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The Effect of Tax Incentives on the Performance of Specialized and Sophisticated Small and Medium-Sized Enterprises: The Role of Innovation

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Abstract

Tax incentives have been widely used to promote the development of enterprises, especially Specialized and Sophisticated enterprises in Chian. This research endeavors to examine the effects of tax incentives by amalgamating established theoretical frameworks and empirical data, while taking into account the attributes of specialized and sophisticated SMEs. Innovation, serving as a fundamental driver of contemporary economic, technological, and social development, exhibits diverse definitions across various academic fields. This research attempts to explain the direct and indirect ways in which tax incentives influence enterprise performance through examining the relationship between tax incentives, innovation input and output, and enterprise performance. To achieve this, the research uses a multiple linear regression model to test the direct effect of tax incentives on the performance of specialized and sophisticated SMEs. Additionally, a three-step method based on Baron and Kenny (1986) is used to test the mediating role of innovation input between tax incentives and enterprise performance. Furthermore, hierarchical regression is applied to assess the moderating effect of innovation output on the relationship between tax incentives and enterprise performance. The empirical analysis in this article confirms that all hypotheses are valid.

Keywords: *Tax Incentives, Performance of Specialized and Sophisticated SMEs, Innovation Input, Innovation Output.*

INTRODUCTION

Although China's specialized and sophisticated SMEs have developed relatively late, they play an indispensable role in the Chinese economy by driving technological progress, creating employment opportunities, and promoting regional economic prosperity (Shan, Jia, Zheng, & Xu, 2018; Wu, Mao, & Tang, 2022). The Ministry of Industry and Information Technology of China reports that these SMEs are making increasingly substantial contributions to the nation's innovation capacity. They are vital in fostering regional economic development, generating employment opportunities, and propelling technological advancement (Xiao & North, 2018; Ding & Xie, 2021). However, these SMEs face unique challenges. Firstly, obtaining financial resources is often a formidable task. Due to their restricted scope, insufficient guarantees, and lack of credit history, these enterprises often encounter difficulties securing necessary financial backing from conventional financial institutions. Additionally, limited resources allocated to research and development (R&D) and market promotion hinder the innovation capacity and market expansion rate of specialized and sophisticated SMEs. Furthermore, compared to larger SMEs, these companies exhibit weaker adaptability to market competition and policy changes, increasing their operational risks and uncertainties (Long, 2023).

Tax incentives are monetary measures used to attract domestic or overseas investments into specific financial activities or regions. In China, these policies include, but are not limited to, reducing corporate income tax rates, providing additional deductions for R&D expenses, and offering tax exemptions for small and micro-technology enterprises (Li & Wang, 2022). As a crucial factor influencing enterprise development, particularly in assessing the true capacity of tax incentives to enhance enterprise performance, tax incentive have garnered significant attention in academic circles. In the contemporary economy, tax policies are key mechanisms used by governments to stimulate economic growth, encourage corporate innovation, and promote fiscal balance (Bird, 1992; Hall & Van Reenen, 2000).

Innovation is the fundamental driver of modern economic, technological, and social development, with varying

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definitions across academic fields. For SMEs, innovation is particularly significant. Due to their relatively small size, SMEs often exhibit greater flexibility, enabling them to quickly adapt to market changes. Rothwell (1991) points out that, due to their flexibility, SMEs are generally more inclined to adopt and apply new technologies. Innovation can help enterprises improve production efficiency and reduce production costs. Schumpeter (1942) posits that innovation is the main driver of economic growth. Introducing new technologies can help companies utilize resources more effectively and improve productivity. Innovation can also pave the way for new market opportunities, facilitating the development of new products and services.

Due to the absence of studies on potential mediating and moderating variables, existing literature may not fully reveal the comprehensive impact of tax incentives on enterprise performance. Additionally, existing research indicates that there are relatively more studies on large enterprises and high-tech firms, but fewer studies on specialized and sophisticated SMEs. Foreign scholars primarily use specific enterprise data from developed countries for empirical comparative analysis, while domestic scholars' research often targets high-tech enterprises (Pang & Guan, 2018; Ma , 2011), lacking in-depth and specific studies on specialized and sophisticated SMEs.

This research endeavors to examine the effects of tax incentives by amalgamating established theoretical frameworks and empirical data, while taking into account the attributes of specialized and sophisticated SMEs. This research attempts to explain the direct and indirect ways in which tax incentives influence enterprise performance through examining the relationship between tax incentives, innovation input and output, and enterprise performance. The goal is to provide practical strategies for improving the operational capabilities of specialized and sophisticated SMEs and to offer policymakers valuable information for decision-making. There are five research objectives of this study as followed:

To examine the influence of tax incentives on the enterprise performance of specialized and sophisticated SMEs.

To examine the influence of tax incentives on the innovation input of specialized and sophisticated SMEs.

To examine the influence of innovation input on the enterprise performance of specialized and sophisticated SMEs.

To examine whether innovation input plays a mediation effect between tax incentives and enterprise performance of specialized and sophisticated SMEs.

To examine whether innovation output plays a moderation effect between tax incentives and enterprise performance of specialized and sophisticated SMEs.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

The Influence of Tax Incentives on Enterprise Performance

Tax incentives provide additional funding for enterprises to grow production scales, explore markets, and enhance technology applications, thereby improving overall operational efficiency by boosting cash flow (Dahlby & Ferede, 2012). This enables enterprises to respond quickly and flexibly to market demands and changes, thereby enhancing overall business efficiency. Additionally, tax incentives can strengthen enterprise profitability by reducing taxes, increasing net earnings, and consequently improving shareholder returns and market value (Mayende, 2013).Furthermore, tax incentives are crucial in enhancing an enterprise's ability to adapt to the market and innovate. The study by Czarnitzki and Lopes-Bento (2014) suggests that tax incentives can effectively stimulate quick reactions to market fluctuations and enhance innovation capabilities. Companies demonstrate a strong tendency to actively invest in researching and applying new technologies, leading to overall improvement in enterprise performance. In companies that heavily invest in research and development, such as those in high technology and pharmaceuticals, tax incentives can significantly enhance performance (Griffith, Miller, & O'Connell, 2014).For small and medium-sized enterprises (SMEs), the financial support offered by tax incentives can greatly enhance market competitiveness and long-term growth potential, especially given their limited financial resources and exposure to market risks (Czarnitzki & Delanote, 2015). Gong (2022) posits

that tax burdens hinder the performance of specialized and sophisticated SMEs. Therefore, to promote the development of these SMEs, it is necessary to further increase tax incentives and reduce corporate tax burdens.

Based on the above analysis, this article proposes the following hypothesis:

H1: Tax incentives positively affect the enterprise performance of specialized and sophisticated SMEs.

The Mediation Effect of Innovation Input Between Tax Incentives and Enterprise Performance

Tax incentives are widely acknowledged as an effective approach to encouraging enterprises to enhance their innovation efforts. Aghion and Howitt (1992) demonstrated that financial constraints can limit organizations' capacity to innovate. Thus, tax incentives act as a financial stimulus, enabling enterprises to overcome monetary limitations and further stimulate inventive endeavors. Imran and Rehman (2024) found that government-provided financial subsidies and tax incentives significantly promote research and development (R&D) activities in key industries in China. Czarnitzki et al. (2011) and Hewitt-Dundas and Roper (2010) found that government tax incentives facilitate corporate innovation and R&D, promoting the creation of new products. The mechanism often involves increasing the company's own innovation investment by boosting its cash holdings (Lyandres & Palazzo, 2012). Richardson (2006) found through empirical research that pilot companies benefiting from the retention tax refund policy are more inclined to invest in innovation than companies not covered by such policies. Tax incentives can reduce companies' external financing costs, expand channels for product innovation investment, and promote product transformation. Additionally, some scholars focus on the impact of value-added tax (VAT) on corporate innovation investment, finding that VAT promotes corporate innovation by expanding fixed asset investment and reducing corporate debt ratios (Richardson, 2006).

Based on the above analysis, this article proposes the following hypothesis:

H2: Tax incentives positively effects the innovation input of Specialized and Sophisticated small and medium enterprises (SMEs).

Innovation signifies change and breakthrough. Whether for the internal or external environment, innovation is a key driving force and the main source of competitiveness and competitive advantage (Forsman & Temel, 2011). Innovation investment and scale are crucial indicators for measuring corporate innovation. Continuous investment in both is necessary to produce corresponding innovation outputs. Ongoing innovation activities can signal to investors that the company has a long-term vision and is not sacrificing long-term interests for "short-sighted" behavior. In an increasingly competitive market, companies must cumulatively and continuously cultivate their innovation capabilities. Dynamic innovation capabilities consider environmental uncertainty and identify innovation opportunities in a timely manner. Dynamic innovation investment capabilities enable organizations to flexibly invest in innovation and allocate resources according to environmental changes, ultimately fostering continuous innovation and growth.

Based on the above analysis, this article proposes the following hypothesis:

H3: Innovation input positively effects the enterprise performance of Specialized and Sophisticated SMEs.

Tax incentives play a crucial role in enhancing enterprise performance by encouraging higher investment in innovation. Chen and Yang (2019) revealed that R&D tax credit regulations significantly impact enterprises' ability to innovate. The tax credit reduces the expenses incurred by companies in their research and development efforts, allowing them to allocate additional resources towards advancing technology and creating new products. These findings are supported by Tian et al. (2020), which demonstrates that tax incentives substantially stimulate enterprises' investment in research and development and their innovation efforts, ultimately leading to improved performance. Wang (2019) provides empirical evidence showing that tax incentives positively impact business performance by encouraging companies to increase their R&D expenditure. The study conducted by Ting, Sheng, and Hong (2019) further supports this, indicating that tax incentives enhance the quality of innovation and market competitiveness through increased R&D spending.

Continuous investments in R&D enable enterprises to create new goods and technologies, enhance productivity, and decrease expenses, resulting in overall improved performance. Based on the above analysis, this article proposes the following hypothesis:

H4: Innovation input mediates the relationship between tax incentives and enterprise performance of specialized and sophisticated SMEs.

The Moderation Effect of Innovation Output Between Tax Incentives and Enterprise Performance

Innovation output has both direct and indirect impacts on enhancing enterprise performance. It can provide new income streams and market opportunities, thus immediately boosting the economic performance of businesses. Additionally, successful innovation outcomes can strengthen an enterprise's market competitiveness and brand influence, enhancing overall performance and long-term competitive advantage (Mousavi, Bossink & van, 2019). Liu and Mao (2019) demonstrated that tax incentives positively impact business performance by stimulating R&D investment, leading to increased innovation output. Tax incentives encourage the use of innovative resources and result in higher levels of innovation, improving enterprise performance through increased market competitiveness and financial success.

Chen et al. (2020) found that the government uses external indicators, such as whether a firm is listed on both the Shanghai and Hong Kong Stock Markets, as an information agent for making tax subsidy decisions. Their empirical results show that firms targeted by the Shanghai-Hong Kong Stock Connect are more likely to receive tax incentives. This indicates severe information asymmetry between the government and tax incentive applicants. Applying for tax incentives can be seen as a self-selection behavior at the firm level to reduce risks and financing costs (Takalo , Tanayama, & Toivanen, 2013). In an attempt to obtain larger subsidies, business managers tend to exaggerate their investment needs and engage in earnings management during the application process. Moreover, public choice theory (Butler, 2012) suggests that the government may take opportunistic actions to prioritize certain firms, give credit to their managers, and gain short-term reputation for the 'effectiveness' of its programs.

Based on the above analysis, this article proposed the following hypothesis:

H5: Innovation output moderates the relationship between tax incentives and enterprise performance of specialized and sophisticated SMEs.

Figure 1 is the conceptual framework of the current study.

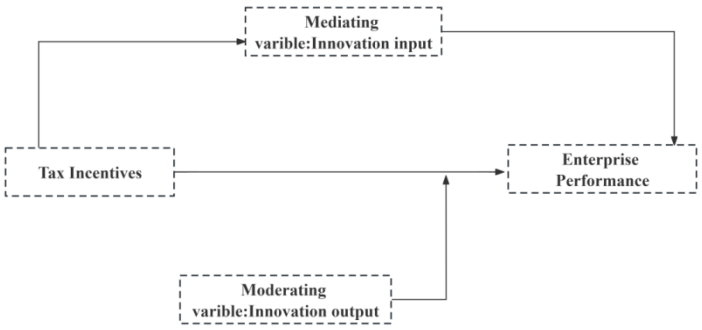

Figure 1 Conceptual Framework

RESEARCH METHODOLOGY

Sample Selection and Data Source

The research subjects for this study are specialized and sophisticated SMEs listed on the Growth Enterprise Market Board of the Shenzhen Stock Exchange in China from 2010 to 2022. After collecting all relevant variable

data for the 605 enterprises, this study addressed missing values and outliers to ensure data reliability and analysis accuracy.

Given that many missing values were due to outliers in the independent variable of tax incentives, we followed the practices of scholars like Wu (2009) and Chu, Yang, & Song(2016) to ensure the economic significance of tax incentives. Specifically, we excluded outliers where the actual tax rate was less than 0 or greater than 1, as well as cases where the denominator was less than 0 when calculating the actual tax rate from the raw data.

Following standard procedures, we excluded enterprises with a listing status of "ST," "*ST," or delisted.

We winsorized all continuous variables at the 1% and 99% levels.

After these treatments, this study obtained 3,237 valid data points from 591 enterprises.

The data for this research are primarily derived from the China Stock Market & Accounting Research Database (CSMAR) and the Chinese Research Data Services Platform (CNRDS). Basic information, enterprise characteristics, and financial data are sourced from the CSMAR Database, while data on innovation input (R&D expenditure) are obtained from the Listed Firm's R&D and Innovation section of the CSMAR Database and cross-verified with R&D expenditure data from the CNRDS Database to ensure accuracy. Patent application data are sourced from the patent database of the CNRDS Database, which includes patents from the listed enterprises as well as their subsidiaries and affiliates, providing a comprehensive measure of innovation levels. To further ensure data comprehensiveness and accuracy, patent application data are also cross-verified with the CSMAR Database.

Measurement of Variables

Independent Variable: Tax Incentives

There are three common methods to measure tax incentives: ① Direct Measurement. This method uses the "various tax rebates received" item in enterprises' annual reports as the primary data indicator. Tax incentives are calculated as "various tax rebates received / (various tax rebates received + various taxes paid)" (Zhang & Wu, 2023; Zeng et al., 2022; Li et al., 2020). ② Indirect Measurement. This method reflects the effects of tax policies by calculating related indicators of tax incentives' impact on enterprise operations. Specific measurement indicators include tax exemption amounts (Chen & Yang, 2019; Zhang & Du, 2019) or actual tax rates (Yu & Xu, 2022; Wasiluk & Białek-Jaworska, 2020; Fang, Su, & Lu, 2022; Song & Song, 2023). A lower actual tax rate compared to the nominal tax rate can be interpreted as the effect of tax incentives. Therefore, based on the actual tax rate, indicators such as "(nominal tax rate - actual tax rate) × total profits" or "(nominal tax rate - actual tax rate) × main business income" are used to measure the tax incentives received by enterprises. ③ Dummy Variables. This method assigns a value of 1 when a tax incentive is acquired and 0 otherwise.

Since the implementation of the reform and opening up policy, the Chinese government has used fiscal and taxation policies to encourage innovation activities among SMEs. This has been achieved primarily through tax incentives covering all stages of the innovation process. Income tax incentives have become the primary means of promoting innovation due to their extensive reach. Accurately and impartially assessing the impact of R&D incentives within China's existing enterprise income tax framework is challenging. Obtaining accurate statistics on tax incentives is difficult in practice, as annual reports often lack information on research and development deductions. Furthermore, expense deductions are just one of several R&D tax incentives available. Therefore, this study uses the "nominal tax rate - effective tax rate" indicator in the indirect measurement approach to quantify the extent of tax benefits received by enterprises. The usual tax rate for Chinese enterprises is 25%. In this study, enterprise size is included as a control variable. To measure the independent variable, we use the logarithm of the tax incentives, calculated by multiplying the "25% - effective tax rate" by the total profit of the current period. The effective tax rate is determined by dividing the income tax expense by EBIT.

Dependent Variable: Enterprise Performance

Kaplan and Norton (1992) emphasized the pivotal role of financial performance indicators in assessing a company's operational outcomes and financial robustness. Indicators like return on equity (ROE) offer an objective and comprehensive view of a company's performance, encompassing profitability, asset efficiency, debt management, and long-term sustainability. Financial performance indicators provide a precise perspective for evaluating the economic benefits of enterprises by holistically reflecting their operational and financial health. Therefore, this study uses ROE to measure enterprise performance. Additionally, to enhance the robustness of the findings, return on assets (ROA) will be used as an alternative measure of enterprise performance.

Mediation Variable: Innovation Input

This paper uses the logarithm of R&D spending to measure innovation input. Common indicators for measuring innovation input include R&D investment and R&D investment intensity (Liu & Le, 2023; Liu & Zhou, 2023; Guo et al., 2021). However, since this paper already employs enterprise size as a control variable to mitigate its impact on innovation investment, using R&D expenditure directly provides a more straightforward measure of the absolute investment made by enterprises in innovation. Additionally, information regarding R&D spending is typically more readily available and reliable, whereas the determination of R&D intensity might be influenced by several factors, leading to decreased dependability and consistency of the data.

Moderation Variable: Innovation Output

Prior studies (Liu & Le, 2023; Ding et al., 2023; Liu & Zhou, 2023) have demonstrated that patents are a suitable metric for measuring innovation output, particularly in high-tech industries characterized by rapid technological advancements. In China, patent applications typically require 1-3 years for approval. This lag means that approved patents do not accurately represent the innovation that occurred within the same timeframe. Additionally, the efficiency and preferences of the patent office might influence the granting of patents. Therefore, our analysis uses the quantity of patent applications as a measure of innovation output, rather than the number of issued patents.

Control Variables

Enterprise Size

This study uses the logarithm of the overall assets of an enterprise as a substitute for measuring the size of the enterprise.

Enterprise Age

The age of an enterprise in this article is determined by subtracting the year of enterprise registration from the year of observation.

Debt-to-Asset Ratio

This paper defines the Debt-to-Asset Ratio as the ratio of total liabilities to total assets.

Operating Income Growth Rate

The growth rate of operating income in the current study is calculated as follows: Growth Rate = (Operating Income of the Current Period - Operating Income of the Same Period of the Previous Year) / Operating Income of the Same Period of the Previous Year.

Ownership Concentration

This study employs the percentage of ownership held by the largest shareholder as a measure of ownership concentration.

Proportion of Independent Directors

This study uses the ratio of independent directors to all directors, multiplied by 100%, as a metric for determining the proportion of independent directors within an enterprise.

Table 1 below displays all variables in the current study.

Table 1 Variable Abbreviation

Variable Type	Variable Name	Variable Abbreviation
Dependent variable	Enterprise performance	ROE
Independent variable	Tax incentives	Tax
Mediating variable	Innovation input	RD
Moderating variable	Innovation output	Patent apply
Control variables	Enterprise size	Size
	Debt-to-asset ratio	Lev
	Enterprise age	Age
	Ownership concentration	TOP1
	Proportion of independent directors	Indep1
	Enterprise growth	Growth1

Model Setting

The benchmark model

To analyze the impact of tax incentives on the performance of specialized and sophisticated SMEs in China, this research starts with a benchmark model that does not consider the impact of innovation activities. The benchmark model can be written as follows:

$$EP\_(i,t)=a\_0+a\_k\ 〖Pol〗\_(i,t)+a\_j\ X\_(i,t)+u\_i+\lambda\_t+\varepsilon\_(i,t) \quad (3.1)$$

Where, EP_(i,t) represents the enterprise performance; 〖Pol〗_(i,t) symbolizes the tax incentives; X_(i,t) embodies the control variables; u_i represents the firm fixed effect; λ_t represents the year fixed effect, and ε_(i,t) is the random disturbance term.

Models of Testing the Mediation Effect of Innovation Input

This study utilizes Baron and Kenny's (1986) three-step method to test for mediation effects, and also uses Sobel test for further analysis. The following three models are constructed to test the mediation effect of innovation input between tax incentives and enterprise performance:

$$EP\_(i,t)=a\_0+a\_k\ 〖Pol〗\_(i,t)+a\_j\ X\_(i,t)+u\_i+\lambda\_t+\varepsilon\_(i,t) \quad (3.1)$$

$$IN\_(i,t)=b\_0+b\_k\ 〖Pol〗\_(i,t)+b\_j\ X\_(i,t)+u\_i+\lambda\_t+\varepsilon\_(i,t) \quad (3.2)$$

$$EP\_(i,t)=c\_0+c\_k\ 〖Pol〗\_(i,t)+c\_j\ IN\_(i,t)+c\_l\ X\_(i,t)+u\_i+\lambda\_t+\varepsilon\_(i,t) \quad (3.3)$$

Where, IN_(i,t) denotes innovation input.

Model of Testing the Moderation Effect of Innovation Output

The research uses a cross-multiplier term to verify the moderating effect of innovation output on the relationship between tax incentives and enterprise performance. The moderating effect pertains to the degree or direction by which a certain variable (moderator variable) influences the relationship between two other variables (Baron & Kenny, 1986). First, it is necessary to establish a cross-multiplier term that links the independent variable (tax incentives) with the moderator variable (innovation output). The regression model includes the independent variable (tax incentives), the moderating variable (innovation output), and the cross-multiplier term to examine their impact on the dependent variable (enterprise performance) simultaneously (Hayes, 2017). The precise formula is as follows:

$$EP\_(i,t)=d\_0+d\_l\ Pol\_(i,t)*OUT\_(i,t)+d\_k\ Pol\_(i,t)+d\_j\ OUT\_(i,t)+d\_l\ X\_(i,t)+u\_i+\lambda\_t+\varepsilon\_(i,t) \quad (3.4)$$

Where, 〖OUT〗_(i,t) denotes innovation output; 〖Pol〗_(i,t)* 〖OUT〗_(i,t) denotes the cross-multiplier term.

RESULTS

Descriptive Statistical Analysis

The descriptive statistical analysis is shown in Table 2.

Table 2 Descriptive Statistical Analysis

Variables	N	Mean	Std. Dev.	Min	Max
ROE	3237	0.089	0.055	0.006	0.308
Tax	3078	16.181	1.008	13.106	18.763
RD	3232	17.439	.838	15.727	19.753
Patent apply	3128	2.759	1.244	0	5.147
Size	3237	21.128	.716	19.689	23.136
Lev	3237	26.549	15.173	3.402	66.984
Age	3237	16.205	5.235	5	31
TOP1	3237	30.851	12.241	8.38	64.49
Indep1	3237	38.141	5.218	33.333	57.143
Growth1	3237	21.838	32.13	-37.358	167.698

Correlation Analysis and Multicollinearity Analysis

Table 3 presents the correlation analysis results. The explanatory variable tax incentives (Tax) is significantly positively correlated with the explained variable enterprise performance (ROE) ($r = 0.547$, $P < 0.01$). Tax incentives (Tax) are also significantly positively correlated with the mediating variable innovation input (RD) ($r = 0.631$, $P < 0.01$). Additionally, the mediating variable innovation input (RD) is significantly positively correlated with enterprise performance (ROE) ($r = 0.139$, $P < 0.01$). Furthermore, tax incentives (Tax) are significantly positively correlated with the moderating variable innovation output (Patent apply) ($r = 0.235$, $P < 0.01$), and the mediating variable innovation input (RD) is significantly positively correlated with innovation output (Patent apply) ($r = 0.373$, $P < 0.01$).

The results of the multicollinearity test show that the VIF values for all nine variables are less than 10, and the tolerance values are all above 0.10, indicating that there are no severe multicollinearity problems in this dataset.

Table 3 Correlation Analysis.

	ROE	Tax	RD	Patent~y	Size	Lev	Age	TOP1	Indep1	Grow
	1									
	0.547***	1								
	0.139***	0.631***	1							
ly	0.0270	0.235***	0.373***	1						
	-0.041**	0.619***	0.726***	0.323***	1					
	0.049***	0.135***	0.308***	0.271***	0.393***	1				
	-0.049***	0.143***	0.200***	0.076***	0.188***	0.138***	1			
	0.147***	-0.065***	-0.221***	-0.084***	-0.205***	-0.033*	-0.093***	1		
	-0.0130	-0.00900	0.0120	-0.00400	-0.0130	0.033*	0.053***	0.048***	1	
	0.302***	0.265***	0.167***	0.113***	0.184***	0.215***	-0.075***	-0.041**	-0.00700	1

*** p<0.01, ** p<0.05, * p<0.1

Correlation coefficients reported in the table.

Table 4 Test Results of Multicollinearity

Variables	Collinearity Statistics	
	VIF	Tolerance (1/VIF)
Size	2.730	0.367
RD	2.580	0.387
Tax	2.050	0.487
Lev	1.380	0.724
Patent apply	1.210	0.829
Growth1	1.150	0.872
TOP1	1.080	0.923
Age	1.060	0.940
Indep1	1.010	0.989
Mean VIF	1.580	

Baseline Regression Analysis of The Impact of Tax Incentives on Enterprise Performance

To examine the impact of tax incentives on the performance of specialized and sophisticated SMEs, the baseline regression model in this paper uses enterprise performance (ROE) as the dependent variable and tax incentives (Tax) as the independent variable. Table 5 reports the results of the baseline regression analysis under different conditions. Column (1) does not include control variables or fixed effects; column (2) adds six control variables (enterprise size, debt-to-asset ratio, enterprise age, ownership concentration, proportion of independent directors, and enterprise growth) but still does not include fixed effects; column (3) includes control variables and adds enterprise fixed effects; column (4) includes control variables and controls for both year and enterprise fixed effects. All models use clustered robust standard errors at the enterprise level.This study selects the results from Model 4 as the baseline regression outcome, as it represents the most comprehensive and robust model.

Overall, in all four models, the coefficients for tax incentives (Tax) are highly significant, with p-values less than 0.01. Additionally, the coefficients for tax incentives (Tax) are positive in all models, indicating a positive relationship between tax incentives and enterprise performance (ROE). Therefore, hypothesis H1 is accepted.

Table 5 Regression Analysis of The Impact of Tax Incentives on The Enterprise Performances

Variables	(1)	(2)	(3)	(4)
Tax	0.0282***	0.0466***	0.0440***	0.0438***
	(21.2937)	(26.8687)	(23.5247)	(23.3265)
Size		-0.0517***	-0.0543***	-0.0539***
		(-21.4795)	(-14.4848)	(-13.9867)
Lev		0.0008***	0.0013***	0.0013***
		(10.5853)	(10.1586)	(10.0440)
Age		-0.0007***	-0.0008	-0.0003
		(-3.9819)	(-1.4777)	(-0.1326)
TOP1		0.0004***	0.0010***	0.0009***
		(5.1964)	(3.4153)	(3.2974)
Indep1		-0.0002	-0.0003	-0.0003
		(-1.3097)	(-1.2092)	(-1.2888)
Growth1		0.0002***	0.0002***	0.0002***
		(7.8459)	(6.9464)	(6.9755)
Constant	-0.3631***	0.4085***	0.4824***	0.4741***
	(-17.3396)	(10.0184)	(6.5720)	(5.8775)
Number of observations	3078	3078	3078	3078
R-squared	-	-	0.5752	0.5784
Adjusted R-squared	-	-	0.5742	0.5758
F statistic	-	-	120.0210	46.4177
Code FE	NO	NO	YES	YES

Year FE	NO	NO	NO	YES

The number of employees involved in this study was 70.1 percent among those with fewer than five employees, t-statistics reported in parentheses; * p < 0.1, ** p < 0.05, *** p < 0.01

Robustness Test of Baseline Regression Analysis

According to previous studies, Return on Assets (ROA) can also reflect enterprise performance. Supriyadi & Terbuka (2021) show that ROA is a key indicator for evaluating enterprise performance, reflecting an enterprise's ability to generate returns from its total assets. Therefore, this paper uses ROA as an alternative indicator to re-measure enterprise performance and re-run the regression model (See Table 6).

In the robustness test, the coefficient for tax incentives is 0.0339 and is significant at the 1% level (p-value = 0.0000). This result is consistent with that of using ROE, further confirming the positive impact of tax incentives on enterprise performance.

Table 6 Robustness Test 1 of Baseline Regression Analysis

Variable	ROA
Tax	0.0339***
	(21.7761)
Size	-0.0436***
	(-14.7466)
Lev	0.0003***
	(2.7539)
Age	-0.0007
	(-0.3942)
TOP1	0.0007***
	(3.4182)
Indep1	-0.0002
	(-1.2492)
Growth1	0.0002***
	(6.7498)
Constant	0.4339***
	(7.1087)
Number of observations	3078
R-squared	0.5397
Adjusted R-squared	0.5369
F statistic	48.2670

* p < 0.1, ** p < 0.05, *** p < 0.01; Code FE = Yes,Year FE = Yes; t-statistics reported in parentheses

Mediation Effect Analysis

This study primarily employs Baron & Kenny's three-step method to test whether tax incentives (Tax) have a mediating effect on enterprise performance (ROE) through innovation input (RD). The test results are shown in Table 7.

Model (1) tests the total effect of the independent variable on the dependent variable, verifying whether tax incentives (Tax) significantly impact enterprise performance (ROE). The results show that the coefficient for Tax is 0.0438, with a t-value of 23.3265 and a p-value < 0.01, indicating a significant positive effect.

Model (2) tests the effect of tax incentives (Tax) on innovation input (RD), primarily to verify whether tax incentives significantly impact innovation input. The results show that the coefficient for Tax is 0.1029, with a t-value of 7.8385 and a p-value < 0.01, indicating a significant positive impact of tax incentives on innovation input.

The final step tests the effects of both the mediator variable and the independent variable on the dependent variable, to verify whether the direct effect of tax incentives (Tax) on enterprise performance (ROE) decreases or becomes insignificant when controlling for the mediator variable (RD). The coefficient for RD is 0.0055, with a t-value of 1.6862, showing a positive impact though not very strong in significance. The coefficient for Tax is 0.0435, with a t-value of 22.7859 and a p-value < 0.01, indicating that the direct effect of tax incentives on enterprise performance remains significant after controlling for innovation input. The results indicate that

innovation input plays a partial mediating role.

Table 7 Mediation Effect Analysis

	(1)	(2)	(3)
Variable	ROE	RD	ROE
Tax	0.0438***	0.1029***	0.0435***
	(23.3265)	(7.8385)	(22.7859)
Size	-0.0539***	0.6123***	-0.0574***
	(-13.9867)	(16.6013)	(-12.0507)
Lev	0.0013***	0.0027**	0.0013***
	(10.0440)	(2.3222)	(10.0629)
Age	-0.0003	0.0154	-0.0004
	(-0.1326)	(0.5718)	(-0.1760)
TOP1	0.0009***	0.0034	0.0009***
	(3.2974)	(1.2185)	(3.1590)
Indep1	-0.0003	-0.0026	-0.0003
	(-1.2888)	(-0.9601)	(-1.2398)
Growth1	0.0002***	0.0004	0.0002***
	(6.9755)	(1.4633)	(6.7423)
RD			0.0055*
			(1.6862)
Constant	0.4741***	2.0488***	0.4615***
	(5.8775)	(2.7644)	(5.7994)
Number of observations	3078	3075	3075
R-squared	0.5784	0.7944	0.5811
Adjusted R-squared	0.5758	0.7932	0.5784

t statistics in parentheses; * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

To further analyze the mediating effect, this study employs the Sobel-Goodman mediation test. The results show that the indirect effect of tax incentives on enterprise performance through innovation input is significant, with an indirect effect coefficient of 0.000564 and a p-value of 0.0116, significant at the 5% level.Combining the three-step method and the Sobel test, this study finds that the effect of tax incentives on enterprise performance is primarily driven by direct effects, but there is also a significant indirect effect through innovation input.

Moderation Effect Analysis

The moderation effect analysis results are shown in Table 8. In the model, the coefficient for tax incentives is 0.0395, with a t-value of 21.81 and a p-value of 0.000, indicating a significant positive correlation between tax incentives and enterprise performance. Further analysis shows that the interaction term (TaxPatent_apply) has a significant positive impact on ROE, with a coefficient of 0.0019, a t-value of 2.1544, and a p-value of 0.032, significant at the 5% level.

Specifically, the significant positive correlation between tax incentives and enterprise performance, along with the significant positive correlation between the interaction term (TaxPatent_apply) and enterprise performance, indicates that patent applications positively moderate the relationship between tax incentives and enterprise performance.

Table 8 Moderation Effect Analysis

Variable	ROE
TaxPatent_apply	0.0019**
	(2.1544)
Tax	0.0395***
	(21.8147)
Patent_apply	-0.0010
	(-1.1470)
Size	-0.0358***
	(-9.6830)

Lev	0.0007***
	(5.7243)
Age	0.0014
	(1.0434)
TOP1	0.0002
	(0.8076)
Indep1	-0.0001
	(-0.5608)
Growth1	0.0002***
	(7.7715)
Constant	0.1709**
	(2.3297)
Number of observations	2971
R-squared	0.5470
Adjusted R-squared	0.5437

t statistics in parentheses; * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Conclusion, Discussion and Implications

CONCLUSION

The objective of the study was to examine the effect of tax incentives on the performance of Specialized and Sophisticated SMEs using panel data techniques for the period 2010-2022. Additionally, this article examines the mediating role of innovation input and the moderating role of innovation output. A linear regression model was used to test the direct effect of tax incentives on the performance of Specialized and Sophisticated SMEs. The study adopts Baron and Kenny's (1986) three-step method to test the mediating role of innovation input between tax incentives and performance. Hierarchical regression was used to test the moderating effect of innovation output between tax incentives and performance.

The findings indicate that tax incentives positively impact the performance of Specialized and Sophisticated SMEs. Additionally, the findings show that innovation input positively impacts performance and mediates the relationship between tax incentives and performance. Innovation output moderates the relationship between tax incentives and performance.

DISCUSSION

The Influence of Tax Incentives on Enterprise Performance

From the literature review, data analysis, and discussion of the findings, this study concludes that tax incentives significantly impact the performance of Specialized and Sophisticated SMEs. This conclusion is consistent with the empirical findings of Deyganto (2022), Ahmedova (2015), Fernández-Viñé et al. (2013), and Twesige and Gasheja (2020), which suggest that tax incentives positively affect enterprise performance (H1).

Klemm (2010) proposed that tax incentives reduce the cost of production factors, stimulating their supply, expanding production scale, concentrating resources in more efficient areas, improving production efficiency, and ultimately enhancing enterprise performance. According to the signaling theory, preferential tax policies send favorable signals to market investors, indicating that the supported enterprises have growth potential and profitability. This has a positive impact on the share prices of enterprises enjoying preferential tax policies (Hasan et al., 2021).

The Influence of Innovation Input on Enterprise Performance

From the literature review, data analysis, and discussion of the findings, this study concludes that innovation input significantly impacts the performance of Specialized and Sophisticated SMEs. This conclusion is consistent with the empirical findings of Ndesaulwa & Kikula (2016), Cui (2020), and Forsman & Temel (2011), which suggest that innovation input positively affects enterprise performance (H3).

Innovation input can enhance the added value of enterprise products through technological innovation and improve product competitiveness. Improved technological innovation ability increases market share, which in turn boosts enterprise performance. Through innovation input, enterprises convey a positive message of innovation to society, enhancing their reputation. A good enterprise reputation attracts investment, increases stakeholders' trust, and enhances enterprise performance (Zhang & Wu, 2023).

The Mediation Effect of Innovation Input Between Tax Incentives and Enterprise Performance

From the literature review, data analysis, and discussion of the findings, this study concludes that innovation input mediates the relationship between tax incentives and the performance of Specialized and Sophisticated SMEs. This conclusion aligns with the empirical findings of Zhang & Wu (2023) and Brown & Guzmán (2014), which suggest that innovation input mediates the relationship between tax incentives and enterprise performance (H4).

The impact of government tax preferential policies on corporate performance primarily occurs through their effects on corporate innovation input and organizational incentives, both of which have complete mediating effects (Chen et al., 2018). Additionally, the impact of government tax preferential policies on corporate performance is realized through the mediating role of corporate innovation willingness and behavior (Hong & Li, 2012), which can increase corporate enthusiasm for independent innovation. Furthermore, the more tax incentives Specialized and Sophisticated SMEs receive, the more they invest in innovation. The intensity of innovation investment fully mediates the mechanism by which tax incentives affect corporate innovation performance (Li et al., 2008).

The Moderation Effect of Innovation Output Between Tax Incentives and Enterprise Performance

From the literature review, data analysis, and discussion of the findings, this study concludes that innovation output moderates the relationship between tax incentives and the performance of Specialized and Sophisticated SMEs, supporting hypothesis H5.

Empirical evidence from China has shown that innovation output significantly enhances resource allocation efficiency, with capital flowing to the best industries (Zhai & Wang, 2016). Based on data from Spanish SMEs, Palazuelos et al. (2020) show that innovation output is crucial for firms to access government subsidies. Similarly, data from Japanese SMEs reveal that innovation output is effectively used in the guaranteed loans screening process, highlighting its importance for firms (Kim and Yasuda, 2019). Furthermore, Hsieh et al. (2019) indicate that innovation output helps firms reduce the cost of capital. Hidayat and Mardijuwono (2021) examine the effect of innovation output on investment efficiency in Indonesian manufacturing firms and find that those with high innovation output are associated with high investment efficiency and performance.

Implications of The Study

Improve the Tax Preferential System for Specialized and Sophisticated Smes

Legislation is essential for protecting the business environment, ensuring economic security, and establishing social security regulations. However, it also imposes additional expenses and administrative obstacles on businesses, affecting SMEs disproportionately. Larger companies have more options: they can delegate legal compliance tasks to specific staff, hire personnel to handle new regulations, or contract services for tax compliance and planning. For SMEs, these expenses are often unaffordable (Smatrakalev, 2006). Shahroodi (2010) suggests that for a tax system to be efficient, tax policy must have appropriate and rational tax rates, minimal exemptions, efficient tax collection, lighter tax burdens on the poor, and a robust fight against corruption and tax evasion.

Increase Tax Incentives for Scientific and Technological Talents

The government can purchase services to open scientific research projects from research institutions and

universities to enterprises. It can also provide tax reductions and exemptions for talents who achieve technological innovation, implementing stepped tax reductions based on the degree or process of innovation.Additionally, tax incentives can be provided for the training of enterprise R&D personnel, such as increasing the pre-tax deduction rate for training expenses.

Strengthen the Implementation and Control of Preferential Tax Policies

In order to promote the effective implementation of preferential tax policies, on the one hand, the tax department should regularly organize preferential policies, increase publicity efforts, and optimize publicity methods. On the other hand, in the context of the reform of the tax collection and management system, tax authorities should prevent taxpayers from making "mistakes" in implementing tax preferential policies, which may result in them not enjoying tax benefits and underpaying taxes, or "maliciously" exploiting policy loopholes to evade taxes.

REFERENCES

Shan, S., Jia, Y., Zheng, X., & Xu, X. (2018). Assessing relationship and contribution of China's technological entrepreneurship to socio-economic development. Technological Forecasting and Social Change, 135, 83-90.

Wu, J.G., Mao J., & Tang C. (2022). Do government R&D subsidies stimulate innovation in SMEs? China Soft Science (9), 184-192.

Xiao, L., & North, D. (2018). The role of technological business incubators in supporting business innovation in China: A case of regional adaptability? Entrepreneurship & Regional Development, 30(1-2), 29-57.

Ding, F. F. & Xie, H. X .(2021). Can Fiscal and Tax Policies Encourage Enterprises to Innovate with High Quality? Evidence from GEM Listed Companies. Finance and Economics Theory and Practice, 42(4),74-81

Long, Y. H.(2023). Research on promoting high-quality development of specialized and sophisticated SMEs from a tax perspective: Based on the survey of specialized and sophisticated SMEs in Zhejiang. Taxation Research, (6), 38-43.

Li, Q., & Wang, D.H..(2022). Fiscal and Tax Policies to Support Innovation of Micro, Small and Medium-sized Enterprises. Research on Financial Issues, (3), 11.

Bird, R. M. (1992). Tax policy and economic development. Baltimore, Maryland: Johns Hopkins University Press.

Hall, B. H., & van Reenen, J. (2000). How effective are fiscal incentives for R&D? A review of the evidence. Research Policy, 29(4-5), 449-469.

Rothwell, R. (1991). External networking and innovation in small and medium-sized manufacturing firms in Europe. Technovation, 11(2), 93-112.

Schumpeter, J. A. (1942). Capitalism, Socialism and Democracy. New York, U.S.: Harper & Brothers.

Pang, L. X., & Guan, J. C. (2018). The impact of government fiscal and tax policies on the innovation and growth of high-tech enterprises. Studies in Science of Science, 36(12), 11.

Ma, W. H. (2011). An empirical study on the effects of tax incentives and government subsidies on R&D investment of enterprises--Based on panel data of listed high-tech enterprises. Science and Technology Progress and Countermeasures, 28(17), 4.

Dahlby, B., & Ferede, E. (2012). The effect of tax cuts on economic growth: Evidence from the Canadian provinces. National Tax Journal, 65(3), 563-594.

Mayende, S. (2013). The effects of tax incentives on firm performance: Evidence from Uganda. J. Pol. & L., 6, 95.

Czarnitzki, D., & Lopes-Bento, C. (2014). Innovation subsidies: Does the funding source matter for innovation intensity and performance? Empirical evidence from Germany.Industry and Innovation,21(5), 380-409.

Griffith, R., Miller, H., & O'Connell, M. (2014). Ownership of intellectual property and corporate taxation. Journal of Public Economics, 112, 12-23.

Czarnitzki, D., & Delanote, J. (2015). R&D policies for young SMEs: input and output effects.Small Business Economics,45, 465-485.

Gong, Y.L. (2022). Discussion on fiscal and taxation policies to promote the development of my country's new energy automobile industry. Modern Commerce and Industry, (023) 27-29.

Aghion, P., & Howitt, P. (1992). A Model of Growth Through Creative Destruction. Econometrica, 60(2), 323-351.

Imran, M., & Rehman, Z. U. (2024). Interplay of government support and foreign investment in enhancing R&D in China's strategic sectors. J. Organ. Technol. Entrep, 2(1), 1-13.

Czarnitzki, D., Hanel, P., & Rosa, J. M. (2011). Evaluating the impact of R&D tax credits on innovation: A microeconometric study on Canadian firms.Research policy,40(2), 217-229.

Hewitt-Dundas, N., & Roper, S. (2010). Output additionality of public support for innovation: evidence for Irish manufacturing plants. European Planning Studies,18(1), 107-122.

Lyandres, E., & Palazzo, B. (2012). Strategic cash holdings and R&D competition: Theory and evidence.Available at SSRN,2017222.

Richardson, S. (2006). Over-investment of free cash flow. Review of accounting studies, 11, 159-189.

Forsman, H., & Temel, S. (2011). Innovation and business performance in small enterprises: An enterprise-level analysis.International Journal of Innovation Management,15(03), 641-665.

Chen, L., & Yang, W. (2019). R&D tax credits and firm innovation: Evidence from China. Technological Forecasting and Social Change, 146, 233-241.

Tian, B., Yu, B., Chen, S., & Ye, J. (2020). Tax incentive, R&D investment and firm innovation: evidence from China. Journal of Asian Economics, 71, 101245.

Wang, Y. (2019). Tax Preferential, R&D Investment and Enterprise Performance An Empirical Study Based on Mediating Effect. Proceedings of the 2019 International Conference on Economic Management and Cultural Industry (ICEMCI 2019). pp.525-529). Beijing, China: Atlantis Press.

Ting, Z. T., Sheng, H. Y., & Hong, W. (2019). Tax preference, R&D and innovation quality: An empirical study based on the mediating effect model. In 2019 International Conference on Strategic Management.

Mousavi, S., Bossink, B., & van Vliet, M. (2019). Microfoundations of companies' dynamic capabilities for environmentally sustainable innovation: Case study insights from high-tech innovation in science-based companies. Business Strategy and the Environment, 28(2), 366-387.

Liu, Y., & Mao, J. (2019). How do tax incentives affect investment and productivity? Firm-level evidence from China. American Economic Journal: Economic Policy, 11(3), 261-291.

Chen, Y., Wang, Y., Hu, D., & Zhou, Z. (2020). Government R&D subsidies, information asymmetry, and the role of foreign investors: Evidence from a quasi-natural experiment on the shanghai-Hong Kong stock connect. Technological forecasting and social change,158, 120162.

Takalo, T., Tanayama, T., & Toivanen, O. (2013). Market failures and the additionality effects of public support to private R&D: Theory and empirical implications. International Journal of Industrial Organization,31(5), 634-642.

Butler, E. (2012). Public choice-a primer. Institute of Economic Affairs Occasional Paper,147.

Wu L.S. (2009). State-owned equity, tax preferences and corporate tax burden. Economic Research, 44(10),109-120.

Chu, D. Y., Yang, S., & Song, G. M. (2016). Fiscal subsidies, tax incentives and innovative investment in strategic emerging industry.Finance and Trade Research,27(5), 83-89.

Zhang, Y., & Wu, S. (2023, June). Empirical Study on the Influence of Tax Incentives, Research and Development Investment on Enterprise Value. In Proceedings of the 3rd International Conference on Big Data Economy and Information Management, BDEIM 2022, December 2-3, 2022, Zhengzhou, China.

Zeng, J.H., Du, K.Y., & Li, J.W. (2022). A study on the effect of government financial and tax incentives on enterprises' open innovation performance. Soft Sciences, 36(2), 7.

Li, J.Y. ,Li, Wang, Z.Y.& Xianyun Wu(2020). Effects of policy incentives and R&D investment on innovation performance. Research Management, 41(5), 12.

Zhang, N. & Du, J. T.(2019). The effect of fiscal and tax policies on the innovation efficiency of high-tech enterprises - based on the perspective of interaction. Taxation Research, (12), 7.

Yu, Y., & Xu, Q. (2022). Tax incentive policy and enterprise innovation: from enterprise heterogeneous perspective. Discrete Dynamics in Nature and Society, 2022, 1-8.

Wasiluk, D., & Białek-Jaworska, A. (2020). Determinants of corporate R&D expenditures: the role of taxes. Central European Economic Journal, 7(54), 110-126.

Fang, H., Su, Y., & Lu, W. (2022). Tax incentive and corporate financial performance: Evidence from income tax revenue sharing reform in China. Journal of Asian Economics, 81, 101505.

Song, Z., & Song, X. (2023). Can Tax Incentives Enhance Enterprise Value?—Mediating Effect Based on Research and Development Investment. Academic Journal of Business & Management, 5(24), 1-8.

Kaplan, R. S., & Norton, D. P. (1992). The balanced scorecard: Translating strategy into action. Brighton, Massachusetts, USA: Harvard Business Review Press.

Liu, J., & Le, Z. (2023). Research on the effect of financial subsidies on enterprise performance: Based on the mediating effect of R&D investment. In 2023 3rd International Conference on Business Administration and Data Science (BADS 2023) (pp. 173-180). Beijing, China: Atlantis Press.

Liu, Z., & Zhou, X. (2023). Can Direct Subsidies or Tax Incentives Improve the R&D Efficiency of the Manufacturing Industry in China?. Processes, 11(1), 181.

Guo, L., Long, W., & Dai, Z. (2021). Manufacturing R&D investment efficiency and financing constraints: evidence from China. Applied Economics, 53(6), 676-687.

Ding, L., Wu, Y., & Long, J. (2023). Incentive effect of tax preferences towards the technological innovation of enterprises-Based on China's GEM listed companies. Plos one, 18(4), e0282692.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of personality and social psychology, 51(6), 1173.

Hayes, A. F. (2017). Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach (2nd ed.). New York, NY: Guilford publications.

Supriyadi, T., & Terbuka, U. (2021). Effect of return on assets (ROA), return on equity (ROE), and net profit margin (NPM) on the company's value in manufacturing companies listed on the exchange Indonesia securities year 2016-2019. International Journal of Economics, Business and Management Research, 5(4), 1-15.

Deyganto, K. O. (2022). The effect of tax incentives practices on the sustainability of micro, small and medium enterprises in Ethiopia during the outbreak of corona virus pandemic. Journal of Innovation and Entrepreneurship,11(1), 8.

Ahmedova, S. (2015). Factors for increasing the competitiveness of small and medium-sized enterprises (SMEs) in Bulgaria. Procedia-Social and Behavioral Sciences,195, 1104-1112.

Fernández-Viñé, M. B., Gomez-Navarro, T., & Capuz-Rizo, S. F. (2013). Assessment of the public administration tools for the improvement of the eco-efficiency of Small and Medium Sized Enterprises.Journal of Cleaner Production,47, 265-273.

Twesige, D., & Gasheja, F. (2020). Effect of macro-economic variables on profitability of selected commercial banks in Rwanda. Journal of Asian Economics,1(2), 181-198.

Klemm, A., & Van Parys, S. (2012). Empirical evidence on the effects of tax incentives. International Tax and Public Finance, 19(3), 393–423.

Hasan, R., Jiang, Y., & Rafols, R. M. (2021). Place-based preferential tax policy and industrial development: Evidence from India's program on industrially backward districts. Journal of Development Economics,150, 102621.

Ndesaulwa, A. P., & Kikula, J. (2016). The impact of innovation on performance of small and medium enterprises (SMEs) in Tanzania: A review of empirical evidence. Journal of Business and Management Sciences, 4(1), 1-6.

Cui, L. (2020). The Impact of Innovation Input on Innovation Performance from the Perspective of Differentiation Strategy. International Journal of Social Science and Education Research, 2(12), 121-133.

Forsman, H., & Temel, S. (2011). Innovation and business performance in small enterprises: An enterprise-level analysis. International Journal of Innovation Management, 15(03), 641-665.

Zhang, Y., & Wu, S. (2023). Empirical Study on the Influence of Tax Incentives, Research and Development Investment on Enterprise Value. In Proceedings of the 3rd International Conference on Big Data Economy and Information Management, BDEIM 2022, December 2-3, 2022, Zhengzhou, China.

Brown, F., & Guzmán, A. (2014). Innovation and productivity across Mexican manufacturing firms. Journal of technology management & innovation, 9(4), 36-52.

Chen, Y.Y., He, M.J., & Zhang, X.Y. (2018). Fiscal subsidies, tax incentives and corporate innovation output structure-evidence from China's high-tech listed companies. Tax Research, (12), 48-54.

Hong, Y., & Li, Y.M. (2012). Research on the policy transmission mechanism of independent innovation. Scientific Research, 30(03), 449-457.

Li, W.M., Cui, Y., Chen, Z.P., et al. (2008). An empirical study on the impact of technological innovation policies on the innovation performance of small and medium-sized enterprises: using corporate resource investment and organizational incentives as mediating variables. Science and Technology Management, 324(09), 61 -65.

Zhai, J., & Wang, Y. (2016). Accounting information quality, governance efficiency and capital investment choice. China Journal of Accounting Research, 9(4), 251-266.

Palazuelos, E., Herrero Crespo, Á., & Montoya del Corte, J. (2020). Auditing and credit granting to SMEs: an integrative perceptual model. Managerial Auditing Journal, 35(1), 152-174.

Kim, H., & Yasuda, Y. (2019). Accounting information quality and guaranteed loans: evidence from Japanese SMEs. Small Business Economics, 53, 1033-1050.

Hsieh, C. T., Hurst, E., Jones, C. I., & Klenow, P. J. (2019). The allocation of talent and us economic growth. Econometrica, 87(5), 1439-1474.

Hidayat, S. B. D., & Mardijuwono, A. W. (2021). The effect of accounting information quality on investment efficiency with auditor specialization as moderating variables. Review of International Geographical Education Online, 11(4), 320-329.

Shahroodi, S. M. M. (2010). Investigation of the effective factors in the efficiency of tax system. Journal of Accounting and taxation, 2(3), 42.

Smatrakalev, G. (2006). Tax Policy for Small and Medium Enterprises. Paper Delivered at the6th Global Conference on Business and Economics. In Gut Man Conference Center, USA.