of the independent variables, except for H1-3, H2-1 and H3, the rest of the independent variables have a significant impact on the dependent variable as expected. Therefore, H1-1, H1-2, H1-4, H2-2 and H4 are all supported.

Regarding the independent variables, in the dimension of business location and business style, the number of business locations (BRA) has a significant and positive impact on total business revenue (PFOR) (the coefficient value is 0.034, $p<0.1$), suggesting that more business locations are able to generate more total business revenues. A resident CPA service (CPAL) has a significant and negative impact on total business revenue (PFOR) (the coefficient value is -0.063, $p<0.05$), suggesting that total business revenues of a firm with branch firms who have resident CPAs are fewer. A regular resident CPA service (CPAF) has an insignificant and negative impact on total business revenue (PFOR) (the coefficient value is -0.042, $p>0.1$), suggesting that total business revenues have no significant differences regardless of whether or not CPAs provide regular services to branch firms. The resident professional service (PROL) has a significant and negative impact on total business revenue (PFOR) (the coefficient value is -0.080, $p<0.1$), suggesting that the total business revenue is lower in the case of firms with professionals in branch firms.

In the dimension of market regional distribution, city concentration (CITY) has an insignificant and negative impact on total business revenue (PFOR) (the coefficient value is -0.046, $p>0.1$), suggesting that business concentration or distribution in a specific city or different cities has no significant impact on the firm's total business revenues. Region concentration (REGI) has a significant and negative impact on total business revenue (PFOR) (the coefficient value is -0.109, $p<0.05$), suggesting that the concentration of one's business in a specific region can result in lower total business revenues. In other words, if the business is more evenly distributed across the northern region, central region, southern region, eastern region, and other regions, then firm's total business revenues increase.

In the dimension of human configuration, human configuration concentration (HUM) has a significant and positive impact on total business revenue (PFOR) (the coefficient value is 0.064, $p<0.1$), suggesting that human resources concentration in a specific service category is able to generate more firm's total business revenues. In other words, if human resources are evenly distributed across the four services (namely auditing, taxation, management consultation, and accounting) then the firm's total business revenue is relatively limited.

In the business specialization or diversification dimension, the presence of a business specialization (BUSS) has a significant and negative impact on total business revenue (PFOR) (the coefficient value is -0.354, $p<0.01$), suggesting that the concentration of business revenues in a specific business category, makes the firm's total business revenues lower. In other words, if the business revenues are distributed across the four services (namely, public offering financial auditing and attesting, taxation, management consultation and business registration and other business to implement) then firm's total business revenues will increase.

Regarding the control variables, number of employees (EMP) has a significant and positive impact on total business revenue (PFOR) (the coefficient value is 1.031, $p<0.01$), suggesting that more employees are able to generate more total business revenues. Period since establishment

(PERD) also has a significant and positive impact on total business revenue (PFOR) (the coefficient value is 0.002, p<0.05), suggesting that a longer period of time since the establishment of the firm generates more total business revenues. Partnership or sole proprietorship (TYPE) also has a significant and positive impact on total business revenue (PFOR) (the coefficient value is 0.068, p<0.01), suggesting that the total business revenue of firms with a partnership style are greater. The results for these three control variables are therefore as expected.

Table 5. Regression Results of Operating Performance

$PFOR=\beta_0+\beta_1BRA+\beta_2CPAL+\beta_3CPAF+\beta_4PROL+\beta_5CITY+\beta_6REGI+\beta_7HUM+\beta_8BUSS+\beta_9EMP+\beta_{10}PERD+\beta_{11}TYPE+e_i$ (1)

Dimension	Variable description	Predicted sign	Coefficient	Std. Error	t value	p value (one-tailed)	VIF	Hypothesis
	Intercept		6.033	0.085	70.669	<0.000***		
Business location and business style	BRA	+	0.034	0.021	1.618	0.053*	1.912	H1-1 accepted
	CPAL	-	-0.063	0.035	-1.778	0.038**	1.502	H1-2 accepted
	CPAF	-	-0.042	0.060	-0.692	0.244	1.250	H1-3 rejected
	PROL	-	-0.080	0.052	-1.548	0.061*	1.218	H1-4 accepted
Market regional distribution	CITY	-	-0.046	0.052	-0.886	0.188	1.164	H2-1 rejected
	REGI	-	-0.109	0.056	-1.941	0.026**	1.173	H2-2 accepted
Human configuration	HUM	-	0.064	0.047	1.357	0.088*	1.121	H3 rejected
Business specialization or diversification	BUSS	-	-0.354	0.065	-5.411	<0.000***	1.147	H4 accepted
Control variables	EMP	+	1.031	0.032	31.919	<0.000***	2.260	
	PERD	+	0.002	0.001	1.945	0.026**	1.204	
	TYPE	+	0.068	0.026	2.602	0.005***	1.491	

R^2=0.836　　Adjusted R^2=0.832

F-statistic=258.301***　　P value<0.000

*Notes***:** 1. Variables are defined in Table 1. 2. The variables' variance inflation factors (VIFs) are all less than 10, implying that no serious multi-collinearity exists among variables. 3. *p<0.1, **p<0.05, ***p<0.01, and the statistical significance level is determined using one-tailed p-values. 4. The number of samples is 571. 5. "Accepted" means that the hypotheses are accepted, "Rejected" means that the hypotheses are rejected.

4.4 Cross Analysis

The samples are divided into two groups by the four variables in the business location and business style dimension in order to compare whether the two groups have any significant differences in the dimensions of market regional distribution, human configuration and business specialization or diversification. Tables 6 to 9 illustrate the groupings by the number of business locations (BRA), resident CPA service (CPAL), regular resident CPA service (CPAF) and resident professional service (PROL). As the results in Table 6 suggest, 72 firms established business locations and 499 firms not established business locations. In terms of the four variables of city concentration (CITY), region concentration (REGI), human configuration concentration (HUM) and business specialization (BUSS), the mean values of the two groups of samples suggest that city concentration (CITY), region concentration (REGI), human configuration concentration (HUM) and business specialization (BUSS) are all significantly lower in the case of firms with branch firms or various business locations. A low concentration degree means a higher distribution degree. Due to more business locations, the probability of relative distribution of business revenue in different cities and regions is relatively higher. Similarly, the probability of demand on human resources for different professional services is higher. The firm will invest more in the management of different business markets, and therefore the four variables of firms with branch firms are more scattered.

By following the processing in Table 6, the samples are divided into two groups by the resident CPA service of branch firms. According to the mean value of the samples, in terms of the four variables of city concentration (CITY), region concentration (REGI), human configuration concentration (HUM) and business specialization (BUSS), the results show that city concentration (CITY), region concentration (REGI), human configuration concentration (HUM) and business specialization (BUSS) of firms with branch firms providing resident CPA services are significantly lower. This indicates that the concentration of the four variables will be lower and the distribution degree will be higher when firms provide branch firm resident CPA services. A possible reason for this is that the firm is capable of allocating human resources to provide resident CPA services, which means that a firm that is rich in human and other resources can distribute human and other resources across various locations. Therefore, relatively speaking, the distribution degree of human resources is relatively higher. In addition, if the city and region concentration degrees are lower, then the firm is able to acquire revenues from different channels and thereby diversify business revenue.

By following the sample processing methods shown in Tables 6 and 7, the results in Table 8 suggest that whether or not accounting firms provide regular resident CPA services in their branch firms has no significant difference on city concentration (CITY), region concentration (REGI), human configuration concentration (HUM) and business specialization (BUSS), which indicates that whether or not has regular resident CPA services, it has no significant difference on business revenue in terms of city, region, business and human resource configuration.

The results shown in Table 9 suggest that the two groups of samples have significant differences in terms of region concentration (REGI) and business specialization (BUSS) for resident professional services, suggesting that the region concentration and business specialization of branch firms with resident professional services are relatively lower. In other words, business revenues come from relatively more distributed regions and human resources are more evenly distributed across the different professional services.

Table 6. Results of Independent Sample T Test for The Number of Business Locations

Independent variables	Number of business locations (BRA)	Mean	Std. error mean	t value	p value (one-tailed)
City concentration (CITY)	>=1 (n=72)	0.584	0.206	-6.595***	<0.000
	<1 (n=499)	0.754	0.204		
Region concentration (REGI)	>=1 (n=72)	0.751	0.230	-5.085***	<0.000
	<1 (n=499)	0.895	0.184		
Human configuration concentration (HUM)	>=1 (n=72)	0.552	0.170	-2.566***	0.006
	<1 (n=499)	0.610	0.237		
Business specialization (BUSS)	>=1 (n=72)	0.464	0.101	-5.514***	<0.000
	<1 (n=499)	0.543	0.172		

Notes: 1. Variables are defined in Table 1. 2. *p<0.1, **p<0.05, ***p<0.01. 3. The number of samples is 571. 4. n represents the number of samples.

Table 7. Results of Independent Sample T Test for the Resident CPA Service

Independent variables	Resident CPA service (CPAL)	Mean	Std. error mean	t value	p value (one-tailed)
City concentration (CITY)	1 (n=83)	0.629	0.223	-4.882***	<0.000
	0 (n=488)	0.750	0.205		
Region concentration (REGI)	1 (n=83)	0.771	0.232	-4.643***	<0.000
	0 (n=488)	0.895	0.184		
Human configuration concentration (HUM)	1 (n=83)	0.548	0.193	-2.694***	0.004
	0 (n=488)	0.612	0.235		
Business specialization (BUSS)	1 (n=83)	0.475	0.134	-4.031***	<0.000
	0 (n=488)	0.543	0.169		

Notes: 1. Variables are defined in Table 1. 2. *p<0.1, **p<0.05, ***p<0.01. 3. The number of samples is 571. 4. n represents the number of samples.

Table 8. Results of Independent Sample T Test for The Regular Resident CPA Service

Independent variables	Regular resident CPA service (CPAF)	Mean	Std. error mean	t value	p value (one-tailed)
City concentration (CITY)	1 (n=21)	0.713	0.262	-0.338	0.369
	0 (n=550)	0.733	0.210		
Region concentration (REGI)	1 (n=21)	0.823	0.241	-1.050	0.153
	0 (n=550)	0.879	0.194		

Human configuration concentration (HUM)	1 (n=21)	0.603	0.203	0.010	0.496
	0 (n=550)	0.603	0.231		
Business specialization (BUSS)	1 (n=21)	0.556	0.152	0.665	0.253
	0 (n=550)	0.532	0.167		

Notes: 1. Variables are defined in Table 1. 2. *$p<0.1$, **$p<0.05$, ***$p<0.01$. 3. The number of samples is 571. 4. n represents the number of samples.

Table 9. Results of Independent Sample T Test for The Resident Professional Service

Independent variables	Resident professional service (PROL)	Mean	Std. error mean	t value	p value (one-tailed)
City concentration (CITY)	1 (n=28)	0.694	0.222	-0.984	0.163
	0 (n=543)	0.734	0.212		
Region concentration (REGI)	1 (n=28)	0.792	0.232	-2.010**	0.027
	0 (n=543)	0.881	0.193		
Human configuration concentration (HUM)	1 (n=28)	0.572	0.195	-0.834	0.205
	0 (n=543)	0.604	0.232		
Business specialization (BUSS)	1 (n=28)	0.474	0.129	-1.933**	0.027
	0 (n=543)	0.536	0.168		

Notes: 1. Variables are defined in Table 1. 2. *$p<0.1$, **$p<0.05$, ***$p<0.01$. 3. The number of samples is 571. 4. n represents the number of samples.

Tables 10 to 12 represent the comparative analysis of the three control variables in the two groups of samples in terms of the aforementioned four concentration variables. Regarding the number of employees (EMP) and period since establishment (PERD), the samples are divided by the mean values. For partnership or sole proprietorship (TYPE), the samples are divided by business style, suggesting that city concentration (CITY), region concentration (REGI), human configuration concentration (HUM) and business specialization (BUSS) are significantly lower if the number of employees is greater, the period since establishment is longer and the firm involves a partnership. In other words, if firm size is larger, the period since establishment is longer and the firm involves a partnership, then the business revenues are more likely to be distributed in different cities and regions, while the business revenues are more diversified and human resources are more evenly distributed across different professional service categories.

Table 10. Results of Independent Sample T Test for The Number of Employees

Independent variables	Number of employees (EMP)	Mean	Std. error mean	t value	p value (one-tailed)
City concentration (CITY)	>= 30 (n=63)	0.531	0.178	-9.376***	<0.000
	< 30 (n=508)	0.757	0.203		
Region concentration (REGI)	>= 30 (n=63)	0.694	0.228	-6.913***	<0.000
	< 30 (n=508)	0.900	0.180		
Human configuration concentration (HUM)	>= 30 (n=63)	0.544	0.169	-2.808***	0.003
	< 30 (n=508)	0.610	0.235		

Business specialization (BUSS)	>= 30 (n=63)	0.447	0.094	-6.888***	<0.000
	< 30 (n=508)	0.543	0.170		

Notes: 1. Variables are defined in Table 1. 2. *$p<0.1$, **$p<0.05$, ***$p<0.01$. 3. The number of samples is 571. 4. n represents the number of samples.

Table 11. Results of Independent Sample T Test for The Period Since Establishment

Independent variables	Period since establishment (PERD)	Mean	Std. error mean	t value	p value (one-tailed)
City concentration (CITY)	>= 16 (n=285)	0.712	0.218	-2.287**	0.011
	< 16 (n=286)	0.752	0.204		
Region concentration (REGI)	>= 16 (n=285)	0.852	0.210	-3.047***	0.001
	< 16 (n=286)	0.902	0.179		
Human configuration concentration (HUM)	>= 16 (n=285)	0.584	0.223	-1.995**	0.023
	< 16 (n=286)	0.622	0.236		
Business specialization (BUSS)	>= 16 (n=285)	0.520	0.162	-1.863**	0.031
	< 16 (n=286)	0.546	0.170		

Notes: 1. Variables are defined in Table 1. 2. *$p<0.1$, **$p<0.05$, ***$p<0.01$. 3. The number of samples is 571. 4. n represents the number of samples.

Table 12. Results of Independent Sample T Test for The Partnership or Sole Proprietorship

Independent variables	Partnership or sole proprietorship (TYPE)	Mean	Std. error mean	t value	p value (one-tailed)
City concentration (CITY)	1 (n=197)	0.665	0.212	-5.647***	<0.000
	0 (n=374)	0.768	0.203		
Region concentration (REGI)	1 (n=197)	0.818	0.223	-4.979***	<0.000
	0 (n=374)	0.908	0.172		
Human configuration concentration (HUM)	1 (n=197)	0.556	0.207	-3.737***	<0.000
	0 (n=374)	0.628	0.238		
Business specialization (BUSS)	1 (n=197)	0.480	0.143	-5.990***	<0.000
	0 (n=374)	0.561	0.171		

Notes: 1. Variables are defined in Table 1. 2. *$p<0.1$, **$p<0.05$, ***$p<0.01$. 3. The number of samples is 571. 4. n represents the number of samples.

4.5 Comparative Analysis of Partnership and Sole Proprietorship Operating Performance

Furthermore, the accounting firm samples are divided into firms by partnership and sole proprietorship and a multiple-regression model is developed as shown by the following equation (2) in order to compare and understand whether the correlation between the independent and dependent variables varied in samples of different types.

$$PFOR=\beta_0+\beta_1 BRA+\beta_2 CPAL+\beta_3 CPAF+\beta_4 PROL+\beta_5 CITY+\beta_6 REGI+\beta_7 HUM+\beta_8 BUSS+$$

$$\beta_9 EMP+\beta_{10} PERD+u_i \qquad (2)$$

In the regression equation (2), PFOR is the total business revenue, BRA is the number of business locations, CPAL is the resident CPA service, CPAF is the regular resident CPA service, PROL is the resident professional service, CITY is the city concentration, REGI is the region concentration, HUM is the human configuration concentration, BUSS is the business specialization, EMP is the number of employees, PERD is the period since establishment, β_0 is the intercept, β_1, β_2, β_3, β_4, β_5, β_6, β_7, β_8, β_9 and β_{10} are the parameters of regression model, and u_i is an error item.

With reference to the suggestions shown in Section 3 and made by Neter et al. (1990), Tables 13 and 14 suggest that the VIF values of the independent and control variables are all lower than 10, indicating that there is no serious collinearity problem in between the independent and control variables. Table 13 shows the model's explanatory power with an Adjusted R^2 value of 0.865, and an F-statistic of 126.592, which reach a 1% statistical significance level; Table 14 shows the model's explanatory power with an Adjusted R^2 value of 0.696, and an F-statistic of 86.265, which reach a 1% statistical significance level. The regression results shown in Table 13 suggest that only H4 is accepted. However, the regression results shown in Table 14 suggest that H1-1, H1-2, H1-4, H2-2 and H4 are also accepted.

The regression results shown in Table 13 indicate that business specialization (BUSS) has a significant and negative impact on total business revenue (PFOR) (the coefficient value is -0.306, p<0.01) in the case of partnership firms. In other words, business revenues are more concentrated in a specific business, thus, the total business revenues is lower. This suggests that business revenues should be scattered across the four business areas (that is, the public offering financial auditing and attesting, taxation, management consultation and business registration and other business to implement) in order to increase the firm's total business revenue. Table 14 shows the regression results for sole proprietorship firms, and suggests that the regression results for the independent variable are the same as the total sample in Table 5. That is, more business locations are able to generate more total business revenues. Firms with resident CPAs in branch firms acquire lower total business revenues. Firms with resident professionals in branch firms have lower total business revenues. If the market is more concentrated in a specific region, then the total business revenue is lower. In other words, if the market is more evenly distributed across different regions (the northern region, central region, southern region, eastern region, and other regions) then the firm's total business revenue will increase. If human resources are more concentrated in a specific service category, then the firm's total business revenue is greater. In other words, if human resources are more evenly distributed across the four service categories of the accounting firm (auditing, taxation, management consultation, and accounting) then the firm's total business revenues is relatively limited. If business revenues are more concentrated in a specific business, then the firm's total business revenues is lower. In other words, if business revenues are more scattered across the four business services (public offering financial auditing and attesting, taxation, management consultation and business registration and other business to implement) then the total business revenues is greater.

Regarding the control variables, except for period since establishment (PERD) in the case of sole proprietorship firms (as shown in Table 14) having an insignificant and positive impact on total business revenue (PFOR) (the coefficient value is 0.002, p>0.1), the control variables (as shown in Tables 13 and 14) have a significant and positive impact on total business revenue (PFOR), suggesting that more employees, and longer periods since establishment are able to generate total business revenues.

According to Tables 13 and 14, the relationship between the independent and dependent variables is more stable and significant in the case of sole proprietorship firms. Therefore, the research findings are able to provide managers of sole proprietorship firms with more robust reference indicators.

Table 13. Regression Results of Operating Performance for Partnership Accounting Firms

$PFOR=\beta_0+\beta_1 BRA+\beta_2 CPAL+\beta_3 CPAF+\beta_4 PROL+\beta_5 CITY+\beta_6 REGI+\beta_7 HUM+\beta_8 BUSS+\beta_9 EMP+\beta_{10}PERD+u_i$ (2)

Dimension	Variable description	Predicted sign	Coefficient	Std. Error	t value	p value (one-tailed)	VIF	Hypothesis
	Intercept		5.977	0.124	48.092	<0.000***		
Business location and business style	BRA	+	0.002	0.021	0.091	0.464	2.116	H1-1 rejected
	CPAL	-	-0.038	0.040	-0.946	0.173	1.535	H1-2 rejected
	CPAF	-	-0.033	0.073	-0.459	0.323	1.274	H1-3 rejected
	PROL	-	-0.017	0.053	-0.327	0.372	1.156	H1-4 rejected
Market regional distribution	CITY	-	-0.010	0.079	-0.120	0.452	1.283	H2-1 rejected
	REGI	-	-0.073	0.074	-0.982	0.164	1.242	H2-2 rejected
Human configuration	HUM	-	-0.045	0.074	-0.604	0.273	1.068	H3 rejected
Business specialization or diversification	BUSS	-	-0.306	0.108	-2.845	0.002***	1.081	H4 accepted
Control variables	EMP	+	1.104	0.043	25.459	<0.000***	1.786	
	PERD	+	0.003	0.002	1.847	0.033**	1.172	

$R^2=0.872$ Adjusted $R^2=0.865$

F-statistic=126.592***   P value<0.000

Notes: 1. Variables are defined in Table 1. 2. The variables' variance inflation factors (VIFs) are all less than 10, implying that no serious multi-collinearity exists among variables. 3. *p<0.1, **p<0.05, ***p<0.01, and the statistical significance level is determined using one-tailed p-values. 4. The number of samples is 571. 5. "Accepted" means that the hypotheses are accepted, "Rejected" means that the hypotheses are rejected.

Table 14. Regression Results of Operating Performance for Sole Proprietorship Accounting Firms

$PFOR=\beta_0+\beta_1 BRA+\beta_2 CPAL+\beta_3 CPAF+\beta_4 PROL+\beta_5 CITY+\beta_6 REGI+\beta_7 HUM+\beta_8 BUSS+\beta_9 EMP+\beta_{10}PERD+u_i$ (2)

Dimension	Variable description	Predicted sign	Coefficient	Std. Error	t value	p value (one-tailed)	VIF	Hypothesis

	Intercept		6.096	0.116	52.598	<0.000***		
Business location and business style	BRA	+	0.186	0.068	2.725	0.003***	1.705	H1-1 accepted
	CPAL	-	-0.147	0.060	-2.433	0.008***	1.197	H1-2 accepted
	CPAF	-	-0.044	0.096	-0.459	0.323	1.349	H1-3 rejected
	PROL	-	-0.293	0.108	-2.711	0.004***	1.390	H1-4 accepted
Market regional distribution	CITY	-	-0.036	0.067	-0.531	0.298	1.053	H2-1 rejected
	REGI	-	-0.142	0.080	-1.782	0.038**	1.075	H2-2 accepted
Human configuration	HUM	-	0.100	0.061	1.630	0.052*	1.197	H3 rejected
Business specialization or diversification	BUSS	-	-0.388	0.082	-4.708	<0.000***	1.124	H4 accepted
Control variables	EMP	+	0.989	0.046	21.432	<0.000***	1.577	
	PERD	+	0.002	0.002	0.975	0.165	1.182	

R²=0.704   Adjusted R²=0.696

F-statistic=86.265***   P value<0.000

Notes: 1. Variables are defined in Table 1. 2. The variables' variance inflation factors (VIFs) are all less than 10, implying that no serious multi-collinearity exists among variables. 3. *p<0.1, **p<0.05, ***p<0.01, and the statistical significance level is determined using one-tailed p-values. 4. The number of samples is 571. 5. "Accepted" means that the hypotheses are accepted, "Rejected" means that the hypotheses are rejected.

5. DISCUSSION AND CONCLUSION

Taking into consideration the impact of business location and business style, market regional distribution, human configuration and business specialization or diversification on firm operating performance, this paper proposes the following conclusions and suggestions.

In the dimension of business location and business style, more business locations are able to generate better operating performance. It is therefore suggested that firm managers establish more branch firms in order to provide services to customers in various places and expand the service channel range and share the burden with the firm's headquarters. Through business location establishment, a firm is able to enhance its competitiveness and reputation and thereby can establish an information communication bridge between the firm and customers and respond rapidly to customer demands. Branch firms that provide resident CPA services and resident professional services may cause poorer operating performance, possibly because resident CPAs

or professionals may affect the distribution of human resources across the firm and divert the focus of CPAs from the business of the firm's headquarters. If the professionals are resident in their business locations, in high season, the diversion of human resources across branch firms can result in a heavier business burden. This may affect service quality and result in poorer operating performance. It is therefore suggested that firm managers increase the number of professionals in branch firms in order to reduce human resources distributed away from the firm's headquarters. This would reduce the adaption problem of human or business demand allocation as well as the lack of manpower at headquarters or increase the business burden to maintain the service quality of the accounting firm.

In the dimension of market regional distribution, higher degrees of region concentration can result in poorer operating performance. It is therefore suggested that managers expand in the market. In other words, business can be scattered across different regions (the northern region, central region, southern region, eastern region, and other regions) in order to reach more customers and create further business opportunities, so that the firm has customer bases in various regions and increases firm revenues and operating performance.

In the dimension of human configuration, higher degrees of human configuration concentration can result in better firm operating performance. This is not as expected and reaches a significant level. It is therefore suggested that managers concentrate manpower in specific service categories according to business attribute and expertise. This can facilitate total business revenue. In other words, if manpower is evenly distributed across the four service categories (auditing, taxation, management consultation, and accounting) then this may scatter professionals. This may also increase additional manpower employment to satisfy the demands of customers. This indicates that firm managers create highly concentrated human configurations in order to increase operating performance and reduce manpower costs.

In the dimension of business specialization or diversification, more diverse business can generate better operating performance. It is therefore suggested that firm managers develop different business markets; for example, public offering financial auditing and attesting, taxation, management consultation and business registration and other business to implement in order to increase customer groups of different sources and satisfy customer demands. In addition, business diversification is able to absorb more customers and is not limited to a conventional auditing business. This can help a firm to seek out new market opportunities in highly competitive conventional business markets with bottlenecks. Only in this way can a firm attract different types of customers, increase firm competitiveness and enhance operating performance.

The inter-dimensional cross analysis suggests that regarding the independent variables, in the case of a firm with more business locations and with branch firms providing resident CPA services, the concentration degree of the four variables of city concentration, region concentration, human configuration concentration and business specialization is lower. In other words, it is more scattered. In addition, if branch firms provide resident professional services, then the region concentration and business specialization degrees are relatively lower. Regarding the control variables, firms of larger size, with longer periods since their establishment and involving a partnership style are more likely to have scattered business revenues in different cities and regions, while business revenues are more diverse and manpower is more scattered in different professional service categories.

Taking into consideration business location and business style, market regional distribution, human configuration, and business specialization or diversification, factors with an important impact on operating performance are identified. The findings of this paper are expected to provide managers with a reference for practice and decision-making in terms of operation

direction, distribution of manpower, and business strategy in relation to the market, and thereby serve as the basis for improvement and development in the future.

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