

An Empirical Analysis of Labor Cost and Smes' Willingness to Invest in Innovation

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Abstract: *The level of labor cost is the key to the innovation and development of small and medium-sized enterprises. In order to further locate the relationship between the two, an empirical analysis of labor cost and innovation investment intention of small and medium-sized enterprises is carried out. Taking the small and medium-sized enterprises as the research object, this paper investigates the labor cost of the employees in the enterprises, selects the effective employee information, and obtains the sample data. By setting independent variables and dependent variables, the structural equation model of SMEs' innovation investment intention is constructed. At the same time, based on SEM model, this paper tests the impact of labor cost on innovation investment intention from two aspects of internal and external factors. By using the multiple regression method, this paper analyzes the innovation investment intention of small and medium-sized enterprises, and completes the research on labor cost and innovation investment intention of small and medium-sized enterprises.*

Keywords: *Labor cost, Small and medium-sized enterprises, Willingness of innovation investment, Empirical analysis*

1. Introduction

Labor is a key factor to support the social development of enterprises, and the research on labor cost has always been the focus of the financial department of enterprises. Specifically, it refers to the direct expenses paid by enterprises in the society by employing labor and social workers through diversified means, which will be directly included in the enterprise production and social development cost Ben. Therefore, the research on the relationship between the input of production factors and labor cost belongs to the work content of enterprise accounting system [1]. Based on the analysis of social macro development level, labor cost is consistent with the overall goal of enterprise's external development, which also belongs to external rigid constraints. But for small and medium-sized enterprises, if they invest too much labor cost resources, it will easily lead to too high basic production cost, and even break the basic capital distribution chain. Therefore, this paper will analyze from the perspective of labor cost, study the relationship between this aspect and SMEs' willingness to invest in social development and production, and give the final research results based on the theoretical level through empirical research.

2. An Empirical Analysis of Labor Cost and Smes' Willingness to Invest in Innovation

2.1 Get Sample Data

The sample data of enterprise labor force obtained in this chapter mainly adopts the method of field survey by the market research group, selects a small enterprise as the research object, and conducts a labor cost survey on the employees in the enterprise [2]. After relevant analysis, 300 valid employee data are selected. The effective research data include the characteristic cost of employees in small and medium-sized enterprises, that is, the employment cost difference of different positions; cognitive labor cost, that is, the basic wage of labor force employed by enterprises, the performance bonus provided by enterprises to workers, social provident fund, welfare benefits, etc.

After obtaining the preliminary data, we use eviews8.0 software to continue the regression analysis of the sample data to prove that the sample data results are effective and true.

2.2 Constructing the Structural Equation Model of Smes' Innovation Input Willingness

After positioning and obtaining the sample data, this paper will integrate the current development and construction status of small and medium-sized enterprises in the market, combined with the scale and social share of small and medium-sized enterprises, extract the labor force characteristics of their internal employees [3]. Among them, the main contents of the model include the individual work behavior of employees in small and medium-sized enterprises, employees' cognition of innovation investment intention, employees' initiative to participate in innovation activities, the behavior characteristics of employees in innovation investment, and the impact of the new national economic development policies on the innovation of small and medium-sized enterprises [4]. Based on the above-mentioned factors, we can take the satisfaction of SMEs' innovation investment intention as the dependent variable of this structural equation model, and the individual characteristics (employee gender, employee age, employee name, etc.) and cognitive characteristics (SME employees' attention to enterprise innovation development, employees' attitude to innovation development) of SMEs participate in the whole innovation investment. The independent variables include the degree of understanding of relevant policies, the characteristics of reform (the duration of innovation behavior, the content of enterprise innovation, etc.). Based on the above independent variables and dependent variables, this paper constructs the structural equation model of SMEs' innovation investment willingness as shown in formula (1)

$$Y_t = \beta_0 + \beta_1\chi_{t1} + \beta_2\chi_{t2} + \dots + \beta_j\chi_{tj} + \mu_t \quad (1)$$

In formula (1): Y_t is the satisfaction degree of employees after innovation and reform of small and medium-sized enterprises; t is the number of employees, where t is $t=1,2,3,\dots,n$; β_0 is the regression coefficient of the equation; j is the corresponding value of specific influencing factors; χ_{tj} is a series of independent variables proposed above, which is the j factor in the t sample, and μ_t is the random error term. According to the above formula (1), we can get the satisfaction degree of SMEs' labor cost after innovation, and then quantify the structure of SMEs' innovation investment intention.

2.3 The Effect of Labor Cost on Innovation Input Willingness Based on Sem Model

Based on the structural equation model of SMEs' innovation input willingness, from the overall response of SMEs, the rise of minimum wage has a relatively large impact on the cost of some SMEs, and will gradually affect the subsequent innovation input willingness [5]. Considering that in the process of the development of small and medium-sized enterprises, the labor cost of employees is composed of a variety of different factors, and each factor will have mutual influence, so combined with the structural equation model, the assignment of each variable factor is realized, as shown in Table 1.

Table 1 Evaluation Table of the Impact Degree of Smes' Innovation Input Willingness

Variable	Serial number	Name (symbol)	assignment
Internal cause	1	Willingness to invest (INS)	Ordered Variable
	2	Wage growth rate (GWA)	Numerical variable
	3	Profit growth rate (CPM)	Numerical variable
External cause	3	Talent shortage (TAL)	Ordered Variable
	1	Industry competition (Inc)	Ordered Variable
	2	GDP per capita (QRD)	Numerical variable

In Table 1, the order variables of the impact degree of SMEs' innovation investment intention are from 1 to 9. According to the assignment in Table 1, this paper makes a quantitative test on the impact of labor cost on innovation input willingness. In the actual test process, because the government and relevant departments for small and medium-sized enterprises innovation support is mostly carried out after the event, and its strength is relatively small. Therefore, when considering the external factors, the support from the government and relevant departments can be ignored. Through a variety of observable exogenous variables, we can further test the willingness of SMEs to invest in innovation.

2.4 Using Multiple Regression to Analyze Smes' Innovation Investment Intention

After the completion of the impact test of labor cost on innovation input willingness, for labor-intensive enterprises, the minimum wage is the most important factor affecting their labor cost.

Through the use of multiple regression, the correlation coefficient is more significant in the whole sample. Therefore, this phenomenon can further explain that the minimum wage for labor-intensive small and medium-sized enterprises will cause more serious impact on their labor costs.

Through the above model, the fitting degree of each influencing factor is calculated. According to the fitting degree, the correlation order of independent variables and control variables is judged. The main reason is that in this type of small and medium-sized enterprises, the wages of employees are relatively high, and the standard of minimum wage is raised, so the direct or indirect impact is small, so as to complete the relationship between labor costs and small and medium-sized enterprises Empirical analysis of enterprise innovation investment willingness.

3. Conclusion

This paper makes an empirical study on the relationship between labor cost and innovation investment intention of small and medium-sized enterprises. Through this study and comprehensive research results, we can see that labor cost in enterprise accounting system includes four items: basic wage of employed labor, performance bonus provided by enterprises to workers, social accumulation fund and welfare treatment. Labor cost guarantee capital behavior is a market development measure based on government intervention. Its core significance is to ensure the stable development of social economy, protect the income of grassroots social groups in enterprises, and reduce the emergence of social poor households. Therefore, to develop small and medium-sized enterprises, we should reasonably plan the labor cost.

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