

# The impact of VAT instead of the business tax on the financial performance of Listed Companies in Heilongjiang

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**Abstract:** This paper takes the listed companies in Heilongjiang Province from 2013 to 2016 as the research samples from the perspective of financial practitioners. Through empirical analysis of VAT instead of the business tax policy on the financial performance of Listed Companies in Heilongjiang Province changes, check the implementation effect of the policy. The impact of the policy on the company's financial performance is not significant. After the reform, the average level of real tax burden of turnover tax has not declined significantly.

## 1. Introduction

On May 1, 2016, the VAT instead of business tax in the financial industry, construction industry, real estate industry and life service industry. This is an important structural tax reduction policy, not only conducive to promoting the development of the tertiary industry, but also conducive to the adjustment of the industrial structure and the transformation of the mode of economic development. With the implementation of reform in various industries, the results and problems are gradually revealed. This paper selects listed companies in Heilongjiang Province as the research sample to analyze the related issues of financial performance of listed companies under this policy.

## 2. Research hypothesis

According to the regulations, the input tax of fixed assets newly purchased by enterprises which can be used for more than 12 months in connection with production and operation activities is allowed to be deducted. This will inevitably have an impact on the financial performance of some listed companies, but because Heilongjiang Province is not within the scope of the trial, the following assumptions are proposed:

**Hypothesis 1:** Business tax reform VAT Policy has no significant impact on the financial performance of Listed Companies in Heilongjiang.

**Hypothesis 2:** Business tax reform VAT Policy has a significant impact on the turnover tax burden of Listed Companies in Heilongjiang.

**Hypothesis 3:** There is a negative correlation between turnover tax burden and financial performance of Listed Companies in Heilongjiang.

**Hypothesis 4:** There is a positive correlation between the proportion of production cost to total operating cost and financial performance.

**Hypothesis 5:** There is a negative correlation between fixed assets turnover and financial performance.

## 3. Data sources and sample selection

### 3.1 Sources of data

The data needed in this paper come from Cathay Tai'an database (<http://www.gtarsc.com/p/sq/>) Tide information website (<http://www.cninfo.com.cn/>) and the annual reports of listed companies.

Using Excel office software and SPSS19.0 statistical software to process all data.

### 3.2 Sample selection

This article is classified according to the industry classification standard of the SFC in 2013. Analysis of the business tax reform VAT Policy influence of Heilongjiang listed company on corporate financial performance. In order to eliminate the influence of heterogeneous sample data on the conclusions of the study, the data were screened as follows:

- (1) Excluding a series of listed companies that are subjected to special treatment (ST).
- (2) Excluding a series of listed companies with incomplete financial data.

By screening the data of the annual and semi-annual reports from 2013 to 2016, 29 samples of Listed Companies in Heilongjiang Province in Shanghai and Shenzhen stock markets were obtained.

## 4. Research design

### 4.1 Variable selection and interpretation

Through the theoretical analysis of Chapter 4 and considering the availability of data, the research variables and specific meanings involved in this paper are shown in Table 1.

Table 1 Meaning table of research variables

Symbol	Meaning	Calculation formula	Variable type
ROE <sub>it</sub>	Net asset yield	Current net profit / average net assets	dependent variable
BTV	VAT instead of the business tax	0 indicates that before the implementation of business tax to VAT, 1 indicates that after the implement.	independent variable
CTR <sub>it</sub>	Actual tax rate of transfer tax	(VAT and business tax and additional) / total revenue	independent variable
MIR <sub>it</sub>	The deductible production cost accounts for the proportion of the total cost of business	(total operating cost - payable staff salaries) / total operating cost X 100%	independent variable
FAT <sub>it</sub>	Fixed assets turnover	Current operating income/Average balance of fixed assets	independent variable
LEV <sub>it</sub>	Company's asset liability ratio	Total liabilities / total assets	control variable
SIZE <sub>it</sub>	Enterprise scale	Natural logarithm of total capital production	control variable
GRP <sub>it</sub>	Gross interest rate	Gross profit / operating income x 100%	control variable
CR5 <sub>it</sub>	ownership structure	The number of the top five shareholders / the total share capital of the company	control variable

### 4.2 The construction of the model

In order to test the hypothesis in this paper, the following models are designed according to the relevant principles.

$$ROE_{it} = \alpha_0 + \beta_1 BTV + \beta_2 CTR_{it} + \beta_3 MIR_{it} + \beta_4 FAT_{it} + \beta_5 LEV_{it} + \beta_6 SIZE_{it} + \beta_7 CR5_{it} + \beta_8 GPR_{it} + \mu_{it}$$

Among them, *i* is the company, *t* represents the year, and  $\mu_{it}$  is residual.

## 5. Empirical analysis

### 5.1 Descriptive statistical analysis

This paper uses SPSS19.0 to make descriptive statistical analysis of the main variables. The results of the descriptive statistical analysis of the 2013-2016 year general samples are shown in Table 2, table 3, table 4, and table 5.

Table 2 2013 descriptive statistics for samples

	N	Minimum value	maximum value	mean value	standard deviation
Net asset yield	58	-0.282800	0.315100	0.029048	0.079926
Actual tax rate of transfer tax	58	-0.003900	0.763200	0.087588	0.121258
Main business cost account for total operating cost ratio	58	0.862200	1.000000	0.979038	0.026328
Fixed assets turnover	58	0.108700	123.808500	5.826307	17.321821
Asset liability ratio	58	0.137400	0.886900	0.485653	0.213068
Enterprise scale	58	8.788300	10.929500	9.564633	0.463329
Gross interest rate	58	-0.001500	0.771400	0.273712	0.200973
ownership structure	58	18.900000	75.960000	49.491897	15.364251
Effective N (list state)	58				

Table 3 2014 descriptive statistics for samples

	N	Minimum value	maximum value	mean value	standard deviation
Net asset yield	58	-1.925900	0.209500	-0.008540	0.291665
Actual tax rate of transfer tax	58	-0.010100	0.186700	0.059184	0.047684
Main business cost account for total operating cost ratio	58	0.861400	1.000000	0.975041	0.032868
Fixed assets turnover	58	0.009600	145.643000	5.917241	20.376507
Asset liability ratio	58	0.137800	0.996100	0.476731	0.218349
Enterprise scale	58	8.802800	11.035200	9.593890	0.480075
Gross interest rate	58	-0.160000	0.683100	0.290150	0.202023
ownership structure	58	19.410000	78.110000	48.242603	15.723931
Effective N (list state)	58				

Table 4 2015descriptive statistics for samples

	N	Minimum value	maximum value	mean value	standard deviation
Net asset yield	58	-18.841300	2.007400	-0.212379	2.514915
Actual tax rate of transfer tax	58	-0.052000	0.176900	0.064971	0.055389
Main business cost account for total operating cost ratio	58	0.773300	1.000000	0.976131	0.040858
Fixed assets turnover	58	0.136000	144.376600	6.600555	20.882662
Asset liability ratio	58	0.028200	1.360100	0.480636	0.279140
Enterprise scale	58	8.473700	11.183000	9.616190	0.539148
Gross interest rate	58	-0.165700	0.683800	0.277105	0.208345
ownership structure	58	18.280000	80.990000	48.415172	15.165663
Effective N (list state)	58				

Table5 2016 descriptive statistics for samples

	N	Minimum value	maximum value	mean value	standard deviation
Net asset yield	58	-0.234400	0.306500	0.054397	0.073318
Actual tax rate of transfer tax	58	-0.008000	0.229000	0.061766	0.052701
Main business cost account for total operating cost ratio	58	0.749300	1.000000	0.970959	0.044592
Fixed assets turnover	58	0.128400	163.659400	7.922671	23.994608
Asset liability ratio	58	0.146900	1.442500	0.475884	0.240473
Enterprise scale	58	8.566200	11.203900	9.727214	0.552552
Gross interest rate	58	-0.149300	0.792300	0.275567	0.198620
ownership structure	58	20.050000	83.540000	51.337241	14.550687
Effective N (list state)	58				

From the descriptive statistics in the above table, we can find the overall statistics of 29 samples from 2013 to 2016.

From the perspective of return on net assets, the average return on net assets in 2013-2016 are 0.079179, 0.029048, -0.008540, -0.212379 and 0.054397, respectively. From 2013 to 2015, the trend was decreasing year by year, and it increased rapidly in 2016. With the implementation of business tax reform VAT Policy, the financial performance of Listed Companies in Heilongjiang has increased slightly.

From the perspective of fixed asset turnover rate, the average fixed asset turnover rate from 2013 to 2016 is 7.844328, 5.826307, 5.917241, 6.600555 and 7.922671 respectively. On the whole, it has been increasing year by year since 2013. The statistical results show that the new fixed assets investment of Listed Companies in Heilongjiang Province did not increase significantly before and after the reform.

## 5.2 Complete sample regression analysis

In order to study the effect of VAT on the financial performance of the pilot listed companies of the traffic and transportation industry, this paper returns all the related financial data of the 29 sample enterprises in 2013-2016 and a half year and the year, and the results are shown in table 6 as follows.

Table 6 the return of VAT instead of business tax on the financial performance of Heilongjiang listed companies

Model	Non standardized coefficient		Standard coefficient		
	B	Standard error	Beta	t	Sig.
(constant)	-1.586848	3.065966		-0.517569	0.605213
VAT on business tax	0.047303	0.180111	0.016535	0.262634	0.793048
Actual tax rate of transfer tax	-0.579669	1.073092	-0.036435	-0.540186	0.589546
Main business cost account for total operating cost ratio	-0.352849	2.291909	-0.010421	-0.153954	0.877769
Fixed assets turnover	0.000316	0.003880	0.005372	0.153954	0.935241
Asset liability ratio	0.000990	0.017528	0.003601	0.056485	0.955000
Enterprise scale	0.185183	0.157080	0.078567	1.178910	0.239546
Gross interest rate	-0.451303	0.408880	-0.076012	-1.103755	0.270752
ownership structure	0.005812	0.005061	0.073699	1.148312	0.251929

## 6. Conclusion

In this paper, the object of this study is listed companies in Heilongjiang Province in 2013-2016 years. By proposing assumptions and building models. This paper analyzes the specific impact on financial performance of Listed Companies in Heilongjiang Province, including the change of actual tax rate, the deduction effect of production cost and the turnover rate of fixed assets. The conclusions are as follows:

(1) Business tax is converted to VAT has no significant impact on the financial performance of Listed Companies in Heilongjiang. The standardized regression coefficient of the company's net assets yield is 0.016535. The P value is 0.793048. It does not pass the significant test.

(2) There is a negative correlation between the actual tax rate of the circulation tax and the financial performance of the listed companies in Heilongjiang, but the actual tax rate does not have a significant impact on the corporate financial performance after the policy. According to the results of the regression, the influence coefficient of the two is -0.010421. The P value is 0.589546, and it has not passed the significant test. Because the implementation of the policy is not long.

(3) There is a positive correlation between the fixed assets turnover rate and the corporate financial performance of the listed companies in Heilongjiang. But the effect of the fixed assets tax deduction on the corporate financial performance is not significant. According to the regression results, the influence coefficient of the fixed assets turnover rate on the financial performance of the enterprises is 0.005372, it shows a positive correlation. But the P value is 0.935241. Significance test did not pass. It shows that the financial performance is not significantly affected by the tax deduction effect of newly added fixed assets investment.

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