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# The Modeling of Shares and Middle Parameter of the Best Condition in Stock Market on Economics

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## Abstract

It is found when the best capital is 4.85 the number of shares are 50 thousand with the intersection of 5 RMB which is turnover point in the Pl & Pk=10,000 &10,000. When the best capital is 1RMB the best quantity will be 55 thousand shares with labor being 0.574. The value is 34 thousand with laobr being 0.574 too. Meantime the biggest total share will happen which attains from 2,000 to 16,000 thousand when the total cost is 250,000Yuan. It is higher than that of 100,000 Yuan. The smallest shares cost will be 4,000 Yuan in the condition of labor with low Pk=800. It is observed that it is higher than low Pk respectively. For example, Pk= 10,000 is higher value than 200.

**Keywords:** Modeling; Middle investment; Shares; Stock market; Economics; Middle parameter

## Introduction

The investment and shares are a behaviour with investing much money and requiring revenue from investment and shares in stock market. This process includes buy and sale shares in order to form the profile of shares, so it is a process which completes these two functions in whole process. The profit is calculated through revenue and shares which is an important factor in this process. In this paper the revenue has been computed and drawn from their relationship with cost. The revenue and AC, AVC &AFC which is shares is investigated for searching their change in these processes. For the better benefit it must be studied further it can gain the profit use. Since the stability is key as for this procedure. How we can define stable and low-cost parameter is significant matter. For the inference the different drawing between profit cost and quantity is made to analyse the change and low cost situation in this study. The constant labor L & capital K is defined to fit to cost value for this process [1-3]. The least total cost has an important role with the quantity & labor. Because the least one is evaluate the cost per labor under the best labor and capital on economics. If the cost is big, it will increase cost burden. Only if the least cost can decrease the cost price and the reasonable choose may be used in determining the total cost [4,5]. Because of its availability it may be chosen for other factor such as the random price promotion. In this paper the revenue is adopted from higher value to check the piece and the cost value. So as to higher revenue the low cost value and low pieces is necessary. For the sake of the least total cost the best labor and capital has been established firstly and then determined the least total cost equation with quantity and labor [6-8]. In the study the detail research has been completed with low investment of 1000 shares Now we discuss the detailed search with high investment of 100,000 in this paper. We looke forwards to finding moe resonable one by this study. Through parameters of shares and cost the destination with low cost and the least cost will be hoped to find.

## Modeling and Discussions

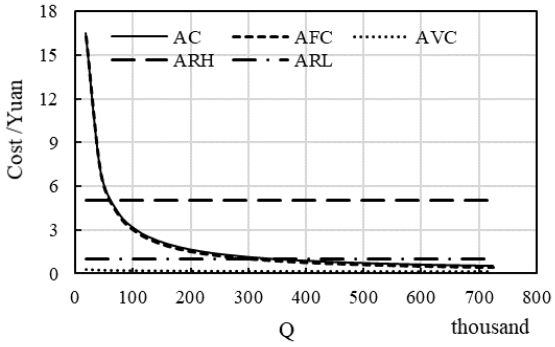
The Investment and shares has been established according to modelling with economic equations that has a certain role in stock market. So Cobb-Douglas function is used to complete the

modelling. The detail establishment and modeling is as related literature.

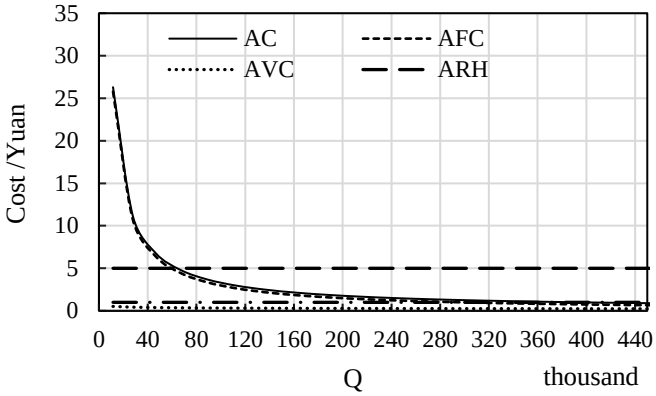
The Cobb-Douglas function is

$$Q = \gamma L^{\alpha} K^{\beta} \quad (1)$$

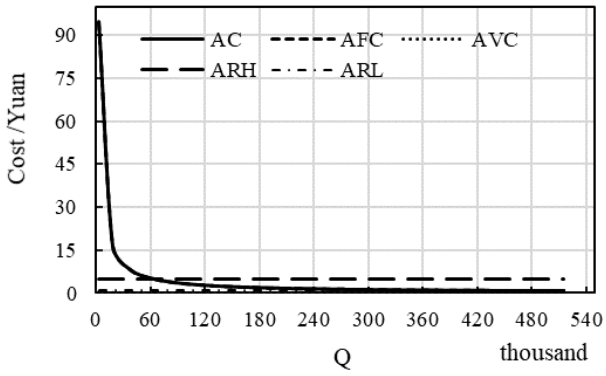
Here Production quantity Q; γ is technique coefficient; α is producing labor; β is capital elasticity. K is capital; L is labour; AFC is average fixed cost; AVC is average variable cost; AR is the average revenue; TR is total revenue. The calculated constant is γ=106086; α=1.25; β=-0.2 respectively. The parameter Pl is labor price and Pk is capital price. They are from 20,000 to 30,000 and from 30,000 to 80,000 Yuan respectively. Turnover is in terms of 5Yuan per share and Q is piece of shares. Table 1 shows the parameter of constant value with labor and capital & quantity. It is chosen that 10groups value to acquire average ones. The detail narration is expressed as below. TP is the total product and AP is the average product. MPK is capital marginal product and MPL is labor marginal product in this study (Table 1) (Figure 1).



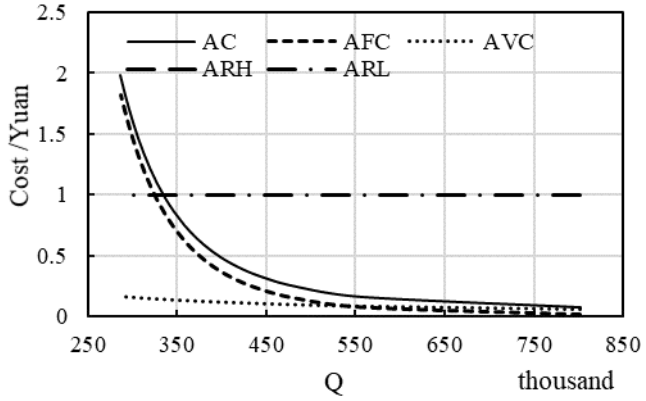

*(a) K=29; Pl&Pk=10,000&10,000.*



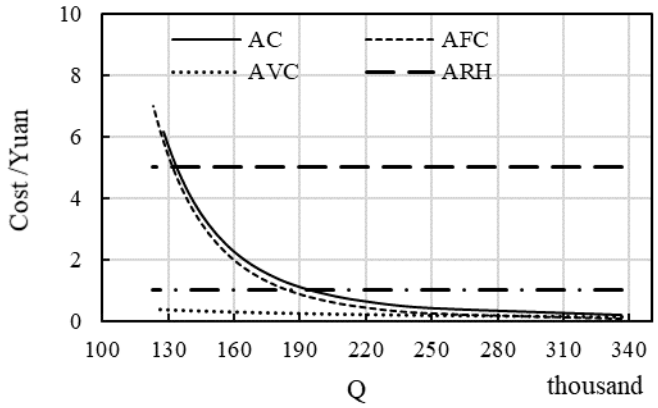

*(b) K=14; Pl&Pk=20,000&20,000.*



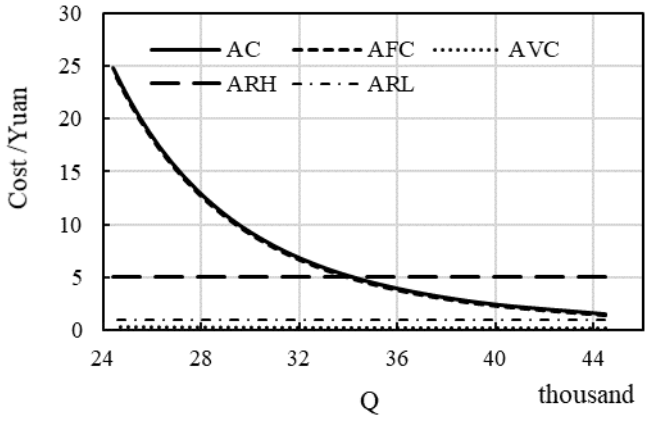

*(c) K=9; Pl&Pk=10,000&30,000*




*(d) L=5; Pl&Pk=10,000&10,000*

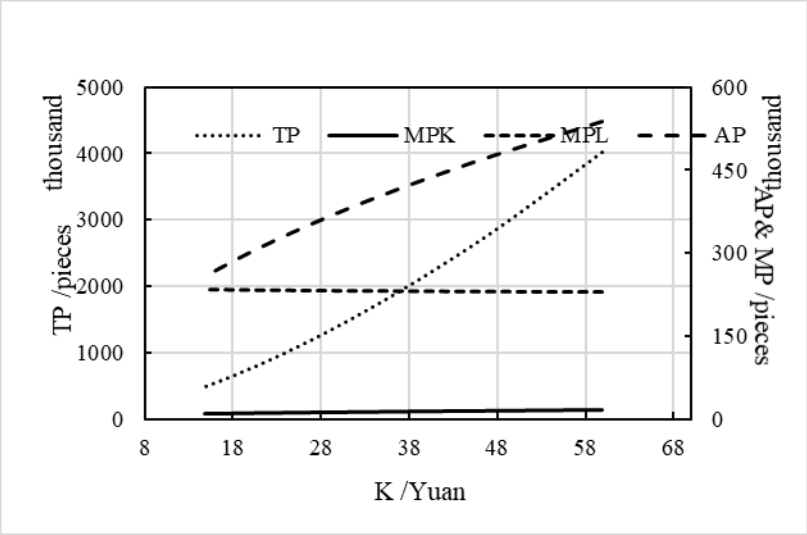



*(e) L=2; Pl&Pk=20,000&20,000*

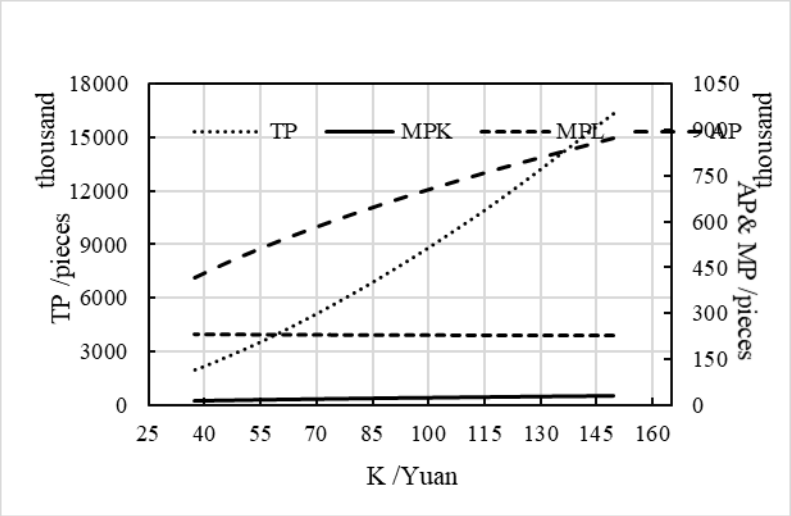



*(f) L=0.6; Pl&Pk=10,000&30,000*

***Figure 1:*** *The relationship between cost and number of shares according to different conditions.*

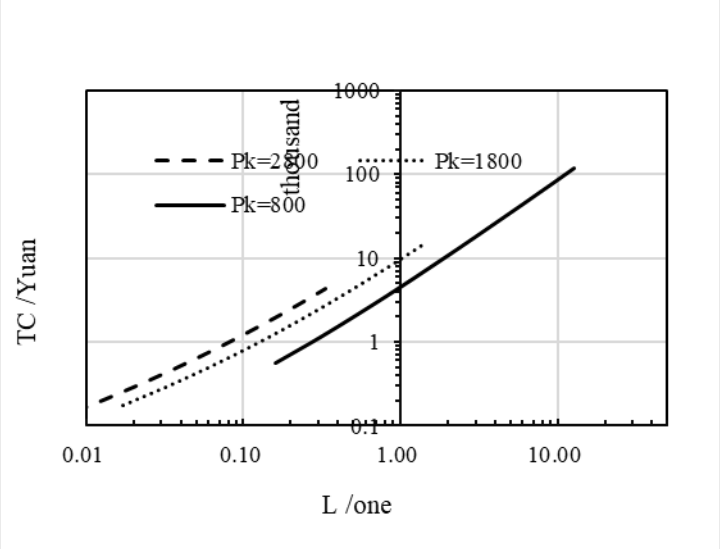



*(a) K; TC=100,000*

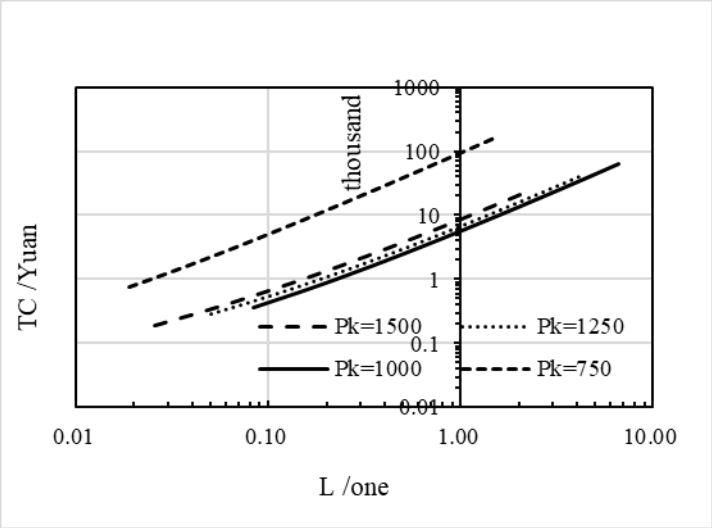



*(b) K; TC=250,000*

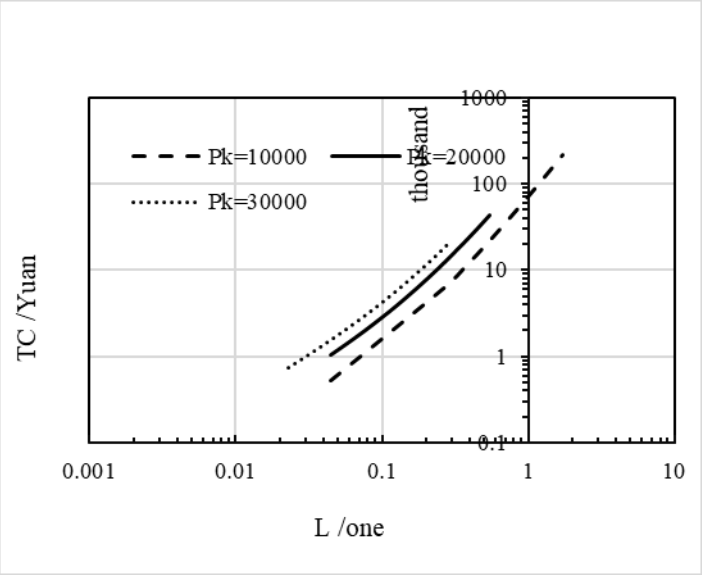
***Figure 2:*** *The relationship between maximum &marginal production and number of capital and labor.*




*(a) Pk=800~2800 Yuan*




*(b) Pk=750~1500 Yuan*




*(c) Pk=10,000~30,000 Yuan*

***Figure 3:*** *The minimum cost with labor quantity and 100,000 pieces under different Pk.*

***Table 1:*** *The conditions of original parameters and coefficient.*

| Parameters No. | l | K | Q | α | β | γ |
|---|---|---|---|---|---|---|
| 1 | 0.1 | 0.1 | 10，000 | - | - | - |
| 2 | 0.2 | 0.2 | 20，000 | - | - | - |
| 3 | 0.3 | 0.3 | 30，000 | 1.69 | -0.41 | 141391 |
| 4 | 0.4 | 0.4 | 40，000 | 1.41 | -0.29 | 111396 |
| 5 | 0.5 | 0.5 | 50，000 | 1.29 | -0.22 | 104575 |
| 6 | 0.6 | 0.6 | 60，000 | 1.22 | -0.18 | 102107 |
| 7 | 0.7 | 0.7 | 70，000 | 1.18 | -0.15 | 101010 |
| 8 | 0.8 | 0.8 | 80，000 | 1.15 | -0.13 | 100461 |
| 9 | 0.9 | 0.9 | 90，000 | 1.13 | -0.12 | 100166 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 10 | 1 | 1 | 100，000 | 1.12 | -0.11 | 100000 |
| 11 | 1.1 | 1.1 | 110,000 | 1.11 | -0.10 | 99904 |
| 12 | 1.2 | 1.2 | 120,000 | 1.10 | -0.09 | 99849 |
| Average | - | - | - | 1.24 | -0.18 | 106086 |

As seen in Figure 1(a~c) the 50 thousand is the turnover point with 5RMB and 380 & 220 thousand is the turnover with 1RMB in the capital K=29.99 and 14.9 respectively. Here it expresses that the lowest quantity is 50 thousand with Pl=10,000 and Pk=10,000. It is best investment quantity share in this paper because more than 50 thousand it will be profitable with less money investment. Meantime in Figure 1(d~f) 34 thousand is the one which has been lowest intersection with 5RMB in the labor L=0.574 and 65 thousand is the lowest one with 1RMB in this case. So the 65 thousand is the idealist investment money here with Pl=10,000 and Pk=30,000 for in this study. The prior turn is 1RMB>5RMB for less money being needed (Figure 2).

As seen in Figure 2 with TC=100,000 Yuan and 250,000 Yuan TP, AP, MPk & MPl change when the capital K changes from 17 to 58 and from 28 to 147 respectively. From Figure 2 the best total shares will increase when the K increases from above one. It is under parameter with Pl=1000~4030 and Pk=1670~6730. The average shares will increase too from 450 to 800 thousand too while capital increases. The best shares lie in from 500~4,000 thousand to 2,000~16,000Yuan in these two cases. It explains that the increasing capital will increase the revenue. When the price of labor and capital increase the maximum number of shares will increase. It ranges from 2,000 thousand to 16,000 thousand shares when capital ranges from 28 to 147 in Figure 2. It expresses that increasing the price will cause maximum shares increase. MPL maintains 200 thousand level meanwhile MPK stays 20 thousand. In Figure 2(a & b) the total TP and AP will evidently increase in TC to be 100,000 and 250,000. the TP ranges from 500~4,000 thousand to 2000~16,000 thousand and AP changes from 280~500 thousand to 450~800 thousand respectively in the two cases (Figure 3).

In Figure 3 with Pk=800 the total cost TC has been 4 thousand and 7 thousand Yuan with Pk=1000. As seen in Figure 3 the TC will increase from 80 thousand, 150 thousand to 200 thousand from Pk=10,000, 20,000 to 300,000 with labor one. The 80 thousand is the least one with Pk=10,000. Therefore, the total cost TC with Pk=800 will be the least value of 4 thousand Yuan in this study which represents the less investment money with 4 thousand profited from investment stock market. The biggest TC attains 15,000, 100,000 and 200,000 with Pk=2800, 1500 and 10,000 respectively. The 15,000 Yuan will be least investment money with Pk to be 2800 among these three Pk value. The middle ones as following 12,000, 10,000 and 150,000 when the Pk attains 1800,1250 and 20,000. Between them when Pk to be 1250 the value of 10,000 is the least total cost from the chart here. Pl as a parameter in this study is supposed an arrangement like the original one. So, there is uncertain results which needs to be resolved destination in studying least total cost with the capital and labor in economics. It involves in the large calculation and experimental data to solve its precisive and creditable problem for further research.

## Conclusions

It is found when the best capital is 4.85 the number of shares is 50 thousand with the intersection of 5 RMB which is turnover point in the Pl & Pk=10,000 &10,000. When the best capital is 1RMB the best quantity will be 55 thousand shares with labor being 0.574. The value is 34 thousand with labor being 0.574 too. Meantime the biggest total share will happen which attains from 2,000 to 16,000 thousand when the total cost is 250,000Yuan. It is higher than that of 100,000 Yuan. The smallest shares cost will be 4,000 Yuan in the condition of labor with low Pk=800. It is observed that it is higher than low Pk respectively. For example, Pk= 10,000 is higher value than 200.

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