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Original Article

Heterogeneous Effects of Individual Income Tax Reform on Enterprises Total Factor Productivity

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Abstract *- This paper studies the effect of individual income tax reform upon total factor productivity in China using the data of Shanghai and Shenzhen A-share listed companies from 2017 to 2019. The empirical results show that the reform of personal income tax promoted improvement of enterprises' total factor productivity in manufacturing industry, information transmission, software, and information technology services industry, leasing and business services industry, real estate industry, and culture, sports, and entertainment industry; while the total factor productivity of financial enterprises is inhibiting ed by the reform of individual income tax. These conclusions evaluate the economic effect of China's individual income tax reform from the micro perspective of enterprises, enrich the literature on personal tax reform and total factor productivity, and provide theoretical reference and enlightenment for the government's optimization of the tax system.*

Keywords *- Individual Tax Reform, Total Factor Productivity, Heterogeneous Effect*

I. INTRODUCTION

From January 1, 2019, the revised individual income tax law has been put into effect in China. The main changes of individual income tax include: (1)The income tax threshold is increased from 3500 yuan per month to 5000 yuan per month; (2)Special deductions such as children's education expenditure, continuing education expenditure, serious illness medical expenditure, housing loan interest, housing rent and supporting the elderly have been permitted deduction; (3)The measurement method of tax payment time is adjusted from monthly to annual; (4)The changes of comprehensive income tax rate are reflected in the expansion of the grade spacing of 3%, 10% and 20%, the shortening of the grade spacing of 25%; The grade of operating income tax rate has been significantly expanded from 5% to 35%, and the lower limit of 35% has been increased from 100,000 to 500,000(RMB). (5) The year-end bonus tax calculation method is adjusted from monthly calculated individual tax amount to annual calculated individual tax amount. The new individual income tax rate table and threshold are carried out from October 1, 2018, and other measures are implemented on January 1, 2019 (hereinafter referred to as individual income tax reform). Individual income tax can adjust the income gap of workers, and workers are important factors of production. Whether this reform has effectively reduced the individual income tax burden of enterprise employees with different income levels, increased disposable income, and then improved the total factor productivity of enterprises is an important question to be studied. Taking the individual income tax reform as an exogenous event, this paper uses an empirical model to study the heterogeneous impact of individual income tax reform on enterprises' total factor productivity.

II. LITERATURE REVIEW

The research on the relationship between tax and total factor productivity (hereinafter referred to as TFP) mainly focuses on the following two aspects: (1) the economic growth effect of the tax system. For example, Gong Liutang et al. (2002) believed that tax structure affected economic growth, and property (consumption) tax had negative (positive) effects on economic growth, respectively. GuoQingWang et al. (2004) proposed that excessive macro tax burden inhibited economic growth; (2) The impact of

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enterprise value-added tax system on productivity. Hsieh and Klenow (2009) found that multiple tax rates reduced the efficiency of VAT collection. Chen Xiaoguang (2013) confirmed that the difference of effective tax rate of value-added tax caused TFP loss using Chinese data; Liu Baihui et al. (2019) found that China's multiple VAT tax rates led to the problems of "low levy and high deduction" and "high levy and low deduction", and the misplacement of resources led to TFP loss. The productivity losses in the product market and capital market are 1.33% and 0.88%, respectively. Reducing the difference of VAT tax rates significantly improved productivity; The effect of value-added tax transformation on improving economic TFP has regional differences (Wang Lujun and Su Jian, 2019). (3) The impact reduction of enterprise income tax on TFP. Asghedom and Karen (2009) proposed that the preferential tax policies of capital cost subsidy, investment tax credit, and reduction of corporate income tax have improved the capital intensity and TFP. Jiang Wei (2016) emphasized that effective enterprise tax rate can significantly affect productivity; Zheng Baohong and Zhang Zhaoguo (2018) found that the reduction of enterprise income tax rate in 2008 improved enterprises' TFP in four ways: optimizing resource allocation, alleviating financing constraints, increasing R&D investment and human capital investment. The effect was the largest in that year and then decreased year by year; the cumulative effect increased year by year and tended to be stable in 2014. The incentive effect of enterprise income tax cut on TFP of foreign enterprises, private enterprises, and state-owned enterprises decreased, and the incentive effect on TFP of small and micro enterprises, medium-sized and large enterprises decreased in turn (Lin Xiaoling and Zhang Kai, 2019).

To sum up, scholars have used normative analysis methods to investigate the distribution effect of individual income tax reform and used empirical methods to analyze the specific impact, impact path, timeliness, and regional heterogeneity of tax policies, such as value-added enterprise tax and income tax reform on TFP. There is a lack of analysis on the economic effect of the implementation of the individual income tax reform, from the perspective of the enterprise, Particularly the specific impact of individual income tax reform on TFP.

III. HYPOTHESES DEVELOPMENT

The individual income tax reform positively impacts the improvement of enterprises' TFP through the incentive effect of employee salary increase and the governance effect of tax collection and management. Specifically, first, scientific researchers are the intellectual capital for the high-quality development of enterprises, and their salary is at the upper middle level in the same industry. The individual income tax reform has increased the disposable income of R&D personnel, improved the endogenous driving force of enterprise scientific and technological innovation, promoted the active development of R&D and innovation activities, which is conducive to enterprises to improve TFP. Second, after the individual income tax reform, significant changes have taken place in the individual income tax collection and management mode, the governance of government's tax collection and management has been improved, which is specifically reflected in curbing the improper behavior of the management, enabling them to devote more energy to the production and operation of enterprises, and alleviating the agency problem (Desai et al., 2007; Xu et al., 2011); The transparency of enterprise information is improved, the financing cost is reduced (Guedhami and Pittman, 2008), and the tax avoidance behavior of enterprises is effectively reduced (Tian Binbin and fan Ziying, 2016); The efficiency of enterprise resource allocation is improved (Sun Gang, 2017), finally the increase of enterprise labor productivity and the enhancement of tax collection and management promoted the improvement of enterprise TFP (Liu Zhong and Li Yin, 2019).

On the other hand, the individual income tax reform may have a negative impact on enterprises' TFP by narrowing the executive employee salary gap. The reason is that the individual income tax reform has a small increase in the salary of enterprise executives who felt unfair and not been effectively recognized if compared with the improvement of ordinary employees' salary, and executives might neglect to adjust the management mode, optimize salary management and improve the efficiency of capital utilization, reducing the efficiency of enterprise resource allocation and inhibit the improvement of TFP. For example, Huang Xianhuan and Wang Yao (2020) found that state-owned enterprises' three salary limit policies in 2009, 2012, and 2014 significantly reduced the TFP of state-owned enterprises. Therefore, the impact of individual income tax reform on enterprise TFP depends on the offset between the incentive effect of salary promotion and the negative spillover effect of the salary gap. Therefore, this paper puts forward two competitive assumptions H2a and H2b, for the impact of individual income tax reform on enterprises' TFP:

Hypothesis H1: under other unchanged conditions, personal income tax reform promotes the improvement of enterprise TFP.

Hypothesis H2: under the condition that other conditions remain unchanged, personal income tax reform inhibits the improvement of enterprise TFP.

Hypothesis H3: under the condition that other conditions remain unchanged, personal income tax reform does not affect the improvement of enterprise TFP.

IV. RESEARCH DESIGN

A. Sample

Since the implementation time of individual income tax reform (new tax rate, threshold, and new individual income tax law) is October 2018 and January 1, 2019, respectively, this paper selects Shenzhen and Shanghai A-share listed companies from 2017 to 2019 in China as the research sample, and the samples are screened as follows:

(1)eliminate the missing, and abnormal data of listed companies related to main variables; (2) ST and PT listed companies are eliminated, and the continuous variables are reduced by 1% up and down, and 11404 sample observations are finally obtained. The data in this paper are from the WIND and CSMAR databases.

Definition of Variables

1) Explained variable and Explanatory Variables Measure

Drawing lessons from the semi-parametric number method used by Lu Xiaodong and LianYujun (2012), this paper calculates enterprises' TFP, measured by LP and OP methods and recorded as TFPlp and TFPop, respectively. When we calculated enterprises' TFP, the variables of output, labor input, capital input, and intermediate input are expressed as the logarithm of operating income, the logarithm of the number of employees, the ratio of cash paid for the purchase and construction of fixed assets and intangible assets divided by assets, and the ratio of cash paid for the purchase of goods and services divided by assets. The explanatory variable is "individual income tax reform" recorded "It". If the observed value is after the individual income tax reform, It = 1; it is before the individual income tax reform, It = 0.

2)Controlled Variables Measure

According to the existing empirical literature, this paper mainly selects the following controlled variables: (1) company size recorded Siz, expressed by the logarithm of total assets at the end of the period. Generally speaking, the larger the company, the stronger the company's strength, the higher the quality requirements of employees, and the higher the compensation provided for them. (2) Asset liability ratio recorded Lev is expressed by the ratio of ending Liabilities divided by ending total assets. The smaller the index value, the stronger the solvency of the enterprise, the stronger the financial strength of the enterprise, and the higher the salary of employees. (3) Operating gross profit margin recorded Gpm is expressed by the ratio of gross profit divided by operating revenue. The larger the index value, the stronger the profitability of the enterprise and the higher the salary it pays to employees. (4) Fixed assets ratio recorded Far is expressed by net fixed assets divided by total assets at the end of the period. This indicator reflects the ratio structure of the enterprise. The higher the value obtained by dividing fixed assets by total assets, it indicates that the enterprise occupies more funds, and the capital flow rate of the enterprise is low, which affects the salary payment level. (5)The proportion of independent directors recorded Idr is expressed by the ratio of the number of independent directors divided by the total number of directors. The existence of independent directors can supervise the behavior of senior executives and safeguard the interests of minority shareholders and ordinary employees. (6) Executive shareholding ratio recorded Esh is expressed by the proportion of executive shares divided by total shares issued by the enterprise. (7) Industry dummy variable recorded Ind. (8) Region dummy variable recorded Reg.

3)Research Equation

This paper constructs a multiple regression model (1) to study the direct impact of individual income tax reform on TFP to test hypotheses H1, H2, and H3; If the coefficient (μ1) of the variable (It) of the model is significant, we can believe that the impact of individual income tax reform on enterprise TFP is significant, so this paper mainly focuses on the coefficient (μ1).

$$TFP=\mu0+\mu1It+\mu2Siz+\mu3Lev+\mu4Gpm+\mu5Far+\mu6Idr+\mu7Esh+\mu8Ind+\mu9Reg+\varepsilon \quad (1)$$

V. ANALYSIS DESCRIPTIVE STATISTICS

The descriptive statistical results of the main variables are reported in Table 1-A. Table 1-A shows that the minimum (large) value of enterprises' TFP is 0.723 (5.78), and the average value is 3.56. There are great differences among enterprises. Table 1-B reports the univariate test results of the main observation variables: after the individual income tax reform, total factor productivity decreased significantly.

Table 1-A Descriptive statistics of main variables

Variable	N	mean	std	median	min	max
TFPlp	11404	3.556	0.723	3.472	2.005	5.775
TFPop	11404	3.564	0.722	3.481	2.014	5.781
Siz	11404	22.190	1.313	22.040	19.680	26.190
Lev	11404	0.413	0.206	0.399	0.059	0.929
Gpm	11404	0.306	0.179	0.275	0.009	0.862
Far	11404	0.199	0.157	0.166	0.002	0.691
Idr	11404	0.377	0.0530	0.364	0.333	0.571
Exsh	11404	0.0840	0.148	0.004	0	0.620

Table 1-B Univariate test results of main variables

	before		after		after-before	
Variables	Mean	Median	Mean	Median	difference of Mean (T-Test)	difference of Mean（Z Test）
TFP_{lp}	3.575	3.493	3.532	3.446	-0.043***（-3.193）	-0.047***（9.376）
TFP_{op}	3.584	3.502	3.540	3.456	-0.043***（-3.187）	-0.046***（9.376）

*Note：***、**、* is significant at the level of 1%, 5%, and 10%, respectively.*

VI. PRIMARY REGRESSION RESULTS

Considering the huge differences in the characteristics of different industries, enterprises in resource-intensive and capital-intensive industries usually have fewer human resources, while enterprises in labor-intensive industries have more human resources. The impact of individual income tax reform on the TFP of enterprises with more employees is more significant. This paper analyzes the industry heterogeneity of the impact of the individual income tax reform on TFP according to the primary

industries regulated in the industry classification guidelines for listed companies issued by the CSRC in 2012.

The regression results are shown in table 2-A and table 2-B. The regression coefficient of It in all models is significant, which means the industries in which the individual income tax reform has a significant impact on Enterprise TFP include manufacturing (C), information transmission, software, and information technology services (I), finance, and insurance (J), Leasing and business service industry (K), real estate industry (L), culture, sports, and entertainment industry (R). Among them, the regression coefficient of It in the model (3) is significantly -0.568 at the level of 5%, indicating that the individual income tax reform has played a role in inhibiting the improvement of TFP of banking enterprises, while the coefficients of It in the model (1), (2), (4), (5) and (6) are significantly positive, indicating individual income tax reform has promoted enterprises' TFP in manufacturing, information transmission, software, and information technology service industry, leasing and business service industry, real estate industry, culture, sports, and entertainment industry.

Table 2-A Regression results of the impact of individual income tax reform on TFP： Significant industry

	(1)	(2)	(3)	(4)	(5)	(6)
	C	I	J	K	L	R
VARIABLES	TFPlp	TFPlp	TFPlp	TFPlp	TFPlp	TFPlp
It	0.035***	0.084**	-0.568**	0.204**	0.196*	0.173**
	(2.845)	(2.095)	(-2.432)	(2.586)	(1.664)	(2.058)
Siz	0.197***	0.188***	-0.287**	0.169***	0.377***	0.101**
	(32.737)	(9.197)	(-2.514)	(4.983)	(6.929)	(2.127)
Lev	-0.186***	0.119	2.458***	0.347	-0.577*	0.577**
	(-4.792)	(0.936)	(2.919)	(1.208)	(-1.748)	(2.256)
Gpm	-1.195***	-1.514***	-0.488	-0.433*	-2.522***	-0.556
	(-29.500)	(-14.202)	(-1.044)	(-1.713)	(-7.828)	(-1.592)
Far	-0.131***	-1.209***	-3.409	-0.848	-0.047	-2.504***
	(-2.779)	(-5.880)	(-1.292)	(-1.167)	(-0.085)	(-5.483)
Idr	-0.399***	0.263	5.523	1.450**	3.482***	-0.403
	(-3.462)	(0.689)	(1.664)	(2.012)	(3.579)	(-0.438)
Esh	0.050	0.192	0.269	0.547	1.056**	0.972**
	(1.211)	(1.471)	(0.125)	(0.435)	(2.275)	(2.243)
Constant	-0.195	-0.443	6.082*	-0.275	-4.807***	1.690
	(-1.436)	(-0.941)	(1.942)	(-0.375)	(-4.034)	(1.565)
Observations	7,450	833	46	412	155	168
R-squared	0.264	0.318	0.396	0.178	0.472	0.258
r2_a	0.264	0.312	0.284	0.164	0.447	0.226
F	381.9	54.85	3.552	12.48	18.78	7.956

Table 2-B Regression results of the impact of individual income tax reform on total factor productivity：Significant industry

	(1)	(2)	(3)	(4)	(5)	(6)
	C	I	J	K	L	R
VARIABLES	TFPop	TFPop	TFPop	TFPop	TFPop	TFPop
It	0.035***	0.084**	-0.567**	0.204**	0.196*	0.173**
	(2.846)	(2.094)	(-2.432)	(2.585)	(1.664)	(2.059)
Siz	0.198***	0.189***	-0.286**	0.169***	0.378***	0.101**
	(32.847)	(9.227)	(-2.510)	(5.002)	(6.937)	(2.141)
Lev	-0.186***	0.119	2.456***	0.346	-0.578*	0.577**
	(-4.789)	(0.937)	(2.916)	(1.207)	(-1.751)	(2.256)
Gpm	-1.195***	-1.514***	-0.488	-0.434*	-2.523***	-0.558
	(-29.511)	(-14.212)	(-1.043)	(-1.717)	(-7.837)	(-1.598)
Far	-0.131***	-1.209***	-3.410	-0.848	-0.048	-2.501***
	(-2.775)	(-5.884)	(-1.292)	(-1.167)	(-0.087)	(-5.479)
Idr	-0.400***	0.263	5.520	1.446**	3.484***	-0.403
	(-3.465)	(0.690)	(1.664)	(2.009)	(3.585)	(-0.439)
Esh	0.050	0.192	0.267	0.549	1.055**	0.971**
	(1.210)	(1.472)	(0.123)	(0.438)	(2.275)	(2.242)
Constant	-0.199	-0.444	6.081*	-0.278	-4.801***	1.686
	(-1.466)	(-0.945)	(1.942)	(-0.379)	(-4.033)	(1.561)
Observations	7,450	833	46	412	155	168
R-squared	0.265	0.318	0.395	0.179	0.473	0.258
r2_a	0.264	0.312	0.284	0.164	0.448	0.226
F	383.6	54.99	3.547	12.55	18.82	7.954

Table 3-A and table 3-B show that regression coefficients of "It" in all models are insignificant, and the individual income tax reform has no significant impact on enterprises' TFP in these industries, including agriculture, forestry, animal husbandry, and fishery (A), mining (B), power, heat, gas and water production and supply (D), construction (E), wholesale and retail (F), transportation, warehousing and postal (G), accommodation and catering (H), scientific research and technical services (M), water conservancy Environmental and public facilities management (N), health and social work (Q), comprehensive industry (S).

VII. CONCLUSION

Individual income tax has the function of redistribution and can adjust the income gap of residents. The individual income tax reform implemented in 2019 raised the threshold of individual income tax, increased pre-tax deduction items, adjusted some tax rates, and affected residents' income. As an important part of residents, enterprise employees are bound to be affected by the individual income tax reform; the remuneration of labor is adjusted, which will inevitably change total factor productivity. Based on the data of A-share listed companies in Shanghai and Shenzhen, this paper empirically analyzes industry heterogeneity in the impact of individual income tax reform on enterprises' TFP. Empirical conclusions are as follows:

(1)Individual income tax reform has a significantly positive impact on enterprises' TFP in manufacturing, information transmission, software, and information technology services, finance and insurance, leasing and business services, real estate, culture, sports, and entertainment industry; (2) Individual income tax reform harms enterprises' TFP in the financial industry. (3) Individual income tax reform has no impact on enterprises' TFP in these industries, including agriculture, forestry, animal husbandry and fishery, mining, power, heat, gas and water production and supply, construction, wholesale and retail, transportation, warehousing and postal,

Table 3-A Regression results of the impact of individual income tax reform on total factor productivity：Insignificant industry

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	A	B	E	D	F	G	H	M	N	Q	S
VARIABLES	TFPlp	TFPlp	TFPlp	TFPlp	TFPlp	TFPlp	TFPlp	TFPlp	TFPlp	TFPlp	TFPlp
It	-0.025	0.110	-0.037	0.010	-0.037	0.016	-0.109	-0.067	-0.026	-0.024	-0.069
	(-0.307)	(1.079)	(-0.568)	(0.174)	(-0.709)	(0.225)	(-1.260)	(-0.993)	(-0.330)	(-0.204)	(-0.437)
Siz	0.197***	0.199***	0.072**	0.190***	0.202***	-0.019	0.260***	0.251***	0.246***	0.456***	0.270***
	(4.995)	(5.309)	(2.412)	(8.032)	(8.510)	(-0.655)	(6.907)	(5.565)	(5.433)	(4.102)	(3.189)
Lev	-0.242	0.471*	-0.014	-0.225	0.017	0.667***	-0.416	-0.284	-0.476*	0.117	1.821***
	(-1.198)	(1.768)	(-0.049)	(-1.199)	(0.106)	(2.893)	(-1.541)	(-1.040)	(-1.718)	(0.299)	(3.479)
Gpm	-0.650***	-0.253	-0.709**	-0.844***	-3.358***	-1.002***	-1.567***	-1.867***	-1.590***	-0.453	-1.939***
	(-2.948)	(-0.882)	(-2.112)	(-4.194)	(-15.768)	(-4.815)	(-5.467)	(-6.316)	(-5.729)	(-1.109)	(-4.176)
Far	-0.905***	-1.705***	-1.529***	0.251	-0.658***	-0.720***	-0.940*	-0.685**	-0.918***	1.708***	-1.904***
	(-3.460)	(-4.293)	(-3.427)	(1.600)	(-3.463)	(-4.153)	(-1.833)	(-2.217)	(-3.758)	(3.257)	(-2.961)
Idr	1.558*	0.453	0.099	0.222	0.301	0.565	0.127	-2.359***	0.512	-0.809	3.355**
	(1.966)	(0.496)	(0.196)	(0.348)	(0.556)	(0.733)	(0.165)	(-3.558)	(0.766)	(-0.815)	(2.159)
Esh	-0.105	-1.059	0.408	7.791***	0.375	2.463**	0.486	0.465*	0.554*	1.300***	-0.671
	(-0.341)	(-1.458)	(1.555)	(5.070)	(1.499)	(2.445)	(0.031)	(1.918)	(1.738)	(3.668)	(-0.320)
Constant	-0.921	-0.901	2.567***	-0.639	0.450	3.959***	-1.682**	-0.755	-1.366	-7.467***	-3.826*
	(-0.945)	(-1.013)	(4.175)	(-1.123)	(0.808)	(5.971)	(-2.256)	(-0.794)	(-1.444)	(-3.052)	(-1.935)
Observations	145	237	301	355	510	321	35	157	136	30	79
R-squared	0.242	0.204	0.098	0.228	0.525	0.192	0.700	0.469	0.480	0.623	0.458
r2_a	0.203	0.179	0.0760	0.212	0.519	0.174	0.622	0.444	0.451	0.503	0.404
F	6.251	8.362	4.526	14.64	79.33	10.65	9.005	18.78	16.86	5.190	8.565

Note: since the sample size is less than 30, residential service, repair and other service industry (O), and education industry (P) are deleted in this table, the same as table 8-b.

Table 3-B Regression results of the impact of individual income tax reform on total factor productivity：Insignificant industry

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	A	B	E	D	F	G	H	M	N	Q	S
VARIABLES	TFPop	TFPop	TFPop	TFPop	TFPop	TFPop	TFPop	TFPop	TFPop	TFPop	TFPop
It	-0.025	0.109	0.010	-0.037	-0.037	0.016	-0.109	-0.067	-0.026	-0.024	-0.069
	(-0.306)	(1.079)	(0.174)	(-0.567)	(-0.709)	(0.226)	(-1.261)	(-0.993)	(-0.331)	(-0.206)	(-0.437)
Siz	0.198***	0.200***	0.190***	0.073**	0.202***	-0.018	0.261***	0.251***	0.246***	0.457***	0.271***
	(5.014)	(5.329)	(8.056)	(2.437)	(8.537)	(-0.636)	(6.930)	(5.582)	(5.447)	(4.110)	(3.195)
Lev	-0.242	0.471*	-0.225	-0.013	0.017	0.666***	-0.417	-0.284	-0.476*	0.117	1.820***
	(-1.196)	(1.769)	(-1.201)	(-0.047)	(0.109)	(2.891)	(-1.547)	(-1.040)	(-1.719)	(0.301)	(3.481)
Gpm	-0.650***	-0.254	-0.846***	-0.710**	-3.355***	-1.004***	-1.567***	-1.867***	-1.590***	-0.453	-1.939***
	(-2.949)	(-0.887)	(-4.207)	(-2.114)	(-15.773)	(-4.830)	(-5.472)	(-6.323)	(-5.736)	(-1.110)	(-4.180)
Far	-0.904***	-1.703***	0.251	-1.529***	-0.656***	-0.720***	-0.942*	-0.686**	-0.916***	1.709***	-1.902***
	(-3.454)	(-4.290)	(1.601)	(-3.429)	(-3.459)	(-4.155)	(-1.839)	(-2.221)	(-3.754)	(3.260)	(-2.959)
Idr	1.559*	0.451	0.224	0.100	0.299	0.566	0.125	-2.358***	0.512	-0.806	3.352**
	(1.968)	(0.495)	(0.351)	(0.200)	(0.555)	(0.734)	(0.163)	(-3.561)	(0.766)	(-0.812)	(2.158)
Esh	-0.106	-1.061	7.792***	0.409	0.376	2.462**	0.503	0.464*	0.555*	1.300***	-0.674
	(-0.344)	(-1.461)	(5.073)	(1.556)	(1.504)	(2.445)	(0.032)	(1.919)	(1.742)	(3.670)	(-0.321)
Constant	-0.928	-0.906	-0.642	2.558***	0.448	3.956***	-1.686**	-0.757	-1.369	-7.474***	-3.825*

	(-0.953)	(-1.019)	(-1.128)	(4.163)	(0.805)	(5.970)	(-2.263)	(-0.798)	(-1.448)	(-3.056)	(-1.935)
Observations	145	237	355	301	510	321	35	157	136	30	79
R-squared	0.243	0.204	0.229	0.098	0.526	0.193	0.701	0.470	0.480	0.623	0.458
r2_a	0.204	0.180	0.213	0.0769	0.519	0.175	0.624	0.445	0.452	0.504	0.405
F	6.268	8.408	14.72	4.568	79.49	10.67	9.060	18.86	16.91	5.205	8.579

Accommodation and catering, scientific research and technical services, water conservancy, Environmental and public facilities management, health and social work, comprehensive industry.

In summary, it can be seen that the policy welfare of the individual income tax reform is mainly reflected in the improvement of TFP in manufacturing, information transmission, software and information technology services, finance and insurance, leasing and business services, real estate, culture, sports, and entertainment industry. The above conclusions evaluate the economic effect of individual income tax reform from the micro perspective of enterprises, enrich the literature on individual income tax reform and enterprise TFP, and provide empirical support and Enlightenment for improving the individual income tax system in the future.

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