

The Connection and Research Between Corporate Culture and Corporate Performance in the Construction Industry

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Abstract: Methods such as correlation test, variation analysis and multiple linear regression were used to explore the significant role of construction corporate culture on company performance. A total of 358 samples were collected for systematic comparative study from multiple perspectives.

Keywords: Architecture, Business performance, Correlation test, Variation analysis, Stepwise regression, Corporate culture, market competitiveness, Company performance.

1. Introduction

The economic integration continues to accelerate around the world, construction companies are facing increasingly fierce market competition. The scope of competition has often expanded from the original product, technology and resource levels to more in-depth services, concepts and levels of talent. In the final analysis, it still depends on the cultural battle among construction companies. With the continuous development of construction companies, the importance of construction corporate culture has become increasingly prominent. In a certain sense, this is reflected at the micro level within the scope of business economics. Jax et al. (1952) identified the origin of the concept of corporate culture. Company culture is a natural force similar to ethos and trends. They operate behind the scenes, sometimes intangibly, sometimes tangible, and include internal repeated actions and emotional responses. Company culture is a set of self-disciplined behaviors, emotions, ways of thinking and believing that determine how we behave. If a construction company is running well, its construction company culture will inspire its employees and give them satisfaction in their efforts to achieve the construction company's strategic and operational goals. This is a real emotional power that can't be found anywhere else. Worse, this culture can also hurt long-term success by reducing productivity and mood. Rather than trying to reinvent the construction industry as a construction company, it would be better to focus on improving the behavior of employees whose performance is more realistic and visible. Although the cups and saucers cannot change on their own, they do follow the movements. Highlighting a select few major actions, and when many people can do it, will reveal the factors that help a construction company succeed, such as how they communicate with customers or how they open a business. Check these plans with the company's overall strategy and employees' willingness to implement them. Assuming you're emotionally invested, the next step is to turn those important actions into practical, day-to-day actions and select those employees who will have a strong impact on your actions. Construction companies can gain a competitive advantage by focusing on a few key habits,

engaging people's emotions, and hiring unofficial leaders. Robinson and others. (2005) research shows that construction enterprises must improve the performance of construction enterprises through the construction enterprise culture and technology of construction enterprises in order to maintain the innovation capabilities of construction enterprises. The company's culture is directly related to the success or failure of the construction enterprise's business activities. The improvement of company culture is an important driving force for the company's performance. Compared with a strong corporate culture, a weak corporate culture is difficult to achieve the purpose of the enterprise. It's critical to explore the question of how a company's culture and performance interact. Studying a company's performance from four aspects can clearly show the role of each aspect on the company's performance, thereby enabling the company to improve and strengthen the company's performance according to different company cultures, or to achieve results according to different company cultures. purpose of company performance. implemented under current conditions. However, its mechanism of action is unclear.

Under the influence of the current COVID-19 epidemic, China's construction industry has shown a momentum of vigorous development, showing broad development space [1]. In China's GDP in 2019, the construction industry contributed 7.2% of the GDP. China's construction industry output value increased by approximately 7% and 6% in 2020 and 2022 respectively, while reaching 1.3% in 2020. Private construction continues to be an important force in promoting economic development. Starting from the second quarter of 2020, housing construction has been hindered by the newly introduced real estate controls [2]. The new controls are aimed at improving access to homes and curbing speculation in a housing market dominated by heavy lending. The government has borrowed more from property developers, while banks have tightened their grip on their funding. Several debt-ridden real estate developers had to sell properties in order to reduce their debts, resulting in a shortage of liquidity and the suspension of construction projects. The likelihood that large real estate companies like Evergrande will default on their debts has increased sharply,

increasing credit risks for contractors and suppliers. According to the Office for National Statistics, the construction value indicator fell by 2.1% in the fourth quarter of 2021 compared with the growth rate of 1.8% in the second quarter of 2021. The report pointed out that driven by infrastructure projects such as transportation and energy, At present, the National Development and Reform Commission has approved 90 key construction projects with a total amount of 7954 trillion yuan, involving transportation, energy, water conservancy, information technology and other industries. In the 14th Five-Year Plan (2021-2025), investment in infrastructure will promote the growth of industries, including

transportation, energy, manufacturing, health, education, etc [3].

2. Research Methods

2.1. Method

The role of four different types of corporate culture on construction company performance is proposed. This framework can paint a picture of a business's desired culture, not just an actual organization. The paper gives the following assumptions in Figure 1:

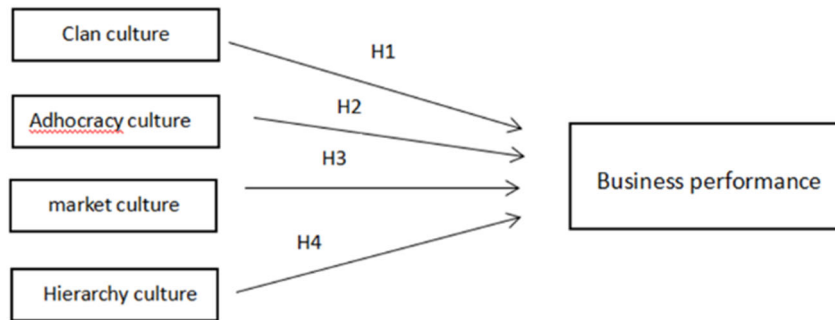


Figure 1. Assumptions of this article

H1: Family culture is positively related to company performance.

H2: There is a positive relationship between transitional culture and company performance.

H3: There is a positive relationship between marketing culture and company performance.

H4: Hierarchical culture is positively related to company performance.

Mei Shu (2020) believes that corporate business performance can be measured through four dimensions: finance/customer/process/human resource development/future. In addition, the main construction industry performance index mentioned by the British working group can also become a branch of "business performance". Use this as a benchmark for performance evaluation.

Group	Indicators	Level
Time	1. Time for Construction 2. Time Predictability – Design 3. Time Predictability – Construction 4. Time Predictability – Design & Construction 5. Time Predictability – Construction (Client Change Orders) 6. Time Predictability – Construction (Project Leader Change Orders) 7. Time to Rectify Defects	Headline Headline Headline Operational Diagnostic Diagnostic Operational
Cost	1. Cost for Construction 2. Cost Predictability – Design 3. Cost Predictability – Construction 4. Cost Predictability – Design and Construction 5. Cost Predictability – Construction (Client Change Orders) 6. Cost Predictability – Construction (Project Leader Change Orders) 7. Cost of Rectifying Defects 8. Cost In Use	Headline Headline Headline Operational Diagnostic Diagnostic Operational Operational
Quality	1. Defects 2. Quality Issues at Available for Use 3. Quality Issues at End of Defect Rectification Period	Headline Operational Operational
Client Satisfaction	1. Client Satisfaction Product – Standard Criteria 2. Client Satisfaction Service – Standard Criteria 3. Client Satisfaction – Client-Specified Criteria	Headline Headline Operational
Change Orders	1. Change Orders – Client 2. Change Orders – Project Manager	Diagnostic Diagnostic
Business Performance	1. Profitability (company) 2. Productivity (company) 3. Return on Capital employed (company) 4. Return on Value Added (company) 5. Interest Cover (company) 6. Return on Investment (client) 7. Profit Predictability (project) 8. Ratio of Value Added (company) 9. Repeat Business (company) 10. Outstanding Money (project) 11. Time taken to reach Final Account (project)	Headline Headline Operational Operational Operational Operational Operational Diagnostic Diagnostic Diagnostic Diagnostic
Health and Safety	1. Reportable Accidents (inc fatalities) 2. Reportable Accidents (non-fatal) 3. Lost Time Accidents 4. Fatalities	Headline Operational Operational Operational

Figure 2. Related framework and content of KPI

2.2. Performance measurement method

2.2.1. Integrated performance index (IPI)

This article uses "integrated performance indicators" as an effective model for R&D (R&D) project performance measurement, which is generally divided into (a) project selection (b) project implementation (c) execution stage [4]. And by establishing corresponding quantitative models, the paper quantitatively analyzes the secondary measurement factors in three different periods to obtain a comprehensive performance index.

2.2.2. Main performance measures

KPI is a basic means that can evaluate the performance of an enterprise from many aspects and aspects. It can also be used to monitor individual devices or small processes, or it

can be used to monitor the entire project.

KPIs are made up of elements related to "key drivers of change", focusing on "customer needs", "integration of product teams", "qualified work practices", and "responsibility towards employees". Egan introduced the general KPI guidelines and classifications, and elaborated on the scope (index) of sustainable improvement in the construction industry. In 2000, the British Minister of Construction classified it in more detail, also known as "multiple clusters" (figure 2).

2.3. Related Questionnaires

The content of the questionnaire designed in this article is shown in Table 1.

Table 1. Questionnaire and code name

B1	How would you assess the level of collaboration among your company's employees?
B2	What are your thoughts on intimacy and relationships among employees within your company?
B3	How high do you think the level of employee participation in decision-making is in our company?
B4	How do you assess an employee's level of commitment to your company?
B5	How can the company inspire employees to come up with new ideas and approaches?
B6	How much autonomy do employees within the company have in making decisions?
B7	How can the company inspire employees to pursue new approaches and experiments?
B8	How do you think our company works in terms of innovation and change?
B9	How important is our company in terms of competition?
B10	How much impact does completing the company's mission have on the company?
B11	How important is customer satisfaction to your company?
B12	How important is performance measurement and results to your company?
B13	At what level are delegations and decisions taken in our company?
B14	Do employees comply with company rules and regulations?
B15	Are responsibilities and authorities clear in our company?
B16	How much recognition do employees have of the company's structure and hierarchy?
B17	Has the company's financial targets been met?
B18	How effective is our project cost and cost management?
B19	How accurate is the company's estimate of investment income?
B20	How do we use the money we spend on projects?
B21	How satisfied are customers with this project?
B22	How does the company respond to customer opinions and questions?
B23	How effective is the communication between our project and the owner?
B24	Are customers satisfied with the company's problem-solving capabilities?
B25	Are the performance appraisals of our construction companies reasonable?
B26	What is the planned purpose of our project?
B27	In this project, what is the control and implementation status of the project plan?
B28	What is the relationship between the company's construction projects and its suppliers and partners?
B29	What are our risk management and problem-solving skills in engineering?
B30	Is your company's estimate of future market demand and development direction correct? wrong?
B31	Does your company pay attention to technological innovation and development?
B32	In terms of sustainability, how important is this aspect to your company? rare?
B33	How strong is your company in facing market competition and strategic planning?

3. Experimental Results

3.1. Reliability analysis

It can be seen from the above table that the reliability coefficient of the study data is 0.951, which is greater than 0.9, indicating that the reliability and validity of the study data is good [5]. For the "remove alpha coefficient", if an item is removed, its confidence coefficient does not increase significantly, so this indicates that the term should not be

deleted. The reliability of all the data is above 0.9, indicating a high degree of reliability for future research (Table 2).

3.2. Validity analysis

KMO is 0.885, which exceeds 0.6, and can perform better data extraction. The coefficients of variation of the nine factors can explain 11.895%, 10.108%, 10.086%, 9.909%, 9.769%, 9.552%, 9.528%, 9.477%, and 5.535% respectively [6]. This shows that information on research topics can be extracted efficiently (Table 3) [7].

Table 2. Reliability Statistics (Cronbach Alpha)

	Items	Corrected Item-Total Correlation (CITC)	Cronbach Alpha if Item Deleted
Clan Culture	B1	0.538	0.95
	B2	0.532	0.95
	B3	0.522	0.95
Adhocracy Culture	B4	0.527	0.95
	B5	0.542	0.95
	B6	0.573	0.949
	B7	0.508	0.95
	B8	0.537	0.95
Market Culture	B9	0.545	0.95
	B10	0.543	0.95
	B11	0.571	0.949
Hierarchy Culture	B12	0.56	0.949
	B13	0.578	0.949
	B14	0.571	0.949
	B15	0.556	0.95
Financial Performance	B16	0.57	0.949
	B17	0.608	0.949
	B18	0.589	0.949
	B19	0.6	0.949
	B20	0.531	0.95
Customer Satisfaction	B21	0.555	0.95
	B22	0.553	0.95
	B23	0.573	0.949
	B24	0.605	0.949
Employee Performance	B25	0.589	0.949
Process	B26	0.525	0.95
	B27	0.704	0.948
	B28	0.704	0.948
	B29	0.69	0.949
Future Outlook	B30	0.553	0.95
	B31	0.608	0.949
	B32	0.614	0.949
	B33	0.577	0.949

Table 3. Validity Analysis

	Items	Factor Loadings									Communalities
		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	
Clan Culture	B1	0.119	0.13	0.156	0.094	0.072	0.089	0.855	0.132	0.067	0.83
	B2	0.114	0.115	0.128	0.084	0.122	0.126	0.852	0.112	0.043	0.821
	B3	0.096	0.124	0.12	0.061	0.077	0.097	0.862	0.103	0.155	0.836
Adhocracy Culture	B4	0.093	0.13	0.128	0.073	0.109	0.057	0.865	0.097	0.155	0.844
	B5	0.116	0.068	0.153	0.128	0.138	0.077	0.099	0.857	0.11	0.839
	B6	0.18	0.095	0.125	0.127	0.096	0.148	0.116	0.856	0.08	0.856
	B7	0.142	0.036	0.092	0.061	0.12	0.123	0.138	0.864	0.066	0.833
	B8	0.108	0.066	0.131	0.099	0.193	0.078	0.099	0.846	0.121	0.827
Market Culture	B9	0.135	0.09	0.11	0.135	0.082	0.865	0.108	0.108	0.115	0.847
	B10	0.166	0.101	0.117	0.108	0.123	0.868	0.068	0.094	0.079	0.851
	B11	0.187	0.13	0.15	0.135	0.046	0.842	0.109	0.109	0.093	0.837
	B12	0.153	0.126	0.117	0.081	0.135	0.853	0.097	0.117	0.105	0.839
Hierarchy Culture	B13	0.118	0.081	0.14	0.879	0.139	0.114	0.099	0.116	0.114	0.882
	B14	0.12	0.079	0.137	0.867	0.112	0.149	0.079	0.107	0.138	0.862
	B15	0.108	0.093	0.153	0.867	0.155	0.096	0.045	0.124	0.094	0.855
	B16	0.124	0.113	0.166	0.877	0.119	0.102	0.099	0.07	0.095	0.873
Financial Performance	B17	0.888	0.144	0.088	0.085	0.137	0.157	0.082	0.106	0.107	0.898
	B18	0.832	0.07	0.115	0.154	0.101	0.137	0.101	0.131	0.099	0.8
	B19	0.802	0.151	0.066	0.111	0.116	0.159	0.108	0.135	0.145	0.773
	B20	0.846	0.125	0.064	0.074	0.11	0.082	0.098	0.111	0.06	0.785
Customer Satisfaction	B21	0.16	0.848	0.103	0.102	0.102	0.152	0.123	0.068	0.084	0.826
	B22	0.122	0.922	0.096	0.081	0.109	0.104	0.133	0.062	0.121	0.939
	B23	0.189	0.86	0.135	0.104	0.128	0.087	0.128	0.073	0.082	0.857
	B24	0.117	0.139	0.857	0.15	0.118	0.121	0.143	0.107	0.096	0.859
Employee Performance	B25	0.106	0.143	0.86	0.161	0.098	0.143	0.145	0.104	0.109	0.871
Process	B26	0.145	0.058	0.11	0.119	0.848	0.078	0.07	0.143	0.108	0.813
	B27	0.251	0.222	0.2	0.204	0.182	0.194	0.182	0.142	0.728	0.847
	B28	0.19	0.175	0.206	0.175	0.192	0.178	0.231	0.237	0.736	0.859
	B29	0.239	0.183	0.17	0.252	0.144	0.18	0.203	0.158	0.74	0.85
	B30	0.122	0.922	0.096	0.081	0.109	0.104	0.133	0.062	0.121	0.939
Future Outlook	B31	0.888	0.144	0.088	0.085	0.137	0.157	0.082	0.106	0.107	0.898
	B32	0.091	0.084	0.903	0.158	0.1	0.127	0.144	0.161	0.112	0.941
	B33	0.142	0.158	0.085	0.135	0.903	0.102	0.104	0.139	0.052	0.93
	Eigenvalues (Initial)	13.879	3.035	2.838	2.589	2.524	2.182	2.065	1.968	1.119	-
% of Variance (Initial)	38.552	18.698	12.531	8.438	8.063	7.885	7.188	7.010	6.063	-	
% of Cum. Variance (Initial)	38.552	57.250	69.781	78.219	86.281	94.156	101.354	108.365	114.427	-	
Eigenvalues (Rotated)	4.460	3.791	3.782	3.716	3.664	3.582	3.573	3.554	2.076	-	
% of Variance (Rotated)	12.396	10.531	10.510	10.323	10.177	9.948	9.927	9.875	5.771	-	
% of Cum. Variance (Rotated)	12.396	22.917	33.427	43.750	53.927	63.875	73.802	83.667	89.438	-	
KMO	0.885										
Bartlett's Test of Sphericity (Chi-Square)	null										
df	630										
p value	null										

3.3. Frequency analysis

Male to female ratio: 286 male cases, accounting for 71.14%; 116 female cases, accounting for 28.86%.

Among them, the proportion of women aged 18 to 25 is 45.52%, 26 to 30:164 (40.80%), 30 to 45:45 (11.19%), and 45 to 45 years old is 10, accounting for 2.49%.

Size of your company: Small companies (5 to 49) 41 (10.2%) Medium companies (50 to 249) 158 (39.30%) Large

companies (250 or more) 203 (50.50%).

Your annual household income is closest to: \$50,000 or less: \$28 (6.97%) \$1,000 to \$100,000: 227 (56.47%) \$101,000 to \$150,000: 120 (29.85%) More than \$25,000 27 (6.72%).

Education level: 94 people have secondary school education or above, accounting for 23.38%; 101 people have a bachelor's degree, accounting for 42.54%; other educational backgrounds: 36 people, accounting for 8.96% (Table 4).

Table 4. Basic information table

Items	Categories	N	Percent (%)	Cumulative Percent (%)
Gender	Male	286	71.14	71.14
	Female	116	28.86	100
Age	18-25	183	45.52	45.52
	26-30	164	40.8	86.32
	30-45	45	11.19	97.51
	over 45	10	2.49	100
Your company size	Small business (5-49 people)	41	10.2	9.95
	Medium-sized enterprises (50-249 people)	158	39.3	49.25
	Large enterprises (more than 250 employees)	203	50.5	99.75
			0.25	100
Which range is closest to your annual household income?	Less than RMB 50, 000	28	6.97	6.97
	51, 000-100, 000 RMB	227	56.47	63.43
	101, 000-150, 000 RMB	120	29.85	93.28
	More than 150, 000 RMB	27	6.72	100
Education	high school and below	94	23.38	23.38
	bachelor degree	171	42.54	65.92
	Graduate degree	101	25.12	91.04
	Other degree	36	8.96	100

3.4. Experimental results

3.4.1. T test results of Gender

There are no statistically significant differences between

men and women at all levels of family culture. p is above 0.05, which means that any difference in average can be attributed to randomness (Table 5).

Table 5. Clan Culture

	Items	Gender (Mean ± Std. Deviation)		t	p
		Male (n=286)	Female (n=116)		
Clan Culture	B1	4.88 ± 1.35	4.78 ± 1.60	0.643	0.521
	B2	5.14 ± 1.35	5.11 ± 1.60	0.155	0.877
	B3	5.00 ± 1.36	4.96 ± 1.55	0.283	0.777
	B4	4.78 ± 1.40	4.62 ± 1.61	0.963	0.336

There were no statistically significant differences between genders in all four dimensions of ad hoc culture. The p values

were all greater than 0.05, indicating that any observed differences in means are likely attributable to chance (Table 6).

Table 6. Adhocracy Culture

	Items	Gender (Mean ± Std. Deviation)		t	p
		Male (n=286)	Female (n=116)		
Adhocracy Culture	B5	5.36 ± 1.35	5.35 ± 1.45	0.021	0.983
	B6	5.62 ± 1.31	5.56 ± 1.39	0.376	0.707
	B7	5.53 ± 1.22	5.34 ± 1.55	1.137	0.257
	B8	5.22 ± 1.35	5.19 ± 1.45	0.179	0.858

At the level of marketing culture, there are significant differences between men and women in terms of competitiveness and achieving goals. However, there are no

significant differences among different customer satisfaction levels (Table 7).

Table 7. Market Culture

	Items	Gender (Mean ± Std. Deviation)		t	p
		Male (n=286)	Female (n=116)		
Market Culture	B9	5.52 ± 1.32	5.09 ± 1.45	2.824	0.005**
	B10	5.69 ± 1.26	5.34 ± 1.49	2.215	0.028*
	B11	5.58 ± 1.32	5.33 ± 1.39	1.711	0.088
	B12	5.42 ± 1.30	5.03 ± 1.45	2.628	0.009**

Hierarchical culture (How much authority and decision-making power do we have in our organization?) Hierarchical culture (How much do employees follow company rules and regulations?); Hierarchical culture (How are responsibilities

and authorities divided?), and What about both sexes?), hierarchical culture (to what extent do employees recognize our organizational structure and hierarchy?), neither showed significant differences (Table 8).

Table 8. Hierarchy Culture

	Items	Gender (Mean ± Std. Deviation)		t	p
		Male (n=286)	Female (n=116)		
Hierarchy Culture	B13	4.98 ± 1.51	4.67 ± 1.66	1.724	0.086
	B14	5.23 ± 1.55	4.95 ± 1.64	1.647	0.1
	B15	5.10 ± 1.54	4.84 ± 1.69	1.519	0.13
	B16	4.86 ± 1.51	4.59 ± 1.65	1.552	0.121

There is a statistically significant difference between genders in Business Performance, with males having a higher

mean score compared to females (table 9).

Table 9. Business Performance

Items	Gender (Mean ± Std. Deviation)		t	p
	Male (n=286)	Female (n=116)		
Business Performance	5.14 ± 0.92	4.91 ± 1.09	1.998	0.047*

3.4.2. T test results of Age

Numerical values for F and P are given for various aspects of the clan:

Collaboration: F=0.774, P=0.509.

Intimacy and interpersonal relationships: F=0.05, P=0.405.

Employee participation level: F=0.369, P=0.775.

Sense of social identity: F=0.664, P=0.575.

In each case, P exceeds 0.05, indicating that there is no statistically significant difference among various age groups in the evaluation of clan culture (Table 10).

Table 10. T-test results of Clan Culture of Age

	Items	Age (Mean ± Std. Deviation)				F	p
		18-25 (n=183)	26-30 (n=164)	30-45 (n=45)	over 45 (n=10)		
Clan Culture	B1	4.87 ± 1.41	4.77 ± 1.39	5.11 ± 1.61	4.60 ± 1.58	0.774	0.509
	B2	5.08 ± 1.40	5.09 ± 1.38	5.47 ± 1.62	5.20 ± 1.62	0.975	0.405
	B3	4.95 ± 1.45	4.99 ± 1.39	5.18 ± 1.42	4.80 ± 1.32	0.369	0.775
	B4	4.70 ± 1.50	4.69 ± 1.43	5.02 ± 1.53	4.70 ± 1.25	0.664	0.575

Numerical values for F and P are given for various aspects of temporary culture:

New ideas are stimulated: F=0.126, P=0.945

Independent choice: F=0.042, P=0.795

Experimenting with new approaches: F=0.549, P=0.649.

Perceptions of innovation and change: F=0.051, P=0.985 (P=0.985)

In any case, P exceeds 0.05, indicating that there is no significant difference in temporary cultural evaluation between people of different age groups (Table 11).

Table 11. T-test results of Adhocracy Culture of Age

	Items	Age (Mean ± Std. Deviation)				F	p
		18-25 (n=183)	26-30 (n=164)	30-45 (n=45)	over 45 (n=10)		
Adhocracy Culture	B5	5.34 ± 1.42	5.38 ± 1.39	5.27 ± 1.23	5.50 ± 1.08	0.126	0.945
	B6	5.64 ± 1.33	5.60 ± 1.38	5.49 ± 1.25	5.30 ± 0.95	0.342	0.795
	B7	5.55 ± 1.32	5.45 ± 1.35	5.38 ± 1.25	5.10 ± 1.37	0.549	0.649
	B8	5.19 ± 1.36	5.21 ± 1.43	5.27 ± 1.34	5.30 ± 1.16	0.051	0.985

The F and P values of marketing culture at various levels are given:

Significance of competition: F=1.794, P=0.148 (p=0.148)

Indicator completion status: F=1.628, P=0.182

Customer satisfaction: P=0.025, F=3.154.

Performance evaluation and results: F=0.992, P=0.397

The importance of customer satisfaction P<0.05, indicating

that there are statistically significant differences in marketing culture among customers of different age groups. However, in other dimensions, P is better than 0.05, which shows that

there is no significant statistical difference between different age groups (Table 12).

Table 12. T-test results of Market Culture of Age

	Items	Age (Mean ± Std. Deviation)				F	p
		18-25 (n=183)	26-30 (n=164)	30-45 (n=45)	over 45 (n=10)		
Market Culture	B9	5.50 ± 1.26	5.26 ± 1.46	5.58 ± 1.37	4.80 ± 1.62	1.794	0.148
	B10	5.73 ± 1.19	5.43 ± 1.47	5.67 ± 1.38	5.40 ± 1.17	1.628	0.182
	B11	5.71 ± 1.28	5.30 ± 1.42	5.53 ± 1.16	5.00 ± 1.63	3.154	0.025*
	B12	5.39 ± 1.33	5.23 ± 1.40	5.42 ± 1.31	4.80 ± 1.23	0.992	0.397

Set F and p-values for each dimension in the hierarchical culture:

Centrality of rights and policy making: F=0.149, P=0.930.

Employees' implementation of rules and regulations: F=0.166, P=0.919

Clarity of responsibilities and authorities: F=0.621,

P=0.602

Internal personnel's recognition of the company's organizational structure and hierarchy, F=0.433, P=0.729.

In all aspects, P is better than 0.05, indicating that there is no significant difference between different age groups (Table 13).

Table 13. T-test results of Hierarchy Culture of Age

	Items	Age (Mean ± Std. Deviation)				F	p
		18-25 (n=183)	26-30 (n=164)	30-45 (n=45)	over 45 (n=10)		
Hierarchy Culture	B13	4.94 ± 1.49	4.84 ± 1.60	4.87 ± 1.74	5.00 ± 1.41	0.149	0.93
	B14	5.20 ± 1.53	5.12 ± 1.58	5.04 ± 1.82	5.30 ± 1.49	0.166	0.919
	B15	5.12 ± 1.58	4.90 ± 1.60	5.11 ± 1.58	5.00 ± 1.63	0.621	0.602
	B16	4.80 ± 1.55	4.75 ± 1.57	4.71 ± 1.63	5.30 ± 1.06	0.433	0.729

The F value and the P value obtained from ANOVA are:

P value is 0.932, F=0.146

p>0.05 indicates that there is no significant difference in

business performance of enterprises of various age groups (Table 14).

Table 14. T-test results of Business Performance of Age

	Age (Mean ± Std. Deviation)				F	p
	18-25 (n=183)	26-30 (n=164)	30-45 (n=45)	over 45 (n=10)		
Business Performance	5.09 ± 1.01	5.04 ± 0.97	5.13 ± 0.84	5.11 ± 1.04	0.146	0.932

3.5. CFA analysis

This article uses confirmatory factor analysis to analyze 4 factors and 16 factors. As can be seen from the table above,

the average variance coefficient of each factor is above 0.5, and the correlation coefficient is above 0.7, indicating that the data studied has good convergence and validity (Table 15).

Table 15. Model AVE and CR indicator results

Factor	Average variance extraction AVE value	Combination reliability CR value
Clan Culture	0.772	0.931
Adhocracy Culture	0.778	0.933
Market Culture	0.788	0.937
Hierarchy Culture	0.821	0.948

3.6. Regression analysis

The regression coefficient of hierarchical culture is 0.185 (t=7.321, P=0.000), indicating that hierarchical culture has a significant positive effect on company performance. The regression coefficient of corporate culture is 0.212 (t=7.048, P=0.000<0.01), which means that corporate culture has a significant positive effect on company performance. The regression coefficient of Adhocracy is 0.185 (t=6.096,

P=0.000), suggesting that Adhocracy culture has a significant positive effect on company performance. The regression coefficient of family culture is 0.200 (t=7.113, P=0.000), which means that family culture has a significant positive effect on company performance. The results show that hierarchical culture, market culture, organizational culture and family culture all have significant positive effects on company operating performance (Table 16).

Table 16. Parameter Estimates

	Unstandardized Coefficients		Standardized Coefficients	t	p	collinearity diagnosis	
	B	Std. Error	Beta			VIF	tolerance
Constant	1.017	0.197	-	5.151	0.000**	-	-
Hierarchy Culture	0.185	0.025	0.277	7.321	0.000**	1.217	0.822
Market Culture	0.212	0.030	0.269	7.048	0.000**	1.239	0.807
Adhocracy Culture	0.185	0.030	0.234	6.096	0.000**	1.244	0.804
Clan Culture	0.200	0.028	0.267	7.113	0.000**	1.196	0.836
R2	0.532						
Adj R2	0.527						
F	F (4,397) =112.727, p=0.000						
D-W	1.980						

3.7. Model Regression Coefficients

As can be seen from the above table, under the influence of family culture on company performance, the standardized path coefficient is $0.267 > 0$, and the significance of this path is 0.01 ($z=7.157$, $P=0.000 < 0.01$), which shows that: family culture has a significant impact on company performance. The performance of the company plays an important role. Corporate performance has a significant positive effect on corporate performance [8]. When Adhocracy culture has a significant effect on company performance, its standardized path coefficient is $0.234 > 0$, and the significance level is 0.01

($z=6.136$, $P=0.000 < 0.01$), which shows that Adhocracy culture can significantly improve company performance and have a positive impact on the company. relationship plays a positive role. Between corporate performance and corporate performance, the normalized path coefficient is $0.269 > 0$, and the path is 0.01 ($z=7.088$, $P=0.000 < 0.01$), which means that in the corporate operating performance, The business culture of an enterprise can significantly promote cooperation between enterprises [9]. Under the influence is $0.277 > 0$, and this path 0.01 ($z=7.369$, $P=0.000 < 0.01$), which illustrates the impact of hierarchical culture on corporate operations. There is a significant positive effect (Table 17) [10].

Table 17. Model Regression Coefficients Summary

X	→	Y	unnormalized path coefficient	SE	Z CR value	p	normalized path coefficient
Clan Culture	→	Business Performance	0.2	0.028	7.157	0	0.267
Adhocracy Culture	→	Business Performance	0.185	0.03	6.136	0	0.234
Market Culture	→	Business Performance	0.212	0.03	7.088	0	0.269
Hierarchy Culture	→	Business Performance	0.185	0.025	7.369	0	0.277

4. Discussion

Domestic and foreign scholars have conducted a large number of studies on corporate culture and company performance, including the construction industry. Below are a few articles related to this article. Denison, D. R., Mishra, A. K. (1995). Conducted research on corporate culture and effectiveness. This paper has a total of 6 (2), 204-223. An account of this article. This article focuses on the relationship between the company's business performance and business performance from the perspective of the company. On this basis, taking corporate culture as the starting point, the role of corporate culture on the company's performance is analyzed. However, Dennison and Mishra (1995) suggest that their origins may be different. Denison and Mishra (1995) may have adopted their own approach to data collection, but your research may have been based on a different set of data or other industries. Corporate Culture Architecture: In their study, Denison and Mishra (1995) divide corporate culture into four levels (input, integration, adaptation, and outcome) and conduct an in-depth analysis of the influence mechanism between each factor. (10) You can use various cultural frameworks or use various methods to conduct research. Title: This article will examine various institutions and industries. While Denison and Mishra's (1995) study may have covered a variety of organizations, yours focuses on the construction industry. (2010) Corporate culture and leaders in companies. Compared with the paper by John Wiley & Sons, both focused on the role of corporate culture on corporate output,

highlighted the connection between companies, and from the perspective of corporate culture, put forward the concept of corporate culture Culture has a significant impact on a company's operating performance. However, Schein (2010)'s research conducted a more systematic study on corporate culture and its impact from three levels: the formation, diffusion and transformation of corporate culture. Your research, on the other hand, focuses on exploring how specific cultural factors affect company performance[11]. In addition, Schein (2010) also established a three-level corporate culture model: artifacts, value artifacts and basic assumptions artifacts. However, this study may have used an alternative cultural construct and measure. The research methods used by Schein (2010) are broader, such as case analysis, interviews, observations, etc. However, this study may focus on the analysis of quantitative data. Like the research by Wang and Li (2016), both focus on how corporate culture changes the company's operating performance or creative activities, but they are different in terms of research objects, variables, and research scope. The above differences will lead to different research conclusions and conclusions, and should be considered and compared when discussing and interpreting the research results [12]. In addition, the relevant theories and research results proposed by Wang and Li (2016) will also provide references for related research. Wang and Li (2016) focus on corporate creativity, while you focus on corporate performance. In addition, this article will also use a variety of behavioral measurement methods of corporate culture and innovation. A multi-level questionnaire method was used to

examine how corporate culture affects corporate creativity at various levels. Your research might focus on the connection between overall company performance and corporate culture.

This project will start from the interaction between organizational culture and other factors, and explore the interaction mechanism between organizational culture and income level, education and other factors, as well as their effect on company performance. However, organizational culture also interacts with other factors such as personnel characteristics, organizational structure, and industry type. Therefore, the follow-up research of this study will conduct in-depth exploration of different influencing factors.

Expand the research objects and scope: include 402 samples, covering a specific institution and group [13]. However, further research can be further extended to cross-industry, cross-regional, and cross-cultural enterprises to enhance the credibility and universality of the research results. The research results of this project will lay the foundation for the theoretical research and application of this project.

Existing research mostly focuses on the role of corporate culture on company performance, but ignores its impact on company performance. And in the process, it will also explore the impact of different time dimensions on corporate performance. Although existing research has analyzed some possible impacts, there are still some hidden variables that will have a certain impact on a company's operating performance. Follow-up research can conduct in-depth exploration and control of the above issues in order to improve the accuracy and understandability of the research results.

In addition, this study will also explore other factors that have a significant impact on corporate culture and corporate performance. For example, leadership style, employee satisfaction, company size, etc. will all have a certain effect on the company's corporate culture and company performance. A more profound analysis of the relationship between income and education. This article proposes a new perspective, namely the interaction between wages and educational attainment. When collecting data, the sample scope should be appropriately increased to cover various organizations and regions, so that the research has strong representativeness and universality. Follow-up research can further explore expanding the sample size and diversification to enhance the representativeness and promotion effect of the research. In addition, in order to obtain more complete conclusions, this research can also be conducted across various industries and sectors. Future research can provide a more detailed measurement of a company's culture and operational performance. For example, more measures can be used to reflect the different cultural aspects of different companies, while more detailed measurement of business performance can be made. In this project, it is proposed to exclude the role of other factors by adding control factors such as firm size and industrial competitiveness. Focus on long-term effects: Existing research has focused on how company culture directly affects company performance. Future research can delve into the role of corporate culture in the long-term and sustainable nature of a company's performance, and change it over time.

This article believes that a company's corporate culture is the main factor in its business performance. Follow-up research can further explore how companies construct and operate excellent corporate culture, thereby improving corporate operating performance and market competitiveness.

Specifically, it is necessary to formulate an effective corporate culture strategy, cultivate and cultivate the corporate culture of the enterprise, and build a performance evaluation and incentive system that conforms to the characteristics of the corporate culture. Research on corporate culture: In the context of economic integration, the study of multinational corporate culture is particularly important. Follow-up research can further explore the corporate cultural characteristics of multinational enterprises and the correlation with corporate operating performance. This research helps multinational companies and companies across different cultures make more intelligent decisions in corporate cultural management. Such as leadership style, employee motivation, market competition, etc. Follow-up research can construct a more comprehensive model by integrating various factors to comprehensively analyze the causes of company performance. Explore new research methods and indicators: Existing research is mostly based on questionnaire surveys and statistical methods, but subsequent research still needs to further explore mixed research methods and methods, including case studies and employee behavior observations, in order to obtain a more complete study in conclusion. and depth of research. This article will conduct a comparative analysis of different types of organizations. Different corporate cultures have different effects in different industries, different scales and different cultural backgrounds. An in-depth study of the company's organizational culture was conducted. Understanding how corporate culture is established and maintained, and what factors regulate corporate performance, has important guiding significance for corporate management. This project plans to use a combination of qualitative research to further improve the mechanism of corporate culture on corporate performance by analyzing the perceptions and perceptions of internal employees on the relationship between corporate culture and corporate performance. This project will also explore the impact of different employee salary, education and other factors on corporate culture. Other regulating variables can also be analyzed under different economic conditions and different educational levels.

5. Conclusion

Correlation between cultural aspects and income and educational level: average scores of all cultural aspects for reference of each class. On some cultural levels, there are significant differences between economic classes and educational levels. At the three levels of class culture, market culture and family culture, family economic status and educational level have reached significant levels. The lower the economic level and education level, the lower the scores of various cultural traits; four different corporate characteristics (family, temporary organization, market and hierarchy) will all play an important role in company performance. In the organizational structure of the enterprise, the hierarchical structure of the enterprise has a significant positive impact on the business performance of the enterprise. Market culture, short-term culture and family culture have a significant positive impact on company performance, but the impact is smaller than that of hierarchical culture.

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