

Original Research Article

Tax Cuts and Fee Reductions and Labor Demand of SMEs

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Abstract: Policies to cut taxes and fees are important means to deal with the economic downturn, which strongly support to the development of the majority of small and medium-sized enterprises (SMEs). The current study has no consistent conclusion of whether SMEs expand their labor demand because of this. This paper builds a structural vector autoregressive (VAR) model to analyze the dynamic effects of tax cuts and fee reduction policies on increasing labor demand for SMEs. The empirical results show that tax cuts and fee reductions are important causes of short-term employment fluctuations, but in the long run, it is difficult for taxation policies to have a direct positive effect on employment. Therefore, this article puts forward the idea that different tax incentives can be formulated for small and medium-sized enterprises in the short term according to their life cycles. In the long run, the focus of macro-control needs to be turned to supply management to achieve the goal of stable employment.

Keywords: Tax Reduction and Fee Reduction; Corporate Comprehensive Tax Burden Rate; Structural Vector Autoregressive Model; SMEs

1. Introduction

SMEs account for half of urban employment, but the "small, scattered, chaotic" characteristics of SMEs have prevented them from maintaining stable labor demand when facing economic downturn. There are many policies to promote the development of SMEs, and taxation policies have become an important means of coping with the economic downturn. The efforts to reduce the value-added tax and corporate income tax burden have become stronger. At the same time, the contribution rate of basic pension insurance units for urban employees has been reduced and some special funds have been halved, whose purpose is to deliver the dividends of reform to enterprises and people in a timely manner, and to improve the level of social investment, employment, and social welfare.

Can the policy of tax and fee reductions play a role in promoting SMEs to expand jobs and achieve the government's goal of "stabilizing employment"? The current study has no consistent conclusions. Theoretically, tax cuts and fees will help reduce the cost of capital for enterprises. The scale effect allows enterprises to expand production scale and jobs, while the substitution effect causes enterprises to increase capital investment and reduce jobs. However, most of China's small and medium-sized enterprises are labor-intensive enterprises. When the substitution effect is smaller than the scale effect, a certain tax incentive is given, which has the effect of increasing labor demand^[1-4]. In addition, the reduction of social security rates will directly reduce the labor cost of enterprises, and provide the possibility for the safety of the capital chain and the expansion of employment^[5]. There is also literature believing that the effect of tax cuts and fee reductions on increasing labor demand is uncertain from an empirical perspective. Chen Yongwei and Xu Donglin (2011)^[6] use VAR to prove that the tax relief policy is difficult to induce companies seeking to

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"reduce employees and increase efficiency" to increase jobs. Xue Fengzhen (2014)^[7] analyzed the impact of corporate income tax burden on employment from 2001 to 2009 in non-listed companies in the industrial industry, and found that with the increase of corporate tax burden, the number of employed people showed an upward trend. This is because most of the small and medium-sized enterprises in China have low production and operation levels, and their tax burdens are not high. Even with greater tax cuts, the marginal benefits of reduced corporate income tax cannot increase labor demand. After the tax burden is increased, the enterprise will maintain the original profit by increasing labor employment and expanding production and operation, thus increasing the demand for labor. The literature at the current stage only elaborates that tax cuts and fee reductions play a positive role in the expansion of jobs for SMEs from the perspective of qualitative analysis, but few literatures have applied data from recent years to obtain support from empirical results.

2. Model building and data processing

This paper adopts the vector autoregressive (VAR) model, which can more clearly explain the short-term response effect of tax and fee reduction policies on employment shocks. This article takes the small and medium-sized board enterprises in Shenzhen Stock Exchange from 2014 to 2018 as the research objects, and randomly samples 303 companies to investigate the impact of the annual corporate comprehensive tax burden rate on the employment of small and medium-sized board enterprises. This article refers to Feng Yanchao^[8] and Cui Jiujiu^[9] to measure the actual tax burden of a company by using the corporate comprehensive tax burden rate (compre) as an independent variable.

$$\text{corporate comprehensive tax burden rate (compre)} = \frac{\text{Annual paid taxes}}{\text{Annual operating income}} * 100\%$$

This indicator considers not only the income tax preference, but also the impact of VAT as the main tax type in China. The labor demand of an enterprise can be regarded as the total number of active employees. Because the independent variable is selected in the form of time relative number, the dependent variable adopts the relative number of staff growth rate (staff).

The VAR model is constructed according to the selected indicators as follows:

$$\text{staff}_t = A_0 + A_1\text{compre}_{t-1} + A_2\text{compre}_{t-2} + \dots + A_p\text{compre}_{t-p} + B_1\text{staff}_{t-1} + \dots + B_q\text{staff}_{t-p} + ut$$

3. Empirical results and analysis of the impact of tax and fee reduction on labor demand

Since this paper uses panel data with a small-time span, unit root tests are not performed on the two variables. Judging by the information criteria of AIC, BIC and QIC, this paper determines the VAR lag order as **Table 1**.

Lag	MBIC	MAIC	MQIC
1	-40.25174*	-10.54187*	-22.42784*
2	-12.78286	2.072073	-3.870907

Table 1. Calculated results of lag order. * indicates that under this standard, the corresponding lag order is optimal.

After the VAR model is established, the stability of the model needs to be checked. When the reciprocal of all the characteristic roots is within the unit circle, the VAR model of the effect of tax reduction and fee reduction policies on the labor demand of SMEs is stable. The stability test results show that the reciprocal of the two characteristic roots are 0.541 and 0.021 respectively, and all the points are within the unit circle, so the VAR model is robust and the estimated results obtained are valid.

To explore whether the tax reduction and fee reduction policies affect the labor demand of small and medium-sized board companies, Granger causality test is needed to verify the causal relationship between the two. That is to test whether the comprehensive tax burden rate of enterprises lags by one order to explain the employment growth rate. At a 95% confidence interval, the causality test rejects the assumption that "corporate comprehensive tax burden

rate is not the Granger cause of staff". Explain that changes in taxes and fees are Granger's reasons for changes in labor demand. This proves that China's tax reduction and fee reduction policies have a certain role in promoting the expansion of SMEs employment.

Lag	Granger causality	p-value	Test result
1	The independent variable is the cause of the change of the dependent variable	0.044	Refuse
1	The dependent variable is the cause of the change of the independent variable	0.523	Accept

Table 2. Results of Granger causality test

Next, this paper will study the dynamic effect of the tax reduction and fee reduction policy on the labor demand of SMEs. The following figure shows the dynamic response of labor demand to the tax and shock impact of 1 unit. In the figure, the horizontal axis is the number of lag periods (years) in which the shock occurs, and the vertical axis is the degree of response of the variable. The impact of taxes and fees on a standard unit, such as the implementation of tax reduction and fee reduction policies, will have a positive impact on the demand for small and medium labor, that is promoting employment. And this positive effect peaked in the second period, and then converged to 0. In the short term, the tax policy has a greater impact on employment, but when the forecast period exceeds 5 years, the policy effect is not obvious.

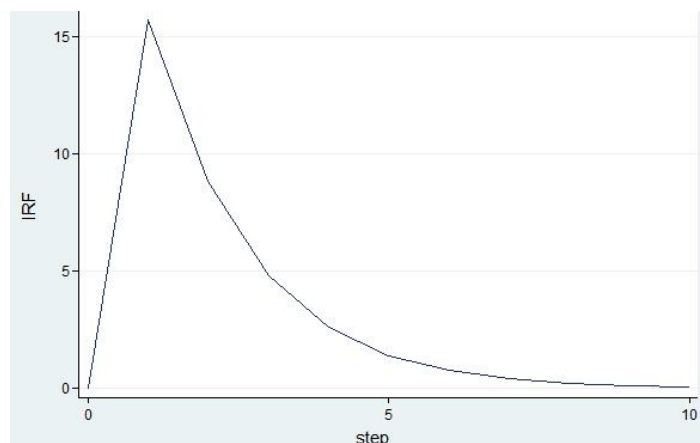


Figure 1. The pulse response graph of the increase in labor demand versus changes in taxes and fees.

Table 3 lists the results of tax and employment variance decomposition. As the forecast period is extended, the impact of labor demand on taxation has gradually increased. This is because employment will bring economic growth, and the expansion of the tax base will increase tax revenue. But this trend is no longer obvious after the fifth period, and the comparison value of the influence of both sides is 96.56% : 3.44%. It shows that the root cause of tax fluctuations lies in the regulation of national tax policies, so it is reasonable to treat tax policies as exogenous variables in this article. On the other hand, tax reduction and fee reduction policies are an important factor leading to fluctuations in labor demand. The impact of tax and fee reduction policies on labor demand has increased year by year. And in the eighth period, its influence reached a peak of 26.60%. It shows that in the short term, labor demand and even employment are significantly affected by tax policies. This result indicates that the preferential tax policies for short-term SMEs are conducive to encouraging enterprises to expand production scale and increase employment. In the long run, the effect of taxation policies is declining. The government should promote economic growth from the perspective of creating a good business environment and cultivating innovative enterprises, and achieve the purpose of expanding employment.

Period	Taxes		Employment	
	Compre	Staff	Compre	Staff
1	97.04	2.96	0	1
2	96.67	3.33	20.11	79.89
3	96.59	3.41	24.81	75.19
4	96.57	3.43	26.09	73.91
5	96.56	3.44	26.45	73.55
6	96.56	3.44	26.56	73.44
7	96.56	3.44	26.59	73.41
8	96.56	3.44	26.60	73.40
9	96.56	3.44	26.60	73.40
10	96.56	3.44	26.60	73.40

Table 3. Variance decomposition of taxes and employment

4. Conclusion

In the critical period of transformation of economic growth mode and acceleration of economic structure adjustment, "stable employment" is placed in a more prominent position as the first of six stables. It guarantees that residents have enough purchasing power and releases economically favorable expectations to society. This paper selects the small and medium-sized board enterprises of Shenzhen Stock Exchange as the research object from 2014 to 2018, and examines the impact of the relationship between tax policies and labor demand of enterprises. Policy thinking and suggestions are as follows:

First, tax and fee reduction policies make the substitution effect of SME capital on labor less than the income effect. In the short term, tax policies significantly affect the labor demand of SMEs. In the long run, although tax cuts and fees can promote SMEs to expand jobs to a certain extent, the correlation between the two is not high. Therefore, tax policy can be used as a tool to stimulate SMEs to achieve stable employment in the short term, while long-term macro-control should focus on supply management.

Second, most of China's small and medium-sized enterprises are labor-intensive enterprises, so supporting them has an important role in driving economic growth and expanding employment. However, it is necessary to formulate scientific tax preferential policies based on the different life cycles of the industry. For small and medium-sized enterprises in the start-up period, tax exemption can be granted to provide more employment opportunities. For enterprises in the growth stage, different preferential policies can be formulated according to the development speed and scale, to further exert the ability to absorb employment. Enterprises in recession period should be given appropriate tax subsidies because of inclusive reduction and exemption policies, which helps to enhance the confidence of enterprises to do business and reduce the proportion of SMEs withdrawing from the market to stabilize employment.

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