The Influence of Computer Application Technology on Enterprise Computer Technology

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Abstract. This paper theoretically analyzes the mechanism and influence of computer technology on enterprise informatization, and makes up for the lack of empirical research. In practice, it can provide theoretical and practical basis for enterprises to better promote the informatization construction, and help to measure, plan and guide the informatization construction of enterprises. The value of information technology will be further realized to provide basic help.

Keywords: Computer Technology, Informatization construction, Information technology

1. Introduction

Computer Technology is the inevitable trend of enterprise development. More and more enterprises are aware of the role and importance of computer application technology in promoting enterprise informatization[1-2]. The core part of the theory of this paper is to analyze the influence mechanism of computer technology construction on enterprise informatization, starting with the source of enterprise informatization, this paper analyzes the impact of informatization on four sources including resources, capabilities, knowledge and environment[3-4]. The influence of computer technology on enterprise informatization is worth studying.

2. Empirical research design and methodology

2.1. Hypothesis presented

Based on the analysis of the theoretical relationship between the construction of enterprise computer technology, the source of enterprise informatization and enterprise informatization, this paper puts forward such a conclusion[5-6]. Enterprise Computer Technology can improve enterprise resources, enterprise capacity, enterprise knowledge, enterprise environment.

(1) enterprise resources

H1: The better the construction and utilization of enterprise computer technology are, the
better the improvement of enterprise resources is.

H2: the better the enterprise resource is, the better the enterprise informatization is.

(2) enterprise capability

H3: the better the construction and utilization of enterprise computer technology are, the better the enterprise capability is.

H4: The higher the enterprise capability is, the stronger the enterprise informatization is.

(3) enterprise knowledge

H5: The better the construction and utilization of enterprise computer technology are, the more knowledge accumulation and innovation can be promoted.

H6: The better the level of enterprise knowledge accumulation and innovation are, the stronger the enterprise informatization is.

H7: the better the construction and utilization of enterprise computer technology are, the better the formation and development of inter-firm network relationship are.

H8: The better the development of inter-firm network relationships are, the stronger the enterprise informatization is.

(4) corporate culture

H9: the better the construction and utilization of corporate computer technology are, the better the improvement of corporate culture is.

H10: With a good corporate culture environment, the enterprise information will be stronger. To sum up, the impact of enterprise computer technology on enterprise information model can be shown in figure 1.

![Figure 1. Hypothetical Model](image)

2.2. Variable design

In this paper, each latent variable is set up with 3 indexes, and the answers of 7 variables are chosen from 5 levels: "very disagree", "disagree", "neutral", "agree", "agree", "1" is the lowest, "5" is the highest. The specific variables are as follows:

(1) Enterprise Information Construction and utilization. The level of enterprise informatization infrastructure, the degree of integration between enterprise informatization and basic management, and the degree of integration between enterprise informatization and business process are used to measure. (2) enterprise resources. It is measured by three indexes:
The quality of enterprise assets, the turnover rate of capital in enterprise operation and the quality of enterprise employees.

(3) Enterprise capability. It is measured by three indexes: The basic management ability, the technological innovation ability and the management innovation ability.

(4) Enterprise knowledge. It is measured by the quantity of new products put into production, the proportion of sales revenue and the quantity of management innovation achievements.

(5) Network relationship among enterprises. The relationship between enterprise and supplier, between enterprise and distributor, and between enterprise and cooperator are used to measure the relationship.

(6) Corporate Culture. The value of the enterprise, vision, learning organization can measure the three indicators.

(7) Competitiveness of enterprises. Use Market Resilience, customer service, Channel Management, corporate impact, brand competitiveness, Customer satisfaction to measure.

2.3. Data analysis and results

According to the variable design of enterprise informatization, enterprise competitive power source and enterprise competitive power. The questionnaire was sent to the respondents by e-mail and in person, and the questionnaire was sent to other respondents using their relationships. Because some of the questions are confidential or comprehensive, the general staff cannot answer, so the survey will be limited to middle managers above (including middle managers) to take such a snowball approach, a total of 120 distributed in the province, a total of 103 valid questionnaires and 87 valid questionnaires were collected. The rate of return and efficiency is 84% and 83%. The rate of return and efficiency is higher because of the follow-up.

3. Hypothesis testing and result analysis

3.1. Hypothesis testing

At this stage, Lisrel8.7 software was used to test the structural equation model. First, according to the design of the structure of the model to draw a structure chart, then add the data in the indicators, then run the software, finally get the structure model as figure 2.

![Figure 2. model of enterprise informatization, source of enterprise competitiveness and structure of enterprise competitiveness](image)

In the basic model, the factor load between each latent variable and its index is greater.
than 0.7, which shows that each index can be well measured and variable. Chi-square=386.30;
Df=242; Chi-square/Df=386.30/242≈1.6<3; P-value=0.00000; RMSEA=0.083; The model fits well.

3.2. Analysis of results
The data is derived from the structural model, as shown in Table 1.

| Path                          | Coefficient | T    | Path                          | Coefficient | T    |
|-------------------------------|-------------|------|-------------------------------|-------------|------|
| H1:Computer technology-resources | 0.94        | 8.65 | Resources-Institutionalization | -0.11       | -0.45|
| H3:Computer technology-Ability | 0.93        | 8.57 | Ability-Institutionalization  | -0.12       | -0.52|
| H5:Computer technology-knowledge | 0.78       | 7.25 | knowledge-Institutionalization | 0.32        | 2.65 |
| H7:Computer technology-Internet | 0.79       | 8.02 | Internet-Institutionalization  | 0.22        | 2.13 |
| H9:Computer technology-culture | 0.85        | 7.25 | culture-Institutionalization   | 0.84        | 4.63 |

First, this paper assumes that three paths are verified and two are not. The conclusion is that the informatization can be promoted by promoting the construction and utilization of enterprise computer technology and enhancing enterprise knowledge accumulation and innovation. We can improve our competitiveness by promoting the construction and utilization of enterprise informatization, improving, and developing network relations among enterprises. It can be promoted by promoting the construction and utilization of enterprise computer technology to perfect the enterprise culture atmosphere. However, it is not supported to promote the informatization construction by improving the resources and capability of enterprise computer technology. The following is a step-by-step analysis of each path.

First, H1 is supported, and H2 is not, which suggests that further informatization is not supported by advancing the application and utilization of enterprise computer technology to improve resources. This article thinks to have following several.(1)the respondent does not know the information about the answers to the questions; or the respondent knows the information about the answers to the questions but is unable to answer them for objective reasons; or the respondent does not understand the questions. Therefore, the data cannot really reflect the actual situation of enterprises. (2) The indicators to measure the resource variables of an enterprise are the quality of assets, the turnover rate of funds and the completion of the work of the employees of the enterprise. The indicators are all based on the content of traditional resources, which belong to the improvement of the internal conditions of the enterprise and are not highly integrated with the external environment, and the external environment has a greater impact on enterprise information, so there is no support for the results. Another reason is that the application and utilization of enterprise computer technology to traditional resources. It is mainly reflected in improving the efficiency of resource utilization. This improvement is less important than using enterprise informatization to promote enterprise knowledge accumulation and innovation, to develop network relationship among enterprises and to perfect enterprise culture. The various sources of enterprise informatization also influence each other. This affects the result of path analysis
and results that are not supported. (3) As mentioned above, enterprise informatization is a complex systems engineering, and its effectiveness requires a greater investment of resources and a longer period of time. Therefore, the application of enterprise computer technology may not have a positive effect on improving resources, but rather a negative effect, leading to unsupported results.

Second, H3 is supported, and H4 is not, suggesting that further information enhancement through advancing capabilities in the application and utilization of enterprise computer technology is not supported. In addition, the variables that measure the ability of enterprises are basic management ability, technological innovation ability, and management innovation ability, based on the management ability and the innovation ability two aspects proposed. These skills, especially the ability to innovate, are actually harder to improve. The main body of Management and innovation is human beings. In order to improve the management and innovation ability, the demand for human resources is very high. The enterprise strategy-making and decision-making all need the wisdom of leaders and the ability of employees, enterprise informatization can only play an auxiliary role. Therefore, the enterprise informatization has little effect on the improvement of management ability and management innovation ability, and there is no support result. As a result of the above synthesis reason, obtained does not support the result. However, we cannot completely deny the impact of the application and utilization of computer technology on the resources and capabilities of enterprises. Empirical analysis is only used to test the theoretical hypothesis. The results cannot absolutely explain the correctness of the theory, only that the hypothesis is not supported in this study. At the same time, in the theoretical part, it also analyzes in detail how enterprise informatization can affect the various sources of informatization, and these influences are also affirmed by other scholars. Therefore, this paper still holds that the better the application and utilization of enterprise computer technology can improve enterprise resources and enhance enterprise capacity, thus enhancing enterprise informatization.

Third, both H5 and H6 are supported, demonstrating that increasing knowledge accumulation and creation can further enhance informatization by advancing the application of enterprise computer technology.

Fourth, both H7 and H8 are supported, demonstrating that the development of inter-firm network relationships through advancing the application of enterprise computer technology can further enhance informatization.

Fifth, both H9 and H10 are supported, demonstrating that improving corporate culture through advancing the application of corporate computer technology can further enhance informatization.

Sixthly, based on the conclusion, this paper puts forward a tentative plan: the Application and utilization of enterprise computer technology cannot promote enterprise informatization through the two mediums of Enterprise Resource and enterprise capability. It may be due to the interaction among enterprise informatization, Enterprise Resource and enterprise capability. The effect of Enterprise Resource and enterprise capability on enterprise informatization is greater than that of enterprise informatization on both.

4. Conclusion
The most important conclusion is that the application of enterprise computer technology broadens the depth and breadth of enterprise resource utilization to make the resource
dynamic, transparent and more convenient for enterprise utilization. Under the background of the Times, the enterprise informatization promotes the formation of new enterprise capability, improves the existing management, innovation, production and so on, and finally promotes the overall capability and strength of enterprise. In a word, this paper theoretically analyzes the mechanism and influence of computer technology on enterprise informatization, and makes up for the lack of empirical research. In practice, it can provide theoretical and practical basis for enterprises to better promote the informatization construction, and help to measure, plan and guide the informatization construction of enterprises, to further realize the value of information technology to provide basic help.

References

[1] Fan P. Application of Computer Application Technology in Enterprise Informationization [J]. China Computer & Communication, 2019 (7): 2.

[2] Sindiren E, Ciylan B. Application model for privileged account access control system in enterprise networks[J]. Computers & Security, 2019, 83: 52-67.

[3] Meng X. Research on the Innovation of Collaborative Talents Cultivation Mode in the Major of Computer Application Technology Based on" Production-Teaching Integration and School-Enterprise Cooperation"—A Case Study of Applied Technology College[C]//3rd International Seminar on Education Innovation and Economic Management (SEIEM 2018). Atlantis Press, 2019.

[4] Cummins F A. Enterprise integration: an architecture for enterprise application and systems integration[M]. John Wiley & Sons, Inc., 2002.

[5] Farooq R, Ganaie G H, Ahirwar G S. Role of Information and Communication Technology in Small and Medium Sized Enterprises in J & K[M]//Smart Intelligent Computing and Applications. Springer, Singapore, 2020: 355-360.

[6] Miao L. Application of Information Processing Technology in Garment Enterprises [M]. //Data Processing Techniques and Applications for Cyber-Physical Systems (DPTA 2019). Springer, Singapore, 2020: 623-631.