

Citizen Satisfaction with the Distribution of Disaster Logistic

Mashudi¹, Luluk Fauziah², Anafil Windriya³

^{1,2,3}Vocational School, Diponegoro University, Semarang, Indonesia

Email: emashud@lecturer.undip.ac.id

Copyright © 2023 Mashudi et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract. Departing from such condition as officer competency, compensation received, and service quality in distributing disaster logistic that has been relatively standardized, there is an indication that people affected by flood disaster have not been satisfied yet. This research aims to find out the citizen satisfaction level and the factors affecting their satisfaction. This research employed qualitative approach with survey research format. Data collection was carried out by distributing questionnaire to 68 respondents taken purposively and interviewing some respondents randomly. In addition, data collection was also conducted using documentation and observation techniques. Data was processed using percentage and multiple linear regression techniques with *Statistical Program for the Social Science (SPSS) program*. The result of research shows: 1) the satisfaction of citizens affected by flood is at moderate level; 2) officer competency, compensation, and service quality affect both partially and simultaneously the citizen satisfaction; 3) meanwhile, officer competency variable affects the citizen satisfaction most significantly; and 4) some other variables affect the citizen satisfaction slightly but excluded from this research.

Keywords: *officer capability, compensation, service quality, and citizen satisfaction.*

A. INTRODUCTION

Semarang City, as the capital of Central Java Province, is located on 6°50' - 7°10' S and 109°35' - 110°50' E. It borders on Kendal Regency in the west, on Demak Regency in the East, on Semarang Regency in the South, and on Java Sea in the North with 13.6 km- coastal line. Semarang City is located at 0.75 m – 348 m altitude. This City is divided into 16 sub districts and 177 kelurahans (villages). Most areas of Semarang City or 10 sub districts are located at 0.75m-6m altitude, while few of them or 6 sub districts at 11-348 m altitude. Semarang City is 373.70 km wide, consisting of 39.56 Km² (10.59 %) farmland and 334.14 (89.41%) non-farm land. By its use, the widest area of farmland is the rainfed one (53.12 %) and only about 19.97 % can be planted twice a year. This City has 1,814,110 populations (Semarang Dalam Angka [Semarang in Number]: 2020).

In early 2021 exactly on February, flash flood occurred in 13 kelurahans distributed in 5 sub districts in Semarang City: Semarang Utara, Semarang Barat, Gajah Mungkur, Ngaliyan, and Tugu. In addition to being affected with flood disaster, Genuk Sub District was also affected with coastal flood. This area often affected with flash flood and coastal flood is located in Semarang bawah. In dealing with potential disaster in Semarang City, the government has established Semarang City's Local Agency for Disaster Mitigation (*Badan Penanggulangan Bencana Daerah* or BPBD) as mentioned in Local Regulation No. 12 of 2010, followed with the issuance of Semarang Mayor's Regulation Number 30 of 2010 about the elaboration and function of Semarang City's BPBD.

Considering its geographical, geological, hydrological, and demographic conditions, it can be concluded that Semarang City area has high vulnerability to disaster, due to either natural or human factor. Disaster will have an impact on environmental damage, property loss, non-material and psychological damages.

Table 1: Summary of Disaster Incidence Data (BPBD of Semarang City)

No	Type of Disaster	2011		2012		2013		2014		2015		2016		2017	
		No.	Loss (Million)	No.	Loss (Million)	No.	Loss (Million)	No.	Loss (Million)	No.	Loss (Million)	No.	Loss (Million)	No.	Loss (Million)
1	Flood	2	4	7	1.170	65	15	29	-	48	-	30	-	20	-
2	Landslide	17	1.169,5	29	373,4	39	220	23	1.190	30	145	52	503	49	1.145
3	Tornado	0	-	4	182	6	162	5	-	0	-	1	-	2	-
4	Collapsed House	0	-	6	70	3	-	21	302,5	11	30	14	85	17	125
5	Fallen Tree	20	13	10	27	14	3	6	-	12	-	11	-	-	32
6	Fire	30	-	22	965	58	3.997	56	627,4	84	2.163	44	2.581	109	502
7	Drought	76	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Strategic Plan of Kota Semarang's BPBD, 2016-2021

Considering the amount of loss in millions rupiah due to disaster over years (Table 1), it can be concluded that the effect of disaster on Semarang City tends to increase, either intensity or quality, and its impact on development products such as infrastructure, property, life toll, and public asset loss and damage also increases.

The second amendment to BPBD of Semarang City's Strategic Plan of 2016-2021 mentions:

Although development planning in Semarang City has been designed in such a way that improves the people's welfare, improves the feeling of justice, minimizes the destructive effect on environment, and protects people from disaster threat, in fact its implementation still finds some constraints due to non-systemic and less coordinative management attempt.

Recalling Semarang City more vulnerable to disaster and the intensity and quality of disaster increasing over times, Strategic Plan of Semarang City's BPBD in 2016-2021 states that non-systemic and less coordinative implementation of development and finding of research stating that the citizen's satisfaction with logistic distribution largely belongs to moderate and low category, and only few belongs to high category, this research aims to find out the factors affecting citizen's satisfaction with the distribution of disaster logistic.

Kemampuan (ability) come from Indonesian word *mampu* meaning being powerful (capable) of doing something, while *kemampuan* means capability, competency, power (Tim Penyusun Kamus Besar Bahasa Indonesia: 1989). Ability, according to Robbins (2009), is an individual's capacity to do a variety of tasks in a job. Furthermore, Robbins (2009) states that an individual's comprehensive ability basically consists of two factors: 1) intellectual ability, the ability needed to do various activities (thinking, reasoning, and problem solving); and 2) physical ability is an ability of doing tasks requiring stamina, skill, strength, and similar characteristic.

Referring to the definitions of *ability* above, it can be concluded that ability is an individual's capability, competency, and power in mastering a skill used to do varying tasks in a job.

Compensation, according to Simamora (2004), is an important factor attracting many organizations' attention in maintaining and attracting quality human resource. Meanwhile, according to Peter (1991), compensation is something given to employees as payment or reparation for service or loss, in the form of either money or non-money.

Compensation giving can improve employees' job performance and motivate them. Therefore, an organization or a company's attention is very desirable to the rational or just organization of compensation. If employees view the compensation given is inadequate, their job performance, motivation, and satisfaction will decrease.

Basically, compensation is classified into two groups: financial and non-financial compensation (Edy Sutrisno: 2011). Furthermore, financial compensation can be direct and indirect in nature (Wilson: 2012).

Direct compensation is reward received by employees in the form of money. Direct financial compensation is reward called salary or wage, paid constantly based in constant time interval. Direct compensation consists of salary and incentive. a) Salary: Salary is base pay paid to the employees based on certain specified position level. The amount of base pay paid to employees is determined based on tenure, education level, and skill mastered. b) Incentive. Incentive is a motivating medium, including material given deliberately as a stimulant or impulse to employees to generate spirit inside them to improve work productivity in the organization.

Law No. 25 of 2009 about public service defines public service as an activity or a series of activities in the attempt of fulfilling all citizens and populations' needs for service, service, and administration provided by the public service providers corresponding to the legislation.

The principles of public service as mentioned in the law are: 1) Public Interest: public service should be provided by not prioritizing individual's or group's interest; 2) Law Certainty: the guarantee related to the achievement of right and obligation in providing service; 3) Equal Rights: service is provided to everyone regardless ethnic, race, religion, group, gender, and economic status; 4) Balance between right and obligation: the fulfillment of right should be proportional to the obligation to do by both service provider and receiver; 5) Professionalism: the service provider should have competency corresponding to its field of work; 6) Participation: public participation in service providing should be improved by considering the people's aspiration, need, and expectation; 7) equal or non-discriminative treatment: every citizen is entitled to receive equal or fair service; 8) Transparency: service recipients can access and acquire information easily on the service they want; 9) Accountability: the process of providing service should be accountable for as specified by the legislation; 10) Facilities and special treatment for vulnerable group, i.e. facilitating the vulnerable group to give them the feeling of justice in the term of service; 11) timeliness: each of service types is completed timely according to the standardized service; and 12) speed, easiness, and affordability: each type of services is provided quickly, easily, and affordably.

In this research, the author limits the definition of service quality to the dimensions of: aid quality, aid quantity, timeliness in giving aid to the recipient, and the compatibility of aid/product distributed to the one needed by the victims of flood.

Considering the background elaborated, the problem statements can be formulated as follows: 1) At what level is the citizen's satisfaction with the distribution of disaster logistic? 2) Do ability, compensation, and service quality variables affect partially the citizen's satisfaction with logistic distribution? 3) Do ability, compensation, and service quality variables affect simultaneously the citizen's satisfaction with logistic distribution? And 4) what variable does affect citizen's satisfaction with logistic distribution most significantly, ability, compensation, or service quality?

B. METHOD

The approach used in this study was quantitative on with both explanatory and survey research format. Explanatory research is the one assuming that a phenomenon or an event occurs for any reasons certainly, so that explanatory research is the one that can explain why the phenomenon occurs (Sarwono, 2006). This research took place in 28 (twenty eight) kelurahans vulnerable to flash flood, coastal flood, landslide, and fire distributed in 10 (ten) sub districts in Semarang City, Central Java. In this research, the author focuses on the flood with severest impact, i.e. flash flood befalling 13 (thirteen) kelurahans. Data collection was conducted by distributing questionnaire to 68 (sixty eight) respondents, all of which were

affected by flash flood and taken purposively. Additionally, interview was conducted with respondents taken randomly. Data collection was also conducted using documentary technique for early mapping purpose and complementing the data that cannot be obtained through interview and questionnaire. Data collection through observation was conducted as well to find out the activity in distributing disaster logistic and disaster effect.

The variables involved in this research were ability (X_1), compensation (X_2), service quality (X_3), and satisfaction (Y). For a questionnaire to be valid and reliable, it should be tested for both validity and reliability first before distributed to respondents. Similarly, before the data is processed further using a multiple-linear regression, classical assumption test was conducted, involving normality, heteroscedasticity, autocorrelation, and multicollinearity tests. After classical assumption test was conducted and the result of states that the data is qualified to be analyzed further, analysis using a multiple-linear regression is conducted with SPSS (*Statistical Program for the Social Science*) program.

C. RESULTS AND DISCUSSION

From the data processed, the following information is acquired. Out of 68 (sixty eight) respondents filling in the questionnaire, majorities (43%) state their satisfaction with disaster logistic distribution at moderate level; followed with that at low level (37%), and high level (20%). The data is distributed around diagonal line, so that it can be stated that the data is distributed normally. The data is distributed by creating certain pattern or there is no obvious pattern, and the points spread above and below 0 (zero) on Y or vertical axis; therefore it can be said that the regression model is homogeneous. Thus, it can be said that there is no heteroscedasticity problem.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.954 ^a	.910	.906	.15328	1.895

a. Predictors: (Constant), X3(Service Quality), X2(Compensation), X1(Ability)

b. Dependent Variable: Y(Satisfaction)

Considering the table of Model Summary^b, it can be seen that Durbin-Watson value is 1.895 (between -2 and +3); thus, it can be said that this data does not experience autocorrelation problem.

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	.510	.163		3.136	.003					
X1(Ability)	.453	.081	.485	5.563	.000	.928	.571	.208	.184	5.428
X2(Compensation)	.292	.064	.331	4.574	.000	.892	.496	.171	.268	3.733
X3(Service Quality)	.164	.067	.189	2.451	.017	.872	.293	.092	.237	4.216

a. Dependent Variable: Y(Satisfaction)

Considering the table of Coefficients^a, VIF (*Variance Inflation Factor*) values for each of variables can be found: ability (X_1) of 5.428; compensation (X_2) of 3.733, service quality (X_3) of 4.216. Because VIF values are less than 10 (< 10), it can be said that there is no multicollinearity problem in this research.

Considering the table of Coefficients^a, the significance values of each variable are as follows: ability (X_1) of 0.00; compensation (X_2) of 0.000; and service quality (X_3) of 0.017. Because all significance values are less than 0.050 (< 0.050), it indicates that each of variables

partially affects the satisfaction variable significantly. Thus, there is a strong reason to decline H_0 and to receive H_1 stating “*there is an effect of ability, compensation, and service quality variables partially on citizen’s satisfaction with the distribution of disaster logistic*”.

In addition, considering the table of Coefficients^a, it can be seen that ability affects most significantly the distribution of disaster logistic, followed with compensation and service quality variables. It is confirmed with the finding indicating that t statistic values of each variable are as follows: ability (X_1) of 5.563; compensation (X_2) of 4.574, service quality (X_3) of 2.451. The largest t-statistic value can be found in ability variable, followed with compensation, and the least one, service quality. Thus, there is a strong reason to decline H_0 and to support H_1 stating that “*among ability, compensation, and service quality variables, ability variable affects most significantly the citizen’s satisfaction with disaster logistic distribution*”.

ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	15.244	3	5.081	216.279	.000 ^a
	Residual	1.504	64	.023		
	Total	16.748	67			

a. Predictors: (Constant), X3(Service Quality), X2(Compensation), X1(Ability)

b. Dependent Variable: Y(Satisfaction)

Considering table of Anova^b, it can be seen F statistic value of 0.000. Because F statistic value is less than 0.050 (<0.050), it indicates that independent variables consisting of three variables simultaneously affect the dependent variable, satisfaction. Thus, there is a strong reason to decline H_0 and to support H_1 stating that “*there is a significant effect of ability, compensation, and service quality simultaneously on citizen’s satisfaction in disaster logistic distribution*”.

Considering the table of Model Summary^b, it can be seen that R Square value is 0.910 or 91%. It means that independent variables consisting of three variables contribute to dependent variable by 91%. Thus, it can be concluded that there is an effect of other variables excluded from this research (9%). Those variables are supervision, stressor, and etc.

The result of hypothesis testing indicates that the ability of the officers of disaster logistic distribution affects significantly the citizen’s satisfaction with disaster logistic distribution. It can be seen from the result of data processing at significance level of 0.000, less than 0.050 (<0.050).

The output of research is in line with Diana Rahmawati’s (2013) study finding that the higher the lecturer’s ability of lecturing, the higher is the students’ satisfaction with the lecturing. The lecturer’s ability is elaborated in *Tri Dharma Perguruan Tinggi* (Three Pillars of University) including education and teaching, research, and community service, as well as supporting element.

Tri Dharma Perguruan Tinggi builds on research. If lecturers have researching ability, then the result of research is applied to and trialed within society, and the finding is elaborated in the lecturing, it will be better, more interesting, and satisfactory to students. In addition, this output of research is also in line with Rina Anggraini’s (2019) study finding that the higher the employee performance in Sub District Office, the higher is the citizen’s satisfaction with public service. Ability includes general ability and special ability. General ability is intelligence (*intelligence quotient* or IQ), while special ability is skill. The employees of sub district office with high IQ and high skill tends to have high and satisfactory service performance to the service users in sub district office.

Thus, it can be said that this study evidently shows that the officers' ability of distributing disaster logistic affects significantly the citizen's satisfaction with the distribution of disaster logistic. The higher the ability value, the higher is the citizen's satisfaction, and vice versa.

The result of hypothesis testing indicates that compensation affects significantly the citizen's satisfaction with disaster logistic distribution. It is indicated with the result of data processing at significance level of 0.000, less than 0.050 (<0.050).

This research output is relevant to Muhammad Hatta's (2017) study finding that compensation affects significantly the job satisfaction of employees in PT PLN (Persero) in Aceh Region. The higher the compensation value, the higher is the employees' job satisfaction. This is also relevant to Ni Made Nadya Rahayu's (2017) study finding that compensation affects significantly the job satisfaction and the turnover rate. The higher the compensation value, the higher is the job satisfaction and the lower is the turnover rate in Amaris Hotel of Legian. The higher the salary and other revenue from management, the higher is the employees' job satisfaction and the lower is the turnover rate. This output of research is relevant to Septerina's (2018) study finding that compensation affects significantly the employees' job satisfaction in production division of PT Etowa Packaging Indonesia. The higher the compensation received by the employees, the higher is the job satisfaction of employees in production division.

Thus, it can be said that this study evidently shows that compensation given to the officers in the distribution of disaster logistic affects significantly the citizen's satisfaction with it. The higher the compensation received by the officers, the higher is the citizens' satisfaction, and vice versa.

The result of hypothesis testing shows that service quality affects significantly the citizen's satisfaction with the distribution of disaster logistic. It is indicated with the result of data processing at significance level of 0.000, less than 0.017 (<0.050).

This output of research is relevant to Siti Kurnia Widi Hastuti's (2017) study finding that service quality affects significantly the satisfaction of BPJS participant patients in Yogyakarta Regional Public Hospital. The higher the medical workers' professionalism, physical facility, drug, and health equipment values, the higher is the satisfaction of BPJS participant patients. This output of research is also relevant to Wibawani Yunestri Mukti's (2013) study finding that health service quality affects significantly the satisfaction of inpatient in Woodward Hospital of Palu City. The higher the technical competency, affordability, effectiveness, efficiency, sustainability, safety, comfort, information, timeliness, and inter-human relation dimensions, the higher is the satisfaction of inpatients.

Thus, it can be said that this study evidently indicates that service quality in the distribution of disaster logistic affects significantly the citizen's satisfaction with it. The higher the service quality including the dimensions of aid quality, aid quantity, aid distribution timeliness, compatibility of aid/product distributed to the need of flood victim, the higher is the citizen's satisfaction with the distribution of disaster logistic, and vice versa.

Referring to the result of hypothesis testing stating "*there is a significant effect of ability, compensation, and service quality significantly and simultaneously on the citizen's satisfaction with disaster logistic distribution*", but the result of measurement on the citizen's satisfaction with logistic distribution belonging to moderate and low category, and only few belonging to high satisfaction category, it occurs likely due to inadequate supervision and high stressor. It is confirmed with the finding indicating that independent variables including ability, compensation, and service quality contribute by 91% to the dependent variable. It means the rest of 9% is contributed by other variables excluded from this research, i.e. supervision and stressor. The citizen's satisfaction with disaster logistic

distribution will largely belong to moderate and high category or most of them will belong to high satisfaction level, if this study involves supervision and stressor variables.

D. CONCLUSION

The conclusion of research is as follows: 1) citizen's satisfaction with the distribution of disaster logistic is largely at moderate level, followed with low and high levels; 2) ability, compensation, and service quality affect the citizen's satisfaction with disaster logistic distribution, both partially and simultaneously; 3) meanwhile ability variable affects most significantly the citizen's satisfaction with disaster logistic distribution; 4) some other variables excluded from this research affect the citizen's satisfaction with disaster logistic distribution. Therefore, further research is recommended to include independent variables other than ability, compensation, and service quality (e.g. supervision and stressor).

REFERENCES

1. Anggraini, R., Paranoan, D. B., & Jauchar. (2019). *Pengaruh Kemampuan Kerja Pegawai Terhadap Kepuasan Masyarakat Dalam Pelayanan Publik di Kantor Kecamatan Longkali Kabupaten Paser*. E-Journal Pemerintahan Integratif, 7(1), 82-91.
2. Bangun, W. 2012. *Manajemen Sumber Daya Manusia*. Jakarta: Erlangga.
3. Hastuti, S. K. W., Mudayana, A. A., Nurdhila, A. P., & Hadiyatama, D. (2017). Hubungan mutu pelayanan dengan kepuasan pasien peserta BPJS di Rumah Sakit Umum Daerah Yogyakarta. *Kes Mas: Jurnal Fakultas Kesehatan Masyarakat*, 11(2), 161-168.
4. Hatta, M., & Musnadi, S. (2017). Pengaruh gaya kepemimpinan, kerjasama tim dan kompensasi terhadap kepuasan kerja serta dampaknya pada kinerja karyawan PT. PLN (persero) wilayah Aceh. *Jurnal magister manajemen*, 1(1), 70-80.
5. Pangabean, M. S. 2002. *Manajemen Sumber Daya Manusia*. Jakarta: Ghalia Indonesia.
6. Peter, S., & Yeni, S. (1991). Kamus besar bahasa Indonesia. *Jakarta: Balai Pustaka*.
7. Rahayu, N. M. N., & Riana, I. G. (2017). *Pengaruh Kompensasi Terhadap Kepuasan Kerja Dan Keinginan Keluar Pada Hotel Amaris Legian* (Doctoral dissertation, Udayana University).
8. Rahmawati, D. (2013). Analisis Faktor-faktor yang Mempengaruhi kepuasan mahasiswa. *Jurnal Economia*, 9(1), 52-65.
9. Robbins, S. P., & Judge, T. A. (2009). *Perilaku Organisasi*. Jakarta: Salemba Empat.
10. Sarwono, J. (2006). *Metode Penelitian Kuantitatif & Kualitatif*. Yogyakarta: Graha Ilmu.
11. Septerina & Irawati, R. (2018). Pengaruh komensasi terhadap kepuasan kerja karyawan pada bagian produksi di PT Etowa Packaging Indonesia. *Journal Applied Business Administration*, 2(1).
12. Simamora, H. (2004). *Manajemen Sumber Daya Manusia*. Yogyakarta: STIEYKPN.
13. Sutrisno, E. (2011). *Manajemen Sumber Daya Manusia*. Jakarta: Kencana Prenada Media Group.