

Alone or Along: Unveiling the Performance Differences between Individually Founded and Co-Founded Businesses by Married Couples

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ABSTRACT

Husbands and wives are the main pillars of families, and their belongingness can greatly impact the development of businesses. In this vein, this study aims to explore whether there are differences in the business performance started by a husband and wife separately or co-founded. The survey data was collected from Chinese national private enterprises from 2016 to 2023. Based on the agency theory perspective, the findings revealed that the performance of businesses started separately by husband and wife is significantly superior to that of the one co-founded. Furthermore, women's businesses perform better than men independently.

The findings provide important insights for married couples considering entrepreneurship, suggesting that pursuing separate business ventures may result in better performance. The superior performance of women-led businesses further emphasizes the need for targeted support and policies to empower women entrepreneurs. This study lays the groundwork for policymakers and business support organizations to develop strategies that acknowledge and utilize the strengths of individual entrepreneurial efforts by both men and women.

Keywords: Entrepreneurship; Gender; Business Performance; Agency Theory

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1. INTRODUCTION

Recently, there has been a growing focus in the field of entrepreneurship on the connection between personal relationships and professional endeavors (Zhu, Zhou, Lau, & Welch, 2020). Married couples, especially, exhibit a distinct dynamic when they engage in business, whether separately or together. Although there is increasing interest in studying the dynamics of entrepreneurship within marital partnerships (Franco & Piceti, 2020), research on how the performance of businesses differs between enterprises launched solo by one spouse and ventures co-founded by married couples is limited. The current body of research generally focus on broad elements and difficulties that contribute to entrepreneurial success (Aldrich, Brumana, Campopiano, & Minola, 2021; Shakeel, Yaokuang, & Gohar, 2020), while has greatly ignored the specific effects of human relationships on business results. Furthermore, although several studies investigate gender disparities in entrepreneurship (Wu, Li, & Zhang, 2019), there is a scarcity of research that specifically explores the performance of enterprises led by husbands compared to wives within the setting of marriage. This study seeks to investigate the refined variations in business performance between established solely by husbands and wives and those jointly established by both partners.

This research's significance lies in its ability to provide significant insights for married couples considering entrepreneurship. Assessing whether individual or collaborative enterprises result in superior performance might assist couples in making well-informed choices regarding their commercial pursuits. Furthermore, this study emphasizes the need for specific assistance and strategies to empower women entrepreneurs by showcasing the exceptional achievements. This research ultimately enhances our understanding of how personal and professional dynamics collide in the entrepreneurial landscape. It provides practical advice for improving business success among married couples.

As China's private economy development, women entrepreneurs begin to rise (Yang, Huang, Deng, & Bordignon, 2020). They have made outstanding achievements not lower than those of males worldwide due to their embedded unique advantages (Ogundana, Simba, Dana, & Liguori, 2021). According to the China Development Research Foundation report, with the release of new opportunities for growth, the number of Chinese women entrepreneurs has increased sharply in the past twenty years (Deng, Liang, Li, & Wang, 2021). Women entrepreneurship has become an important way for them to participate in economic activities (Debnath, Chowdhury, Khan, & Chowdhury, 2020; Thomas, 2024). However, the current society holds a conservative

attitude towards women entrepreneurship (Liu & Cowling, 2024). The traditional family pattern "The man goes out to work while the woman looks after the house" has prevailed in China since ancient times. It is widely believed that men should live for their cause, while women live for the family. Wang, Li et al. (2019) and Cooke and Xiao (2021) found that Chinese women entrepreneurs attached great importance to their roles at home. They always placed their goal and responsibility on being the ideal type of good wife and kind mother. However, men predominate in the group of private entrepreneurs in China. Many people think that women cannot start a business. Tang, Osmer, et al. (2021) found that enterprises owned by women were weaker than male enterprises in terms of the number of employees, revenue, and profits. Many Chinese women, under the influence of traditional Chinese concepts, will choose to start a business with their husbands as a secondary task. For example, when Ma Yun (Jake Ma, owner of Ali Baba) was in entrepreneurship, his wife Zhang Ying was in charge of the supporting position. With the development of society, more women have access to higher education, accumulate work experience, and participate in business. Many of them start their own businesses. Likewise, some start with their husbands. Among the private entrepreneurs in China, enterprises co-founded by couples have made remarkable achievements. Nevertheless, many successful women entrepreneurs have found a business alone and made outstanding achievements, such as Yang Mianmian (president of Haier Group), who has established excellent achievements in the field of entrepreneurship.

Although the research on women entrepreneurship has developed greatly in recent years, there are still some aspects of the issue that need further in-depth exploration especially on spousal businesses (Bird & Zellweger, 2018). On the one hand, most of the research separately selects husband or wife or the whole family enterprise rather than the family as independent variables. On the other hand, the role of wife is just served as spouse information in the studies on the relationship between male entrepreneurship and business performance. So should a woman choose to start a business on her own or with her husband? Is the performance of the co-founded enterprise is better? If not, what are the differences between the performances of the enterprises separately founded? This article intends to inquire into the above-mentioned questions by using the large-scale survey data of Chinese private enterprises.

This research makes several contributions to entrepreneurship and family business research. Firstly, it identifies individually founded and company- founded ventures as the primary explanatory categories, elucidating the distinctions within marital entrepreneurship. Secondly, family businesses, or company-founded ventures, are

presumed to outperform individually founded ventures. This study examines the counterpoint and examines whether then individually founded ventures take precedence over their family businesses. Thirdly, in treating interpersonal conflict, instead of empirically testing it as a mediator, this study offers a plausible conceptual argument regarding the performance of ventures founded individually versus those co-founded, with the focus of the argument being co-founded business ventures versus family ventures. Finally, this study focuses on the performance of ventures founded independently, in the context of the husband and wife, within the prism of China. The study, therefore, enriches the field of gender and entrepreneurship.

Theoretical background

Agency theory focuses on the connection between the owners (principals) and the managers (agents) (Amin, Ali, Rehman, & Hasan, 2024). Within the framework of independently established enterprises, one partner assumes the role of the principle, taking exclusive responsibility for making decisions and assuming the associated risks (Amin et al., 2024). This configuration has the potential to result in more direct and unambiguous decision-making procedures and enhanced responsibility. However, it also imposes the obligation completely on one partner, which may restrict the variety of skills and viewpoints that can be contributed to the organization. Based on the ideology, this study aims to examine the dynamics of married couples who work together or independently. On the other hand, when married couples co-found companies, it creates a situation where both partners have equal ownership and decision-making responsibility. Although this approach theoretically offers a wider scope of expertise and support, it can also result in conflicts and inefficiencies arising from divergent agendas and management styles. According to agency theory, internal conflicts could impede the performance of enterprises co-founded by multiple partners in comparison to those led by a single partner.

Even in structural agency theory, insights surrounding efficiency of decision-making and potential conflicts in married individuals type businesses can be captured. However, marriage structures of entrepreneurship demand other integrative theories. As suggested by stewardship theory, the expectation of what co-founding partners goal orientation ought to be is of higher trust and commitment to cause the motivating and persistent collaboration of the business. Family businesses focus on the theory of relational embeddedness; informal structures, integrated families, and comfort in the workplace, as well as relational collaboration of families, are positive. Lack of distinction between business and family roles are likely to increase interpersonal clashes, role confusion, and extensive decision-making. While there are positive and negative implications of co-spousal

entrepreneurship, trust and support are such positive implications, while lack of role distinction and the conflicts and inefficiencies that arise therefrom describe negative implications.

2. Literature Review

At present, women entrepreneurship is undoubtedly a hot research issue. Scholars have explored the relationship between women and business performance from the perspectives of individual, team, and enterprise. On the individual level, human capital theory (Kesner, 1988; Terjesen, Sealy, & Singh, 2009; An, 2022) and feminist theory (Fischer, 1993; Alowaihan, 2004) are widely used; on the team level, upper echelon theory (Nielsen, 2010) and social cognitive theory (Westphal and Milton, 2000) are applied extensively; while on the enterprise level, the application of resource dependence theory (Campbell & Mínguez-Vera, 2008) and agency theory (Carter, Simkins, & Simpson, 2003) are the most. Scholars of various countries have conducted in-depth research on the issue. The scope of research covers the United States (Coleman, 2005), the United Kingdom (Rosa, Carter, & Hamilton, 1996), Germany (Welter, 2004) and other developed countries, and extends to Tanzania (C. Tundui & Tundui, 2013), Malaysia (Al Mamun & Ekpe, 2016), Nigeria (Nwosu and Orji, 2016), South Africa (Radipere and Dhliwayo, 2014) and many other developing countries in recent years. However, the present study explore the two important questions about the familiness of entrepreneurs i.e., how the spouses can effect the business if they work together and who perform better between husband and wife in the china.

Family usually refers to the individual family, namely, the family organization structure bonded by the monogamous individual marriage. Miller, Breton-Miller (2021), and Tifferet (2020), acknowledged that the factors of family will influence the division of labour and resource allocation decisions of entrepreneurs, which ultimately affects the performance of enterprises. Scholars have found that the spouses of entrepreneurs played a crucial role in an enterprise (Miller and Le Breton-Miller 2021, Poza and Messer, 2001). While the success of entrepreneurs requires support in many ways, the support from their spouses is not the same as other support and it is far superior to the others and many studies have verified the superiority of it (Crowley and High 2020, Dehle, Larsen and Landers, 2001). Even the rest of the family cannot replace the spouse's support (Tifferet 2020; Verhofstadt et al., 2007). The support of spouses is essential because it is an indicator of the maintenance of marriage (Ross, Gale et al. 2019; Feeney and Collins 2014). For entrepreneurs, spouses' working in their companies is an important foundation of spouse support. Based on agency theory, there are generally two kinds of views on the impacts of family on corporation performance among scholars. One is that the agency costs are

reduced because of the unity of ownership and agency, as well as the high trust and shared values among the family members. The other is that the agency costs are increased due to the opportunism, escape, adverse selection caused by altruism, along with the different goals of family members. Therefore, this article puts forward the question: whether there are performance differences between individually founded and jointly co-founded enterprises by married couples?

Some scholars hold that women have more sagacious perception of cost and profit (Morris, Miyasaki, Watters, & Coombes, 2006), and are better at using social networking (Kim, 2013), while many point out that there are still great obstacles for women entrepreneurs to conquer in starting a business (Wu et al., 2019). There are enough studies which explored the women and men businesses however, the literature still have gap in marital [gender] entrepreneurship i.e., whether there are differences in the business performance of enterprise founded by a wife and husband independently.

The research scope of domestic scholars focuses on the relationship between women executives and the enterprise performance (Ren Ting and Wang Zheng, 2010; Bao & Li, 2024). M. Wang and Zhu (2010) made an empirical study on the impacts of women executives on the operation of board of directors and enterprise performance; they found that the influence of women executives on the behavior of the board was not obvious. In the Chinese listed companies, the women executives and independent directors have negative impacts on corporate performance to some degree. However, the educational level of women directors can mitigate such impacts (M. Wang and Zhu 2010). Ren Ting and Wang Zheng, (2010) inquired into the relationship between women's participation in the executive team and business performance on the sample of data of 576 Chinese private listed companies. The results showed that the participation of women in the executive team could improve enterprise performance. Women directors have a significant positive impact on bank's performance. The excellent educational and working background of women directors has influenced their function to the board of directors (W. Yang, Yang, & Gao, 2019). However, the marital entrepreneurship still have vein to explore in this regards therefore this study identify characteristics of spouse entrepreneur include age, education, economic status, social status, political status. On the other side the enterprise characteristics cover the registration type, enterprise age, enterprise scale and the industry. These aspects are taken as control variables for explored research questions.

Hypothesis Development

Agency theory maintains that single founder firms have clearer authority lines with quicker decisions, and better accountabilities. Firms that are founded by couples tend to have blending of roles, distribution of authority, and an increase in the probability of family/business conflict. Though spousal co-founded firms have a dual resource, as a result of the blending, coping conflict may interfere with the arbitrariness that is necessary to cope. Therefore, this study proposes:

H1: Businesses founded individually by one spouse are likely to perform better than businesses co-founded by married couples.

Empirical studies in the context of gender and entrepreneurship have shown that female entrepreneurs have more developed interpersonal skills, including cognition and resource management, that facilitate relationship building and effective decision-making. In terms of self-initiated entrepreneurship in China, as it is the case in various studies, the women exhibiting self-initiated entrepreneurship are more likely to be entrepreneurial and highly motivated. Therefore, this paper proposes:

H2: Among individually founded businesses, women-founded businesses are likely to perform differently from men-founded businesses, with women-founded businesses expected to show stronger performance.

3. Study design

Sample selection and data sources

The article's data are selected from the Chinses National Private Enterprise Sampling Survey conducted in 2016 and 2020. The survey was led by the research group consisting of the United Front Work Department of the CCP Central Committee, the All-China Federation of Industry and Commerce (AFIC), the State Administration for Market Regulation, the Chinese Academy of Social Sciences (CASS), and the Chinese Private Economy Research Association (CPERA). It was implemented by provinces, autonomous regions, and administrations for industry and commerce and associations of industry and commerce of municipalities directly under the Central Government. The survey was conducted by the methods of multistage sampling and random sampling nationwide. Administrations for industry and commerce and associations of industry and commerce sent staff to the private sector to give out the questionnaires. The activity has been carried out approximately biennially.

To ensure the reliability of the data, the questionnaires were filled by business owners or major corporate investors. The samples of these two surveys were collected from the national private enterprises via ratio sampling technique, the proportions were 1.2% and 0.55%, respectively. In total, there were 6030 questionnaires. In 2016, 3670 questionnaires were given out, 3012 of them were taken back, and the rate of return was 82.1%. In 2017, 2360 questionnaires were distributed, 2301 were withdrawn, and the return rate was 97.5%. The total number of copies returned was 5313, and the full recovery rate was 88.1%. After eliminating the 2904 enterprises lacking related statistical data, the valid samples were 2409 in all.

This paper divides Chinese private enterprises into four categories, as shown in Figure_01. Type 1 is the women-owned businesses, and the spouse is in the same business; Whereas Type 2 is the men-owned businesses, and the spouse is in the same business. Type 3: is business owned by a man, and the spouse is in a different business; Type 4 is business owned by a woman, and the spouse is in a different business. The first two types are defined as businesses co-founded by a couple. Simultaneously, the latter two types are referred to as businesses founded separately by a husband and wife, and are referred to as businesses started by men and businesses started by women, respectively. The number of the four Types are 232, 1877, 242, 58, respectively.

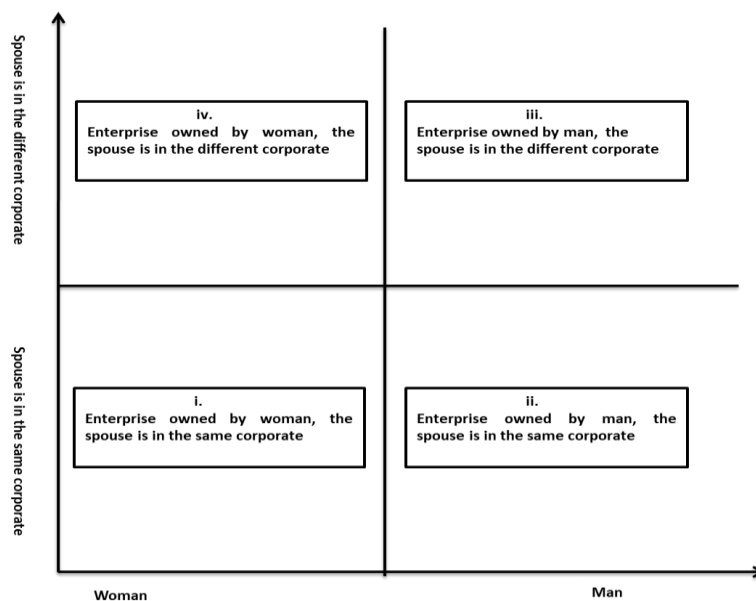


Figure 1 Classification of enterprise types

Measurement of concepts

The main concepts used in the paper and its corresponding measurements (namely, the questions in the original questionnaire) as well as the coding method are shown in Table_01.

The business performance is measured by net profit after tax and sales. Because the goals of different enterprises vary, large enterprises may emphasize profitability and go after high after-tax net profits. In contrast, minor enterprises may be more concerned about their development i.e., sales. Measuring from the two aspects is a reasonable way to analyze the status quo of China private enterprises.

Independent variable

The independent variable in this case is business type. There are four types of categorization used in this descriptive classification. Type 1 refers to women-owned businesses with an active co-founding male spouse. Type 2 refers to businesses owned by men with an active co-founding spouse. These categories are framed as spousal co-founded businesses. Type 3 refers to businesses owned by men whose spouses are involved in different businesses. Type 4 refers to businesses owned by women whose spouses work in different businesses. These categories are framed as individually founded businesses.

For Models 3 and 4, business type is treated as a binary variable, with 0 = spousal co-founded business, and 1 = individually founded business. For Models 5 and 6, the business type variable is treated as a multi-category variable with 1 = spousal co-founded business, 2 = individually founded business (by a colleague), and 3 = individually founded business (by a spouse). Because of these categorizations, the study can first analyze co-founded business and individually founded business and lastly, the performance of each gender individually in the founded businesses.

Control variable

The article selected the entrepreneur and enterprise as the control variables. The qualities of entrepreneur include age, education, economic status, social status, political status. While the enterprise characteristics cover the registered type, enterprise age, enterprise scale and the industry.

Measurement of concepts and coding		Table_01
Concept	Variable name	Variable coding
The dependent variables: Corporate performance	Operating income	The original data to recode the logarithm.
	Net Profit after-tax	The original data to recode the logarithm.
The independent variable:Type		In model 1, model 2, model 3 and model 4: 0=starting a business together with husband; 1=starting a business separately by husband and wife In model 5 and model 6: 1=enterprises co-founded by husband and wife; 2=enterprise owned by man and the spouse is in the different corporate; 3=enterprise owned by woman and the spouse is in the different corporate
Control variables	Age	Data collection- business owners year of birth in the year.
	Education	1=Primary school;2=Junior high school;3=High school, technical secondary school;4=college;5=university;6=graduate student.
	Economic status	11 - raw score.
	Social status	11 - raw score.
	Political status	11 - raw score.
	Registered type	raw score.
	Enterprise age	Based on the questionnaire survey time, that is, 2004/2006, minus the enterprise registration for private enterprise.
	Enterprise scale	The original data to recode the logarithm.
	Industry	To convert the raw data for virtual variable, a total of 14 industries, recode as 13 virtual variables.

Design of model

The paper probes into the two questions mentioned above by convert into the two empirical models described as;

$$Sale = \sigma_0 + \sigma_1 Age + \sigma_2 Edu + \sigma_3 Eco_Status + \sigma_4 Pol_Status + \sigma_5 Soc_Status + \sigma_6 Reg_Type + \sigma_7 Ent_Age + \sigma_8 Size + \sigma_9 Industry + \sigma_{10} Type + \varepsilon \dots \dots \dots Equation_01$$

$$Profit_after_Tax = \beta_0 + \beta_1 Age + \beta_2 Edu + \beta_3 Eco_Status + \beta_4 Pol_Status + \beta_5 Soc_Status + \beta_6 Reg_Type + \beta_7 Ent_Age + \beta_8 Size + \beta_9 Industry + \beta_{10} Type + \varepsilon \dots \dots \dots Equation_02$$

SALE is the enterprise sales, PROFIT is the after-tax enterprise net profit, AGE is the age of entrepreneur, Edu is education, Eco_Status is economic status, Pol_Status is political status; Soc_Status is social status, Reg_TYPE is registration type; Ent_AGE is the age of the enterprise; SIZE is the size of the enterprise; INDUSTRY is the industry in which the enterprise involved, TYPE is business type (i, ii, iii, iv); ε stands for random error.

Despite the inclusion of several entrepreneur-level and firm-level control variables within the regression models, results are best viewed as congruent, as opposed to causal, outcomes. Entrepreneurs may self-select between either forming businesses independently or in partnership with their spouses, due to their own unreported risk preference, marital dynamics, past business participation, or the distribution of household resources. These factors may also impact the performance of the business. Thus, the concerns of selection and endogeneity remain. The application of the two performance measures, sales and after-tax net profit, offers a modest robustness verification of the findings, while other methods, including longitudinal data, instrumental variables, propensity score matching, or fixed-effects models, may more adequately resolve selection and endogeneity concerns in the future.

4. Empirical analysis

Descriptive statistical analysis

Table_02 is classified according to the gender of the entrepreneur, along with whether the spouse works at the same enterprise. Concerning the qualities of an entrepreneur, most of the entrepreneurs have entered middle age. 47.15% of the entrepreneurs are in the age group of 41~50. The educational background of entrepreneurs is above a high school degree. 14.7% of the entrepreneurs have more than a college education. As for the enterprise characteristics, the registration type is concentrated; 63.55% of the enterprises are limited liability companies. The business age of most enterprises is concentrated in 6-8 years. As far as the enterprise scale is

concerned, most enterprises are small; enterprises with fewer than 50 employees account for 48.73%. In terms of sales volume, there is no significant difference among them. The distribution is more average, with maximum sales of 400192 and a minimum of 0. The average sales are 4190.72. From the perspective of net profit after tax, most Chinese private enterprises obtain little net profits after tax, 65.92% of the companies gain less than 500 thousand Yuan, of which 7.18% of them are in a non-profit state.

Characteristics of the sample**Table_02**

Characteristics	Max.	Min.	Mean	Number of firms	% of n
Type	-	-	-	2409	100.00
Type 1,2	-	-	-	2109	87.55
Type 3	-	-	-	242	10.05
Type 4	-	-	-	58	2.41
Age	75	24	44.79	2409	100.00
30 years old and below	-	-	-	51	2.12
31-40 years old	-	-	-	669	27.77
41-50 years old	-	-	-	1136	47.16
51-60 years old	-	-	-	503	20.88
61 years old and above	-	-	-	50	2.08
Education	-	-	3.43	2409	100.00
Elementary	-	-	-	35	1.45
Junior middle school	-	-	-	367	15.23
Senior high school	-	-	-	976	40.51
Junior college	-	-	-	677	28.10
University	-	-	-	257	10.67
Graduate	-	-	-	97	4.03
Registered type	-	-	2.61	2409	100.00
Sole corporation	-	-	-	608	25.24
Partnership	-	-	-	134	5.56

Limited liability	-	-	-	1531	63.55
Incorporated	-	-	-	133	5.52
Deficiency	-	-	-	3	0.12
Enterprise age	21	0	7.64	2409	100.00
3 years old and below	-	-	-	432	17.93
4-5 years old	-	-	-	440	18.26
6-8 years old	-	-	-	655	27.19
9-21 years old	-	-	-	540	22.42
13 years old and above	-	-	-	342	14.20
Enterprise scale	3.9	0	1.76	2409	100.00
50 people and below	-	-	-	1174	48.73
51-100 people	-	-	-	398	16.52
101-500 people	-	-	-	675	28.02
501-1000 people	-	-	-	90	3.74
1001 people and above	-	-	-	71	2.95
Deficiency	-	-	-	1	0.04
Sales	400192	0	4190.72	2409	100.00
100 and below	-	-	-	465	19.30
101-500	-	-	-	633	26.28
501-1000	-	-	-	354	14.69
1001-5000	-	-	-	606	25.16
5001-10000	-	-	-	151	6.27
10001 and above	-	-	-	200	8.30
After-tax net profit	16222	-1292	184.36	2409	100.00
0 and below	-	-	-	173	7.18
0.1-50	-	-	-	1415	58.74
51-200	-	-	-	477	19.80

201-1000	-	-	-	272	11.29
1001 and above	-	-	-	72	2.99

Note: Business type 1,2: enterprises co-founded by husband and wife; Business type 3: enterprise owned by man and the spouse is in the different corporate; Business type 4: enterprise owned by woman and the spouse is in the different corporate

Multi-collinearity Test

It is concluded from Table_03 that the correlation coefficient of entrepreneur age, education and economic status is high. Thus a multi-collinearity test has been done upon the three indicators. Although the eigenvalue of dimensionality 4 is close to zero, the condition index value of that is less than 30, therefore the influence of multi-collinearity test on the results of regression analysis has been excluded.

Multicollinearity Test

Table_03

Dimension	Eigenvalue	Condition Index	Variance Proportions			
			Constant	Age	Education	Economic status
1	3.857	1.000	0.00	0.00	0.01	0.00
2	0.076	7.142	0.00	0.01	0.72	0.31
3	0.057	8.254	0.02	0.19	0.11	0.60
4	0.011	18.867	0.97	0.79	0.16	0.09

Table_04 shows the correlation coefficient, mean value, and standard deviation of key variables. As shown in Table 3, the type of business is significantly positively correlated with sales and the net profit after tax. In terms of the control variables, entrepreneurs with higher education background, economic and political status, the net profit after tax of their enterprises are higher, but the sales are lower. While those with higher social status, the sales of their enterprises are higher, but the net profit after tax is lower. The older the age of the enterprise gets, the larger the enterprise-scale is; both sales and net profit after tax are better. However, neither the age of entrepreneurs nor the type of enterprise is highly correlated with the business performance.

Data analysis

In this paper, SPSS is used to process the data to test the assumptions. Due to the two explained variables are the numerical type, and linear regression is adopted to analyze the data.

First, sales and net profit after-tax are dependent variables to establish the basic models 1 and 2, respectively. Secondly, after adding the independent variables compare Model 3 with 1, with the increase of R-squared, when the P-value of type is 0.000, the coefficient is 5097.908, and the correlation is positive. Hence, the sales of enterprises started separately are significantly better than that of the co-founded one. Compare Model 4 with 2, with the increase of R-squared, when the P-value of type is 0.000, the coefficient is 162.804, and the correlation is positive. Therefore, the after-tax net profit of an enterprise started separately is significantly superior to that of the co-founded one.

In conclusion, the sales and after-tax net profit of enterprise started separately obviously outmatch that of the joint venture. Thus the article raises the viewpoint that the performance of an enterprise started separately precedes that of the co-founded one. Finally, redefine the independent variables, subdivided into three categories: enterprise co-founded by husband and wife, the enterprise started by men, an enterprise started by women. Again after adding the independent variables compare Model 5 with 1, with the increase of R-squared, when the P-value of type is 0.000, the coefficient is 3002.638, and the correlation is positive. So the sales of the enterprise started separately are significantly better than that of the co-founded one. Compare Model 6 with 2, with the increase of R-squared, when the P-value of type is 0.000, the coefficient is 90.676, and the correlation is positive. Thus the after-tax net profit of an enterprise started separately is significantly superior to that of the co-founded one. In conclusion, the sales and after-tax net profit of enterprises individually created by women are better than that of the male companies. As a result, the paper points out that in the enterprises respectively found by husband and wife, women's business ventures perform better than men's businesses.

Descriptive statistics and Pearson correlation matrix

Descriptive statistics	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Sales	4190.72	17682.872	1										
(2) Net profit after Tax	184.36	826.422	0.092**	1									
(3) Type	1.15	0.418	0.155**	0.114**	1								
(4) Age	44.79	7.581	0.033	-0.009	0.086**	1							
(5) Education	3.43	1.045	0.011	0.027	0.090**	0.738**	1						
(6) Economic status	6.07	1.759	-0.011	0.082**	0.099**	0.583**	0.776**	1					
(7) Social status	6.08	1.872	0.087**	-0.007	0.050*	0.037	0.013	0.01	1				
(8) Political status	5.5	2.229	-0.051*	0.150**	-0.008	0.124**	0.139**	0.181**	0.026	1			
(9) Registered type	2.61	3.529	0.008	0.056**	0.244**	0.314**	0.283**	0.283**	0.079**	0.255**	1		
(10) Enterprise age	7.64	4.386	0.074**	0.018	0.105**	0.152**	0.132**	0.118**	0.016	0.076**	0.303**	1	
(11) Enterprise scale	1.76	0.643	0.059**	0.012	0.150**	0.178**	0.140**	0.117**	0.014	0.089**	0.307**	0.715**	1

Significance level: * p < 0.1; ** p < 0.05; *** p < 0.01

Business Types and Performance

Table_05

Variables	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	β	sig.	β	sig.	β	sig.	β	sig.	β	sig.	β	sig.
Constant	-16027.441	0***	-917.396	0***	-16225.69	0***	-923.73	0***	-19392.29	0***	-1019.01	0***

Type	-	-	-	-	5097.908	0***	162.804	0.001***	3002.638	0***	90.676	0.001***
Age	12.293	0.794	0.518	0.813	22.023	0.639	0.829	0.704	22.183	0.637	0.817	0.709
Education	363.528	0.305	50.281	0.002**	147.737	0.678	43.389	0.009**	202.782	0.57	45.426	0.006**
Economic status	537.160	0.070*	48.392	0***	478.484	0.105	46.518	0.001***	502.534	0.089	47.347	0.001***
Social status	194.130	0.581	3.993	0.807	203.046	0.562	4.278	0.793	194.053	0.581	3.991	0.807
Political status	-71.772	0.774	-13.548	0.242	-43.707	0.86	-12.652	0.274	-54.487	0.827	-13.026	0.26
Registered type	-35.585	0.717	-2.679	0.557	-79.902	0.416	-4.095	0.37	-61.326	0.533	-3.457	0.449
Enterprise age	-12.609	0.879	2.219	0.565	2.799	0.973	2.711	0.481	-3.008	0.971	2.509	0.515
Enterprise scale	7787.829	0***	326.042	0***	7711.556	0***	323.606	0***	7785.742	0***	325.979	0***
R ² (Nagelkerke)	0.103		0.117		0.112		0.121		0.108		0.119	
R ² (Cox & Snell)	0.095		0.109		0.103		0.113		0.099		0.111	
F	12.432		14.346		12.979		14.24		12.494		13.977	
Sig.	0***		0***		0.000***		0.000***		0.000***		0.000***	

Significance level: * p < 0.1; ** p < 0.05; *** p < 0.01

5. Conclusion and discussion

Based on the data of the national private enterprise survey of the years 2016 and 2023, it is found that the enterprise started separately by spouses is significantly superior to that of the co-founded in china due to many reasons. First and foremost, the lack of clear demarcation between work-life spheres leads to numerous challenges in establishing joint ventures. The allocation of tasks within the marriage is ambiguous; they do not fulfill their respective business responsibilities. A significant number of entrepreneurs struggle to effectively differentiate between their personal and professional lives, often conducting official business at home or discussing family matters while at work. The absence of a distinct task allocation results in achieving only half of the desired outcomes while requiring double the amount of effort (Yu, Meng, Cao, & Jia, 2020). Secondly, the husband and wife's goals diverge. Gender differences result in males' greater inclination towards strategic thinking, while women prioritize attention to detail (Pfefferman, Frenkel, & Gilad, 2022). These disparities can hinder the couple's ability to achieve a mutual agreement on business matters and cause delays in decision-making (Wong & Daminger, 2024). Particularly in the Chinese setting, where the lines between home and work remain fuzzy, disagreements emerge within a company or family and escalate to the operational level, disrupting the overall management of the enterprise. Moreover, individuals possess a finite quantity of resources such as time, energy, and personal attributes. Therefore, when it comes to co-founded enterprises, these individuals must allocate their resources between their business and family. Consequently, couples have fewer resources available for their commercial ventures compared to single individuals (Tundui & Tundui, 2021). The current model does not account for interpersonal conflict. Thus, the study does not consider interpersonal conflict as a potential mediating factor. However, this study provides possible explanations for the observed performance differences using interpersonal conflict. Co-founded companies are likely to experience both role ambiguity and a collapsing work-family boundary. Co-founded firms are where a couple must meet both the family and business demands. Role conflict can lead to decisions that are both disagreeable and suboptimal, resulting in a loss of the firm's potential. The role that interpersonal conflict, work-family boundary management, and role differentiation among couples play in the performance disparity of individually founded and spousal co-founded firms should be investigated further.

This study's second major finding reveals that female-led enterprises typically outperform those managed by males. Several factors contribute to this success, including women's innovative approach, particularly when confronting challenges such as financial constraints that affect both business and family life. According to research, women possess certain psychological advantages. Jammaers and Huopalainen (2023) suggest that females often exhibit greater perseverance and work ethics than their male counterparts. This resilience may enable women to manage business-related obstacles more effectively. Furthermore, women frequently excel in communication, adeptly expressing ideas, and fostering relationships, which can be crucial for business success. The concept of 'comprehensive thinking,' as described by Tian Ling (2013), is another significant aspect highlighted in the literature. This refers to women's tendency to approach business challenges holistically, considering multiple interconnected factors. In contrast to men, who might focus on individual aspects, women often adopt a broader perspective, evaluate various options, employ diverse problem-solving strategies, and make well-rounded decisions. This cognitive approach promotes enhanced cooperation and collaboration when addressing complex issues, ultimately improving business performance. These findings lend additional support to the growing body of research advocating for the increased support and encouragement of female

entrepreneurs. They underscore the unique strengths women bring to the table, not only in terms of work ethics but also in their innovative thinking and decision-making processes. It is worth noting, however, that our results conflict with those of an earlier study by Van Der Zwan et al. (2012), who found that female-founded businesses tend to have lower survival rates. This discrepancy emphasizes the need for more nuanced research to better understand the various factors that contribute to the success or failure of women-led enterprises.

The results of this study also have specific effects on entrepreneurship policy in China. Instead of presuming that co-founded family or co-founded spousal businesses are always more successful, policymakers are constrained to see that co-founded ventures, particularly co-founded businesses by women, also significantly contribute to the desired outcomes of private-sector growth, job creation, improvements in the level of innovations, and overall micro-level productivity. Such micro-level entrepreneurship outcomes are important avenues through which entrepreneurship impacts growth at the macro level. Thus, improving the opportunities for individual entrepreneurs, particularly women, to access finance, training, mentorship, and legal and marketing support, is likely to enhance the role of private sector enterprises in the economic development of China. Notably, the association between private sector growth and national economic development is not immediate or automatic, and this should be of concern to policymakers.

This study investigates the performance disparities between enterprises co-founded by married couples and those established independently by either spouse. Due to confidentiality constraints regarding the personal information of business proprietors and their spouses, the analysis in this research utilizes publicly available data from private companies listed on the Chinese national private enterprises website, covering the period 2016 to 2023. Consequently, there are certain limitations to data selection. For instance, in-person interviews with business proprietors and their spouses could provide more comprehensive insights into the underlying dynamics of these business decisions and their effects on performance. Furthermore, while most enterprises in the research sample have been operational for a considerable duration, newly established businesses were not included in this study. This presents an opportunity for future research to examine the performance of startups co-founded by spouses, which could yield valuable insights into how early stage dynamics differ from those of established companies. It is noteworthy that this study focuses specifically on performance differences between enterprises that were co-founded by married couples and those initiated independently by either spouse. The impact of spousal involvement on business performance is a complex issue, and subsequent studies could explore this topic in greater depth. Such investigations could consider various factors, including the diverse industries in which these enterprises operate spouses' professional backgrounds, and their respective experiences. To further enhance future research in this domain, it would be advantageous for subsequent private enterprise surveys to incorporate questions that specifically address the role of spouses in business operations and their influence on performance. This would provide additional data points for analyzing the nuanced effects of spousal involvement across different business sectors.

This study has several limitations. The first set of boundaries are relative to the analysis using secondary data on surveys. This restricts contracted vision relating to the internal relational dynamics of married couples in business. Intra-dynamic factors such as role allocation, conflict, and the management of boundaries are particularly analyzed in this survey, but they remain indirect. Second, while the models have numerous controls at the individual and firm level, there

is an innate selection bias and endogeneity. This is because entrepreneurs might select founding arrangements because of personal, family or business traits that are not captured. Third, the sample of businesses founded by women is quite small. This helps understanding the gender-based findings. Succeeding studies are encouraged to utilize techniques such as longitudinal studies, interviews, or matched-sample methods and assess over a period of time the variables of personal interaction, conflict, trust and role allocation to understand the dynamics and correlate these to business growth.

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