Human Capital Analysis Of Organizational Performance Mediated By Customer Capital: Case Of Accounting Study Program

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Abstract: Universities in Indonesia have now become industries, thus causing competition between universities to be unavoidable. The key to success for every university in Indonesia to win this competition is to gain competitive advantage. One important factor determining competitive advantage is intellectual capital. The purpose of this study is to investigate the role of human capital in performance through customer capital as a mediating variable. The research sample is an accounting study program in Surabaya. Data were analyzed using PLS. Human capital is found to affect customer capital and customer capital affects performance, but human capital does not directly affect performance.

Index Terms: accounting study program, customer capital, higher education, human capital, intellectual capital, performance, structural capital.

1. INTRODUCTION
Changes in the environment of higher education have had an impact on the increasing competition for universities in Indonesia. Colleges are currently faced with external challenges that often change [1]. One of the fundamental factors that led to changes in the environment of higher education is the change in the management of the institutions. Management of higher education shifts from a collegialistic system to a managerialistic one that is oriented to functional management, namely adopting management practices, forms of business organization, focusing on the principles of efficiency and accountability, and the concept of money value, generally adopted in the business entity. Therefore, currently universities have entered an era called as the "competitive market" [2] and [3]. The impact of the high competition among higher institutions in Indonesia is scary as the number of closed-down, mergers, and took over is increasing. It is an alarming situation, universities taken over by other universities, and mergers. This shows that universities in Indonesia are unable to compete because they do not have a competitive advantage [4]. One source of competitive advantage is intellectual capital, which consists of human capital, consumer capital, and structural capital [5], [6], [7], and [8]. Ballow [9] found that knowledge-intensive firms have intangible assets between 75% and 85%. One of knowledge intensive firms is the college. Higher education is a complex and unique organization. It is considered complex because universities have many stakeholders and uses varied management systems while at the same time it is unique because universities have several outcomes of its processes, such as students, researches, community services, etc. In the past two or three decades, college competition has increased has made the universities becoming a competitive era industry that enter a competitive era. To date, intellectual capital has become an interesting issue to study. The role of intellectual capital has become very important because companies are beginning to understand the importance of innovation in competition. Innovation arises because organizations have intangible assets that are able to move the tangible assets of the organization. The role of intellectual capital is increasingly important when competition in the business world is intensifying. Intellectual capital is an important factor in every organization to have competitive advantage [10] and [11]. This is because intellectual capital has a more important role than physical and financial assets and is a driver of value creators in a hypercompetitive environment [10], [11], [12], and [13]. This study uses the concept of Balanced Scorecard (BSC) approach which states that human capital does not directly affect organizational performance [11]. Human capital in the BSC included in the learning and growth perspective cannot directly influence organizational performance but must go through the internal business and customer perspectives. In this case, the customer perspective will be measured through customer capital in the concept of intellectual capital. Thus, the purpose of this study is to prove the effect of human capital on the performance of study programs mediated through customer capital in accounting study programs in Surabaya. The urgency of this study is that if universities are able to identify and manage human capital, hoping these universities are able to compete in the current era.

THEORETICAL REVIEW
The concept of intellectual capital is based on the Resource Based Theory (RBT). As argued by [14], the company's ability to acquire, combine, manage, and use its assets optimally will encourage it to have superior performance so that it has competitive advantage. This opinion is supported by [15] who stated that every organization will achieve excellence if it has superior resources. Therefore, the role of intangible assets in managing tangible assets is very strategic, as exemplified when a company develops employees, the employee will implement the strategy through assets owned by the company [11].

Intellectual Capital
Intellectual Capital consists of human capital, customer capital, and structural capital [16]. Human capital includes knowledge, skills, and employee experience [10], and [16]. Human Capital is a representation of the individual capabilities of the organization represented by the employees of the organization. Therefore, human capital is a combination of education, experience, behavior, and the passing-down of generations of employees. The customer capital concept includes consumer satisfaction, consumer loyalty, and image [17]. This concept connects organizations with consumers through marketing channels. Customer capital is knowledge related to marketing channels that aims to develop the organization's business. Structural capital is an organizational infrastructure that supports the organization's operations, called "non-human store-house of knowledge". Structural
capital will increase organizational value because it includes systems, technology, organizational culture, organizational databases, organizational organizational charts, manual processes, and includes organizational strategies [16], and [17].

### The Role of Human Capital in an Organization

Of the three aspects of intellectual capital, human capital has a very important role among other IC components. Through human capital, the organization will be able to increase innovation and creativity, which will ultimately increase value for consumers. Human capital will be able to increase customer capital through consumer loyalty, so there is positive relationship between human capital and consumer capital [16], [18], [19]. In relation to structural capital, human capital is able to develop organizational infrastructure by increasing the effectiveness of procedures and routine activities of the organization. Human capital also has the ability to shape and develop organizational culture that has an impact on the success of the organization. Empirical researches show that human capital influences structural capital [18] and [20]. Until now, the financial aspect alone is not sufficient to assess the performance of an organization. This is because the financial aspect cannot provide a comprehensive picture of the value of the organization since organizational performance includes both financial and non-financial performance [11] and [21].

### RESEARCH METHODS

This study uses a survey method with a population that is the Chairperson of Bachelor (S1) of Accounting Study Programs of higher educations in Surabaya. The study program is used as a unit of analysis because it is a strategic business unit (SBU) in universities that has a competitive advantage [22] and [23]. The research subjects are the chairpersons of the accounting study program. This study uses primary data, namely questionnaires and will be processed using the Partial Least Square (PLS) method.

### Hypotheses

**H1: human capital affects customer capital**

Customer capital has a very important role in improving organizational performance. Customer capital has a contribution in increasing the number of new customers and in retaining existing customers. Some important aspects of customer capital that affect organizational performance are services and facilities provided to customers. Customer capital significantly affects institutions’ performance [18]. Thus, the first hypothesis is:

**H2: customer capital affects performance**

Human capital cannot directly influence organizational performance. Through service and its ability to solve problems with customers, it will be able to improve organizational performance. So, human capital will affect performance through customer capital. One important aspect in human capital is tacit knowledge. Through tacit knowledge, organizations are able to create value that is customer capital, thus consequently improving organizational performance [19]. This argument leads to the following hypothesis.

**H3: customer capital mediates the positive effect of human capital (HC) on performance**

### ANALYSIS AND DISCUSSION

A total of 37 questionnaires were distributed to all chairpersons of undergraduate accounting courses in the city of Surabaya. There were 32 questionnaires. The selection of the chairpersons of the undergraduate programs as the targeted respondents is based on the reason that they are seniors in the field so that they are expected to have sufficient experience in leading and understanding the conditions of the study programs.

#### Convergent Validity Test.

In testing convergent validity for indicators of human capital, customer capital, and performance, all indicators of each latent variable provide t-statistic values greater than 1.96 for bootstrap samples (B = 100) up to (B = 500). Therefore, all indicators of human capital, customer capital, and performance are valid. Discriminant validity test aims to test the validity of indicator blocks. Indicator block validity can be seen if the value of each indicator in measuring the construct variable (= indicator block) is dominantly higher when compared with the value of each indicator in measuring other construct variables. The indicators of each construct variable give a high convergent validity value of more than 0.5. This shows that all indicators used in this study are valid as a measure of each of the construct variables because all these indicators have discriminant validity values that are dominantly higher when compared to the value of each of these indicators in measuring other construct variables.

#### Reliability Testing

**Composite Reliability**

Composite reliability aims to test the reliability of construct variables. Composite reliability shows a satisfactory value if it has a value greater than 0.6. The results of composite reliability values in Table 1 show that all indicator blocks that measure the construct of human capital (HC), customer capital (CC), and personnel performance (Y) have reliability composite values greater than 0.6. Composite reliability in this study is shown in Table 1.
A V E aims to test the reliability of construct variables. AVE aims to determine that construct variables have good discriminant validity values. The AVE value is declared satisfactory if it has a value greater than 0.5. The AVE test results are shown in Table 2.

Table 2 Average Variance Extracted (AVE) Values

<table>
<thead>
<tr>
<th>Variabel</th>
<th>Average Variance Extracted</th>
</tr>
</thead>
<tbody>
<tr>
<td>human capital (HC)</td>
<td>0.509</td>
</tr>
<tr>
<td>customer capital (CC)</td>
<td>0.444</td>
</tr>
<tr>
<td>Performance (P)</td>
<td>0.712</td>
</tr>
</tbody>
</table>

Table 2 shows that the AVE values for indicator blocks that measure constructs can be stated to have good discriminant validity values. So, in this case all indicator blocks that measure all construct variables are declared reliable. The Outer Weight test result indicators of the variables studied in this study is considered as the first step in the data processing using the PLS Model. The outer weight test results find that all indicators have a factor loading value greater than 0.5 and the composite reliability value greater than 0.6. Therefore, these indicators are declared valid and reliable to measure the latent variables used in this study.

Inner Weight
The Test of Structural Model (Inner Weight) is shown through structural path coefficient results. The results of the structural path coefficient (Inner Weight) along with the full significance values are shown in Table 3.

Table 3 Inner weight testing on organizational performance (ko) with bootstrap samples

<table>
<thead>
<tr>
<th>Variable</th>
<th>Original Coef.</th>
<th>Bootstrapped (n=500)</th>
<th>Coef.</th>
<th>t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human capital → customer capital</td>
<td>0.695</td>
<td>0.698</td>
<td>37.887</td>
<td></td>
</tr>
<tr>
<td>Human capital → Performance</td>
<td>-0.088</td>
<td>-0.107</td>
<td>1.751</td>
<td></td>
</tr>
<tr>
<td>Customer capital → Performance (P)</td>
<td>0.232</td>
<td>0.255</td>
<td>3.514</td>
<td></td>
</tr>
</tbody>
</table>

After testing the validity and reliability of all latent variables, the results show valid and reliable outcome, and testing the bootstrap sample of B = 500 gives significant results.

Results of the path coefficient testing is shown in Table 4.

Table 4 Path Coefficient Testing on Personnel Performance Model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Statistic T</th>
<th>T table</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>human capital → customer capital</td>
<td>0.698</td>
<td>37.887</td>
<td>1.96</td>
<td>Significant</td>
</tr>
<tr>
<td>customer capital → performance</td>
<td>0.255</td>
<td>3.514</td>
<td>1.96</td>
<td>Significant</td>
</tr>
<tr>
<td>human capital → performance</td>
<td>-0.107</td>
<td>-1.751</td>
<td>-1.96</td>
<td>Not Significant</td>
</tr>
</tbody>
</table>

Table 4 shows the inner weight between the variables examined in the study. The human capital variable on customer capital, showing that the path coefficient, which is positive, is 0.698 with a t-statistic value of 37.887 which is greater than t-table of 1.96. Thus, Human capital has a direct effect on customer capital, which means an increase in human capital will increase customer capital, so that human capital has a positive and significant effect on customer capital. The variable customer capital for performance shows that the path coefficient is positive at 0.255 with the t-statistic value of 3.514, which is greater than t-table = 1.96. Thus, customer capital directly affects performance, which means that every increase in customer capital will increase performance. The human capital variable on performance shows that the path coefficient is negative at -0.107 with a t-statistic value of -1.751, which is lower than the t-table = -1.96. Thus, human capital has no effect on performance. Human capital affects customer capital. Human capital plays an important role in creating markets. Higher human capital is related to better competency, which leads to a better understanding of customer needs and maintain customer loyalty. Human Capital has an influence on customer capital among chairperson of the accounting study programs. This findings supports the results reported in [16] and [18]. Human capital plays an important role in increasing student loyalty. The higher the competence of the lecturer, the better the lecturers will understand the needs of students and provide optimal service, so that students become loyal to the accounting study program. There are four aspects in human capital, namely the quality of lecturers, teamwork, and lecturers’ soft skills. Consequently, the study program must continuously improve the competence of its lecturers, especially in teaching. This includes improving the ability of the lecturer team to collaborate in carrying out programs that have been planned by the study program and increasing the lecturers’ soft skills. With improved quality, lecturers can provide good service for students, especially in the teaching and in the learning process and consultation. The process of learning and teaching and consultation are the frontline of service to students. Customer capital affects the performance of study programs. The study found that excellent service carried out by lecturers proved to be able to improve the performance of study programs. The study program through its competent lecturers can improve the quality of service to students. As a consequence, through excellent service, students feel satisfied and have loyalty so that they can improve the performance of study programs. Customer capital is a mediating variable between human capital and the performance of study programs. Study programs through human capital cannot directly affect the performance of study programs. Through the abilities and competencies of lecturers in teaching and lecturers’ soft skills that encourage improvement in student services, the performance of study programs will be improved. Study program lecturers, in carrying out their daily activities, can work well together and they will have strong motivation to provide the best for the study programs through their service to students. The satisfaction of lecturers who work in the study program is one of the important aspects, because the increase in lecturer loyalty will improve the quality of service to students. Lecturers will thus work with better responsibly and will always improve their quality.
CONCLUSION
This study empirically reports that human capital affects customer capital, customer capital affects performance, and customer capital is a mediating variable between human capital and performance. An important finding in this study is that customer capital is able to mediate the influence of human capital on performance. This shows that human capital cannot directly influence performance, proving the BSC concept that the learning and growth perspective must go through the consumer's perspective before influencing the performance perspective. Customer capital is an important aspect because without customer capital, it is not possible for the study program to have good performance. The results of this study provide findings that Human Capital does not directly affect performance, but human capital is important in improving customer capital, which affects the performance of accounting study programs. To investigate further, further research can use the faculty or university as a unit of analysis. Deeper investigation regarding the management of lecturers in the study program is also interesting to be done, so future researches may use a qualitative approach.

REFERENCES