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Study on the Impact of Digitization of Tax Collection and Administration on Total Factor Productivity of Enterprises

-- Based on the Evidence of the Quasi-natural Experiment of "Golden Tax Phase III"

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Abstract

Enterprise total factor productivity is the core index to measure the quality of economic development, and tax collection and administration will have an important impact on it. The data of Shanghai and Shenzhen A-share listed companies from 2011 to 2022 is selected as the sample, and the implementation time of "Golden Tax Phase III" is taken as the impact point, and the regression analysis is carried out as A quasi-natural experiment. It is found that the implementation of the third Golden tax will improve the total factor productivity of enterprises, and this policy has heterogeneity among different enterprises and different collection and management methods. The mechanism analysis shows that the implementation of "Golden Tax III" can affect the total factor productivity of enterprises by promoting enterprise innovation and improving the efficiency of resource allocation. This paper provides a basis for the formulation of tax policies and the adjustment of economic policies, which is conducive to improving the tax collection and management system and promoting high-quality economic development.

Keywords

"The Third Phase of Golden Tax"; Total Factor Productivity; Tax Collection and Administration.

1. Introduction

As socialism with Chinese characteristics has entered a new era, the principal contradiction facing Chinese society has evolved into that between unbalanced and inadequate development and the people's ever-growing needs for a better life. The contradictions and problems in development are mainly reflected in the quality of development. The report of the Party's 20th National Congress also pointed out that high-quality development is the primary task of comprehensively building a modern socialist country. We should speed up the development of a modern economic system and strive to raise total factor productivity. As the core index to measure the quality of economic development, total factor productivity can effectively reflect the utilization efficiency of resources and the development of technical level. The in-depth study of the total factor productivity of enterprises is conducive to understanding the behavior of enterprises and improving the production efficiency of enterprises.

On March 24, 2021, the General Office of the CPC Central Committee and The General Office of the State Council jointly issued the Opinions on Further Deepening the reform of the Tax collection and Administration System, marking that China's tax collection and administration has entered the digital era, clearly proposing to "comprehensively promote the digital upgrading and intelligent transformation of tax collection and administration", and introducing

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the concept of "managing taxes by numbers". As a key turning point in the digitization of tax collection and administration, the third Golden Tax phase comprehensively monitors corporate tax payment through big data and cloud computing technology to effectively combat tax evasion and avoidance. Although the tax burden of enterprises may be increased in the short term, in the long run, the "governance effect" will exceed the "taxation effect", promote the compliance of enterprises, optimize resource allocation, and improve total factor productivity. In terms of technological innovation and capital allocation, digital collection and management reduces the temptation of illegal interests, encourages enterprises to increase investment in technological innovation and capital optimization allocation, directly improves production efficiency and resource flow efficiency, and thus improves total factor productivity. From the perspective of policy environment and business environment, the digitalization of tax collection and administration promotes the transparency and fairness of the tax system, reduces the distortion of resource allocation, creates a fairer business environment for enterprises, is conducive to the long-term planning and competitiveness of enterprises, and indirectly promotes the growth of total factor productivity. This reform not only improves the efficiency of tax collection and administration, but also provides a strong background support for further research on the impact of digitization of tax collection and administration on the total factor productivity of enterprises.

The possible marginal contributions of this paper include: First, existing literature mainly focuses on the impact of tax collection and administration on the tax burden, compliance behavior and salary structure of enterprises, while few studies have explored the impact of the digital transformation of tax collection and administration from the perspective of total factor productivity; Secondly, despite significant research progress in the fields of digitization of tax collection and administration and total factor productivity of enterprises, the results of combining the two are limited, so this paper provides a novel perspective and empirical support. Finally, when discussing the specific action path of digitization of tax collection and administration on the total factor productivity of enterprises, this paper constructs a comprehensive analysis framework, which not only focuses on the improvement of innovation ability, but also analyzes the optimization of resource allocation efficiency in depth, and fully reveals its positive effect on the total factor productivity, providing accurate basis for government and enterprise decision-making.

2. Theoretical Analysis and Research Hypothesis

(1) Digitization of Tax Collection and Administration and Total Factor Productivity

As one of the core mechanisms of external governance of enterprises, tax collection and management has a profound impact on the business behavior and governance of enterprises. Existing studies have explored in depth the impact of tax collection and administration on enterprise operating efficiency, especially when considering the differences in fairness of tax enforcement. Tong Jinzhi et al. (2016) found that fairness of tax enforcement can significantly promote the positive effect of tax collection and administration on enterprise operating efficiency. This finding reveals the important role of tax collection and administration in maintaining market order and ensuring fair competition. However, when tax collection is reduced, corporate tax avoidance may increase. Liu Zhong and Li Yin (2019) pointed out that such tax avoidance behavior may not only cause agency problems, but also inhibit enterprises' R&D and innovation expenditure, and ultimately lead to the decline of enterprises' total factor productivity. The rise in tax avoidance means that companies, while avoiding their tax responsibilities, may also be damaging their long-term growth potential. Therefore, digital tax collection simplifies the tax process, speeds up the processing speed, improves the operating efficiency of enterprises, and enables enterprises to devote more energy to their core business.

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At the same time, digital collection and management enhances information transparency, reduces tax avoidance space, and encourages enterprises to operate more compliant and avoid unnecessary legal risks and financial costs. These positive changes work together on enterprises and promote the improvement of total factor productivity.

Based on the above analysis, this paper proposes:

Hypothesis 1: Digitization of tax collection and administration standardizes the production and operation of enterprises and helps to improve the total factor productivity of enterprises.

(2) Mechanism Analysis

The digitization of tax collection and administration may improve the total factor productivity of enterprises through two ways: stimulating the innovation vitality of enterprises and optimizing the allocation of resources. First of all, the in-depth promotion of the digitization of tax collection and administration has not only greatly simplified the tax process, but also provided enterprises with unprecedented convenient and efficient service experience through a highly integrated information platform. Bai Shijie (2023) pointed out that digitalization, as the core driving force of the information age, and its extensive application in the field of tax collection and management, greatly enhanced the information processing and analysis capabilities of enterprises, significantly reduced the cost of information search in the process of innovation, and significantly improved the efficiency and transparency of information flow. This efficient information utilization mechanism not only promotes the accurate allocation of innovation resources and dynamic supervision, but also effectively reduces the uncertainty and potential risks in innovation decision-making, providing a more stable support for enterprise innovation activities. As a digital tax platform, the third phase of Golden Tax can update tax policies in real time, help enterprises to respond quickly to the market, accurately adjust innovation strategies, and seize competitive opportunities. Liu Guanchun et al. (2023) put forward this positive market response mechanism, which not only helps to break industry barriers and promote fair market competition, but also stimulates market vitality and innovation ability at a deep level, creates a good market environment, and provides an internal incentive mechanism for enterprises to achieve high-quality development and improve product and service quality. Such a market atmosphere promotes enterprises to actively innovate and upgrade, strive to stand out, improve total factor productivity, and promote the sustainable and healthy development of the economic system.

Secondly, resource allocation efficiency is one of the key factors of the total factor productivity of enterprises, and the digitization of tax collection and management can improve the efficiency of resource allocation by optimizing the resource allocation process, thus improving the total factor productivity of enterprises. Sun Gang (2017) pointed out that the digital tax platform centrally manages and shares tax data, breaks information silos, improves corporate information transparency, supervises resource allocation decisions, and improves resource allocation efficiency. The third phase of the Golden tax strengthens the supervision and evaluation of the use of enterprise resources, prevents waste and abuse, and enables enterprises to accurately grasp the use of resources, adjust strategies in time, and improve utilization efficiency. At the same time, the digitization of tax collection and administration can also ease the financing constraints of enterprises, optimize the tax environment, reduce financing costs, enhance the ability to attract external resources, inject impetus into the sustainable development of enterprises, and further promote the double improvement of resource allocation efficiency and total factor productivity.

Based on the above analysis, this paper proposes:

Hypothesis 2a: Digitization of tax collection and administration stimulates the innovation vitality of enterprises, which in turn improves the total factor productivity of enterprises.

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Hypothesis 2b: Digitization of tax collection and administration optimizes the efficiency of resource allocation, thereby improving the total factor productivity of enterprises.

3. Research Design

(1) Variable Design and Description

1) Explained variables

Total factor productivity TFP. In this paper, the widely recognized LP method is used to measure TFP, which effectively avoids the sample selection bias caused by the traditional OP method by using the input of intermediate products as the proxy variable, thus improving the accuracy and robustness of the measurement. In order to further verify the reliability of the results, this paper also introduced FE method and OLS method as a comparison reference in the subsequent robustness test.

2) Explanatory variables

This paper focuses on the policy effect of the third phase of gold tax reform, and quantifies this effect by constructing a dummy variable TA. The third phase of the Golden tax has been gradually promoted in stages since 2013, and has achieved comprehensive coverage nationwide by the end of 2016. In the specific operation, if the region where the enterprise is located in a certain year has not implemented the third golden tax period, the value of TA variable is 0; Conversely, if the project has been implemented in the area, the TA variable is assigned a value of 1.

3) Control variables

By referring to previous literature and controlling for a series of variables related to corporate finance, Including asset Size (Size), listed years (ListAge), profitability (Roa), asset-liability ratio (Lev), cash flow ratio (CFO), operating income Growth rate (Growth), TobinQ ratio (TobinQ), Fixed assets ratio (Fixed), nature of property rights (SOE), and combination of two roles (Dual), whether the company is audited by the Big Four (Big4).

(2) Model Design

In order to test the impact of the third phase of gold tax reform on the total factor productivity of enterprises, this paper constructs a panel fixed effect model to analyze and test. The following regression equation is established:

$$TFP_{i,t} = \alpha_0 + \alpha_1 TA_{i,t} + \alpha_2 Controls_{i,t} + \mu_t + \gamma_i + \varepsilon_{i,t}$$

The explained variable is TFP of enterprise total factor productivity, the core explanatory variable is TA of Golden Tax III, Controls is the set of control variables, and subscripts i and t represent enterprise and year, time effect and individual effect respectively, so as to eliminate the interference of factors that do not change with time and year effect on the results at the enterprise level. Is a random disturbance term.

(3) Sample Selection and Data Sources

This paper takes Shanghai and Shenzhen A-share listed companies from 2011 to 2022 as the research object. In order to ensure the validity of the sample, all listed companies in the financial industry with missing data and listed companies with the words ST and *ST in the sample are excluded, and A 1% up-down tailing treatment is implemented for all continuous variables. To reduce the potential bias of minimizing extreme values to statistical results. After rigorous preprocessing, a dataset containing 29,483 samples was obtained. All data are from Guotai 'an database and Wind database.

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4. Empirical Test

(1) Descriptive Statistics

The average value of total factor productivity (TFP_LP) in the sample is 9.0566, the minimum value is 6.3771, and the maximum value is 11.1071, indicating that the total factor productivity of sample enterprises varies between different enterprises and different years. The mean value of the core explanatory variable TA is 0.6481, indicating that 64.81% of the annual observed value of the company during the sample period is affected by the pilot of the third phase of the Golden tax.

(2) Baseline Regression Results

The baseline regression results are shown in Table 1. The regression coefficient of TA is 0.0654, which is significantly positive at 1% level. To a certain extent, it shows that after the pilot of the third phase of the Golden tax, the total factor productivity of enterprises that have implemented the third phase of the Golden tax collection system is significantly higher than that of enterprises that have not implemented it. The governance effect of digitization of tax collection and administration is preliminarily verified. In order to avoid interference to the real reliability of the research results caused by the omission of important variables, this paper brings all control variables into the model, and the results are shown in column (2). After incorporating the fixed effects of company and year and control variables, the regression results show that the influence coefficient between the third Golden tax period and the total factor productivity of enterprises is 0.0305, which is significantly positive at 1% level. It is consistent with the results in column (1), indicating that the digitization of tax collection and administration standardizes the production and operation of enterprises, and then has a significant positive impact on the improvement of the total factor productivity of enterprises. The results verify hypothesis 1.

Table 1. Baseline regression results

	(1)	(2)
	TFP_LP	TFP_LP
TA	0.0654***	0.0305***
	(4.1736)	(2.7969)
_cons	9.0142***	20.1309***
	(887.7558)	(63.5667)
Controls	NO	YES
Firm fixed effect	YES	YES
Year fixed effect	YES	YES
N	29483	29483
Adj.R^2	0.8639	0.9288

Note: The brackets are firm level cluster t-statistics, ***, ** and * indicate significance levels of 1%, 5% and 10% respectively, the same below.

(3) Robustness Test

1) Parallel trend test

The premise of effective differential method is that the treatment group and the control group conform to the parallel trend before the policy impact. In order to verify the parallel trend hypothesis, this paper refers to Fan Yong and Li Haonan (2020), takes the current pilot period

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as the benchmark, and takes the results of the 7th and later periods as the 7th period, and conducts a dynamic effect test, as shown in Figure 1.

Before the third phase of the Golden tax pilot, the core explanatory variable coefficient fluctuated around 0 on the whole, but after the third phase of the Golden tax pilot, the impact of the pilot on the total factor productivity was significantly different from 0 in the first phase after the third phase of the golden tax pilot, and this impact was very long-term, and it was still significantly different from 0 until the seventh phase after the third phase, which was in line with the parallel trend hypothesis. It shows that the implementation of the third phase of golden tax has a long-term effect on the improvement of total factor productivity of enterprises in the pilot areas.

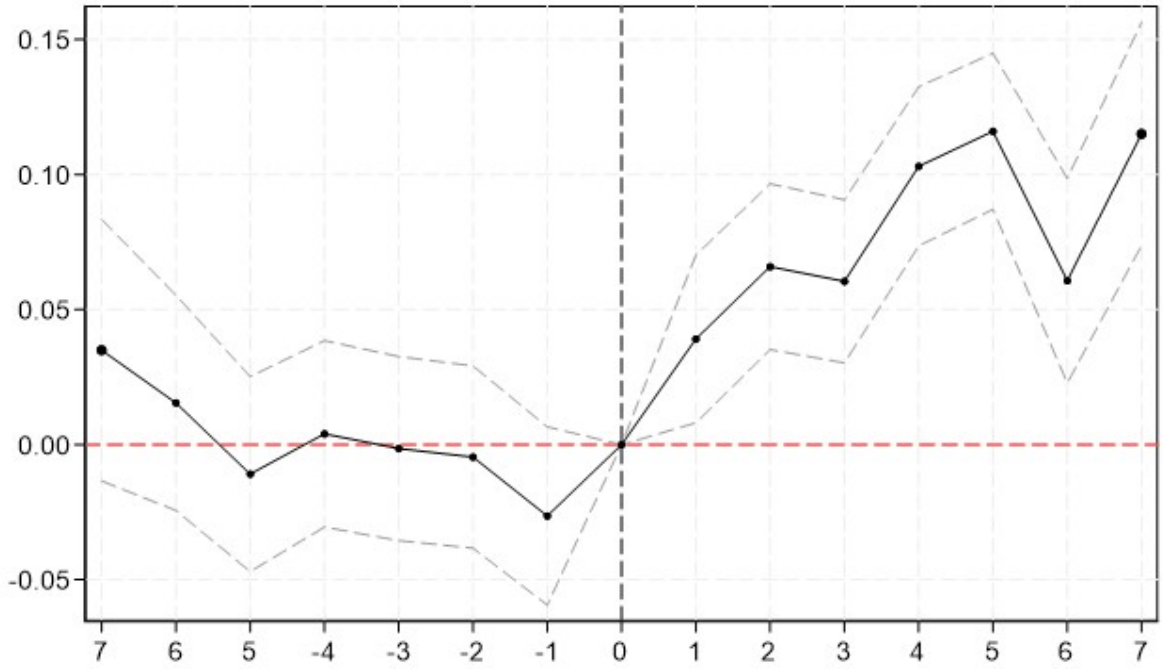

Figure 1. Dynamic effect test diagram

2) Replace the explained variable

In the benchmark regression, LP method is used to measure the total factor productivity of enterprises. In order to test the robustness of the research, this paper uses FE method and OLS method to re-measure the total factor productivity of enterprises. As shown in columns (1) and (2) of Table 2, after replacing the measurement method of explained variables, TA coefficient is still significantly positive at the 1% level, and the impact of the implementation of "Golden Tax III" on the total factor productivity of enterprises remains unchanged.

At the same time, changes in industries may cause total factor productivity fluctuations of enterprises. In order to exclude the influence of changes in different industries in time, this paper further adds the high-dimensional fixed effect of industry × year. After controlling for the triple fixed effect, column (3) shows that the TA coefficient is still significantly positive at the 5% level. Therefore, the model and conclusion adopted in this paper have high robustness.

3) Eliminate distractions

Considering that the period of the research sample in this paper is at the critical stage of China's economic transformation, the two major tax policies "replacing business tax with value-added tax" and the accelerated depreciation policy of fixed assets during the same period may directly affect the total factor productivity of enterprises through the tax incentive mechanism (Sun

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Zheng et al., 2020; Han In-Yue et al., 2022). In order to reduce the interference of the corresponding policies on the research results, two variables "replacing business tax with value-added tax" (VAT) and accelerated depreciation of fixed assets (TREAT) were introduced into the benchmark regression model. Referring to Wei Zhihua et al. (2022), the variable of "replacing business tax with value-added tax" uses the ratio of the total value added tax and business tax to the operating income as a proxy indicator, while the variable of accelerated depreciation of fixed assets is based on whether the enterprise belongs to the pilot industry. After 2014, the value of enterprises in the pilot industry is 1, or 0. Considering the results of "replacing business tax with value-added tax", as shown in Column (4), the third phase of Golden tax (TA) still presents a positive correlation at the significance level of 1%; considering the results of accelerated depreciation of fixed assets, as shown in column (5), the third phase of Golden tax (TA) still presents a positive correlation at the significance level of 1%. Even after controlling the influence of these tax incentives, the effect of the third Golden tax on the total factor productivity of enterprises is robust, and is not significantly disturbed by other major tax policy changes.

Table 2. Replacement of explained variables and elimination of disturbing factors

	(1)	(2)	(3)	(4)	(5)
	TFP_FE	TFP_OLS	TFP_LP	TFP_LP	TFP_LP
TA	0.0343***	0.0346***	0.0248**	0.0305***	0.0302***
	(3.1544)	(3.2173)	(2.2879)	(2.7863)	(2.7697)
VAT				-0.0002	
				(-0.0199)	
TREAT					-0.0192
					(-1.0329)
_cons	27.9191***	25.9476***	19.8421***	20.1309***	20.1264***
	(87.9454)	(83.6512)	(64.6769)	(63.5570)	(63.3506)
Controls	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Industry×Year FE	NO	NO	YES	NO	NO
N	29483	29483	29483	29483	29483
Adj. R^2	0.9587	0.9543	0.9335	0.9288	0.9288

4) Placebo test

In order to exclude the interference of external policies or random factors, this paper refers to the method of Sun Xuejiao et al. (2021), adopts randomization strategy to construct virtual treatment and control group, and performs placebo test. 500 virtual processing effects were calculated by shuffling the order of the enterprise sample and repeatedly randomly assigning the processing groups 500 times. Figure 2 shows that the average T-value of the virtual processing effect is about 0, which proves that the improvement of the total factor productivity of enterprises comes from the third Golden tax reform, rather than random events, which enhances the robustness and credibility of the research conclusions.

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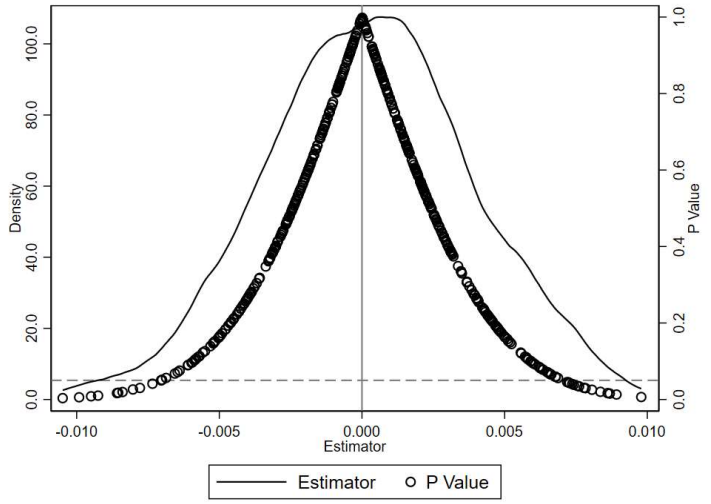

Figure 2. Graph of placebo test results

(4) Heterogeneity Analysis

1) Grouping based on financing constraints

Technological innovation activities are highly uncertain and require a large amount of capital investment. When the financing constraints of enterprises are high, their investment funds in technological innovation are relatively scarce, which may hinder the improvement of technical efficiency. In order to further explore the specific impact of the third golden tax on enterprise productivity under different financing constraints, this study is grouped according to financing constraints. When measuring financing constraints, this paper adopts the SA index proposed by Hadlock and Pierce (2010). The larger the SA value is, the more serious the financing constraints an enterprise is subject to. The analysis results are shown in column (1) (2) of Table 3. Under the condition that other conditions remain unchanged, the stronger the financing constraints faced by enterprises, the weaker the positive impact brought by the implementation of the third phase of the "Golden Tax".

2) Grouping based on agency cost

Tax collection and management can promote enterprises to consciously regulate tax behavior, enhance tax law compliance, and then reduce agency costs, so that enterprises can obtain more debt financing. In this paper, the total asset turnover ratio is used to measure the agency cost of enterprises, and the agency cost is grouped according to the annual median. As can be seen from columns (3) and (4) of Table 3, for the samples with higher agency cost, the governance effect brought by the third golden tax period is more significant, and the total factor productivity of enterprises is improved to a greater extent.

3) Grouping based on collection agencies

Before the merger of national and local taxes, there were differences between the leadership systems of the National Tax Bureau and the local Tax Bureau. The IRS follows the vertical leadership system of the State Administration of Taxation, while the local tax bureaus adopt a dual management model under the joint leadership of the people's government and the higher tax bureaus. Existing studies have shown that local tax agencies tend to show greater flexibility than national tax agencies (Xie Zhenfa and Fan Ziying, 2015; Li Ming et al., 2018) After the introduction of the "third phase of Golden tax" system, human intervention in tax inspection and artificial adjustment space in tax collection and administration were reduced with the help of information technology.

In this paper, the central enterprises and enterprises established in 2002 and later are divided into the National Tax Bureau for collection and management, and the rest of the enterprises are collected and managed by the local tax bureau. According to the group test, column (5) (6) of

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Table 3 shows that the third Golden Tax period significantly increased the total factor productivity of enterprises under the administration of the National Tax Bureau, while there was no significant change in the total factor productivity of enterprises under the administration of the local Tax Bureau, which is consistent with the theoretical expectation and confirms that the third Golden Tax period system has a greater positive impact on enterprises under the administration of the National Tax Bureau.

Table 3. Heterogeneity test

	(1)	(2)	(3)	(4)	(5)	(6)
	TFP_LP	TFP_LP	TFP_LP	TFP_LP	TFP_LP	TFP_LP
	Low financing constraint	High financing constraint	Low agency cost	High agency cost	Internal Revenue Service	Local tax bureau
TA	0.0378***	0.0189	0.0133	0.0304**	0.0396***	0.0096
	(2.5863)	(1.1845)	(0.9416)	(2.2943)	(2.9956)	(0.5067)
_cons	19.5803***	20.3163***	20.8184***	20.0335***	20.2495***	20.1373***
	(39.8539)	(50.1976)	(55.1934)	(53.4963)	(48.7108)	(44.9069)
Controls	YES	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
N	14739	14744	14742	14741	17969	11423
Adj. R^2	0.9101	0.9490	0.9256	0.9540	0.9225	0.9413

(5) Analysis of influence mechanism

In the regression analysis of the benchmark model, the digitization of tax collection and administration is confirmed to have a positive driving effect on the total factor productivity of enterprises. In order to further reveal the internal mechanism of this positive effect, based on the existing research results, this paper focuses on the two core paths of enterprise technological innovation and resource allocation efficiency, which are the main driving forces for the improvement of total factor productivity. This paper uses the method of Jiang Jiang (2022) as reference to test the mechanism of total factor productivity in enterprises from two aspects: technological innovation and resource allocation efficiency.

This paper uses the natural logarithm of R&D investment as an index to measure the innovation intensity of enterprises. According to column (1) in Table 4, TA coefficient shows a positive effect at the significance level of 10%, which clearly indicates that the implementation of the third phase of golden tax has a significant promoting effect on enhancing enterprises' innovation input, and then promotes the improvement of enterprises' total factor productivity to a certain extent. In the analysis of resource allocation efficiency, the research framework proposed by Li Qingyuan and Zhang Yin Sinan (2021) is used for reference. The difference between 90% and 10% quantiles of total factor productivity at the city-industry-year level reflects the dispersion degree, and its value reflects resource misallocation. In this paper, the inverse number TFPQD of dispersion is taken. The larger the TFPQD, the higher the efficiency of resource allocation. As can be seen from column (2) of Table 4, TA coefficient is significantly positive at the 5% level, indicating that the implementation of the third phase of the Golden tax can significantly improve the efficiency of enterprise resource allocation and thus enhance the total factor productivity of enterprises.

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Table 4. Mechanism test results

	(1)	(2)
	RD	TFPQD
TA	0.0488*	0.0167**
	(1.7325)	(2.1415)
_cons	33.9313***	1.5265***
	(54.5463)	(4.4481)
Controls	YES	YES
Firm FE	YES	YES
Year FE	YES	YES
N	21488	21492
Adj. R^2	0.8696	0.9387

5. Conclusion and Enlightenments

Based on the review of relevant literature, this paper takes the data of Shanghai and Shenzhen A-share listed companies from 2011 to 2022 as samples, and uses the quasi-natural experiment of Golden Tax Phase III to build A differential model for empirical analysis. Through the analysis of the empirical analysis results, the research hypothesis proposed in this paper is verified. The results show that: (1) the third phase of golden tax significantly improves the total factor productivity of enterprises, and this effect is still significant after the increase of control variables and robustness test. (2) Heterogeneity analysis shows that enterprises with strong financing constraints benefit less, while enterprises with high agency costs have a more significant positive impact; Enterprises collected by the National Tax Bureau benefit more than those collected by the local tax bureau. (3) Mechanism analysis reveals that the third Golden tax phase indirectly improves total factor productivity by stimulating enterprise innovation and optimizing resource allocation. Overall, digitisation of tax collection and administration has regulated business operations and thus contributed to an increase in total factor productivity.

Based on the above research, this paper puts forward the following policy recommendations:

First, deepen the digital reform of tax collection and administration to improve the business environment. Enterprises should actively respond to the digital reform of tax collection and administration, such as the third phase of the Golden Tax, strengthen internal informatization, data interconnection with tax departments, and improve the automation and intelligence of tax processing. The government should deepen the digitization of tax collection and administration, promote smart taxation, use big data, cloud computing and AI to improve efficiency, reduce tax collection costs, and strengthen data security and privacy protection, so as to create an efficient, convenient and safe business environment for enterprises.

Second, we need to take targeted measures to ease corporate financing constraints. For enterprises with strong financing constraints, the government should introduce more precise support policies, such as providing low-interest loans, tax relief or deferred payment and other preferential measures to ease the financial pressure on enterprises. We will promote the establishment and improvement of a multi-tiered capital market system, expand financing channels for enterprises, and reduce financing costs. At the same time, financial institutions are encouraged to innovate financial products, such as supply chain finance and intellectual property pledge financing, to meet the financing needs of different enterprises, so as to promote the improvement of total factor productivity of enterprises.

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Third, strengthen the internal governance of enterprises to reduce agency costs. Enterprises should establish a sound internal control system, strengthen internal governance, reduce agency costs. By improving the corporate governance structure, optimizing the incentive mechanism, and strengthening the information disclosure, we can improve the scientific and transparent decision-making of the management, and reduce internal friction and ineffective resource consumption. Enterprises should also increase R&D investment, improve technological innovation ability and resource allocation efficiency, so as to promote the improvement of total factor productivity of enterprises. The government can introduce relevant policies, such as providing research and development subsidies, tax incentives, etc., to guide and support enterprises in technological innovation and management innovation.

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