

Analysis on the Implementation of Village Information System in Village Government Performance with Good Governance as Moderating Variable

Dwi Sudaryati
FEB UPN "Veteran" Yogyakarta
 Yogyakarta, Indonesia
 sudaryati_dwi@yahoo.com

Sucahyo Heriningsih
FEB UPN "Veteran" Yogyakarta
 Yogyakarta, Indonesia
 sucahyoheriningsih@upnyk.ac.id

Lita Yulita Fitriyani
FEB UPN "Veteran" Yogyakarta
 Yogyakarta, Indonesia
 lita.yulita@upnyk.ac.id

Abstract—The emerging of the village information system is a new means for the village to socialize the village working program to all the people, especially for the local villagers. Village information system is expected to support the performance of village government to be more transparent and accountable. The limitations often encountered in the village administration, in the form of limited facilities and infrastructure as well as limited human resources, to create good village government performance, it is very important for villages to implement good governance in the village. Although the village is the smallest government, but with the creation of good governance in the village, the village government performance is expected to be more effective, efficient, transparent and accountable, so it can support the performance of local government in city / district / province. In order to realize an accountable performance, village government needs to be supported by the implementation of village information system (SID), and it is important to implement good governance system in the village. The results of this study prove that the application of village information systems affect the performance, and good governance has no effect on performance, but good governance as a moderating variable affecting the performance.

Keywords—*performance, village information system, good governance.*

I. INTRODUCTION

Implication on the implementation of Law Number 6 of 2014 on the Village has brought fresh wind to the village for improving the welfare of the entire village people. In general, the Village Law regulates the village authority in the administration of village government, village rights and obligations, related to village regulations, village finances and village assets, village development and rural development, village-owned enterprises, village cooperation, village community institutions and customary institutions village, as well as guidance and supervision. Thus the operational activities in the village government is increasing, because with the Village Law village is required to utilize the progress of information technology in managing the village administration, including financial management and management of all activities in the village. By utilizing information technology in the village, it is expected that all village information can be accessed by the community, so as to realize a transparent and accountable village governance system [1].

Prior to the enactment of the Village Law, the development of information technology in the village has lagged behind; the policies and programs of the central government only enforced onto the district or sub-district level. Village information governance is inseparable from prevailing regulations, Law No. 5 of 1974 on the principalities of local government and Law No. 5 of 1979 on villages has not regulated the management of village data information. Also in Law No.22 of 1999 on local government, the changes in Law No.32 of 2004 on local government that returned the village as a subsystem in the district / city government that tend to follow the principle of centralization. PP No.72 of 2005 on villages does not specifically regulate information systems similar to SID. Village Law No.6 of 2014 article 86 has emphasized the importance of applying SID in village planning. The development of information technology now has a great influence on the development of rural areas, so that now slowly the village began to be known nationally and globally, hope can create an increase in the economy for the village community. By utilizing Internet technology is expected to open access village information to the public to be more open, without limited by space and time [2].

The role of information technology in the implementation of village development becomes very important as a form of implementation of the Village Law. In accordance with the vision of the Village Act is to make the village strong, independent, prosperous, and democratic. It is contained in article 86 of the Village Law which has specifically regulated the village information system (SID). Village information system has a very important role in rural development. In article 86, paragraph 2 and paragraph 5, the development of village information system management is carried out by the village government, so that all information can be accessed by villagers, and interested parties. The Village Information System (SID) in government administration and community service at the village level has a very urgent and very important role to be implemented in the current era of public information disclosure [3],[4].

In year 2017, Bantul regency has been socialized SID application to 75 villages faced by the Office of Communications and Information, but there is an interesting phenomenon because only about 15 villages or 20% who have implemented SID, this is certainly because not all

human resources in villages capable of mastering the field of information and communication technology (ICT), and also often constrained the limitations of facilities and infrastructure in each village. As the agenda for reform, village governments are required to achieve better, more effective, and efficient performance of village government. It is therefore important for the village government to consistently implement good governance. Implementation of good governance in village government can be achieved by applying the village information system (SID), because it is expected to create a good accountability system accompanied by transparency and openness in the management of village government that will always be monitored by the community and interested parties [5],[6].

Based on the phenomenon of application of village information system (SID) in village government in supporting the achievement of performance of village government. So the formulation of the problem in this study as follows: 1) Does the application of village information system affect the performance of village government in District Banguntapan, Bantul Regency? 2) Is there any influence of the application of village information system to the performance of village government with good governance as a moderation variable?

The purpose of this study: (1) To examine the effect of good governance implementation on the performance of village government in Kecamatan Banguntapan, Bantul Regency; (2) To examine the effect of village information system implementation on village government performance with good governance as moderation variable in Banguntapan sub-district, Bantul regency.

The rest of this paper is organized as follow: Section II describes the theoretical basis and research hypothesis. Section III describes the proposed research method. Section IV presents the obtained results from data analysis and following by discussion. Finally, Section V concludes this work.

II. THEORETICAL BASIS AND RESEARCH HYPOTHESIS

This section presents the theoretical basis and research hypothesis proposed.

A. *Relationship of Village Information System (SID) with Village Government Performance*

Performance is a results obtained from work that has been implemented, besides performance can also been describe as results of work related to organizational goals, such as quality, efficiency, and effectiveness criteria of a task / job. Performance is often used as a benchmark for the success of an entity by assessing it economically, efficiency and effectiveness of a program within an entity. So the performance of village government can be interpreted as a form of activities undertaken by the government in providing services to the local community, this is a form of a devotion made by the village government, regarding the form of services provided there are administrative and non-administrative services. Activities undertaken by the village government is a form of public service that must be done by the village government economically, efficiently and effectively in every implementation of work programs that have been planned by the village government.

To achieve an efficient and effective village governance, it is imperative and urgent for the village government to implement information technology known as the village information system (SID), to facilitate the achievement of accountable and transparent performance. So it is necessary to develop a Village Information System (SID) in accordance with the vision of the Village Law, in order to realize a strong village, independent, prosperous, and democratic. SID is an integral part of village government development. In accordance with the Village Law article 86 with SID, the village is entitled to access information through a village information system developed by the Regency / City Government, including: hardware and software facilities, networks, and human resources.

The scope of the village information system (SID) includes village data, village development data, rural development. In the application of the village information system (SID) is managed by the Village Government and is accessible to the village community and all stakeholders. The following roles and benefits of the village information system:

a) *The more efficient village government*

Village administration can provide citizens' mailing services much faster than manual methods by maximizing the use of Village Information Systems. With SID, the villagers' data is already stored and can be loaded automatically on directly printable mail.

b) *The more effective village government*

By using the village information system, the data storage of the population along with its attributes, can be easily identified accurate population data based on the desired criteria, so as to target a government program on target. Surely this is very effective when compared without the use of SID, where often the determination of village programs is only based on estimates without the support of a complete database.

c) *The more transparent village government*

The application of the village government SIDs can manage village activities information in a form that is easily presented to the village community, and more accessible. Village information systems can be used to manage village development planning information, and display such information on various media, such as on the village web.

d) *The more accountable village government*

With SID planning information, development activities, the use of village funds will be easily accessible to village communities, village government will be required to be more accountable. So that the village government will be easier to make reports of accountability activities, and the use of village funds.

e) *The better public service*

With village information system (SID) community service in village government will be more efficient and more effective in performing their functions and duties. Because one of the main tasks of the village government is to provide better public services. For example, villagers will be

able to obtain the certificate they need more quickly and with more accurate data.

f) Better access to village information for citizen

The village information system accommodates demographic, planning, asset, and budget information that will be stored electronically. All such information has the potential to be more accessible to the village community. Village government can facilitate villagers to easily access village information by publishing all village information on the village web.

g) Villagers can participate more actively in rural development.

SIDs can accommodate the availability of easily accessible village data and information, thereby increasing community participation in rural development. SID also has the potential to provide electronic media to mobilize citizen participation, such as discussion forums or electronic comment / proposal forms, so that all villagers will be aware of all ongoing and planned village activities, and village communities can participate in guarding village activities for provide advice and inputs related to village development.

Accountable and transparent village government performance requires not only the participation of human resources in the village government, but it is important to be able to implement information systems (SIDs) so that villagers can access and monitor the implementation of village administrations, village government programs. So in this study to answer the formulation of research problems with the 1st hypothesis proposed:

H1: There is an effect of applying village information system to the performance of village government.

B. Relations between Village Information System with Government Performance and Good Governance as Moderate Variables

In accordance with the prevailing laws and regulations, the performance of the village government is determined by the village officials in performing their duties. The Village Law has stipulated that the Village Government consists of the Village Head or so-called as the other name assisted by the village apparatus as an element of the Village Administration. Village or Kelurahan device (village secretariat) is a regional executor and technical executive officer of public service officer who has duty and responsibility to service to society, and help Lurah or village head in carrying out its duty. The task of service to the community requires that village officials should be able to provide services in accordance with the wishes of the community. Therefore, village officials are required to have sincere skills, skills and feelings of concern and require a high sense of empathy in performing their duties to serve the community. The performance of village government in rural physical development is a form of village government service to the community in meeting the needs of the community in the form of physical infrastructure provision based on the priorities that have been established as a supporter of all activities and economy in the village. The good performance and the active role of the community in

the implementation of development have an impact on the smoothness of the development implementation process.

The villagers' demands for satisfactory services are the ones that must immediately get the village government's response. The realization of good governance in the village becomes very important to produce the effectiveness and efficiency of rural development in the framework of regional autonomy. Principles of good governance consisting of transparency, accountability, responsibility, independency, and fairness are the foundations of good corporate governance, where the application is expected to be a guide in managing good corporate management by taking into account the interests of the community.

Good governance or often called good governance is the process of organizing state power in implementing good and service public, so as to create a village government that builds credibility, ensures transparency and accountability, and maintains an effective channel and information disclosure that will encourage better performance of village governance.

Good governance is the administration of solid, responsible, effective and efficient state government, and also constructive interaction and synergy between state, private and community. Meanwhile, United Nations Development Program (UNDP) defines governance as: "the exercise of political, economic, and administrative authority to manage a nation's affair at all levels". UNDP emphasizes the political, economic and administrative aspects of state management. According to UNDP there are several principles that must be implemented and should be developed, including 8 eight characteristics of Good Governance as follows:

- Participation, public order in making decision either directly or indirectly through representation agency of village BPD (Badan Musyawarah Desa) in order to conduct their aspiration. Participation is built on the basis of freedom of association and speak and participate constructively. The form of village community participation is seen in the program planning and village development.
- Rule of Law, fair and impartial legal framework, if there is a village apparatus which commits fraud and found to be in violation of applicable laws and regulations, then there will be sanction and a warning letter.
- Transparency, built on the basis of freedom to obtain information directly related to public interest that can be obtained by the people.
- Responsiveness, village administration as a public institution should be quick and responsive in serving and responding to the aspirations of the people. It can be directly or indirectly through BPD or by using the tool of the complaint letter box.
- Consensus orientation, the village government is more oriented towards the comprehensive interests, solving all problems by prioritizing consensus based on the spirit of kinship.

- Equity, every society has equal opportunity to obtain equality and justice.
- Efficiency and Effectiveness, in the implementation of village work programs, management of public resources conducted with efficiency and effectivity.
- Accountability, a form of accountability to the people in every activity undertaken by the village government. That is by making accountability report of the administration of village government at the end of budget year.

The result of the implementation of Village Law through the application of village information system (SID) is expected to create reliable reporting quality and free from any material misstatement. This can be realized with the implementation of good governance in village government, to improve government performance in village. Implementation of Village Law in theory will not be separated from the application of village information systems in support of the performance of village government, which requires the consistency of village government in the implementation of the concept and principles of good governance in the village. If there is no realization and implementation of village information system and good governance, then the public trust for financial management and village administration will be reduced. Good governance becomes an important role for the quality of financial information. The application of the principle of good governance there are obstacles and efforts in overcoming obstacles to the implementation of Village Law. To answer the research problems, the second hypothesis proposed:

H2: There is influence of village information system on village government performance with good governance as moderate variable.

III. RESEARCH METHODS

This research is a quantitative research with survey as the type of the research. The population used for this research is all village people in Banguntapan sub-district, Bantul regency. The sampling method using the census, so that all the population used as sample research. The research respondents consisted of 36 people with up to 32 people completed the survey. Methods of data collection in this study is by using questionnaires distributed to respondents. Village information system (independent variable), good governance (moderating variable), village government performance (dependent variable) questionnaire question is measured by Likert scale 1 (strongly disagree) up to 5 (strongly agree), with interval scale.

The village information system (SID) assists the efficiency and effectivity on the implementation of village governance, and facilitates the achievement of accountable and transparent government performance, in order to create strong, independent, prosperous and democratic villages. SID is an integral part of village government development. According to the Village Law article 86, the SID indicator in this research includes: hardware and software facilities, network, and human resources.

Good governance in this research is moderating variable. Good governance in village governance is manifested through governance management and village finance

management, which includes 8 principles of good governance according to UNDP: Participation, Rule of Law, Transparency, Responsiveness, Consensus orientation, Equity, Accountability, Efficiency and Effectiveness. This independent variable is measured using a Likert scale of 1 (strongly disagree) to 4 (strongly agree) with the interval scale.

The performance of village government is a form of activities undertaken by the government in providing services toward the local community. This is a form of a devotion made by the village government, regarding the form of services provided there are administrative and non-administrative services. Activities undertaken by the village government is a form of public service that must be done by the village government. Village government performance is a dependent variable with indicators of output quality, output quantity, output period, work completion time at work, and ability to work together.

Data analysis is done sequentially starting from data quality test, descriptive analysis, simple regression analysis, regression analysis with moderating variable, and hypothesis testing. The data quality test is done by statistical tool in the form of correlation value between each question item to the total score of each item per variable, by looking at correlation Pearson score and significance value for validity test, and reliability test by using Cronbach Alpha statistic test.

This research model is shown with the following picture:



Information:

K = Performance of village government

SID = Village Information System

GG = Good Governance

IV. DATA ANALYSIS AND DISCUSSION

Based on survey results through questionnaires to all village units in Banguntapan sub-district, there were 36 samples, but there were 4 incomplete questionnaires, which did not qualify to be processed. So that all samples obtained are 32 questionnaires.

A. Data Description of Respondents

The following Table I describes the respondent's working period, the statistical results show that most village apparatus have been working for less than 5 years with 37.5% percentage.

TABLE I. YEARS OF SERVICE

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid <5 years	12	37.5	37.5	37.5
5-9 years	7	21.9	21.9	59.4
10-14 years	7	21.9	21.9	81.2
>15 years	6	18.8	18.8	100.0
Total	32	100.0	100.0	

TABLE II. GENDER

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid High School	10	31.2	31.2	31.2
Diploma	5	15.6	15.6	46.9
Bachelor	16	50.0	50.0	96.9
Master	1	3.1	3.1	100.0
Total	32	100.0	100.0	

Based on Table II below, above 50% male with the number of percentage up to 81.2% of the total research respondents or amounted to 26 people and the remaining 6 people are female.

TABLE III. AGE

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid Male	26	81.2	81.2	81.2
Women	6	18.8	18.8	100.0
Total	32	100.0	100.0	

The Table II above shows that the respondent's description is related to the age of the village apparatus. Most of the respondents were aged between 40 to 49 years who reached the percentage of 46.9% of the total respondents. While the lowest percentage of village apparatus that became respondents aged under 30 years.

Based on the data of educational background of most respondents is Bachelor with the highest percentage achievement of 50%. This indicates that the human resources in the village government in Kecamatan Banguntapan Bantul district is good because more than 50% have been educated minimum in Diploma as described in Tables III and IV.

TABLE IV. EDUCATION

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid <30 years	4	12.5	12.5	12.5
30-39 years	8	25.0	25.0	37.5
40-49 years	15	46.9	46.9	84.4
>50 years	5	15.6	15.6	100.0
Total	32	100.0	100.0	

B. Normality Test

Using a normal plot chart to test the data normality, this research analyzes the degree of dots spreading around the diagonal line and follows the direction of the diagonal line. Based on graphic, it is seen that the regression model is feasible to use because it meets the assumption of normality.

C. Validity Test

Validity test is used to test the validity of the instrument using analytical techniques by calculating the correlation between the score of each question item with the total score of each variable. Based on the result, the correlation of the question for the performance variable (K1-K10) to the total score of the performance question items showed significant results. So it can be concluded that each item is valid

Based on the output, it can be seen that the correlation of village information system variables between each score of question items (SI1-SI6) to the total score of items of village information system questionnaire showed significant results. It can be concluded that each item of question from the village information system variable is valid.

Good governance variable shows the same result based on the result of correlation test from each item of good governance question (G1-G11) to total score of good governance question shows significant result. It can be concluded that each item of good governance question is valid.

D. Reliability Test

Test Reliability is used to measure a questionnaire which is an indicator of a variable or construct. A questionnaire in katakana is reliable if each question is answered consistently or the answer should not be random because each question supposed to measure the same variable tested. Reliability testing using statistical test Cronbach Alpha, with the variable is said to be reliable if it gives Cronbach alpha value > 0.60.

Based on the statistical test, alpha Cronbach value for performance variables shows 0.961 (above 0.60) so it can be concluded that the reliability of the construct or performance is high.

For village information system variables alpha Cronbach value shows 0.842 so it can be concluded that the reliability of the construction or village information system is high Variable good governance alpha Cronbach value shows 0.894 so it can be concluded that the reliability of the constructs or good governance is high.

E. Descriptive Test

Data from the questionnaire received has been tested descriptively from the responses of respondents on the variables of village information systems, good governance, and the performance of village government. The following Table V shows that the average of each variable above 3 so then can be concluded that the respondent's answer to the three variables studied is agree (with 4 Likert scale).

TABLE V. DESCRIPTIVE STATISTICS

	N	Minimum	Maximum	Mean	Std. Deviation
Governance	32	2.82	4.00	3.5312	.36372
SID	32	2.67	4.00	3.2812	.39358
Performance	32	2.60	4.00	3.2750	.44214
Valid (listwise)	N 32				

F. Hypothesis Testing

To test the proposed H1 and H2 hypothesis, using 2 (two) models of regression equation as follows:

$$K = 2.222 + 0.321SID \text{ (see Table VI)}$$

$$K = 10.888 - 3.561SID - 1.914GG + 0.930SID*GG \text{ (see Table VII)}$$

TABLE VI. COEFFICIENTS

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.222	.649		3.421	.002
SID	.321	.197	.286	1.633	.013

Dependent Variable: Performance

TABLE VII. COEFFICIENTS

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	10.888	4.926		2.210	.035
SID	-3.561	1.602	-3.170	-2.223	.034
Governance	-1.914	1.323	-1.575	-1.447	.159
Moderate	.930	.427	4.688	2.177	.038

Dependent Variable: Performance

Based on the result of regression test of model 1 shows that the sig value for the variable of village information system is 0.013 smaller than 5% which means the village information system has a significant effect on the performance of the village government, thus supporting the hypothesis H1. This is consistent with the five principles that determine the usefulness of SID, supporting the performance of village government, among others: the principle of participation, transparency, accountability, inclusiveness, and sustainability. These five principles of SID support can strengthen village capacity in public services, information disclosure and development at the village level, and assist in planning and development at the village level, and the management of village resources independently. This is in accordance with Niswantariputri research in [1].

However, it is necessary to manage the information system of village management to be more consistent and always update with the information, so it is necessary to be supported by the implementation of good governance in the village. The village information management principles are also included in the regulation of village authority, village rights and obligations, the rights and obligations of village communities, planning, implementation and monitoring of village development. From the 2nd research model developed on the basis of good government performance theory it should be supported by governance that involves not only village services but the participation of village communities, as well as local government. This second regression model uses multiple regression model to test the influence of village information system on village government performance with good governance as moderating variable.

The result of H2 hypothesis testing (model 2) shows that the sig value for SID variable is 0.034 which can be concluded that there is SID influence to the performance, while the sig good governance value is 0.159 which can be interpreted there is no influence of good governance to the performance of village government. But then, although village governance is less effective and less efficient, village governments are still required to realize more accountable and transparent village government performance. This is in accordance with the results of research Hendi in [2].

The moderation value of the equation of model 2 shows the sig value of 0.038, means that the H2 hypothesis of this study is supported, which also means that there is an effect of SID on the performance of the village government with good governance as the moderating variable. This is in accordance with the concept of good governance supporting performance in village governance by realizing village management, village administration and finance management, whose implementation involves participation of villagers, upholding the rule of law, by realizing transparency, and improving the responsiveness of village apparatus, and to be more consensus oriented, equity and performance accountability are expected to be accountable, efficient and effective in support planning and development in village government.

V. CONCLUSION AND RECOMMENDATION

Some conclusions that can be drawn based on the research result on the implementation of village information

systems on the performance of village government with good governance as moderating variables are as follows:

- Village information system has a significant effect on the performance of village government. Thus it can be said that the application of village information system (SID) can improve the performance of village government, in order to achieve more accountable and transparent village performance, so that the village is strong, independent, prosperous and democratic
- Good governance does not affect the performance of village government. So it can be said that although village governance is less effective and less efficient, but village governments are still required to realize more accountable and transparent village government performance.
- However, good governance as moderating variable has significant effect to the performance of village government. Good governance, or can be said by the implementation of good and correct governance, will be able to support the implementation of village information system so as to create performance of village government more accountable and transparent, thus, creating a strong, independent, prosperous, and democratic village.

From the findings of this study and supported by empirical data, the questionnaire results of this study suggest as follows:

- Village government should always do supervision and evaluation on the implementation of village information system (SID) and good governance, in order to improve its performance.
- It is better for subsequent research to identify different forms of village information system (SID) such as application of village financial information system (SISKEUDES), village development information system, village service information system and village potential information system.

REFERENCES

- [1] Niswanti, E. and Murtini, H. 2017. The Use of Performance Measurement System in Public Sector Organization. *Accounting Analysis Journal*.
- [2] Hendi S.P. 2017. Tata Kelola Pemerintah Desa dalam Mewujudkan Good governance di Desa Kalibelo Kabupaten Kediri. *Jurnal Politik Muda*.
- [3] Ridwan, E. 2017. *Peran dan Manfaat Sistem Informasi Desa*. (<https://github.com/OpenSID/OpenSID/wiki/peran-dan-manfaat-sistem-informasi-desa>).
- [4] Sistem informasi Desa ://www.jogloabang.com/book/export/html/153
- [5] Sulina, I.G.A.T., Wahyuni, M.A. and Kurniawan, P.S. 2017. Peranan Sistem Keuangan Desa (SISKEUDES) Terhadap Kinerja Pemerintah Desa (Studi Kasus di Desa Kaba-kaba, Kecamatan Kediri, Kabupaten Tabanan). *e-Journal SI Ak Universitas Pendidikan Ganesha Jurusan Akuntansi Program SI*, 8(1), 2017.
- [6] Rendra, R.W., Kaunang, M., and Novie, R.P. 2017. Kinerja Aparatur Pemerintah Desa Dalam Meningkatkan Pelayanan Publik (Studi di Desa Singsingon Kecamatan Passi Timur Kabupaten Bolaang Mongondow). *Jurnal Eksekutif*, 1(1).