EFFECTIVENESS OF HUMAN CAPITAL, SOCIAL CAPITAL, AND INNOVATION FOR PERFORMANCE IMPROVEMENT

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ABSTRACT

The study explores various concepts such as human capital, social capital, innovation capability, and performance. Human capital, involving skills, knowledge, and abilities, is crucial for organizational performance, and the higher level of education positively associates with better performance. Social capital encompasses networks, relationships, and shared norms that facilitate innovation by fostering an environment conducive to the exchange of ideas and resources. Innovation capability refers to an organization’s capacity to adopt and employ technology to develop products, services, or processes that contribute to competitiveness and adaptability. This study formulates hypotheses aiming to establish relationships between human capital, social capital, innovation capability, and organizational performance. The proposed hypotheses suggest the influence of human capital and social capital on innovation capability and performance. A quantitative approach was utilized through explanatory research, investigating specific populations within Telkom Ambon Branch, using Partial Least Square (PLS) analysis. The study’s findings present insightful conclusions regarding the relationships between the variables. Human capital positively influences performance and innovation capability, while social capital has a positive effect on innovation capabilities but negatively impacts employee performance. Moreover, innovation capability positively impacts organizational performance. The examination further elucidates the mediation role of innovation capability between human capital, social capital, and employee performance. This study provides a comprehensive analysis of the relationships between human capital, social capital, innovation capability, and performance within an organizational context. The study’s outcomes offer valuable insights for management and decision-makers in fostering sustainable competitive advantages and driving innovation within organizations.

KEYWORDS

Human Capital, Social Capital, And Innovation
INTRODUCTION

Organizational innovation is not something grand and luxurious, a solution that solves major problems extraordinarily, thus draining very extensive resources. Innovation is not the result of a super team that only consists of brilliant individuals within an organization. Organizational innovation does not always involve super-sophisticated technology. Organizational innovation is more about real solutions to the problems faced every day.

Organizations with highly skilled and knowledgeable human resources have higher human capital and are more likely to create knowledge, make sound decisions, and have better innovativeness (Hitt et al, 2006). Organizations can achieve competitive advantage by effectively managing today while simultaneously creating innovation for tomorrow. It's stated to be crucial for a company to have innovation as part of building competitive advantage (Abou-Moghli, et. al. 2012).

Human capital is a characteristic of human resources determined by the knowledge they possess and use to create value for the organization (Collin and Clark, 2003). The concept of innovation has gained popularity in recent years, such as through the establishment of design agencies, creating innovation centers in businesses, and developing educational programs focused on the innovation process (Garney, et al., 2019). Open innovation provides a new paradigm for sustaining a company's competitive advantage by opening opportunities for external knowledge and also carries risks.

A company's ability to adopt technology to develop innovation is inseparable from the role of human resources, for example, through structural and relational capital (Kianto, Sáenz, & Aramburu, 2017). Human resources can have a positive and significant impact on technology adoption and influence innovation performance (Danquah & Amankwah-Amoah, 2017).

Moreover, there's a research gap between the study of Kuryanto and Syafruddin (2008) and Ulum (2008). Kuryanto and Syafruddin stated that there is no positive influence of human capital, social capital on its performance, while Ulum stated that human capital and social capital positively affect organizational performance. The study conducted by Bontis et al. (2010) shows a positive and relatively significant relationship. However, the research by Rahim (2014) indicates that social capital and organizational capital do not affect employee performance. Based on this research gap and the SME business phenomenon, this article examines the innovation capacity as a mediating variable between human capital and social capital towards business performance.

THEORETICAL STUDY

2.1. Human Capital

Human Capital deals with the skills, knowledge and attitudes of corporate personnel, considered an important element, especially among post-industrial organizations (Mostafa 2005). The knowledge of the employees enhances their Effectiveness of Human Capital, Social Capital, and Innovation For Performance Improvement
creativity and invention, innovation and inventiveness, which further increases the viability and success rate of the organization.

Human capital refers to the combination of knowledge, skills, innovation, and abilities that individuals possess to perform their duties and create human capital is considered an important factor for organizational performance (Colombo & Grilli, 2005). The relevant characteristics of human capital are education, experience and knowledge, allowing access to wider opportunities (Davidsson & Honig, 2003). Higher levels of education are positively associated with performance. Work experience, management experience and previous entrepreneurial experience related to the company's activity

Davidsson & Honig, (2003) argue that formal education does not seem to be a determining factor in the success of the entire business process or in terms of pregnancy activity. Coordination of knowledge spread among different individuals is a typical ability of employers related to their knowledge and skills learned through education and previous work experience.

2.2 Social Capital

Social capital refers to the networks, relationships, and social connections that individuals and organizations have. This includes trust, cooperation, and shared norms, which can lead to increased collaboration, knowledge sharing, and access to resources. Social capital can contribute to innovation by facilitating the exchange of ideas and fostering an environment that supports creativity

2.3. Innovation Capability

Innovation capability refers to an organization's ability to adopt and utilize technology to develop products, services, or processes. It involves the integration of human resources, including skills, knowledge, and creativity, to drive innovation within the organization. The ability to innovate is essential for organizations to remain competitive and adapt to changing market conditions. Performance, in the context of human capital, social capital, and innovation capabilities refers to the results and outcomes achieved by individuals or organizations. This can be measured in terms of productivity, profitability, customer satisfaction, or other relevant metrics. In the study of literature found the importance of social capital, and studies using structural and cognitive social capital models in influencing business growth (Liao & Welsch, 2005). Human capital is contained in terms of social exchange. Social capital is critical to performance, considering business success (Kawachi et al., 1999). Teece (2005) claims that the communication process is an important competency for the success of the company. Social capital includes contexts, relationship stocks, interpersonal beliefs and norms that enable certain behaviors and relationships between individuals, and that ensure conditions for organizational development and knowledge sharing (Anklam, 2002). Social capital is thus considered an activity with many dimensions in which cognitive abilities and communication talents are influenced by context (Wide'n-Wulff and Ginman, 2004)

2.4. Performance

By leveraging human capital, social capital, and innovation capabilities, an organization can improve its performance and achieve its goals. In short, human
capital, social capital, innovation capabilities, and performance are interconnected concepts that play an important role in organizational success. Developing and maintaining human capital, fostering social capital, and enhancing innovation capabilities can lead to improved performance and competitiveness.

Overall, the most accepted interpretation of the nature of innovation has to do with the idea of renewal through the generation and implementation of successful ideas realized into more tangible products and services, namely technological and non-technological inventions (Edwards-Schachter, 2018). For business organizations, innovation can be explained as new products that use technology to explore or create opportunities (Mthanti & Ojah, 2017).

**RESEARCH METHOD**

This research uses a quantitative approach, which investigates specific populations and samples, collecting data using research instruments to test predetermined hypotheses. The quantitative approach involves testing hypotheses through statistical analysis (Sugiyono, 2011).

The research type utilized is explanatory research. Explanatory research aims to explain why certain events or phenomena occur. The outcome of this research offers a depiction of cause-and-effect relationships (Pra-setyo, 2005).

The study's target population is the entire workforce of Telkom Ambon Branch, consisting of 59 individuals, using the Saturated Sampling technique. The analysis technique used is Partial Least Square (PLS) with Warp PLS 5.0.

**Hypothesis Development:**

1. **Human Capital and Performance**

   Human capital reveals that more innovative organizations are managed by educated teams diverse in their functional expertise. According to empirical studies across different cultures, investments in improving human capital seem to enhance innovation. For instance, Dakhli and De Clercq (2004) found strong support for the positive relationship between human capital and innovation in their cross-country data study. They link this influence to the knowledge-intensive nature of both variables: human capital and innovation (Alpkan, 2010). Afnan Marzooqi et al.'s research (2022) on 55,000 ADNOC employees in the UAE explains that to enhance organizational performance, managerial activities should focus on improving human resource practices. Managers should consistently reward high-performing employees yearly to motivate them to achieve organizational strategies like vision, mission, and goals.

   The main dilemma faced by companies is how to encourage employees to contribute their knowledge for the company's benefit. People may be reluctant to share knowledge due to fear of losing ownership or status. Hence, managers, for the organization's sake, should focus on developing capabilities and commitment (willingness and desire to contribute to the company's success). Thus, human capital should involve employees' competencies (e.g., skills, knowledge, and capabilities) and their commitment (e.g., willingness to dedicate their lives and work to the company). It is hypothesized that a highly committed and skilled group (human capital) will be capable of building and utilizing company resources by creating
company innovation (Hitt et al, 2010). Therefore, the hypothesis proposed in this research is:

**H1: There is an Influence between Human Capital and Performance**

2. **Human Capital and Innovation**

   Capability Human capital is one element of knowledge, particularly intellectual capital (Stewart, 1998). This dimension is defined as ‘...all aspects involving talent and public servant competency, as their knowledge and skills form the basis for achieving the goals of an entity (Rossi et al., 2016, p.698)’. Given the complex environment of the public sector, the ability to promote innovation is essential for enhancing efficiency, quality, and value addition. Previous studies consistently depict the relationship between human capital and innovation in the private sector (Rodrigues et al., 2009; 2015; Jardón & Martos, 2014; Costa, 2010). Human capital is crucial as it is a source of innovation and strategy renewal obtained through brainstorming, laboratory research, process improvement, or skill development. There's a theoretical gap to explore the influence of human capital elements and their relationship with the capacity for innovation, especially in the public sector, considering the substantial differences between this sector and the private sector (Koch et al., 2005). Furthermore, the research aims to uncover specific and quantitative human capital variables, expanding Rossi et al.'s (2016) findings, and the capacity for innovation, as proposed by Lewis et al. (2018) and Demircioglu and Audretsch (2018).

   Research conducted by Rasa Aleknavičiūtė, Viktorija Skvarciany, Simona Survilaite (2016) titled 'The Role of Human Capital for National Innovation Capability in EU Countries' explains that the quality of human resources is the most important factor in innovation performance. Quality indicators show a higher correlation with innovation in low-innovative countries (companies with high levels of acceptance and use of new technologies). This model is applied to investigate human capital conditions in 26 EU countries from 2002-2012. The significance of human capital for the innovation process is to analyze available human capital measurements, establish human capital measurement models, and analyze human capital conditions in EU countries and their relationship to national innovation capability. 'The relationship between human intellectual capital and innovation capacity in the public sector' (2021) found that human capital has a significant positive effect on the public sector's capacity for innovation, especially in the respective local/city public administration. Winarno (2012) indicates that human capital can boost an innovation culture, and the higher the innovation culture, the better the organizational performance. Therefore, with human capital reflected by intellectual capital, it can be enhanced to:

   **H2: There is an Influence between Human Capital and Innovation Capability**

3. **Relationship between Social Capital and Performance**

   Social capital, such as social networks built on kinship, friendships, and geographical closeness, provides quick access to extensive and inexpensive market information. The research on 'Social Capital and Corporate Performance: Evidence from State Capital Enterprises in Vietnam' by Chin Ngo, Q. L. Nguyen, P. Nguyen
(2020) explains that social capital indirectly influences company performance through entrepreneurship and resilience in the Vietnamese context. Social capital is proven to be a special resource that grows over time. Previous research has indicated the benefits of social capital for businesses, particularly in promoting innovation (Jiménez-Jiménez, Martínez-Costa, & Sanz-Valle, 2014; Landry, Amara, & Lamari, 2002), enhancing entrepreneurship, and improving resilience (Aldrich & Meyer, 2015). It is helpful in addressing difficult situations, risk mitigation (Casey, 2002), and promoting entrepreneurship (Sambrook & Roberts, 2005). These factors have contributed to profitable operational outcomes and competitive advantages for businesses.

4. Relationship between Social Capital and Innovation

   Capability High social capital contributes to enhancing entrepreneurs' ability to identify new trends and try new techniques (innovation). Supporting and working together create high-quality relationships, affecting the ability to introduce new ideas in their businesses (Andriani, 2011). Andriani's research indicates that the higher the social capital level, the higher the innovation ability of a company. Social Capital (SC) significantly influences Innovation Capability (IC) by supporting each other and working together to create high-quality relationships, thus influencing the ability to introduce new ideas into their business (Andriani, 2011). Based on these descriptions, the fourth hypothesis in this study is:

**H4: Social Capital Positively Affects Innovation Capability**

5. Innovation Capability and Performance

The rapidly changing and uncertain global business environment has made the business competitive and more dynamic and complex (Alguezaui & Filieri, 2010). In this environment, organizations must focus on innovation capability and innovation as they are seen as crucial for an organization's sustainability, success, growth, and competitive advantage (Ahn & Kim, 2017; Holtzman, 2014; Iddris, 2016, Petrou & Daskalopoulou, 2013; Rubera & Kircka, 2012). Novelty is a significant determinant of organizational performance (Calantone et al., 2002; Hult et al., 2004). Therefore, organizational performance can be enhanced through technical and administrative innovation besides other factors (Lloréns Montes et al., 2005).

Previous studies have investigated the influence of innovation and innovativeness on organizational performance (Calantone et al., 2002; Cainelli et al., 2004; Bowen et al., 2010; Gunday et al., 2011). Innovative companies tend to have higher productivity and economic growth rates compared to non-innovative companies (Cainelli et al., 2004). Not only technical innovation but also organizational innovation is crucial for improving performance and increasing a company's value (Lloréns Montes et al., 2005; Bowen et al., 2010). Innovative organizations not only provide a suitable environment for other types of innovation but also have a strong and direct impact on innovative performance (Gunday et al., 2011). Moreover, overall organizational performance and innovative performance are strictly and positively related to each other (Mazzanti et al., 2006). Managers should, therefore, recognize and manage innovation to enhance their operational performance (Gunday et al., 2011).
RESULT AND DISCUSSION

Feasibility test of the model of the influence of Human Capital (X1), and Social Capital (X2) variables with performance (Y), and the influence of Human Capital (X1) and Social Capital (X2) variables on Performance (Y) through Innovation Ability (Z) requires analysis using Warp PLS 5.0. Hypothesis testing is based on the results of the SEM PLS model analysis containing all supporting variables of the hypothesis test.

Hypothesis testing is based on the results of the SEM PLS model analysis containing all supporting variables of the hypothesis test. The PLS model with the addition of Innovation Capability as a mediating variable explains that this addition makes an additional contribution as a performance explainer. The interpretation of the table and figure is the relationship between variables which is explained as follows:

1. Human Capital to performance has a coefficient with a positive direction. The calculation results show that the statistical t is 2.363 > t table 1.673, with a p value of 0.018 < 0.05 (giving a decision that Human Capital affects Performance. **Hypothesis 1 accepted**

2. Human Capital to Innovation Ability has a coefficient with a positive direction. The calculation results show that the statistical t is 5.071 > t table 1.673, with a p value of 0.018 < 0.05 (giving a decision that Human Capital affects Innovation Ability. **Hypothesis 2 accepted**

3. Social Capital towards Kinerja has a coefficient with a positive direction. The calculation results show that the statistical t is 1.291 < t table 1.673, with a p value of 0.0197 < 0.05 (giving a decision that Social Capital has no effect on Performance. **Hypothesis 3 rejected**

4. Social Capital to Innovation Ability has a coefficient with a positive direction. The calculation results show that the statistical t is 5.431 > t table 1.673, with p Value value 0.000 < 0.05 (giving a decision that Social Capital has an effect on Performance. **Hypothesis 4 accepted**
5. The ability to innovate to performance has a coefficient with a positive direction. The calculation results show that the statistical t is 3.704 > table 1.673, with a p value of 0.000 <0.05 (giving a decision that innovation ability has an effect on performance. **Hypothesis 5 accepted**

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<thead>
<tr>
<th>Relationships Between Variables</th>
<th>T Statistika</th>
<th>P Value</th>
<th>Results</th>
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<tbody>
<tr>
<td>Human Capital &gt; Performance</td>
<td>2,363</td>
<td>0,018</td>
<td>Accepted</td>
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<tr>
<td>Human Capital &gt; Innovation Capabilities</td>
<td>5,071</td>
<td>0,000</td>
<td>Accepted</td>
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<tr>
<td>Social Capital &gt; Performance</td>
<td>1,291</td>
<td>0,197</td>
<td>Rejected</td>
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<tr>
<td>Social Capital &gt; Innovation Capabilities</td>
<td>5,431</td>
<td>0,000</td>
<td>Accepted</td>
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<tr>
<td>Innovation Capability &gt; Performance</td>
<td>3,704</td>
<td>0,000</td>
<td>Accepted</td>
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</tbody>
</table>

The examination method in the mediation test can be done by examining the path indirectly. To test the mediation variable Innovation Ability in relation between Human Capital and Performance with innovation ability as a variable. Mediation has a positive direction coefficient with a statistical t value of 3.166 < from t table 1, 673 with a p value of 0.002 < 0.05 Thus proving that Innovation Ability is Mediation.

<table>
<thead>
<tr>
<th>Variabel Independent</th>
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<td>Human Capital</td>
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<td>3,116</td>
<td>0,002</td>
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<td>Innovation Capabilities</td>
<td>Kinerja</td>
<td>2,761</td>
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With the result that the influence of organizational trust on knowledge sharing behavior is insignificant, OCB and organizational commitment are full mediation.

**Discussion**

Human Capital has a positive influence on the performance of karaywan. Human capital is seen as a strategic element of the company because the management and performance of human resources contribute greatly to the creation of competitive advantage. The ability to manage human resources as an important asset for the success of the company such as certain skills, knowledge, abilities and behaviors of humans is needed to achieve competitive advantage at PT Telkom Ambon, because in essence humans will implement the company's strategy. The results of this study are in line with the results of research by Sutia, et al (2013), Swastari (2013) which resulted in the conclusion that human capital investment will improve performance.

Human Capital has a positive effect on innovation capabilities. Human capital consists of professional knowledge, skills, abilities and attitudes that can cause a person to increase creativity and innovation capacity (Suciu & Bratescu, 2010). Human capital is a characteristic of HR that is determined by the knowledge possessed that is used to create value for the organization (Collin and Clark, 2003). Individuals must sustainably invest in human capital in order to develop and sustain their creativity (Reimers-Hild, 2007). For PT Telkom Ambon, increasing the professionalism, appearance, ability and attitude of employees at work will result

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in higher innovation capabilities. The results of this study are supported by research by Akhli and De Clercq (2004) found that there is a positive influence between Human Capital and innovation. Moreover, this research is also supported by Anker (2006) pointing out the importance of updating the skills of the employees especially in the high-tech sector and concluded that HC increases the ability to innovate.

Social Capital negatively affects employee performance at PT. Telkom Ambon. That means the results of this study also contradict the research conducted by (Ghifary, 2017: 116-124), which proves social capital has a positive effect on employee performance. Also contrary to the results of research that found that social capital has a positive influence on employee performance (Wijayanti &; Rusdiana, 2014: 525-536) while the same results were found by (Pardiman 2018: 1-26)

Social Capital has a positive effect on innovation capabilities. Social Capital which refers to institutions, relationships, and norms will shape the quality and quantity of social interactions of society. With the strengthening of social capital, which is shown by the better characteristics / dimensions of social capital such as networking, norms of trust, norms of reciprocity, shared values, it is believed that it will increase the innovation ability of PT Telkom Ambon. The results of this study are supported by Cohen & Prusak's research, (2001) Social capital like other forms of capital positively impact organizational innovation performance, and can enhance and enhance individual and collective capacity based on collaborative practices (Faccin et al., 2017). Organizations should focus on their activities ranging from the social dimension to shared beliefs, norms, principles, and values through social networks, which in turn can contribute new opportunities for innovation and competitiveness as well as better performance outcomes (Dastourian et al., 2017).

Innovation Ability has a positive effect on performance. Innovation is an important determinant of organizational performance (Calantone et al., 2002; Hult et al., 2004). Thus, organizational performance can be improved through technical and administrative innovation in addition to other factors (Montes et al., 2005). Companies that innovate are proven to have higher levels of productivity and economic growth than companies that do not innovate (Cainelli et al., 2004). Not only technical innovation but also organizational innovation is an important condition for improving performance and for increasing corporate value (Lloréns Montes et al., 2005; Bowen et al., 2010). In addition, a firm's overall performance and organizational innovation are closely and positively related to each other (Mazzanti et al., 2006). Therefore, managers must recognize and manage existing innovation capabilities to improve their operational performance (Gunday et al., 2011). Innovation ability can mediate between human capital, social capital and employee performance.

**CONCLUSION**

Some conclusions that can be put forward based on these findings can be put forward as follows: 1) Human Capital has a positive and significant effect on the performance of PT Telkom Ambon Employees 2) Human Capital has a positive and
significant effect on PT Telkom Ambon’s innovation ability. 3) Social Capital has a positive and significant effect on the performance of PT Telkom Ambon employees. 4) Social Capital has a positive and significant effect on innovation capabilities. 5) Innovation ability has a positive and significant effect on performance. 6) Innovation Ability is able to mediate Human Capital and Performance. 7) Innovation Ability to mediate Social Capital and Commerce. The suggestion that can be conveyed is to prioritize Human Capital in optimizing service performance by encouraging increased knowledge, expertise, skills, and abilities of Telkon employees related to the demands of organizational needs and work that must be realized at Telkom Ambon. In addition, the output of this research can be developed and used as a model of human capital, social capital and innovation capabilities as a follow-up to operationalization at Telkom Ambon.

REFERENCES

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