Effect of organizational size and intellectual capital on organizational performance

Ira Cahyaning Tyas\textsuperscript{a}, Indira Januarti\textsuperscript{b}\textsuperscript{*}

\textsuperscript{a} Faculty of Economics and Business, Universitas Diponegoro, Semarang, Indonesia; iracahya87@gmail.com
\textsuperscript{b} Faculty of Economics and Business, Universitas Diponegoro, Semarang, Indonesia; ienjanuarti@gmail.com\textsuperscript{*}

A R T I C L E  I N F O

Article History:
Received 08-30-2022
Revised 04-03-2023
Accepted 04-27-2023

Kata Kunci:
Kinerja organisasi, ukuran organisasi, pengembangan sumber daya manusia, kualitas pelayanan

Keywords:
Organizational performance, organizational size, human resource development, service quality

A B S T R A K


A B S T R A C T

Public sector reform must always maintain the trust mandated therefore it is necessary to apply the principles of a new management philosophy that demands to development and manage intangible assets, especially intellectual capital. Based on this, this study aims to analyze and obtain empirical evidence of the effect of organizational size and intellectual capital with The SICAP Project model (human resource development and service quality) on organizational performance. The population of this research is the entire Provincial BPS work unit (Satker) totaling

*Corresponding Author
Effect of organizational size and intellectual (Tyas, Januarti)

34 work units for the period 2018-2020, with an observation data of 100. The data analysis technique uses unbalanced data panels with the EVIEWS 9 application. This research has succeeded in proving that human resource development and service quality have a positive effect on organizational performance. However, the size of the organization has no impact on organizational performance. The contribution of this research theoretically supports the sources-based view theory. While other contributions are for stakeholders in the Central Bureau of Statistics (BPS) in improving their organizational performance by empowering their resources, both in the form of tangible and intangible assets so that the quality of service improves.

INTRODUCTION

Intellectual capital becomes more important because public sector management is actually intangible compared to private organization (Busenan et al., 2018). The 2020 community satisfaction survey report proves that the performance of government organizations is still not up to expectations (Ombudsman Republic of Indonesia, 2020). Performance according to Presidential Decree No. 29 of 2014 concerning the Performance Accountability System for Government Agencies (SAKIP) (Republic of Indonesia, 2014a), where this system is an integration of the planning system, budgeting system and performance reporting system, which is in line with the implementation of the financial accountability system. SAKIP is work performance on the outputs/results of activities/programs that will be and have been achieved, which are measured in terms of quantity and quality of budget use. Performance is a reflection of the success or failure of an organization in its operational activities, thus showing the actual conditions of the organization's strengths and weaknesses (Diana & Limakrisna, 2018). Therefore, assessing the success of public sector organizations can be done by measuring performance (Diana & Limakrisna, 2018).

Organizational performance related to Resource-Based View (RBV) theory emphasizes that internal resources are a competitive advantage for organizations in the form of tangible and intangible assets, namely machines, capital, licenses, technological knowledge, quality of human resources (HR), good organizational culture, efficient procedures, and good service to relations (Wernerfelt, 1984). According to Barney (1991), an organization that is able to manage its internal resources in the form of tangible fixed assets and intangible fixed assets properly, effectively and efficiently. So, it can become a competitive advantage for its organization.

Government institutions need assets that are in good condition for high performance for the welfare of the community (Nugroho & Prasetyo, 2018). Total assets of government institutions, is a description of the size of the organization that affects the performance of the organization (Duho & Onumah, 2019). Government
institutions with large total assets will benefit from their operational activities. Therefore, they are better able to prosper the community (Duho & Onumah, 2019). However, large total assets can also hamper organizational performance if the allocation of spending is greater for asset maintenance, compared to community welfare (Duho & Onumah, 2019).

Organizational size can be measured by various indicators. One measure of government organization is measured by the number of assets owned (Duho & Onumah, 2019). Research by Duho & Onumah (2019) highlight that the size the results show a positive effect on organizational performance. While research by Noviyanti & Kiswanto (2016); Nugroho & Prasetyo (2018) show different results, that the size of the organization has no effect on organizational performance.

Another important issue related to organizational performance is intangible assets in the form of intellectual capital which is a component that forms organizational value (Arabiyat & Hasoneh, 2019). Intellectual capital management in the Indonesian public sector is important, because the government is carrying out bureaucratic reform (Reformasi Birokrasi/RB) with the issuance of Presidential Decree no. 80 of 2011 regarding Grand Design RB Indonesia 2010-2025 (Atidira & Priyono, 2020). RB demands that every rupiah of government expenditure must have more impact and remain efficient (Atidira & Priyono, 2020).

Research on the measurement of intellectual capital is important, because it is useful for identifying intangible fixed assets in an effort to achieve organizational strategic goals (Busenan et al., 2018). Ramírez (2010) developed the measurement of intellectual models in the Spanish public sector with four models namely (a) The SICAP Project by Bueno et al. (2004); (b) Model by Caba & Sierra (2001); (c) Model by García-Meca et al. (2005); and (d) Model by Bossi et al. (2005). Ramírez (2010) dividing the intellectual model into public human capital (PHC), public structural capital (PSC) and public relational capital (PRC). Research on intellectual models in the public sector has not been done much, therefore it is still relevant to be researched. In Indonesia, Atidira & Priyono (2020) researching intellectual capital in Semarang City Government referring to the construction of The SICAP Project model by Bueno et al. (2004) with an exploratory qualitative method. The results of his research show that there are 55 intellectual capital variables.

This study uses HR development variables for public human capital and service quality variables for public structural capital from the model of Bueno et al. (2004). The selection of these two variables, because they are in line with Presidential Regulation No. 81 of 2010 which aims to improve the performance of government organizations based on the area of RB changes (Republic Indonesia, 2010). This is in line with the spirit of RB, the object of this research, namely BPS, which carries out RB by increasing the development of human resources for its employees and improving data quality services. Public relational capital is not used because the data
is not published.

The ability of every employee must be developed on an ongoing basis, through learning educational programs (Huang et al., 2021). This statement is reinforced by Law no. 5 of 2014 concerning ASN who have equal rights and opportunities to develop competence through formal education programs to improve performance (Republic of Indonesia, 2014b). HR development is an important factor to improve performance, but its output is difficult to analyze (Lunsford, 2019). Human resource development in government organizations is very important because it is able to improve performance, so that employees will carry out their duties and obligations well (Atidira & Priyono, 2020). HR development research on performance has been carried out by Sulaefi (2017) who found a positive effect.

The quality of public services is one of the variables of public structural capital (Campos et al., 2006). Service quality was chosen because this becomes input for improving service to the community and the availability of existing data. The quality of public services by government organizations must always be improved so that the public is satisfied with the services provided so that they have high performance (Putra, 2018). Good public services are created from good governance, so that improving public services is a manifestation of the performance of government organizations (Putra, 2018). Research on the influence of service quality on organizational performance was carried out by Putra (2018) who showed a positive effect.

Rizky & Setiawan (2019) examine the development of public sector accounting research in Indonesia in 2010-2018, where the topic of performance research within the scope of management accounting is in third place (10 percent). The topic of performance is dominated by research on the performance of government officials by 21.14 percent, while organizational performance is rarely carried out. Study by Rizky & Setiawan (2019) also show that public sector research is dominated by quantitative research using survey methods, while quantitative secondary data is still rarely done.

The differences between this research and previous research include: research Yıldız et al. (2014) using intellectual capital capital by using human capital (HC), structural capital (SC) and customer capital. Study by Sujati & Januarti (2021) using value added human capital (VAHU), value added capital employed (VACA), structural capital value added (STVA) while this study uses intellectual capital The SICAP Project, namely the development of human resources and service quality. This research uses the SICAP Project because it is more suitable for public sector research objects such as what has been done by Atidira & Priyono (2020); Ramírez (2010). The SICAP Project comprises from public human capital, public structural capital and public relational capital (Ramírez, 2010). However, in this study only uses public human capital and public structural capital, while public relational capital is not examined because the information to measure it is not available. Two variables from
the SICAP Project in this study include public human capital (human resource development), and public structural capital (service quality).

The Central Bureau of Statistics (BPS) was chosen because BPS is an institution that is obliged to provide public services to provide quality data (Badan Pusat Statistik, 2020c). BPS performance is very good with the achievement of a performance award charter for the 2020 fiscal year by the Ministry of Finance based on decision Minister of Finance No.118/KMK.02/2021 concerning the Award for Budget Performance with a medium ceiling category (Kemenkeu, 2021a). The BPS performance in 2020 was also considered very good by the Minister of Administrative and Bureaucratic Reform, namely the results of the evaluation of SAKIP Number B/31/M.AA.05/2021 getting a score of 76.49 or a very good (BB) predicate. BPS performance in general is good, but there are still notes from the Minister of Administrative and Bureaucratic Reform that need to be followed up (KemenPAN-RB, 2020a).

Based on this background, it is important to identify the factors that affect the organizational performance of BPS. The objectives of this research are analyze and provide empirical evidence of the effect of organizational size, human resource development and service quality on organizational performance at the Central Bureau of Statistics (BPS).

This research has two contributions: theoretically it is useful to add references to research on organizational performance using RBV. While the practical contribution, this research is considered in providing useful information for policy makers who want to improve their organizational performance, thus considering the management of tangible assets in the form of organizational size and intangible assets in the form of intellectual assets (HR development and service quality).

**LITERATURE REVIEW AND HYPOTHESES FORMULATION**

**Resource-Based View Theory**

The theory that underlies organizational performance is the resource-based view (RBV). RBV emphasizes that the organization's internal resources are a competitive advantage that supports organizational performance (Wernerfelt, 1984). RBV is a perspective that answers the phenomenon of why each organization can have different performance, as well as different levels of effectiveness and efficiency (Barney, 1991). RBV explains that the position of the organization's resources is able to create a situation, either directly or indirectly, that becomes a competitive advantage for the organization, thus making it difficult for other organizations to compete and pursue their achievements (Wernerfelt, 1984). Capabilities or internal resources belonging to the organization include total assets, capabilities, organizational processes, organizational culture, organizational characteristics, information, quality
of human resources, customer relations, and so on (Barney, 1991).

**Government Organization Performance**

Performance is the record of outcomes produced on a specified job function or activity during a specified time period (Bernardin & Russell, 1993). Performance according to Presidential Decree No. 29 of 2014 and Minister of Finance Regulation No. 214/PMK.02/2017 is the output or outcome of activities/programs that have been or will be achieved using the budget and its quality and quantity are measured (Kemenkeu, 2017). Organizational performance is a complex relationship between effectiveness, efficiency, quality, productivity, innovation and profitability which is multidimensional and depends on the context (Rolstadås, 1998). Organizational performance is the achievement of the overall goals of the organization (Al-Dhaafri & Alosani, 2022).

Effective performance disclosure helps governments make fact-based decisions (Macpherson, 2001). However, measuring performance in the public sector is very complex (Kamaruddin & Abeysekera, 2013). The performance of the public sector is multidimensional and the nature of the output is more intangible, so that the measurement is not only a measure of financial performance but also a measure of non-financial performance (Mardiasmo, 2018). Ideally, performance measurement is carried out by measuring the level of organizational activity qualitatively and quantitatively, input and output in a process or event (Radnor & Barnes, 2007). Whereas in this study organizational performance only uses secondary data in the form of evaluation assessment results performance and performance indicator values budget execution.

Presidential Decree No. 90 of 2010 and Minister of Finance Regulation No. 214/PMK.02/2017 mandates each Ministry/Agency (K/L) to measure and evaluate performance in implementing the Work Plan and Budget of State Ministries/Agencies (RKA-K/L) (Kemenkeu, 2017). Performance evaluation is carried out as a function of government accountability and a function of improving quality. Other regulations related to performance measurement are mandated by Minister of Finance Regulation No. 195/PMK.05/2018 regarding the measurement of the quality of its performance with the Budget Implementation Performance Indicators (IKPA) which consist of 4 (four) aspects, namely suitability of planning, compliance with laws and regulations, effectiveness, and efficiency (Kemenkeu, 2018). The government also issued Minister of Finance Regulation No. 2/PMK.02/2021 which regulates K/L performance appraisal by calculating performance achievements, namely the weight of the budget performance evaluation value of sixty percent and the IKPA weight of forty percent (Kemenkeu, 2021b).

**Organization Size**

The size of the organization is small and the size of the organization (Masdiantini & Erawati, 2016). Adiputra et al. (2018) state the size of the organization
is a variable to measure the economic resources controlled or owned by a government organization for past events and the future economic benefits that are expected to be obtained. The size of the organization is thus a resource belonging to the organization. In the Government, the size of the organization can be seen from the total assets of government institutions because it is more stable than other criteria (Adiputra et al., 2018).

**Intellectual Capital**

In the current era of disruption, the global economy has become knowledge-based (Rochmadhona et al., 2018). So, the organization does not only depend on its physical assets but must create added value with its intangible fixed assets (Duho et al., 2020; Khairiyansyah & Vebsavili, 2018; Tahir et al., 2018). Bontis (1998) identifies intellectual capital as a set of intangible assets, in the form of abilities and competencies as well as resources that drive organizational performance and create value. Intellectual capital is intangible, meaning that it cannot directly see the form of its output, so it is difficult to understand (Herawati et al., 2020). This causes a lot of intellectual capital that is not reported in the financial statements (Veltri & Bronzetti, 2014). However, currently organizations are required to include intellectual capital in the narrative of annual reports or additional autonomous reports, namely the Intellectual Capital Report (ICR) (Veltri & Bronzetti, 2014).

Stewart (1997) defines intellectual capital (IC) as the sum of everything everybody in your company knows that gives you a competitive edge in the marketplace. It is IC material-knowledge, information, intellectual property, experience-that can be put to use to create wealth. Roos et al. (1997) define IC is classified as structural and human capital, thinking and non-thinking assets. The authors make the distinction primarily on the premise that human capital requires different management approaches than other types of capital. Petty & Guthrie (2000) highlight IC as instrumental in the determination of enterprise value and national economic performance. Based on these definitions, it can be concluded that intellectual capital is an intangible fixed asset in the form of knowledge, innovation, information, and customer relationships that create organizational value.

In government most of the strategic objectives are intangible, and the main key indicators and services provided are more intangible, making it difficult to manage them (Ramírez, 2010). Intellectual capital must be developed in government organizations because resources are important to obtain a sustainable competitive advantage. Chen (2007); Kong & Prior (2008); Schiuma & Lerro (2008) conducted research in Spain to develop intellectual capital in the public sector and provided four model options. This research uses The SICAP Project model by Bueno et al. (2004) from research Ramírez (2010) by adopting two variables, namely human resource development and service quality because it is in accordance with Presidential Regulation no. 81 of 2010 concerning Grand Design RB Indonesia 2010 – 2025
Human Resource Development

Intellectual capital of The SICAP Project PHC component can be measured by the variable of human resource development (Ramírez, 2010). Human resource development is a variety of activities/activities directed at learning for individuals and groups (McGoldrick et al., 2003). LAN Regulation No. 5 of 2018 defines the development of State Civil Apparatus (Aparatur Sipil Negara/ASN) human resources as an effort to fulfill ASN competencies based on position competency standards and career development plans to increase knowledge in carrying out tasks. It can be concluded that human resource development is an organizational effort to improve the capability of human resources to work better (KemenPAN-RB, 2018b).

LAN Regulation No. 5 of 2018 states that the implementation of ASN human resource development can be carried out through formal education and/or training (KemenPAN-RB, 2018b). Ministry of National Education of the Republic of Indonesia No. 232/U/2000 concerning Guidelines for Preparation of Higher Education Curriculum and Assessment of Learning Outcomes that learning outcomes for each level of educational qualification are different (Kemendiknas, 2020). Educational qualifications Diploma 1 to Diploma 3 carry out routine work, while educational qualifications for Diploma IV and/or Bachelor, Master programs and Doctoral programs carry out complex work and have a basic professional ability to solve problems. Presidential Decree No. 8 of 2012 concerning the Indonesian National Qualifications Framework (KKNI) describes learning outcomes through education programs, namely qualification levels 1-5 to complete and be responsible for the assigned tasks (Republic of Indonesia, 2012). Qualification levels 6-9 to apply areas of expertise and take advantage of the knowledge they have, solve problems through their scientific fields and make decisions based on the analysis of information and data obtained. Based on these two regulations, this study measures the ASN HR development variable using employees who have a minimum education of Diploma IV and/or Bachelor's degrees.

Public human capital from The SICAP Project includes 3 elements, namely (1) attitudes and values, (2) technical knowledge and (3) capacity and competence (Ramírez, 2010). Because this study uses secondary data and the availability of existing data, the measurement only uses the education level of employees.

Service quality

Intellectual capital of The SICAP Project PSC component can be measured by the service quality variable (Campos et al., 2006; Ramírez, 2010). Public Service according to Law no. 25 of 2009 is a series of activities to fulfill services for goods, services, and administrative services for citizens that are available by government administrators based on applicable legislation (Republic of Indonesia, 2009). Public service as a comprehensive government service management activity, which is
operationally carried out by government institutions or other legal entities belonging to the government on the authority they have.

Organizational performance can increase if the main target of improving public services is community satisfaction (Putra, 2018). Law no. 25 of 2009 concerning Public Services mandates that every public service provider must evaluate the performance of the implementation of public services on a regular and sustainable basis (Republic of Indonesia, 2009). BPS is one of the providers of public services and carries out this obligation through a Basic Needs Survey (SKD) every year (Badan Pusat Statistik, 2020c). BPS service quality is calculated by the Customer Satisfaction Index (CSI), which is a measure to assess the level of customer satisfaction with services by the BPS PST unit and the data generated by the BPS data generating unit (Badan Pusat Statistik, 2020c).

The Effect of Organizational Size on Organizational Performance

RBV emphasizes internal resources to be a competitive advantage for the organization (Wernerfelt, 1984). One of the internal resources in question is all assets owned by the organization (Barney, 1991). Organizations are expected to be able to manage their assets optimally, so that they become competitive advantages and encourage increased organizational performance (Duho & Onumah, 2019). In line with RBV, an organization that manages its assets well will make it a valuable resource for the organization, resulting in effectiveness and efficiency (Barney, 1991).

Government institutions with large total assets should be able to perform high because having large total government assets greatly supports their performance (Noviyanti & Kiswanto, 2016). Intellectual capital determines the right choice of diversification, by motivating the diversity of its assets (Duho & Onumah, 2019). Organizational size has a positive effect on organizational performance (Duho & Onumah, 2019). Government organization size is measured by the total assets owned by government institutions because the value of assets is more stable than other criteria. So, in this study the size of the organization is measured by the number of assets owned by BPS. Based on this explanation, the following hypothesis is formulated:

H1: Organizational size has a positive effect on organizational performance.

The Effect of HR Development on Organizational Performance

RBV states that organizations that have resources and competitive advantages that are difficult for other organizations to understand, become one of the competitive advantages that cannot be imitated by other organizations (Barney,1991). This competitive advantage can be obtained through the development of human resources owned by the organization, so as to be able to create or exploit scientific breakthroughs and obtain resources that cannot be imitated by other organizations (Barney,1991).
RBV shows that if the organization implements human resource development, the organization will have a competitive advantage that can improve its performance.

Human resource development is one of the strategies to improve services (Huang et al., 2021). Thus the human resource development program can benefit the organization. Sulafet (2017) proves that human resource development has a positive effect on performance. Based on the explanation above, the following hypothesis is formulated:

**H2:** Human resource development has a positive effect on organizational performance.

### The Influence of Service Quality on Organizational Performance

RBV shows that valuable, rare, hard to imitate and irreplaceable resources can be a source of sustainable competitive advantage for organizations (Barney & Arikan, 2005). Demsetz (1973) states that organizations must serve their customers well to maintain user loyalty.

Based on Law Number 25 of 2009 concerning Services Public, the implementation of public services is expected to provide services according to the needs and changes in various fields life of society, nation, and state (Republic of Indonesia, 2009). Monitoring of services at PST BPS needs to be done for improvement quality data and statistical information and services. Service quality concept is to shape the attitudes and behavior of service providers to provide excellent service. Elements of service satisfaction include responsiveness, assurance, tangible, empathy, reliability (Badan Pusat Statistik, 2020c).

Based on this, community satisfaction is the main thing that must be considered by public service providers, because it is a determinant of the success of organizational performance. If the quality of public services increases, the performance of the organization will also increase and vice versa (Huang et al., 2021). Study Putra (2018) provide evidence that service quality has a positive effect on performance. Based on this explanation, the following hypothesis is formulated:

**H3:** Service quality has a positive effect on organizational performance.

### RESEARCH METHODS

This study uses a census of all provincial BPK throughout Indonesia. The total population during 2018-2020 and the data processed can be seen in Table 1.
Table 1
Observation Data

<table>
<thead>
<tr>
<th>Information</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population 34 x 3 (2018-2020)</td>
<td>102</td>
</tr>
<tr>
<td>No data available</td>
<td>(2)</td>
</tr>
<tr>
<td>Total observation data</td>
<td>100</td>
</tr>
</tbody>
</table>

Based on Table 1 population of the entire Provincial BPS is 34 x 3 = 102 (for the 2018-2020 period). From observation 102-2 (North Kalimantan 2018-2019) only 100 could be processed. The reason is that BPS in North Kalimantan only started operations on November 16, 2018. Therefore, the data of 2018 data is not available and the data of 2019 data is incomplete.

The research data uses secondary data from provincial BPS work units throughout Indonesia with a period of 2018 – 2020. The data used include performance reports, financial reports, performance evaluation assessment results, BPS budget implementation performance indicator values, organizational culture survey data, and service satisfaction survey data in obtaining data at BPS. The data sources used are as listed in table 2. Data on organizational size, service quality and education level were obtained from the BPS website while the others were from unpublished reports. Data that is not published on the website, obtained by contacting the person in charge of the data. This study uses unbalanced data panels.

**Variable Operational Definition**

Table 2 shows operational definitions and research indicators.

Table 2
Operational Definition of Research Variables and Indicators

<table>
<thead>
<tr>
<th>No.</th>
<th>Variable</th>
<th>Definition</th>
<th>Indicators</th>
<th>Data Source</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Organizational Performance (Y)</td>
<td>Performance is the government's output or outcome on program activities that have been or will be achieved with the budget used has been measured in terms of quality and quantity (Minister of Finance Regulation Number 214/PMK.02/2017 in Kemenkeu, 2017)</td>
<td>Performance Value: a. Evaluation score (60 percent): 1. Budget realization. 2. Consistency of absorption against RPD. 3. Achievement of activity outputs. 4. Efficiency (Minister of Finance Regulation Number 214/PMK.02/2017 in Kemenkeu, 2017) b. IKPA (40 percent): 1. Planning suitability 2. Compliance with laws and regulations 3. Effectiveness 4. Efficiency (PMK No. 195/PMK.05/2018 in Kemenkeu, 2018)</td>
<td>Planning Bureau</td>
<td>Ratio</td>
</tr>
<tr>
<td>No.</td>
<td>Variable</td>
<td>Definition</td>
<td>Indicators</td>
<td>Data Source</td>
<td>Scale</td>
</tr>
<tr>
<td>-----</td>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>2</td>
<td>Organization Size (X₁)</td>
<td>Organizational size shows the size of an agency (Masdiantini &amp; Erawati, 2016)</td>
<td>(Ln total asset)</td>
<td>Provincial BPS financial report</td>
<td>Ratio</td>
</tr>
<tr>
<td>3</td>
<td>HR Development (X₂)</td>
<td>HR development is an effort to fulfill ASN competencies based on position competency standards and career development plans to increase knowledge to support ASN in carrying out their duties. (State Administration Agency regulations No. 5 of 2018 in KemenPAN-RB, 2018b; Pakpahan et al., 2014)</td>
<td>Level/level of formal education (Percentage of employees with minimum education Diploma IV/Bachelor) (The decision of the national education minister RI No. 232/U/2000 in Kemendiknas, 2020 and Presidential Decree No. 8 of 2012 in Republic of Indonesia, 2012).</td>
<td>Bureau of Human Resources</td>
<td>Ratio</td>
</tr>
</tbody>
</table>
| 4   | Service Quality (X₃)          | Public services are a series of activities to fulfill services for goods or services or administration based on laws that apply to citizens provided by government administrators. (Law No. 25 of 2009 in Republic of Indonesia, 2009) | 1. Terms of service  
2. Service procedure  
3. Service time  
4. Service fee  
5. Service suitability  
6. Facilities and Infrastructure  
7. Access main facilities  
8. Search data on the website  
9. Access content on the website  
10. Officer response or online service application  
11. The ability of officers or online service applications  

**Data Analysis Technique**

The data processing of this research used the panel data method with EVIEWS 9. According to Ghozali & Ratmono (2017) the steps taken were to test the model specifications with the Chow test to determine whether to use the fixed effect model (FEM) or the common effect model (CEM). If the Chi-square probability value is > 0.05, it is decided to choose the common effect model, and if the Chi-square probability value is < 0.05, it is decided to choose the fixed effect model.

**H₀**: Common Effect (CEM)

**H₁**: Fixed Effects (FEM)

If the fixed effect model is selected, then a follow-up test is carried out, namely the Hausman test to find out whether FEM (< 0.05) or REM (> 0.05) should be used.

Hypothesis:
H0: Random Effect Model (REM)

H1: Fixed Effect Model (FEM).

The next stage is to do the F-test and t-test. The hypothesis is accepted with a significance level of 5%.

**ANALYSIS AND DISCUSSION**

**Descriptive statistics**

Based on data from the dependent and independent variables of this study, descriptive statistics can be made in Table 3.

<table>
<thead>
<tr>
<th>Table 3 Descriptive statistics</th>
<th>Y</th>
<th>X1</th>
<th>X2</th>
<th>X3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>89.43</td>
<td>24.27</td>
<td>82.08</td>
<td>88.24</td>
</tr>
<tr>
<td>Median</td>
<td>90.97</td>
<td>24.09</td>
<td>82.12</td>
<td>88.35</td>
</tr>
<tr>
<td>Maximum</td>
<td>94.67</td>
<td>25.77</td>
<td>100.00</td>
<td>96.84</td>
</tr>
<tr>
<td>Minimum</td>
<td>79.16</td>
<td>23.34</td>
<td>66.18</td>
<td>79.65</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>3.75</td>
<td>0.60</td>
<td>6.43</td>
<td>4.09</td>
</tr>
<tr>
<td>Observations</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Processed Data Eviews 9 (2022)

Note: Y = Performance value (0 - 100), X1 = organization size (Ln Total Asset), X2 = HR development (Percentage of number of employees > S1/DIV (0-100)), X3 = quality service (IKK service (0-100)).

Based on Table 3 it can be illustrated that organizational performance variable average value is 89.43. Based on Minister of Finance Regulation No. 2/PMK.02/2021 the average value of organizational performance is in the good category (range 80 < evaluation value < 90) (Kemenkeu, 2021b). The HR development variable has an average value of 82.08. With a rating range of 0-100, it can be stated that human resource development is good. The service quality variable has an average value of 88.24. Based on regulation of the Ministry of State Apparatus Empowerment and Bureaucratic Reform No. 14 of 2017 concerning Guidelines for Compiling a Community Satisfaction Survey for Public Service Providers with an assessment range of 0-100, it can be stated that the average value of service quality is in the good category (KemenPAN-RB, 2017).

**Model Specification Test**

The results of the chow test showed that the Chi-square probability of 0.00 was less than 0.05. Therefore, FEM was chosen and followed by the Hausman test. The results of the Hausman test show that the Chi-square probability of 0.00 is less than 0.05. Thus, it can be concluded that the model uses the fixed effect model (FEM).

**Classic Assumption Test Results**

The results of the normality test show that the probability value of 0.16 is greater than 0.05%, so the data is normally distributed. The multicollinearity test
shows that all variables have a correlation value < 0.90 so that there is no multicollinearity. Heteroscedasticity test shows t statistic of all variables < 1.98 and probability > 0.05. As such, there is no heteroscedasticity.

**Hypothesis test**

The value of F table with a significance is 0.00. The coefficient of determination is 0.619. This means that the contribution of all independent variables in explaining the dependent variable is 61.87 percent and the remaining 38.13 percent is explained by other variables outside the model.

The model specification uses FEM and passes the classical assumption test. Therefore, it is consistent and unbiased. The following is the estimation result of the panel data unbalance regression model.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Probability</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-81.43</td>
<td>0.34</td>
<td></td>
</tr>
<tr>
<td>X_1</td>
<td>3.15</td>
<td>0.38</td>
<td>H1: rejected</td>
</tr>
<tr>
<td>X_2</td>
<td>0.59</td>
<td>0.00</td>
<td>H2: accepted</td>
</tr>
<tr>
<td>X_3</td>
<td>0.52</td>
<td>0.00</td>
<td>H3: accepted</td>
</tr>
</tbody>
</table>

Source: Processed Data Eviews 9 (2022)

The estimation results of the FEM model in table 4 show the organizational size variable (X_1) with a probability of 0.38, which means that it is not significant so that the first hypothesis is rejected. The HR development variable (X_2) has a probability value of 0.00 (significant), so the second hypothesis is accepted. The quality of service (X_3) has a probability value of 0.00 (significant), so the third hypothesis is accepted. Therefore, this research model can be formulated:

\[
\text{Performance} = -81.43 + 3.15X_1 + 0.59X_2 + 0.52X_3
\]

**Discussion**

**Organizational size - organizational performance**

Organizational size has no effect on organizational performance. The results of this study cannot prove that organizational size can affect organizational performance, because a high organizational performance value is not always followed by a high organizational size. In 2018 the highest performance value was at BPS of Special Region of Yogyakarta (89.15) but total assets as a proxy for organizational size showed a smaller value than the total assets of BPS Special Capital Region of Jakarta. The BPS in Special Capital Region of Jakarta had the fourth lowest performance.

The size of the organization as a proxy for the total assets of the Provincial BPS each year does not show much change. This is the possibility that causes no increase in organizational performance. Provincial BPS only slightly increased its
assets, even at BPS in West Kalimantan, BPS in Central Kalimantan, BPS in South Kalimantan, and BPS in East Kalimantan’s assets are declining.

The size of the organization as a proxy for total assets is not able to affect performance because the assets of the Provincial BPS are more dominant in fixed assets. In 2018-2020 the portion of fixed assets is always larger than current assets and other assets. Provincial BPS fixed assets are less productive to improve organizational performance. The statement reinforces the statement Nugroho & Prasetyo (2018) that government organizations have more dominant fixed assets than current assets will not be able to increase the competitiveness of their organizations.

BPK audit results report on BPS financial statements Year 2018 No. 62b/LHP/XV/04/2019 dated 26 April 2019 explained that there was a finding that the BPS internet connection service was not implemented adequately. BPK concluded that there was a waste of internet connection services at BPS and the utilization of assets at BPS was not optimal (Badan Pemeriksa Keuangan, 2019). This problem could be one of the causes of organizational size not being able to influence the organizational performance of BPS.

This asset management problem at BPS has not been able to support RBVT, namely an organization that is able to manage its assets properly can become an organization’s competitive advantage so that it affects organizational performance (Barney, 1991). BPS has not been able to manage its assets properly. Thus, it cannot prove that total assets are a competitive advantage for the organization. This means that the role of total assets that should improve performance has not been able to function properly (Nugroho & Prasetyo, 2018).

BPK inspection report on the 2019 BPS Financial Report Number 10a/LHP/XV/05/2019 dated 12 May 2020 found that the control over the implementation of equipment and machine maintenance expenditures in several BPS Work Units was still inadequate (Badan Pemeriksa Keuangan, 2020). This results in BPS unable to obtain optimal prices and asset maintenance services (Badan Pemeriksa Keuangan, 2020).

Another BPS finding is that many BPS assets have not been given a State Property (BMN) sticker (Badan Pemeriksa Keuangan, 2020). This finding is a recurring finding every year in the BPK LHP on the 2018 BPS Financial Report Number 62b/LHP/XV/04/2019 dated 26 April 2019. The BPK findings support the results of this study and are in line with research Nugroho & Prasetyo (2018) who found that a large amount of total assets can make it difficult for government organizations to directly monitor each asset they own if the recording and monitoring is not good.

The results of the BPK’s examination of the Internal Control System and Compliance with the Provisions of the 2020 BPS Laws and Regulations Number 15b/LHP/XV/05/2021 dated 19 May 2021 also found differences in the recording of
depreciation/amortization expenses in the notes to the financial statements and the records of the BMN report. This shows that the management of BMN assets is not yet good at BPS, so that the maintenance and utilization of assets is not optimal (Badan Pemeriksa Keuangan, 2021). The results of BPK’s findings prove that there are still asset management problems at BPS which cause total assets to not function to improve organizational performance.

The results of this study strengthen the results of the study Noviyanti & Kiswanto (2016), where the size of the organization has no effect on improving organizational performance. The increase or decrease in the size of government organizations is not able to affect the performance of government organizations (Noviyanti & Kiswanto, 2016; Nugroho & Prasetyo, 2018). However, contrary to the results Duho & Onumah (2019) who provide evidence that asset size has a positive effect on organizational earnings.

Human resource development - organizational performance

This study measures intellectual capital at BPS with The SICAP Project model where the PHC component is measured by the HR development variable (Campos et al., 2006; Ramírez, 2010). Table 4 shows that HR development has a positive effect on organizational performance with a significance value of 0.00. Therefore, hypothesis 2 is accepted.

This study supports the RBV which describes the organization must develop its human resources to gain knowledge from formal education learning activities. Thus, organizational resources become difficult to duplicate and important to improve organizational performance (Schroeder et al., 2002). Human resource development through education and training as well as the provision of learning assignments is an effort to improve the ability of employees, with the hope of achieving better organizational performance (Huang et al., 2021).

The results of this study support research by Mayangsari et al. (2019); Sulaefi (2017) that the development of human resources to create good performance by increasing the capabilities of its human resources. Quality human resources is a determinant of the success of an organization. The results of HR development through education are important to improve performance based on Strategic Assumptions Surface & Testing (SAST). This is in accordance with the mandate of the ASN Law Number 5 of 2014 every government institution is obliged to improve the development of its human resources (Republic of Indonesia, 2014b). The BPS Performance Report 2020 shows that human resources are of good quality and adequate in carrying out the duties and functions of BPS (Badan Pusat Statistik, 2020c). This statement is supported by the number of human resources capacity and capability which always increases every year through education programs. This increase in human resource development is proven to improve the performance of BPS every year. Year 2020 based on decision
Minister of Finance No. 118/KMK.02/2021 BPS received a certificate of appreciation for the performance of the 2020 fiscal year (Kemenkeu, 2021a).

**The Influence of Service Quality on Organizational Performance**

This study used SICAP Project’s intellectual capital for the PSC component measured by service quality (Campos et al., 2006; Ramírez, 2010). This study proves that service quality has a positive effect on organizational performance, with a significance value of 0.00. Thus, hypothesis 3 is accepted.

The results of this study support the RBV that an organization that performs services well will become a strategic asset for the organization to improve organizational performance (Barney, 1991). This is evidenced by the implementation of BPS integrated statistical service monitoring through data needs surveys every year. Therefore, good service quality is realized and can improve organizational performance (Badan Pusat Statistik, 2020c).

The results of this study support research by Putra (2018) that the quality of public services has a significant effect on the performance of government organizations. The quality of public services is an important issue because it affects the performance of government organizations (Putra, 2018). Public service providers, namely the government as public servants, are obliged and responsible for providing better and professional services to the community. This statement is reinforced by the mandate of the Preamble to the 1945 Constitution, which states that the state is obliged to fulfill the basic needs and civil rights of every citizen for public goods, public services, and administrative services.

BPS is a public service agency tasked with providing services for the provision of statistical data and information (Badan Pusat Statistik, 2020c). BPS provides an Integrated Statistical Service (PST) unit to provide services to the community and conduct a data needs survey to monitor and improve the quality of services. Thus, it can be seen whether the quality of services provided is good or not (Badan Pusat Statistik, 2020c). For example, BPS must make adaptations in the form of adjusting business processes for the implementation of its activities in the face of the COVID-19 pandemic in order to maintain service quality (Badan Pusat Statistik, 2020a). 69 BPS innovations in 2020 entered the public service innovation competition by the Ministry of State Apparatus Empowerment and Bureaucratic Reform (Badan Pusat Statistik, 2020a). Based on this, BPS activities in 2020 can be said to be successful and BPS organizational performance can be said to be good (Badan Pusat Statistik, 2020a).

It is indicated that the improvement of public services can improve the organizational performance of BPS. This is evidenced by the BPS entry into one of the Top 99 Public Service Innovations in 2018 based on the Announcement Letter of the Ministry of State Apparatus Empowerment and Bureaucratic Reform Number 001/TPI.06/2018 dated June 8, 2018 and in 2020 (KemenPAN-RB, 2018a). Based on the announcement letter of the Ministry of State Apparatus Empowerment and
bureaucratic reform Number B/153/PP.00.05/2020 dated 18 June 2020 (KemenPAN-RB, 2020b). BPS service quality can improve BPS organizational performance. In addition, it is also proven by several awards obtained by BPS both in the technical and administrative fields in 2020 (Badan Pusat Statistik, 2020a). These results explain the findings of this study, namely the quality of service can improve organizational performance.

Several awards received by BPS for the quality of its services, are evidence that BPS data users are satisfied with BPS services (Badan Pusat Statistik, 2020a). The satisfaction of BPS data users is supported by the high performance of BPS, namely based on the Decree of the Minister of Finance No.118/KMK.02/2021 that BPS in the 2020 fiscal year received a certificate of appreciation from the Ministry of Finance (Kemenkeu, 2021a). The satisfaction of data services by the community is a success for BPS. Therefore, service quality is a source of BPS competitive advantage. Finally, these results support RBV.

CONCLUSION, LIMITATIONS AND SUGGESTIONS

This study aims to analyze and obtain empirical evidence of the effect of organizational size and intellectual capital (HR development and service quality) on the Central Bureau of Statistics. The results of this study are organizational size has no effect on organizational performance, while human resource development and service quality as a measure of intellectual capital variables have a positive effect on organizational performance.

The implications of the findings of this study are: firstly, for BPS and the Government to improve policies and implementation of asset management. This is in accordance with the 2019 and 2020 BPK findings reports which state that control implementation of equipment and machinery maintenance spending on several The BPS Work Unit is still inadequate. Even though HR development and service quality can affect organizational performance, BPS must continue to improve HR development and service quality according to demands. Second, for parties involved in the performance of government organizations to manage tangible assets and intangible fixed assets (human resource development and service quality) to improve the performance of government organizations. Third, the Accounting Standards Board need to consider the recording and management of intellectual capital (HR development and service quality) in government administration. It contributes to improving the performance of government organizations.

The limitation of this study for measuring HR development is only using education level. In addition, there is no data supporting public relational capital. Therefore, the components of the SICAP project cannot be examined. The independent variable in this study can only explain the dependent variable 61.87 percent. Thus, there are still many other variables that affect the performance of government
organizations that have not been included in this study. The suggestions for future research may include other variables, such as budget amount, asset quality, etc.

REFERENCES


https://doi.org/10.1108/00251749810204142


