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The Influence of Customer Capital and Service Capital on the Intellectual Capital That Has an Impact on the Village Apparatus

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Abstract

This study aims to analyze the influence of Customer Capital and Service Capital on Intellectual Capital and its impact on the performance of village apparatus in Sungai TFull City. This study uses a quantitative approach with the Structural Equation Modeling (SEM) method to test the relationship between variables. Data was collected through a survey with a questionnaire distributed to village officials in Sungai TFull City. The population in this study is all village apparatus in Sungai TFull City, while the sample was selected using purposive sampling, with a total of 100 respondents who met certain criteria, such as work experience and involvement in village public services. The results show that Customer Capital and Service Capital have a significant effect on Intellectual Capital with coefficients of 0.475 and 0.496, respectively. Intellectual Capital also contributed 0.333 to improving the performance of village apparatus. In addition, Service Capital and Customer Capital have a direct influence on performance with coefficients of 0.206 and 0.178, although the largest influence on performance comes from Intellectual Capital. The analysis of direct and indirect effects shows that Intellectual Capital plays a mediating variable in the relationship between Customer Capital and Service Capital and the performance of village officials. The indirect effect of Service Capital and Customer Capital on performance through Intellectual Capital was 0.207 and 0.208, respectively.

Keywords: Customer Capital, Service Capital, Intellectual Capital, Performance

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INTRODUCTION

The village government has a strategic role in managing administration and public services for the community. The performance of the village apparatus greatly determines the effectiveness of the village government in providing quality services (Sabil et al. 2024). To improve this performance, one of the factors that can be considered is intellectual capital, which includes human resources, managerial systems, and relationships with the community (Jaradat et al. 2024). Strong intellectual capital will contribute to more effective, efficient, and accountable management of the village government (Haddad, Albawab, and Al-Qudah 2023; Juneja and Amar 2018; Muftiasa et al. 2023). In the concept of intellectual capital, there are three main elements, namely human capital, structural capital, and relational capital (Assfaw and Sharma 2024; Javaid, Ain, and D'Ecclesia 2023). Relational capital, which is often associated with customer capital, refers to the relationship between the organization and external parties, including the community served by the village apparatus (Qiao and Wang 2021). Good relationships with the community will create the trust and support needed to run village programs (Karakose et al. 2023). Therefore, customer capital has an important role in strengthening the intellectual capital of the village apparatus (Hashim et al. 2022; Widjajanti, Prihantini, and Wijayanti 2022).

In addition, service capital, which reflects the quality of service infrastructure, administrative systems, and technology used in public services, is also an important aspect of supporting intellectual capital. With the availability of adequate facilities and systems, village apparatus can improve work efficiency and innovation in providing services to the community (Sulaiman et al. 2023). Good service capital will support village officials in managing intellectual resources optimally (Jaradat et al. 2024; Zhu, Li, and Wang 2021).

The relationship between customer capital and service capital with intellectual capital shows that these two factors can strengthen the intellectual capacity of village officials. When village officials have better intellectual capital, their performance in carrying out government tasks will also increase. This can be seen in the improvement of the quality of public services, effectiveness in decision-making, and community participation in village development (Guess and Munger 2023; Mashdurohatun 2021).

This study aims to analyze the influence of customer capital and service capital on intellectual capital, as well as how it impacts the performance of village apparatus. By understanding the relationship between these factors, it is hoped that this study can

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provide recommendations for village governments in improving the quality of services and governance.

Previous research has discussed a lot about intellectual capital in the context of business organizations and the public sector (Huyen et al. 2024; Mukhammedov et al. 2024). However, studies that specifically highlight the role of customer capital and service capital in village government are still limited. Therefore, this study seeks to fill this gap by presenting a more in-depth analysis in the context of village apparatus.

Objectives

Here are the research objectives that fit your topic:

1. Analyze the influence of customer capital on the intellectual capital of village officials.
2. Analyze the influence of service capital on the intellectual capital of village apparatus.
3. Analyze the influence of customer capital on the performance of village apparatus.
4. Analyze the influence of service capital on the performance of village apparatus.
5. Analyze the role of intellectual capital as a mediating variable in the relationship between customer capital and the performance of village officials.
6. Analyze the role of intellectual capital as a mediating variable in the relationship between service capital and the performance of village apparatus.

This objective aims to understand the relationship between customer capital and service capital with intellectual capital, as well as its impact on the effectiveness and performance of village apparatus.

METHOD

The research method used in this study is a quantitative method with a survey approach. This research is explanatory research (Sari 2022), which aims to explain the cause-and-effect relationship between customer capital and service capital on intellectual capital, as well as its impact on the performance of village apparatus in Sungai Penuh City. This approach was chosen because it allows for statistical analysis that can objectively test hypotheses.

The population in this study is all village apparatus in Sungai Penuh City. The research sample was determined using the purposive sampling technique or stratified random sampling, with a sample number of 100 respondents. The data used in this study consisted of primary data and secondary data. Primary data was collected through the distribution of questionnaires to village officials, while secondary data was obtained from

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official village government reports, policy documents, and previous research related to customer capital, service capital, intellectual capital, and village apparatus performance.

The research instrument was in the form of a questionnaire with a Likert scale (scale 1-5) to measure the level of agreement of respondents to the submitted statements. The research variables used in this study include customer capital, which is measured based on the level of trust, loyalty, and community satisfaction with village services; Service Capital, which is measured based on the quality of service infrastructure, administrative systems, and technology used in public services; intellectual capital, which reflects the ability of village officials to manage intellectual resources, innovation, and governance; and the performance of village apparatus, which is evaluated based on the effectiveness of public services, transparency, accountability, and community participation in village development.

DISCUSSION

Model Test Results

The results of Structural Equation Modeling (SEM) which illustrates the relationship between latent variables that are not directly observed but measured through certain indicators. In this model, there are four main latent variables, namely Customer Capital, Service Capital, Intellectual Capital, and Performance. Customer Capital is measured by three indicators (cc1, cc2, cc3), while Service Capital is measured by three other indicators (sc1, sc2, sc3). These two variables influence Intellectual Capital, which in this model is also measured through three indicators (ic1, ic2, ic3). Furthermore, Intellectual Capital together with Customer Capital and Service Capital influence Performance, which is measured through five main indicators (pr1, pr2, pr3, pr4, pr5).

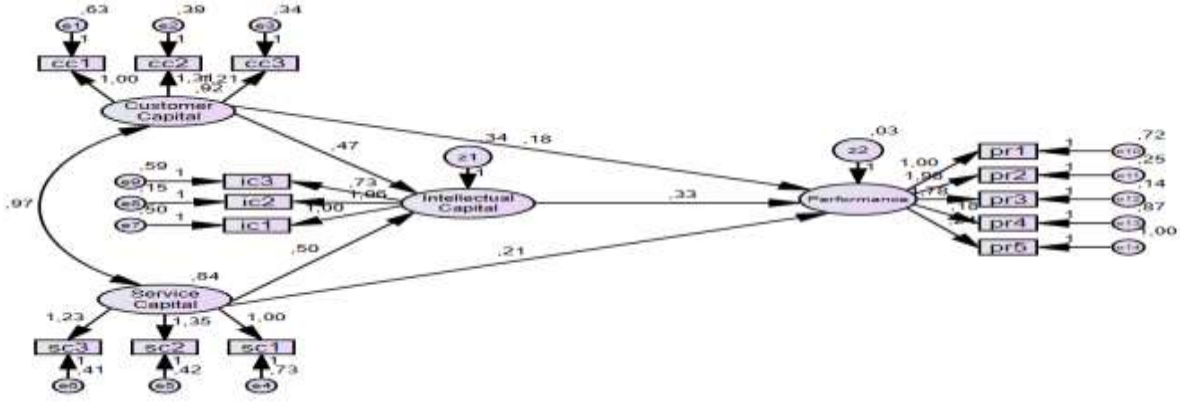


Figure 1: Full Model-Structural Equation Model (SEM) Results Test

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The number shown on each arrow in the chart indicates a path coefficient, which measures the magnitude of the relationship between these variables. For example, Customer Capital has an influence of 0.47 on Intellectual Capital, while Intellectual Capital itself contributes 0.33 to Performance. In addition, there are residual variables or errors (e1, e2, ..., e14) that represent error variables in the measurement of these indicators. The model also includes latent residuals (z1 and z2) that exhibit the variability of latent variables that are not explained by relationships in the model.

Overall, this model describes how Customer Capital and Service Capital contribute to the improvement of Intellectual Capital, which will ultimately have an impact on improving the performance of an entity, such as a company or organization. This modeling is often used to test the suitability of data with theory and to understand the causal relationship between the variables studied.

Model Test Results

The results of the model testing are:

1). Absolute Fit Indices

a. The result of the DF is 8,525 which is interpreted as "accepted" because it has a positive value
b. The result of X2/DF is 1.863 which is interpreted as "accepted" because the lowest limit is 1.0, the highest limit is 2.03

2). Icremental Fit Indices

a. The results of GFI = 0.944, AGFI = 0.973, TLI = 0.949 and CFI = 0.726 are interpreted as "accepted" because is on the criteria of a value ranging from 0-1, closer to 1 the better
b. The results of RMR = 0.077 and RMSEA = 0.064 which are interpreted as "accepted" because they are in the < criteria of 0.08

3). Parsimony Fit Indices

The results of PNFI = 0.649 and PCFI = 0.566 which are interpreted as "accepted" because they are in the criteria of a value ranging from 0 -.1

Based on the explanation of the results of the model test above, it was produced that the model in this study was acceptable.

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Hypothesis Testing

Hypothesis testing in this study uses a comparison of the results of Critical Ratio and P. With the criterion of the value of the Critical Ratio > 1.96 or the P value is below 0.05.

Table 1. Regression Weights Results

			Estimate	S.E.	C.R.	P
Intellectual_Capital	<---	Customer_Capital	,475	,085	5,555	***
Intellectual_Capital	<---	Service_Capital	,496	,088	5,624	***
Performance	<---	Intellectual_Capital	,333	,076	4,382	***
Performance	<---	Service_Capital	,206	,049	4,209	***
Performance	<---	Customer_Capital	,178	,048	3,674	***

Table 1 above shows the results of estimating the relationship between latent variables in the Structural Equation Modeling (SEM) model. The Estimate value represents the magnitude of the influence of independent variables on the dependent variables in the model. Customer Capital has a positive influence of 0.475 on Intellectual Capital, which means that an increase in Customer Capital will increase Intellectual Capital. Similarly, Service Capital has an influence of 0.496 on Intellectual Capital, showing that the service factor also plays a significant role in increasing intellectual capital. In addition, Intellectual Capital has an influence of 0.333 on Performance, which means that the higher the Intellectual Capital, the better the performance produced. Service Capital and Customer Capital also affected Performance, with values of 0.206 and 0.178, respectively, indicating that both contributed to improving performance, albeit on a smaller scale compared to Intellectual Capital.

S.E. (Standard Error) indicates the degree of variation in the estimation of regression coefficients. The relationship between Customer Capital and Intellectual Capital has a standard error of 0.085, Service Capital and Intellectual Capital have a standard error of 0.088, Intellectual Capital and performance have a standard error of 0.076, Service Capital and performance have a standard error of 0.049, Customer Capital and performance have a standard error of 0.048 which indicates that the variation is quite small and the estimated results are quite stable.

The C.R. (Critical Ratio) column is obtained from dividing the Estimate with the S.E., where the C.R. value > 1.96 shows a significant relationship at the 95% confidence level. All the relationships in the table have a C.R. value well above 1.96, such as 5.555

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for the influence of Customer Capital on Intellectual Capital, 5.624 for the influence of Service Capital on Intellectual Capital, 4.382 for the influence of Intellectual Capital on performance, 4.209 for the influence of Service Capital on performance and 3.674 for the influence of Customer Capital on performance, which indicates that these relationships are statistically significant.

Finally, the P (P-Value) column indicates the level of significance of the relationship. The *** sign indicates that the P-value < 0.001, which means that all relationships in this model are statistically significant. Thus, these results indicate that Customer Capital and Service Capital have an important role in increasing Intellectual Capital, which ultimately has an impact on improving performance in the organization.

Squared Multiple Correlations

Table 2. Squared Multiple Correlations

	Estimate
Intellectual_Capital	,721
Performance	,939

1) Customer Capital and Service Capital have an effect of 72.1% on Intellectual Capital in Village Apparatus in Sungai TFull City
2) Customer Capital, Service Capital, and Intellectual Capital Social Capital have an effect of 93.9% on the Performance of Village Apparatus in Sungai TFull City

Analysis of Direct Effect, Indirect Effect, and Total Effect

Table 3. Total Effect

	Service_Capital	Customer_Capital	Intellectual_Capital
Intellectual_Capital	,412	,415	,000
Performance	,465	,442	,503

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Table 4. Direct Effect

	Service_Capital	Customer_Capital	Intellectual_Capital
Intellectual_Capital	,412	,415	,000
Performance	,258	,234	,503

Table 5. Indirect Effect

	Service_Capital	Customer_Capital	Intellectual_Capital
Intellectual_Capital	,000	,000	,000
Performance	,207	,208	,000

Tables 2, 3, and 4 draw conclusions from each of the effects into a matrix:

Table 6. Path Coefficient Matrix

Variabel Dependen	Variabel Independen	Total Effect	Direct Effect	Indirect Effect
Intellectual Capital	Service Capital	0.412	0.412	0.000
Intellectual Capital	Customer Capital	0.415	0.415	0.000
Performance	Service Capital	0.465	0.258	0.207
Performance	Customer Capital	0.442	0.234	0.208
Performance	Intellectual Capital	0.503	0.503	0.000

In the Intellectual Capital variable as a dependent variable, it was found that Service Capital had a direct effect of 0.412, while Customer Capital had a direct effect of 0.415. However, there is no indirect effect on Intellectual Capital, which means that the effect of Service Capital and Customer Capital on Intellectual Capital is direct without the intermediary of other variables. Meanwhile, in the Performance variable as a dependent variable, Intellectual Capital has the largest effect with a direct effect of 0.503, with no indirect effect. This shows that the increase in Intellectual Capital directly improves Performance. In addition, Service Capital and Customer Capital also affect Performance, but with different mechanisms. Service Capital has a total of 0.465 securities, consisting of 0.258 direct securities and 0.207 indirect securities. Customer Capital has a total of 0.442 securities, with 0.234 direct securities and 0.208 indirect securities.

The indirect effects of Service Capital and Customer Capital on Performance show that both affect Performance through Intellectual Capital as a mediating variable. In other

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words, part of the contribution of Service Capital and Customer Capital to Performance occurs because both increase Intellectual Capital first, which then has a positive impact on Performance. Overall, these results confirm that Intellectual Capital plays an important role in improving Performance, while Service Capital and Customer Capital contribute both directly and indirectly through Intellectual Capital as a mediating variable. Therefore, an effective strategy for managing service capital and customer capital can increase Intellectual Capital, which ultimately has a positive impact on overall performance.

Based on the table that shows the Total Effect, Direct Effect, and Indirect Effect, Intellectual Capital plays a role as a mediating variable in the relationship between Service Capital and Customer Capital on Performance. This can be seen from the Indirect Effect of Service Capital on Performance of 0.207 and Customer Capital on Performance of 0.208. This indirect effect shows that part of the influence of Service Capital and Customer Capital on Performance occurs through Intellectual Capital. In other words, Service Capital and Customer Capital first increase Intellectual Capital, which then contributes directly to the improvement of Performance.

In addition, since Intellectual Capital has a significant direct effect on Performance (0.503), this further strengthens its role as a mediator. This means that organizations that increase Service Capital and Customer Capital not only get direct benefits in improving Performance but also indirectly through increasing Intellectual Capital.

CONCLUSION

Customer Capital and Service Capital have a significant influence on Intellectual Capital with coefficient values of 0.475 and 0.496, respectively. This shows that increasing Customer Capital and Service Capital can increase Intellectual Capital in an organization. Intellectual Capital has a direct influence on Performance with a coefficient value of 0.333, which indicates that the higher the Intellectual Capital, the better the performance of the organization. Service Capital and Customer Capital also have a direct effect on Performance, with coefficients of 0.206 and 0.178, respectively. However, their influence on Performance is smaller compared to Intellectual Capital. Customer Capital and Service Capital contributed 72.1% to Intellectual Capital, indicating that these two variables have an important role in increasing Intellectual Capital. Customer Capital, Service Capital, and Intellectual Capital together have a 93.9% influence on Performance, indicating that these variables greatly determine the level of organizational performance.

The implication of the study is that to improve organizational performance, there needs to be a strategy that focuses on strengthening Customer Capital and Service

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Capital because these two factors contribute to increasing Intellectual Capital which ultimately improves organizational performance. Effective management of Intellectual Capital is very important, considering that this variable has the greatest direct impact on Performance.

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