Influence of Specialized Human Capital Level on Job Satisfaction of Technical Employees: A Case Study of Automobile Maintenance Industry in Kunming, China

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Abstract

Due to a serious shortage of technical employees that the automobile maintenance industry in Kunming is facing, this paper focuses on whether the improvement of the level of specialized human capital would affect the job satisfaction of technical employees in the automobile maintenance industry using the questionnaire and interview. Based on the data obtained from the sampling survey of automobile maintenance industry in Kunming, this it discussed the correlation between the level of specialized human capital and the job satisfaction of technical employees by substitution variables of company tenure, training investment, training times, technical titles, job hierarchy, relationship, and transfer. The results showed that the level of specialized human capital has a positive impact on the job satisfaction of technical employees. Training input, relationship, and transferability have positive effects on job satisfaction of technical employees, respectively. The result provided a theoretical reference for the management and technical employees in the automobile maintenance industry, which fills in the research status of specialized human capital.

Keywords: *Automobile Maintenance Industry, Level of Specialized Human Capital, Technical Employees, Job Satisfaction*

1. Introduction

With the steady and continuous growth of the car parc, the number of automobile maintenance personnel simply cannot meet the needs of the automobile maintenance industry. Besides, due to the trend of mechatronics and the short cycle of automobile technology renewal, the quality requirements for automobile maintenance personnel are gradually increasing. However, the reality is that people who have really received professional school training and have both practical experience, technology, and management ability are something extremely rare. The personnel structure, therefore, seriously affects the further development of the automobile maintenance industry. Driven by both the demand and the quality of demand, the shortage of talents in the automobile maintenance industry is particularly prominent. The author found that Kunming City in Yunnan Province is facing this problem, so the shortage of technical talents in the automobile maintenance industry in Kunming City is explored in this thesis.

In order to further understand this problem, the author has read and studied the relevant research on technical employees. The results showed that although scholars discuss solutions from different theories, they all pay close attention to the training of technical employees, and on-the-job training of employees is often an important way to accumulate specialized human capital. Scholars also defined the human capital of technical employees as specialized human capital and put forward corresponding solutions to the shortage of technical employees from the perspective of specialized human capital. Researchers believed that on-the-job training and technical training for technical employees are both considered as investments in specialized human capital.

Therefore, scholars have also changed the focus to specialized human capital, believing that they can also put forward powerful solutions to solve the "shortage of technical employees" from this perspective. For example, Wei (2011) interpreted the "shortage of technical employees" as the insufficient investment of Chinese companies in specialized on-the-job training, and believed that in order to change this problem fundamentally, attention must be paid to the specialized human capital investment of technical employees. However, Wei focused on the impact of the level of specialized human capital on companies, but does not discussed how employees would treat on the specialized human capital. After collecting the

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relevant research on specialized human capital, it is found that due to the difficulty in measuring specialized human capital and the lack of a unified standard, scholars have made less empirical research on this topic. With the increase in employees' specific human capital level, is there any correlation with employees' job satisfaction? This is the blank of the current literature. Therefore, based on the above theoretical and practical background, this thesis focused on the study of the impact of the level of specialized human capital in Kunming's automobile maintenance industry on the job satisfaction of technical employees (mainly including automobile maintenance personnel and management maintenance personnel).

Finally, through reading the measurement methods of specific human capital level and employee job satisfaction proposed by many scholars, the company tenure, training investment, training times, technical titles, job hierarchy, relationships and transferability as substitution variables of specialized human capital are used for the measurement methods of the level of specialized human capital based on the current situation; The work satisfaction of employees was measured with by Minnesota Satisfaction Questionnaire (MSQ) of Weiss, Dawis, England & Lofquist (1967).

After determining the measurement method, the author put forward the theoretical framework on whether the seven dimensions that constitute the level of specialized human capital are correlated with the job satisfaction of technical employees based on literature and industry characteristics, and made the following assumptions.

H1: The improvement of specialized human capital has a positive effect on the job satisfaction of technical employees.

H1a: Employee tenure has a positive effect on job satisfaction of technical employees.

H1b: Training input has a positive effect on job satisfaction of technical employees.

H1c: The number of training companies has a positive effect on the job satisfaction of technical employees.

H1d: Technical title has a positive effect on job satisfaction of technical employees.

H1e: Job hierarchy has a positive effect on job satisfaction of technical employees.

H1f: The relationship in specific human capital has a positive effect on job satisfaction of technical employees.

H1g: The transferability of specialized human capital has a positive effect on the job satisfaction of technical employees.

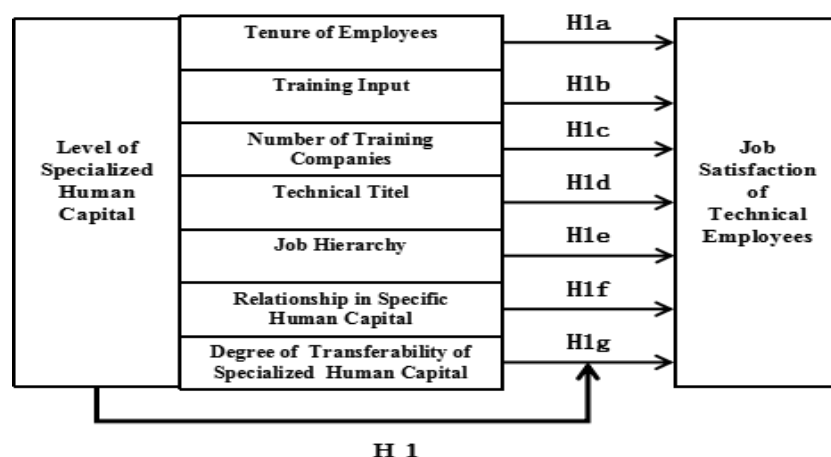Figure 1 is the theoretical framework of this study.

Figure 1 Theoretical framework

2. Objectives

The objective of this study is to explore the relationship between the improvement of the level of specialized human capital and job satisfaction of technical employees.

3. Materials and Methods

This research by collecting data through a questionnaire survey. This thesis made an empirical analysis on the level of specialized human capital and job satisfaction of technical employees.

Table 1 Symbolic Summary of Control Variables

Variable Name	Symbols
Age	AGE
Education	ED
Marital Status	MS
Monthly Income	YSR

Table 2 Symbolic Summary of Independent Variables and Dependent Variables

Variable names and Symbols	Configuration	Symbols
Level of Specialized human capital (FSHC)	Tenure of Employees	RQ
	Number of Training Companies	TT
	Training Input	PXTR
	Technical Title	S
	Job Hierarchy	L
	Relationship	GX
	Metastatic	ZYX
Job Satisfaction of Technical Employees(TJS)	Internal Satisfaction	IS
	External Satisfaction	ES
	General Satisfaction	GS

This research questionnaire was distributed from December 15th, 2018, to February 1st, 2019, and 211 valid questionnaires were received, with a recovery rate of 47.2%. Using SPSS19.0 to analyze 211 sample data, the assumption is tested, and conclusions are drawn, as shown in Table 1 and Table 2 for variable setting and symbol summary.

4. Results and Discussion

4.1 Descriptive statistical results

Except for the two items below high school and secondary vocational school, the laws of a specialized subject and undergraduate subject were the same, and the increase of employees with academic qualifications below high school was a good thing for the automobile maintenance industry, which indicates that the quality of maintenance personnel is gradually improving. Marital status accounted for 74.41% of married employees. Although the majority of the subjects were young people aged 20-30, 65.4% were employees over 30 years old, so the data were in line with reality. In terms of monthly income, those earning less than 3500 yuan accounted for the majority, accounting for 53.56%, and those earning less than 1500 yuan per month were 0, while those earning more than 4500 yuan accounted for only 13.7%, which is in line with the salary characteristics of technical employees. According to all the above contents, the samples had certain representativeness and reliability. See Table 3 for specific data.

Table 3 Descriptive Statistical Analysis of Samples

Topic Item	Options	Frequency	Proportion%
Your age	Under 20 years of age	0	0.00%
	20～30years old (including 30years old)	73	34.60%
	30～40years old (including 40years old)	51	24.17%
	40～50years old (including 50years old)	62	29.38%

Topic Item	Options	Frequency	Proportion%
	Over 50 years old	25	11.85%
Educational background	Junior Secondary and Below	52	24.64%
	High School	68	32.23%
	Technical School(Technical Secondary School)	38	18.01%
	College or Vocational College	30	14.22%
	Bachelor Degree or above	23	10.90%
Marital Status	Married	157	74.41%
	Unmarried	54	10.90%
Monthly Income(RMB)	1500(including 1500)	0	0.00%
	1500～2500(including 2500)	58	27.49%
	2500～3500 (including 3500)	55	26.07%
	3500～4500 (including 4500)	70	33.18%
	More than 4500	28	13.27%

4.2 Results of regression analysis

In order to improve the rationality and authenticity of the empirical model, this thesis constructed a multiple regression model, as shown in the following models:

$$Y=\alpha+\zeta X1 + \beta X2+ \varepsilon$$

where Y represents the dependent variable, and X1 and X2 represent the control variables and independent variables of this thesis, respectively. The control variables are mainly the basic characteristics of the interviewees. The main independent variables of the independent variables include seven independent variables of company tenure, company training times, technical title, job hierarchy, training input, relationship and transfer; ζ and β respectively represent the coefficients of the control variables and independent variables and are constant items and residual errors.

1) Correlation analysis

Before multiple regression analysis, it was necessary to make a correlation analysis on the selected variables. The results were shown in Table 4. As can be seen from the table, the correlation between the variables was not large, and there was no significant relationship between most variables. Therefore, it can be considered that the selected variables are more reasonable, and regression analysis can be carried out.

Table 4 Correlation Analysis of Variable

Variable	AGE	ED	MS	YSR	RQ	TT	S	L	PXTR	GX	ZYX
AGE	1										
ED	-0.001	1									
MS	0.021	0.097	1								
YSR	-0.012	0.011	-0.015	1							
RQ	-0.049	-0.085	0.028	0.043	1						
TT	-0.033	0	0.013	-0.003	0.124*	1					
S	-0.057	0.065	-0.05	-0.165**	0.035	0.016	1				
L	-0.114*	0.027	0.132*	0.064	-0.076	-0.004	0.011	1			
PXTR	0.023	-0.041	-0.003	-0.004	-0.039	0.05	-0.05	-0.037	1		
GX	0.045	-0.06	-0.021	-0.068	-0.063	-0.003	-0.023	-0.032	0.794***	1	
ZYX	0.052	-0.047	0.083	-0.001	-0.065	-0.026	-0.035	0.011	0.729***	0.716***	1

***: significant at 1% level, **: significant at 5% level,* significant at 10% level

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2) Assumption verification

First, in order to verify the H1 assumption, this thesis made a regression analysis of the relationship between the level of specialized human capital and the job satisfaction of skilled employees. As can be seen from that result in Table 5, when all control variables exist, the influence coefficient of independent variable FSHC on dependent variable TJS was 0.949 (Beta coefficient ranges from -1 to 1. The closer the value is to -1, the higher the negative correlation is. The closer the value is to 1, the greater the positive correlation is. The value is about 0, which proves that there is no significant correlation between the two), which is significant at the 95% level. At the same time, the R^2 of linear regression equation was 0.903, and the adjusted R^2 was 0.900 (The value of R^2 is between 0 and 1, and the larger the value, the higher the fitting degree between the regression model and the actual data), which indicates that the model fits well. However, from collinearity statistical analysis, the value of VIF was about equal to 1 (The closer the VIF value is to 1, the lighter the multicollinearity is), which indicates that there is no multicollinearity in the model. The obtained result was good, so the H1 assumption was established.

Table 5 Regression Analysis of Main Explanatory Variables

Independent Variable	Un-normalized Coefficient		Normalization Coefficient	t	Significance	95.0% Confidence interval of B		Correlation			Collinearity Statistic	
	B	Standard Error	Beta			Lower Limit	Upper Limit	Zeroorder	Bias	Partial	Tolerance	VIF
(Constant))	.323	.130		2.494	.013	.068	.579					
AGE	.008	.021	.009	.393	.695	-.032	.049	.025	.027	.009	.999	1.001
ED	-.015	.017	-.019	-.884	.378	-.047	.018	-.061	-.062	-.019	.989	1.011
MS	.028	.049	.013	.572	.568	-.069	.125	-.013	.040	.012	.989	1.011
YSR	-.017	.021	-.018	-.806	.421	-.058	.025	-.026	-.056	-.018	.999	1.001
FSHC	.870	.020	.949	43.486	.000	.830	.909	.950	.950	.947	.997	1.003

a.DependentVariable:TJS
R^2 is 0.903 and adjusted R^2 is 0.900
D-W=1.986
The variation of F was 380.331

Next, in order to verify the assumption H1a, this thesis made a regression analysis of the tenure of enterprises in the specific human capital and the job satisfaction of technical employees. Table 6 was the OLS regression analysis results of all explanatory variables on the explained variable y. From the results, it can be seen that the influence coefficient of independent variable RQ on dependent variable TJS was-0.022 (When all other variables remain unchanged when the tenure of the company increases by one standard deviation, the employee's job satisfaction will decrease by 0.022 standard deviation.), which is not significant at 95% level. Besides, there was no significant relationship among the three elements IS, ES, and GS composed of dependent variables, which indicates that H1a in this thesis is not valid.

Table 6 Regression Analysis of the Influence of Company Tenure on Job Satisfaction of Technical Employees

Dependent Variable	Independent Variable	Un-normalized Coefficient	Normalization Coefficient	95.0% Confidence interval of B

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		B	Standard Error	Beta	t	Significance	Lower Limit	Upper Limit
TJS	(Constant)	2.342	0.414		5.66	0	1.526	3.158
	AGE	0.023	0.066	0.024	0.346	0.729	-0.107	0.153
	ED	-0.047	0.053	-0.062	-0.876	0.382	-0.151	0.058
	MS	-0.017	0.158	-0.008	-0.111	0.912	-0.328	0.293
	YSR	-0.024	0.067	-0.025	-0.353	0.725	-0.156	0.109
	RQ	-0.019	0.061	-0.022	-0.313	0.755	-0.14	0.101
IS	(Constant))	2.39	0.419		5.702	0	1.564	3.217
	AGE	0.015	0.067	0.015	0.221	0.825	-0.117	0.146
	ED	-0.049	0.054	-0.063	-0.901	0.368	-0.155	0.058
	MS	0.001	0.16	0	0.003	0.997	-0.314	0.315
	YSR	-0.039	0.068	-0.04	-0.569	0.57	-0.173	0.096
	RQ	-0.013	0.062	-0.015	-0.214	0.831	-0.135	0.109
ES	(Constant))	2.254	0.418		5.393	0	1.43	3.078
	AGE	0.043	0.067	0.045	0.649	0.517	-0.088	0.174
	ED	-0.054	0.054	-0.07	-1.001	0.318	-0.16	0.052
	MS	-0.001	0.059	0	-0.003	0.997	-0.314	0.313
	YSR	-0.02	0.068	-0.02	-0.291	0.772	-0.154	0.114
	RQ	-0.01	0.062	-0.011	-0.163	0.87	-0.132	0.112
GS	(Constant))	2.351	0.452		5.205	0	1.46	3.241
	AGE	0.016	0.072	0.016	0.226	0.821	-0.126	0.158
	ED	-0.038	0.058	-0.046	-0.65	0.517	-0.152	0.077
	MS	-0.051	0.172	-0.021	-0.297	0.766	-0.39	0.288
	YSR	-0.007	0.073	-0.007	-0.098	0.922	-0.152	0.138
	RQ	-0.035	0.067	-0.036	-0.519	0.604	-0.166	0.097

This thesis made a regression analysis on the job satisfaction of technical employees with the training input in specialized human capital in order to validate the Assumption H1b. Table 7 showed the results of OLS regression analysis of all explanatory variables on the explained variable y. Under the condition that all control variables exist, the normalized coefficient of the influence of independent variable PXTR on dependent variable TJS was 0.875 (When all other variables remain unchanged when the training input increases by one standard deviation, the employee's job satisfaction would decrease by 0.875 standard deviation.), which is significant at the level of 95%. Moreover, there was also a significant relationship to the three elements IS, ES, and GS composed of dependent variables, with coefficients of 0.877, 0.861, and 0.795, respectively, which indicates that the assumption H1b in this thesis is valid.

Table 7 Regression Analysis of the Job Satisfaction of Technical Employees with the Training Input

Dependent Variable	Independent Variable	Un-normalized Coefficient		Normalization Coefficient			95.0% Confidence interval of B	
		B	Standard Error	Beta	t	Significance	Lower Limit	Upper Limit
TJS	(Constant))	0.554	0.198		2.793	0.006	0.163	0.946
	AGE	0.007	0.032	0.007	0.212	0.832	-0.056	0.069
	ED	-0.017	0.026	-0.023	-0.667	0.506	-0.067	0.033
	MS	-0.02	0.076	-0.009	-0.266	0.791	-0.17	0.129
	YSR	-0.021	0.032	-0.022	-0.645	0.52	-0.085	0.043
	PXTR	0.796	0.031	0.875	26.027	0	0.735	0.856
IS	(Constant))	0.595	0.2		2.982	0.003	0.202	0.989
	AGE	-0.005	0.032	-0.005	-0.158	0.875	-0.068	0.058
	ED	-0.02	0.026	-0.026	-0.788	0.431	-0.071	0.03
	MS	0.001	0.076	0.001	0.018	0.986	-0.149	0.152
	YSR	-0.038	0.033	-0.038	-1.156	0.249	-0.102	0.027
	PXTR	0.809	0.031	0.877	26.331	0	0.749	0.87
ES	(Constant))	0.517	0.209		2.47	0.014	0.104	0.929

Dependent Variable	Independent Variable	Un-normalized Coefficient		Normalization Coefficient			95.0% Confidence interval of B	
		B	Standard Error	Beta	t	Significance	Lower Limit	Upper Limit
	AGE	0.026	0.033	0.027	0.779	0.437	-0.04	0.092
	ED	-0.023	0.027	-0.03	-0.855	0.394	-0.076	0.03
	MS	-0.007	0.08	-0.003	-0.085	0.933	-0.164	0.151
	YSR	-0.019	0.034	-0.02	-0.559	0.577	-0.086	0.048
	PXTR	0.788	0.032	0.861	24.477	0	0.725	0.852
GS	(Constant))	0.551	0.273		2.021	0.045	0.014	1.089
	AGE	-0.001	0.044	-0.001	-0.02	0.984	-0.087	0.085
	ED	-0.008	0.035	-0.01	-0.224	0.823	-0.077	0.061
	MS	-0.055	0.104	-0.022	-0.529	0.597	-0.26	0.15
	YSR	-0.006	0.044	-0.006	-0.133	0.894	-0.094	0.082
	PXTR	0.789	0.042	0.795	18.797	0	0.707	0.872

Use the same method, regression analysis of the job satisfaction of technical employees with the other five variables of specialized human capital.

In order to verify the assumption H1c, this thesis made a regression analysis of the tenure of enterprises in the specific human capital and the job satisfaction of the number of training companies. From the results of Table 8, it can be seen that the influence coefficient of independent variable TT on dependent variable TJS was-0.044 (When all other variables remain unchanged when the number of training companies increases by one standard deviation, the employee's job satisfaction will decrease by 0.044 standard deviation.), which is not significant at 95% level. However, there was no significant relationship among the three elements IS, ES, and GS composed of dependent variables, which indicates that H1c in this thesis is not valid.

Table 8 Regression Analysis of the Job Satisfaction of Technical Employees with the Number of Training Companies

Dependent Variable	Independent Variable	Un-normalized Coefficient		Normalization Coefficient			95.0% Confidence interval of B	
		B	Standard Error	Beta	t	Significance	Lower Limit	Upper Limit
TJS	(Constant))	2.381	0.416		5.723	0	1.561	3.201
	AGE	0.024	0.066	0.026	0.372	0.71	-0.105	0.154
	ED	-0.045	0.053	-0.059	-0.841	0.401	-0.149	0.06
	MS	-0.018	0.157	-0.008	-0.116	0.908	-0.328	0.292
	YSR	-0.024	0.067	-0.025	-0.357	0.721	-0.156	0.108
	TT	-0.033	0.053	-0.044	-0.625	0.533	-0.138	0.071
IS	(Constant))	2.493	0.422		5.913	0	1.662	3.324
	AGE	0.012	0.067	0.013	0.187	0.852	-0.119	0.144
	ED	-0.048	0.054	-0.063	-0.899	0.37	-0.154	0.058
	MS	0.004	0.159	0.002	0.025	0.98	-0.31	0.318
	YSR	-0.041	0.068	-0.042	-0.6	0.549	-0.175	0.093
	TT	-0.048	0.054	-0.062	-0.888	0.376	-0.154	0.058
ES	(Constant))	2.316	0.418		5.535	0	1.491	3.141
	AGE	0.044	0.066	0.046	0.662	0.509	-0.087	0.174
	ED	-0.05	0.053	-0.066	-0.943	0.347	-0.155	0.055
	MS	-0.005	0.158	-0.002	-0.032	0.975	-0.317	0.307
	YSR	-0.022	0.068	-0.023	-0.328	0.743	-0.155	0.111
	TT	-0.029	0.053	-0.038	-0.549	0.584	-0.134	0.076
GS	(Constant))	2.333	0.455		5.131	0	1.437	3.23
	AGE	0.017	0.072	0.017	0.239	0.811	-0.124	0.159
	ED	-0.035	0.058	-0.042	-0.606	0.545	-0.149	0.079
	MS	-0.054	0.172	-0.022	-0.312	0.755	-0.392	0.285
	YSR	-0.009	0.073	-0.009	-0.122	0.903	-0.154	0.136

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TT	-0.022	0.058	-0.027	-0.388	0.699	-0.137	0.092

In order to verify the assumption H1d, this thesis made a regression analysis of the tenure of enterprises in the specific human capital and the job satisfaction of the technical title. From the results of Table 9, it can be seen that the influence coefficient of independent variable Son dependent variable TJS was-0.021 (When all other variables remain unchanged when the technical title increases by one standard deviation, the employee's job satisfaction would decrease by 0.021 standard deviation.), which is not significant at 95% level. There was also no significant relationship among the three elements IS, ES, and GS composed of dependent variables, which indicates that H1d in this thesis is not valid.

Table 9 Regression Analysis of the Job Satisfaction of Technical Employees with Technical Title

Dependent Variable	Independent Variable	Un-normalized Coefficient		Normalization Coefficient			95.0% Confidence interval of B	
		B	Standard Error	Beta	t	Significance	Lower Limit	Upper Limit
TJS	(Constant))	2.352	0.429		5.487	0	1.507	3.197
	AGE	0.023	0.066	0.024	0.344	0.731	-0.107	0.153
	ED	-0.044	0.053	-0.058	-0.828	0.409	-0.149	0.061
	MS	-0.022	0.158	-0.01	-0.14	0.889	-0.333	0.289
	YSR	-0.028	0.068	-0.029	-0.412	0.681	-0.163	0.106
	S	-0.017	0.057	-0.021	-0.3	0.764	-0.129	0.095
IS	(Constant))	2.403	0.434		5.535	0	1.547	3.259
	AGE	0.015	0.067	0.015	0.218	0.828	-0.117	0.146
	ED	-0.047	0.054	-0.061	-0.866	0.387	-0.153	0.059
	MS	-0.003	0.16	-0.001	-0.019	0.985	-0.318	0.312
	YSR	-0.042	0.069	-0.043	-0.611	0.542	-0.178	0.094
	S	-0.014	0.057	-0.017	-0.24	0.81	-0.127	0.099
ES	(Constant))	2.253	0.433		5.204	0	1.4	3.107
	AGE	0.043	0.067	0.045	0.65	0.516	-0.088	0.175
	ED	-0.053	0.054	-0.069	-0.979	0.329	-0.158	0.053
	MS	-0.003	0.159	-0.001	-0.017	0.987	-0.317	0.311
	YSR	-0.022	0.069	-0.022	-0.315	0.753	-0.158	0.114
	S	-0.007	0.057	-0.009	-0.125	0.901	-0.12	0.106
GS	(Constant))	2.365	0.468		5.055	0	1.443	3.288
	AGE	0.016	0.072	0.016	0.224	0.823	-0.126	0.158
	ED	-0.033	0.058	-0.04	-0.569	0.57	-0.147	0.081
	MS	-0.059	0.172	-0.024	-0.346	0.73	-0.399	0.28
	YSR	-0.015	0.074	-0.014	-0.201	0.841	-0.162	0.132
	S	-0.03	0.062	-0.034	-0.484	0.629	-0.152	0.092

In order to verify the assumption H1e, this thesis made a regression analysis of the tenure of enterprises in the specific human capital and the job satisfaction of job hierarchy. From the results of Table 10, it can be seen that the influence coefficient of independent variable L on dependent variable TJS was 0.015 (When all other variables remain unchanged when the job hierarchy increases by one standard deviation, the employee's job satisfaction would decrease by 0.015 standard deviation.), which is not significant at 95% level. There was no significant relationship among the three elements, IS, ES, and GS composed of dependent variables, which indicates that H1e in this thesis is not valid.

Table 10 Regression Analysis of the Job Satisfaction of Technical Employees with Job Hierarchy

Dependent Variable	Independent Variable	Un-normalized Coefficient		Normalization Coefficient			95.0% Confidence interval of B	
		B	Standard Error	Beta	t	Significance	Lower Limit	Upper Limit
TJS	(Constant))	2.279	0.399		5.717	0	1.493	3.064
	AGE	0.025	0.066	0.027	0.384	0.701	-0.105	0.156
	ED	-0.045	0.053	-0.06	-0.855	0.394	-0.15	0.059
	MS	-0.024	0.159	-0.011	-0.149	0.881	-0.337	0.289
	YSR	-0.026	0.067	-0.027	-0.38	0.705	-0.158	0.107
	L	0.012	0.058	0.015	0.207	0.836	-0.103	0.127
IS	(Constant))	2.349	0.404		5.819	0	1.553	3.145
	AGE	0.016	0.067	0.017	0.243	0.808	-0.116	0.149
	ED	-0.048	0.054	-0.062	-0.887	0.376	-0.153	0.058
	MS	-0.003	0.161	-0.001	-0.019	0.985	-0.32	0.314
	YSR	-0.04	0.068	-0.041	-0.584	0.56	-0.174	0.095
	L	0.006	0.059	0.008	0.108	0.914	-0.11	0.123
ES	(Constant))	2.236	0.403		5.553	0	1.442	3.03
	AGE	0.043	0.067	0.045	0.647	0.518	-0.089	0.175
	ED	-0.053	0.054	-0.069	-0.99	0.324	-0.159	0.053
	MS	0	0.16	0	-0.002	0.999	-0.317	0.316
	YSR	-0.02	0.068	-0.02	-0.294	0.769	-0.154	0.114
	L	-0.003	0.059	-0.004	-0.057	0.954	-0.12	0.113
GS	(Constant))	2.219	0.435		5.102	0	1.362	3.077
	AGE	0.022	0.072	0.022	0.31	0.757	-0.12	0.165
	ED	-0.035	0.058	-0.043	-0.613	0.541	-0.149	0.079
	MS	-0.066	0.173	-0.027	-0.383	0.702	-0.408	0.275
	YSR	-0.015	0.074	-0.014	-0.201	0.841	-0.162	0.132
	L	-0.03	0.062	-0.034	-0.484	0.629	-0.152	0.092

In order to validate the assumption H1f, this thesis made a regression analysis on the job satisfaction of technical employees with the relationship in specialized human capital. Table 11 showed the results of the OLS regression analysis of all explanatory variables on the explained variable y. Under the condition that all control variables exist, the normalized coefficient of the influence of independent variable GX on dependent variable TJS was 0.874 (When all other variables remain unchanged when the relationship increases by one standard deviation, the employee's job satisfaction would decrease by 0.874 standard deviation.), which is significant at the level of 95%. Also, there was a significant relationship to the three elements IS, ES, and GS composed of dependent variables, with coefficients of 0.878, 0.86, and 0.795, respectively, which indicates that the assumption H1f in this thesis is valid.

Table 11 Regression Analysis of the Job Satisfaction of Technical Employees with the Relationship

Dependent Variable	Independent Variable	Un-normalized Coefficient		Normalization Coefficient			95.0% Confidence interval of B	
		B	Standard Error	Beta	t	Significance	Lower Limit	Upper Limit
TJS	(Constant))	0.566	0.199		2.84	0.005	0.173	0.959
	AGE	0.005	0.032	0.005	0.149	0.882	-0.058	0.068
	ED	-0.018	0.026	-0.023	-0.691	0.49	-0.068	0.033
	MS	-0.02	0.076	-0.009	-0.261	0.795	-0.17	0.13
	YSR	-0.022	0.033	-0.022	-0.667	0.505	-0.086	0.042
	GX	0.795	0.031	0.874	25.896	0	0.735	0.856
IS	(Constant))	0.597	0.199		3.005	0.003	0.205	0.988
	AGE	-0.004	0.032	-0.004	-0.125	0.9	-0.067	0.059
	ED	-0.02	0.026	-0.026	-0.769	0.443	-0.07	0.031

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Dependent Variable	Independent Variable	Un-normalized Coefficient		Normalization Coefficient			95.0% Confidence interval of B	
		B	Standard Error	Beta	t	Significance	Lower Limit	Upper Limit
	MS	-0.001	0.076	-0.001	-0.017	0.986	-0.151	0.148
	YSR	-0.036	0.032	-0.037	-1.123	0.263	-0.1	0.028
	GX	0.81	0.031	0.878	26.465	0	0.749	0.87
ES	(Constant))	0.508	0.211		2.409	0.017	0.092	0.924
	AGE	0.025	0.034	0.026	0.735	0.463	-0.042	0.091
	ED	-0.026	0.027	-0.034	-0.949	0.344	-0.079	0.028
	MS	-0.002	0.081	-0.001	-0.025	0.98	-0.161	0.157
	YSR	-0.017	0.034	-0.018	-0.503	0.616	-0.085	0.051
	GX	0.791	0.032	0.86	24.37	0	0.727	0.855
GS	(Constant))	0.551	0.273		2.021	0.045	0.014	1.089
	AGE	-0.001	0.044	-0.001	-0.02	0.984	-0.087	0.085
	ED	-0.008	0.035	-0.01	-0.224	0.823	-0.077	0.061
	MS	-0.055	0.104	-0.022	-0.529	0.597	-0.26	0.15
	YSR	-0.006	0.044	-0.006	-0.133	0.894	-0.094	0.082
	GX	0.789	0.042	0.795	18.797	0	0.707	0.872

For the validation of the assumption H1g, this thesis made a regression analysis on the job satisfaction of technical employees with the metastatic in specialized human capital. Table 12 showed the results of OLS regression analysis of all explanatory variables on the explained variable y. Under the condition that all control variables exist, the normalized coefficient of the influence of independent variable ZYX on dependent variable TJS was 0.848 (When all other variables remain unchanged when the metastatic increases by one standard deviation, the employee's job satisfaction would decrease by 0.848 standard deviation.), which is significant at the level of 95%. It also showed a significant relationship to the three elements IS, ES, and GS composed of dependent variables, with coefficients of 0.846, 0.821, and 0.79, respectively, which indicates that the assumption H1g in this thesis is valid.

Table 12 Regression Analysis of the Job Satisfaction of Technical Employees with the Metastatic

Dependent Variable	Independent Variable	Un-normalized Coefficient		Normalization Coefficient			95.0% Confidence interval of B	
		B	Standard Error	Beta	t	Significance	Lower Limit	Upper Limit
TJS	(Constant))	0.323	0.225		1.435	0.153	-0.121	0.766
	AGE	-0.012	0.035	-0.013	-0.336	0.737	-0.081	0.058
	ED	-0.008	0.028	-0.011	-0.297	0.766	-0.064	0.047
	MS	0.014	0.084	0.006	0.163	0.871	-0.152	0.179
	YSR	0.03	0.036	0.031	0.836	0.404	-0.041	0.101
	ZYX	0.818	0.036	0.848	22.681	0	0.747	0.889
IS	(Constant))	0.363	0.229		1.585	0.115	-0.088	0.814
	AGE	-0.021	0.036	-0.021	-0.575	0.566	-0.091	0.05
	ED	-0.01	0.029	-0.014	-0.362	0.718	-0.067	0.046
	MS	0.033	0.086	0.014	0.381	0.704	-0.136	0.201
	YSR	0.016	0.037	0.016	0.435	0.664	-0.056	0.088
	ZYX	0.827	0.037	0.846	22.533	0	0.755	0.899
ES	(Constant))	0.297	0.244		1.22	0.224	-0.183	0.778
	AGE	0.009	0.038	0.009	0.232	0.817	-0.066	0.084
	ED	-0.017	0.031	-0.022	-0.556	0.579	-0.078	0.043
	MS	0.031	0.091	0.014	0.338	0.736	-0.149	0.21
	YSR	0.033	0.039	0.034	0.855	0.394	-0.044	0.11
	ZYX	0.801	0.039	0.821	20.479	0	0.724	0.878
GS	(Constant))	0.261	0.283		0.922	0.358	-0.297	0.82
	AGE	-0.018	0.044	-0.018	-0.409	0.683	-0.106	0.069
	ED	0.002	0.036	0.003	0.064	0.949	-0.068	0.073

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MS	-0.021	0.106	-0.009	-0.199	0.843	-0.23	0.188
YSR	0.047	0.045	0.044	1.031	0.304	-0.043	0.136
ZYX	0.832	0.045	0.79	18.289	0	0.742	0.921

Through OLS regression analysis, from the results, we can see that the improvement of the human capital level of the main explanatory variable dedicated line has a positive impact on the job satisfaction of technical employees, which can fill the research on dedicated human capital and provide some references for companies to invest in the dedicated human capital of technical employees. Then, it discusses the relationship between the seven dimensions that constitute the level of specialized human capital and the job satisfaction of employees (the other seven assumption results are shown in the following table. First of all, job hierarchy, technical title, company training times, and company tenure do not correlate with the job satisfaction of technical employees. From this, it is concluded that for technical employees, it is not a position. The higher the professional title and the longer the term of office, the higher the job satisfaction, which is different from the conclusion drawn by many studies on the analysis of ordinary employees. Moreover, the numbers of training and the tenure of the company do not affect the job satisfaction of technical employees.

Table 13 Data Analysis Results

Assumption	Content	Results
H1a	Employee tenure has a positive effect on job satisfaction of technical employees	Not valid
H1b	Training input has a positive effect on job satisfaction of technical employees	Valid
H1c	The number of training companies has a positive effect on the job satisfaction of technical employees	Not valid
H1d	The technical title has a positive effect on job satisfaction of technical employees	Not valid
H1e	Job hierarchy has a positive effect on job satisfaction of technical employees	Not valid
H1f	The relationship in specific human capital has a positive effect on job satisfaction of technical employees	Valid
H1g	The transferability of specialized human capital has a positive effect on the job satisfaction of technical employees	Valid

5. Conclusion

First, there is a significant positive correlation between training input and job satisfaction of technical employees, which shows that technical employees prefer to require employees to devote a great deal of energy and time to understand what they are competent to do. This conclusion is consistent with the above-mentioned technical employees who tend to prefer challenging work. The work can often bring such employees a greater sense of achievement and self-efficacy after completion, which also supports the statement mentioned above that many scholars believe that training is very important for the job satisfaction of technical employees.

Second, the relationship in specific human capital has a significant positive correlation with the job satisfaction of technical employees. This conclusion shows that for technical employees, the related to task solving, the higher the job satisfaction. As mentioned earlier, for the automobile maintenance industry, in order to match the effective use of specialized human capital with a specific work team, this thesis optimized and integrated heterogeneous human capital according to the needs of the team. In different special structures, the advantages complement each other to enhance the core competence of the whole team. Each maintenance team is equipped with employees with different professional directions, and each member is good at the maintenance of different parts. Therefore, this form of work makes the colleague relationship more important to technical employees. Moreover, the common training mode in the automobile maintenance industry is "master with an apprentice." This special mode also makes the relationship between employees and work inseparable.

Third, the degree of transferability of specialized human capital is significantly positively correlated with the satisfaction of technical employees. This shows that the lower the transferability of human capital of the dedicated line for technical employees (the higher the score, the lower the transferability). The higher the job satisfaction of technical employees, the biggest difference between

special human capital and general human capital is its low degree of transferability. This not only limits the employment scope of employees, but also is very difficult for companies to train such professional employees, which creates an inseparable relationship between the two parties, which also gives technical employees a sense of security to a large extent, thus improving their job satisfaction.

On the whole, some suggestions are put forward for the managers of the automobile maintenance industry: 1) When managing technical employees, more attention should be paid to incentive methods other than money and positions; 2) Improving the level of the specialized human capital of technical employees can improve employees' job satisfaction.

6. Acknowledgements

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