Journal of Positive Psychology & Wellbeing http://journalppw.com
2022, Vol. 6, No. 2, 739 – 752 ISSN 2587-0130

Risk Management for Fire Disaster Prevention in DKI Jakarta Province

[1]Faris Shafrullah, [2]Sedarmayanti, [3]Solahuddin Ismail, [4]Bahrullah Akbar, [5]Khasan Effendy, [6]Sampara Lukman, [7]Layla Kurniawati, [8*]Leni Indrawati, [9]Fieghie Fadila, [10]Putri Ayu Pratiwi, [11]Asral, [12]Kusnan

[1]Alumni University of Padjadjaran, Bandung,
[2]Lecturer University of Dr. Sutomo, Surabaya,
[3]Lecturer School of Government Universiti Utara Malaysia,
[4,5,6,7]Lecturer IPDN, Bandung,
[8]Lecturer University of Azzahra, Jakarta,*
[9]Doctoral Program in Management Science, University of Brawijaya, Malang,
[10]Lecturer Kupang State Polytechnic,
[11]Lecturer University of Pelita Bangsa, Bekasi,
[12]Lecturer University of Pamulang, South Tangerang
[8]Correspondence Authors: lenindra12@gmail.com*

Abstract

The aspect of optimization through training provided to the community has a positive and significant response from the community. The community is very interested and enthusiastic about participating in the training program to prevent fire disasters. The efficiency aspect was responded positively significantly by the local community. People know that fire disasters occur very quickly, so that quick anticipation is needed, so that fires do not spread. The effectiveness aspect was responded positively significantly by the community, where the training program provided to the community was easy to understand, so that the community was ready to deal with fire disasters. The role of the community is absolutely necessary for the prevention of fire disasters in Jakarta. People are increasingly aware of the dangers of fire, so they take precautions by providing information, and reminding fellow citizens to always be careful and care about the potential for fires to occur. This is very important to do in order to reduce the risk or impact that will befall the community in the event of a fire disaster. This fire prevention program was successfully implemented through increasing aspects of optimization, efficiency and effectiveness by involving the participation of local communities in fire disaster prevention, and has been proven to reduce the frequency of fire disasters, and reduce the risk of loss for the people of Jakarta.

Keywords— Optimization, Efficiency, Effectiveness, Community Role, and Fire Disaster Prevention

Introduction

In the context of risk management due to the fire disaster in Jakarta, Governor Anies Rasyid Baswedan issued an order through the Instruction of the Governor of the Special Capital Region of Jakarta Number 65 of 2019 concerning the movement of residents to prevent fire disasters. This condition is a very good policy and aims to minimize the risk impact of fire disasters in the form of loss of property, residence, place of business and even life, which befell the community at large. and the community, in the prevention and management of fire disasters in the Province of the Special Capital Region of Jakarta. Community participation in the prevention and management of fire disasters is an obligation for the entire community (see Westcott, et.al, 2017). DKI Jakarta Province is an area that has

a very dense population, so the potential for fires is highest. This condition is caused by a high population density per square kilometer, a lack of land and many tall buildings, and people who are less concerned about the potential for fires (see Obasa, Mbamali, and Okolie, 2020a). A fire is a disaster, or an event that should be prevented, controlled and managed. Fires that occur always cause deep trauma for the affected victims. The losses it causes can be in the form of life, property, and can even cause physical disabilities in humans. The occurrence of fires can be explained through the fire triangle theory. The fire triangle theory explains that there are three components that cause fires, namely heat, fuel, and oxygen. Fuels are materials that are flammable or easily react with combustion which can be divided into several types of fuel, namely solids (paper, dry waste, wood, cloth, leaves), liquids (kerosene, spirit, alcohol, diesel fuel). , gasoline), and gaseous substances (LPG, LNG). Heat is a heat source that can be categorized into several types such as natural factors (volcanic heat, lightning), electrical thermal energy (short circuit, short circuit), heat energy due to friction (mechanical) , chemical thermal energy, nuclear thermal energy, and solar thermal energy. There is another theory, namely the pyramid of fire, which explains the process of fire with the three components of heat, fuel, and oxygen not necessarily causing a fire. These three components require a chain of chemical reactions for a flame or combustion event to occur.

In Law Number 23 of 2014 Article 12, that fire is a sub-business part of the affairs of the field of public peace and order, as well as community protection, included in the mandatory affairs related to basic services. The fire sub-agency is a shared responsibility between the government, provinces and districts/cities. In the division of authority, the main person in charge is the district/city government. Therefore, the fire sub-affairs becomes a strategic and priority in local government budget planning as a manifestation of ensuring the presence of local governments in serving and responding to fire disasters. Fire disaster is one of the unpredictable disasters and cannot be predicted when it will come, but fire disasters can be reduced by giving full vigilance to items that can cause fire sources and damaged electronics. Fire is a feared thing that can scorch the community's basic needs, namely food, clothing, and housing. Resources around the community are always under threat from fires that can disrupt economic resilience, public health and environmental damage. For this reason, it is necessary to reposition the point of view in dealing with the fires faced, as well as future policy directions. In addition, the evacuation route in the event of a fire must be made a special route, so as to reduce the risk of the impact of a fire (see Dube, and Orodho, 2016).

The following table shows the incidence of fire disasters in Jakarta and their causes.

Table 1. Fire Data in DKI Jakarta Province

No	Uraian	Tahun									
		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1.	Frequency	953	1039	997	1094	1569	1171	1471	1751	2183	1505
2.	Residential Building Object	404	445	409	430	495	392	505	511	602	461
3.	General Building & Trading Object	224	240	212	237	227	224	210	279	304	269

4.	Industry Building Object	28	21	30	32	19	21	22	15	14	17
5.	Vehicle Object	70	90	87	92	111	117	109	98	121	93
6.	Object of Outdoor Installation	0	0	0	0	0	326	359	451	527	438
7.	Plant Object	0	0	0	0	0	6	66	123	205	30
8.	LapakObject	0	0	0	0	0	27	24	26	39	14
9.	Garbage Object	0	0	0	0	0	51	102	167	251	83
10.	Other Objects	227	243	259	303	717	7	74	81	120	100
11.	Alleged Cause of Electricity	611	684	724	728	873	873	927	1061	1202	938
12.	Alleged Cause of Gas	82	91	52	73	104	110	185	181	200	180
13.	Alleged Cause of Candles	10	1	1	0	0	7	5	6	29	7
14.	Alleged Cause of Waste	0	0	0	0	0	52	124	247	384	123
15.	Alleged Cause of Smoking	44	48	29	61	96	30	34	75	134	36
16.	Other Alleged Causes	206	215	191	232	495	99	196	181	234	221
17.	Dead Officer	0	0	0	0	0	0	0	1	0	0
18.	Wound Officer	13	23	7	13	32	18	21	11	21	5
19.	Dead Citizens	17	35	42	18	22	21	46	23	27	18
20.	Residents Injured	87	96	150	66	81	100	118	99	112	79
21.	Residential building losses	3221	3790	4027	3146	3276	1876	2534	1723	2740	1898
22.	General building & trade losses	494	815	423	3479	472	313	2078	367	778	429
23.	Industrial building losses	34	24	32	36	13	30	26	16	16	17
24	Vehicle loss	95	130	160	165	218	174	173	135	248	137

.											
25.	Loss of outdoor installation	0	0	0	0	0	270	364	457	531	436
26.	Plant loss	0	0	0	0	0	4	70	123	202	34
27.	Loss of stall	0	0	0	0	0	365	82	69	248	20
28.	Waste loss	0	0	0	0	0	46	115	172	258	86
29.	Other losses	218	266	288	316	721	91	72	85	123	99
30.	Total estimated loss (Rp) billion	2196	2985	2546	3983	3778	2145	4752	2389	3221	2521

Source : https://data.jakarta.go.id/dataset/kejadiankebakaran

The development of an urban area has brought about an important problem such as the rapid flow of population mobilization from villages to cities, as well as the development of various residential, industrial and trade areas. One of the impacts of this condition is the threat of fire hazard. Fires that occur in densely populated residential areas, especially in industrial areas, can cause a lot of losses, including losses due to social, economic and psychological consequences. Therefore, early detection and evaluation of fire equipment systems is one of the efforts to prevent fire disasters (see Celik 2010; and Nimlyat, Audu, and Ola-Adisa, 2017). The handling of fire disasters in Jakarta is still facing various obstacles, both in terms of policies, institutional performance, laws and regulations, operational mechanisms as well as the completeness of its institutions as well as the level of congestion and population density. The performance and authority of fire fighting institutions is still not optimal regarding human resources (HR), equipment and supporting facilities (see Kihila, 2017). Including the lack of number of firefighting posts, which affects response time and the severity of the attack. Meanwhile, demands for rescue actions against fires and other urban disasters are increasing along with the increase in the incidence of disasters. Aspects of fire protection have not been considered as one of the basic needs, as a result, fire incidents are often fatal and repeated. Fire incidents in Jakarta, often occur in people's lives, especially urban communities with a very dense population. Apart from being caused by a dense population, the influence of economic mobilization and growing industry causes the risk of fire to be higher (see Mohamed, et.al, 2019).

RESEARCH AIM:

To analyze the implementation of the Governor's Instructions for the Special Capital Region of Jakarta Number 65 of 2019, with the application of the principles of optimization, efficiency, and effectiveness, community participation, towards the prevention and management of fire disasters in Jakarta.

LITERATURE REVIEW:

Optimization is a process of finding the best practices that are carried out to achieve maximum and ideal results by making the best use of existing resources.In simple terms the meaning of optimization is a series of processes to optimize what is already.The

benefits of optimization are that it can solve problems, can make the right decisions, and can save resources.

Efficiency, can be formulated according to a certain understanding, namely maximizing the ratio between the actual net results, the balance of the desired and unwanted consequences with the sacrifices given.An action can be called efficient if it achieves maximum results with a given given effort, or if it achieves a certain level of results with the smallest possible effort.

Effectiveness, is a condition that shows the level of success or achievement of a goal as measured by quality, quantity and time as previously planned or on target with high efficiency.

Community participation;that the role is a dynamic process of position (status).If a person carries out his rights and obligations according to his position, he is carrying out a role.The notion of a defined role is part of the main tasks that must be carried out by someone in management;behavioral patterns that are expected to accompany a business;the part or function of a person in a group or institution;the expected function of a person or become the characteristics that exist in him, and the function of each variable in a causal relationship in the prevention and management of fire disasters.

METHODS

Based on the hypotheses in the previous section, the mathematical relationship between the variables can be derived as follows:

Community Role=Optimization + Efficiency + Effectiveness

$\eta_1 = \gamma_{11}\xi_1 + \gamma_{12}\xi_2 + \gamma_{13}\xi_3$

Fire Disaster Prevention = Community Role +Optimization + Effectiveness

$\eta_2 = \beta_{21}\eta_1 + \gamma_{21}\xi_1 + \gamma_{23}\xi_3$

Equation is estimated using an Estimates Maximum Likelihood

The analysis technique uses the Structural Equation Modeling (SEM) method, with Lisrel software.

RESULT

Normality test

Normality test was conducted to determine the data is normally distributed.The test results have a Zskewness value of 69.37 greater than 0.05, and a Zkurtosis value of 1117.95 greater than 0.05. The conclusion is that all data are normal or normally distributed.

Multicollinearity Test

Multicollinearity test using the Variance Inflation Factor VIF method, the conclusion is that there are no symptoms of multicollinearity in the structural equation model data, because the Variance Inflation Factor VIF value of 1.78 is smaller than 10 (1.78 < 10);and the values in the 1/VIF column are all above 0.1.The conclusion is that all data are not affected by multicollinearity symptoms.

Validity Measurement

The validity of the Xi measure of ξ_j is the magnitude of the direct structural relationship between $\xi_j$and Xi. In this definition, in order for a measure to be valid, the latent variable and the observed variable must have a unidirectional or direct relationship. There must be no intervention variable between Xi and ξ_j if Xi is to be a valid measure. According to Bollen (1989), and Rigdon and Ferguson (1991), a variable is said to have good construct validity or latent variable, if the t value of the loading factor is greater than its critical value (or > 1.96, or practically > 2). All loading values are non-standard or significant estimates ($p < 0.05$) which are shown in the t-value result column, all values are above 1.96. Standard factor loading > 0.70 (see Bollen 1989), or > 0.50 as suggested by Joreskog and Sorbom (1993). The use of a value of 0.50 or 0.70 as a critical value can be considered valid. The conclusion is that the t-values in the t-value column are all greater than 1.96, which

indicates that all data indicators are valid and feasible to use.

Reliability Measurement

Reliability test, namely testing the effect of each latent variable on the indicator or manifest variable. The reliability test can be done in two ways, namely the Composite Reliability method, or the Average Variance Extracted calculation method. The Composite Reliability measure where the standardized loadings value can be obtained from the Lisrel output, and e_j is the measurement error for each indicator or variable observed (see Fornel and Larcker 1981). The cut-off level to say that Composite Reliability is quite good is > 0.6 (see Bagozzi and Youjae 1988), and Average Variance Extracted > 0.5.

If the research instrument meets the criteria, then the analysis and interpretation can be measured. As many as 1000 questionnaires were distributed to people who live in five areas of the city of Jakarta, and who have attended fire disaster prevention training, but 842 questionnaires were returned and answered.

The following is a descriptive table from the respondents.

Table 2.Respondent's profile of formal questionnaires

Profile	Frequency	Percentage (%)
Age		
< 18	19	2,3
18-25	138	16,4
26-35	149	17,7
36-45	272	32,3
46-50	176	20,9
> 50	88	10,5
Gender		
Female	264	31,4
Male	578	68,6
Length of work		
1-5 years	593	70,4
More than 5 years	249	29,6
Education level		
High school	526	62,5
Diploma	129	15,3
Bachelor	135	16,0
Master	52	6,2

The following table presents the results of the validity and reliability tests of the processed data, to ensure that the data is steady, consistent and the measuring instrument used is very precise in measuring public perception.

Table3.Validity and Reliability Tests

Latent Variable	Indicator	λ	e	CR	VE	Result	
Optimization (OPTIMIZA)	X1	0.71	0.5	0.89	0.58	Valid	Reliable
	X2	0.76	0.43			Valid	
	X3	0.67	0.55			Valid	
	X4	0.68	0.54			Valid	
	X5	0.77	0.42			Valid	
	X6	0.71	0.51			Valid	
Efficiency (EFFICIEN)	X7	0.87	0.24	0.86	0.56	Valid	Reliable
	X8	0.86	0.27			Valid	
	X9	0.83	0.32			Valid	
	X10	0.71	0.5			Valid	
	X11	0.59	0.66			Valid	
Effectiveness (EFFECTIV)	X12	0.82	0.33	0.86	0.55	Valid	Reliable
	X13	0.76	0.42			Valid	
	X14	0.79	0.38			Valid	
	X15	0.72	0.48			Valid	
	X16	0.58	0.66			Valid	
Community Role (COMROLE)	Y1	0.63	0.61	0.87	0.53	Valid	Reliable
	Y2	0.75	0.44			Valid	
	Y3	0.72	0.49			Valid	
	Y4	0.7	0.51			Valid	
	Y5	0.77	0.41			Valid	
	Y6	0.78	0.4			Valid	
Fire Disaster	Y7	0.75	0.44	0.88	0.51	Valid	Reliable

Prevention (FDPREV)	Y8	0.73	0.47			Valid	
	Y9	0.7	0.5			Valid	
	Y10	0.65	0.58			Valid	
	Y11	0.76	0.43			Valid	
	Y12	0.77	0.42			Valid	
	Y13	0.64	0.59			Valid	

Based on the test results in Table 3, all indicators depicting a loading factor standard value of> 0.50 and Construct Reliability of> 0.70.Hence, all of them meet the validity and reliability criteria.

The following table presents the results of the structural equation model fit test.

Table 4. Goodness of Fit Index-Full Model

No	Goodness of Fit	Criteria	Result	Evaluation Model
1	Chis Square (P-Value)	≥ 0.05	0.00	Marginal Fit
2	RMSEA	≤ 0.08	0.06	Good Fit
3	NFI	≥ 0.90	0.95	Good Fit
4	CFI	≥ 0.90	0.97	Good Fit
5	IFI	≥ 0.90	0.97	Good Fit
6	RFI	≥ 0.90	0.95	Good Fit
7	SRMR	≤ 0.05	0.04	Good Fit
8	GFI	≥ 0.90	0.91	Good Fit
9	AGFI	≥ 0.90	0.92	Good Fit
10	CN	≥ 200	269.69	Good Fit

Based on the test results in Table 4, the results show that RMSEA, NFI, CFI, IFI, RFI, SRMR, GFI, AGFI and CN have met the specified requirements and criteria. The conclusion is that the results of the SEM model test are suitable and good.

The following table presents the results of hypothesis testing from the structural equation model.

Table 5. Hypothesis Test Result

Hypothesis	Coefficient	t-Statistic	Significant	Conclution
Optimization=>ComRole	0.09	2.08 ≥ 1.65	Positive	Hypothesis is Accepted
Efficiency=>ComRole	0.16	3.87 ≥ 1.65	Positive	Hypothesis is Accepted
Effectiveness=>ComRole	0.37	8.05 ≥ 1.65	Positive	Hypothesis is Accepted
ComRole=>FDPrev	0.54	11.4 ≥ 1.65	Positive	Hypothesis is Accepted
Optimization=>FDPrev	0.21	5.65 ≥ 1.65	Positive	Hypothesis is Accepted
Effectiveness=>FDPrev	0.11	2.67 ≥ 1.65	Positive	Hypothesis is Accepted

Based on the test results in Table 5, the hypothesis test has been carried out that the exogenous optimization latent variable has a significant positive effect on the Community Role endogenous latent variable of 0.09. The exogenous latent variable Efficiency has a positive and significant effect on the endogenous latent variable Community Role of 0.16. The exogenous latent variable Effectiveness has a positive and significant effect on the endogenous latent variable of Community Role of 0.37. Furthermore, the endogenous latent variable of Community Role has a significant positive effect on the endogenous latent variable of Fire Disaster Prevention of 0.54. The exogenous optimization latent variable has a direct effect on the endogenous variable Fire Disaster Prevention of 0.21. The exogenous latent variable Effectiveness has a direct influence on the endogenous variable Fire Disaster Prevention of 0.11.

The following table presents the results of the direct effect test, indirect effect and total effect in the structural equation model.

Table 6.The Intervention of Variable Testing Results

Correlation	Direct Effect	Indirect Effect	Total Effect
Optimization=>ComRole	0.09	-	0.09
Effectiveness=>ComRole	0.37	-	0.37
ComRole=>FDPrev	0.54	-	0.54
Optimization=>FDPrev	0.21	-	0.21
Effectiveness=>FDPrev	0.11	-	0.11
Optimization=>ComRole=>FDPrev	-	0.05	0.26

Effectiveness=>ComRole=>FDPrev	-	0.20	0.31

Based on the test results in Table 6, the Exogenous Optimization latent variable has a significant positive indirect effect on the Fire Disaster Prevention endogenous latent variable through the Community Role endogenous latent variable of 0.05. Furthermore, the exogenous latent variable Effectiveness has a significant positive indirect effect on the endogenous latent variable Fire Disaster Prevention through the endogenous latent variable Community Role of 0.20.

The total effect is the sum of the coefficients of the indirect influence of the exogenous optimization latent variable on the endogenous latent variable of Fire Disaster Prevention through the Community Role endogenous latent variable of 0.05, plus the coefficient of the direct influence of the exogenous optimization latent variable on the endogenous latent variable of Fire Disaster Prevention is 0.21, so that the total the effect becomes significant positive of 0.26.

Furthermore, the total effect of the sum of the coefficients of the indirect influence of the exogenous latent variable Effectiveness on the endogenous latent variable of Fire Disaster Prevention through the latent variable of endogenous Community Role is 0.20, plus the coefficient of direct influence of the exogenous latent variable Effectiveness on the endogenous latent variable of Fire Disaster Prevention is 0.11, so that the total the effect becomes significant positive of 0.31.

Structural Equations

COMROLE = 0.087*OPTIMIZA + 0.16*EFFICIEN + 0.37*EFFECTIV, Errorvar.= 0.74 , R^2 = 0.26

(0.042) (0.042) (0.046) (0.079)

2.08 3.87 8.05 9.42

FDPREV = 0.54*COMROLE + 0.21*OPTIMIZA + 0.11*EFFECTIV, Errorvar.= 0.52 , R^2 = 0.48

(0.047) (0.037) (0.040) (0.048)

11.40 5.65 2.67 10.84

Figure 1. Structural Model

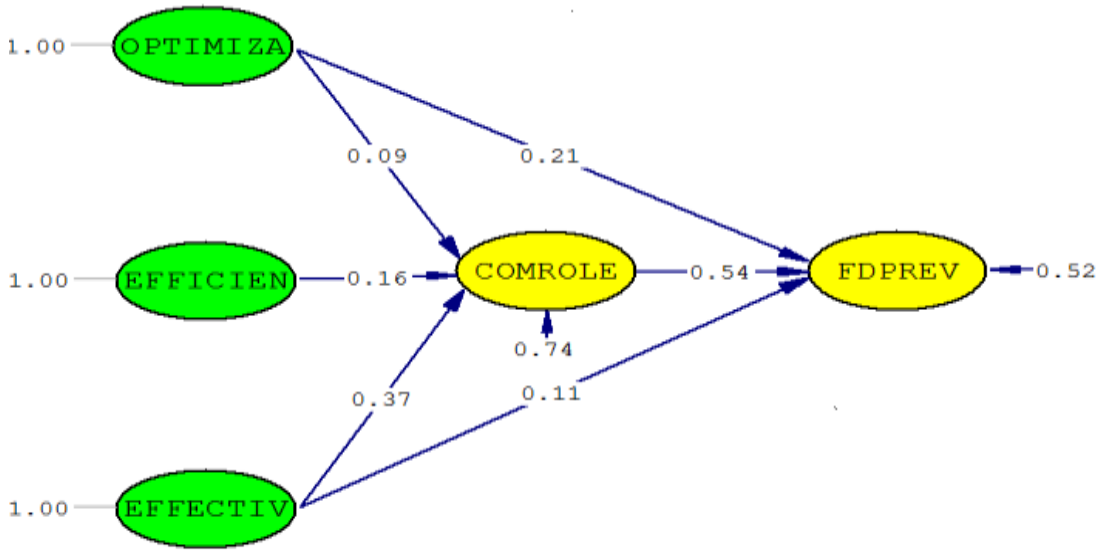
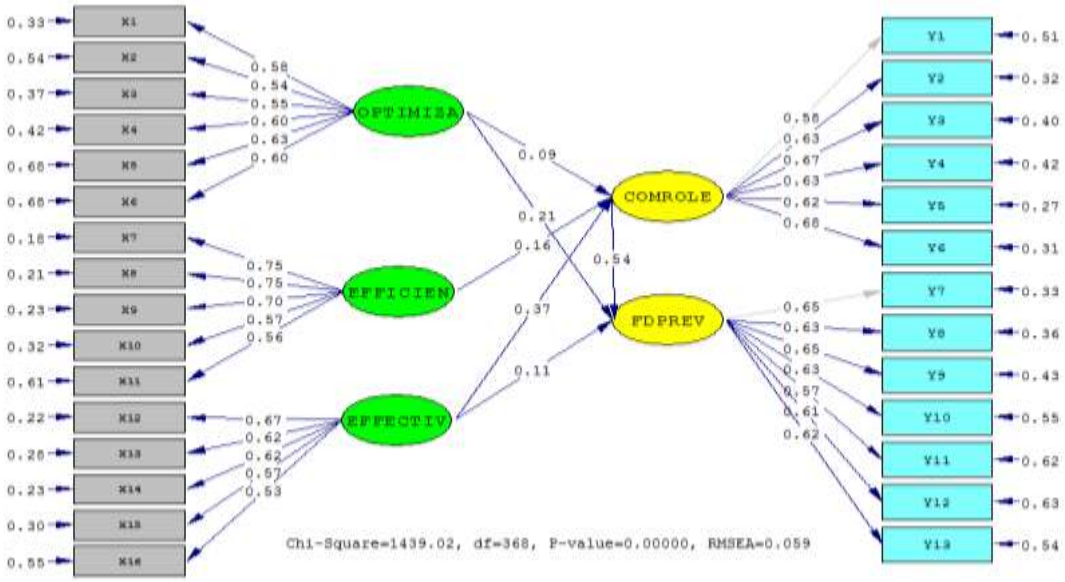


Figure 2. Basic Model Estimates



CONCLUSION

Activities that involve the community's role in preventing fire disasters in Jakarta are absolutely necessary.Given the frequency of fires is always increasing every year.Since 2019, it was proclaimed by the Governor of DKI Jakarta to reduce the frequency of fires, the firefighters invited the public to provide training on how to prevent fire disasters, and teach the community how to deal with ongoing fire disasters, so as not to cause property and loss losseseven human life.

Therefore, the optimization aspect through the training provided to the community has a

positive and significant response from the community.This condition can be seen from the interest of the community who enthusiastically participates in training programs to prevent fire disasters.In addition, the efficiency aspect was responded positively significantly by the local community.Given the fire disaster that occurred in a very fast time, so that people can anticipate so that the fire does not spread.Furthermore, the effectiveness aspect was responded positively to significantly by the community, where the training programs provided to the community can and are very easy to understand, so that the community is ready to deal with fire disasters that occur.

The role of the community as a whole is absolutely indispensable in preventing fires in Jakarta.This condition reflects that people who are aware of the dangers of fire will take precautions by providing information and reminding fellow citizens to always be careful and care about the potential for fires to occur in their homes or in other people's homes.This is very important to do in order to reduce the risk or impact on the community in the event of a fire.

The attitude that is built with this policy is that the community benefits from socialization or fire training in the use of fire extinguishers, informing others after participating in fire socialization or training, prohibiting and warning other people who have the potential to cause fires, have added value or more.care for the environment after participating in fire socialization or training, gain experience and increase skills during work after participating in fire disaster socialization.

This fire prevention program was successfully implemented through increasing aspects of optimization, efficiency and effectiveness by involving the participation of the local community, and was proven to reduce the frequency of fire disasters in Jakarta, and reduce the risk of loss for the people of Jakarta.

References

[1] Bagozzi, R.P, and Yi, Youjae. 1988. On the Evaluation of Structural Equation Models.*Academy of Marketing Science, Journal of the Academy of Marketing Science Spring*, Vol. 16 No.1.

[2] Bollen, K,A.1989.Structural Equations with Latents Variables. Wiley,New York.

[3] Browne, M.W., and Cudeck, R., 1993. Alternative Ways of Assessing Model Fit, in K.A. Bollen and J.S. Long (Eds), Testing Structural Equation Models. Newbury Park, CA: *Sage.*

[4] Byrne, B.M., 1998. Structural Equation Modeling With LISREL, PRELIS and SIMPLIS: Basic Concepts, applications and programming. New Jersey: *Lawrence Erlbaum Associates*, Inc.

[5] Celik, T, 2010, Fast and efficient method for fire detection using image processing. ETRI Journal, Vol. 32, Number 6, Dec.

[6] Creighton, L, James. 2005. The Public Participation Handbook: Making Better Decisions Through Citizen Involvement, San Fransisco, *Jossey-Bass AWiley Imprint*.

[7] Doll, W.J., W, Xia and G. Torkzadeh. 1994. Confirmatory Factor Analysis of the End User Computing Satisfaction Instrument.*MIS Quarterly*, Desember, 453-461.

[8] Dube, A. K. and Orodho, A. K, 2016, Level of disaster preparedness and policy implementation in public secondary schools in Rhamu town, Madera county, Kenya. *IOSR Journal of Research and Method in Education* (IOSR-JRME) e-ISSN: 2320-7388, p-ISSN: 2320-737 Vol. 6, Issue 2 Ver. 1 (Mar-Apr), pp 06-11 www.iosrjournal.org.

[9] Fornel, C, and D.F, Larcker.,1981. Evaluating Structural Equation Models with Unobserved Variables and Measurement Error. *Journal Of Marketing Research*, 18, 39-50.

[10] Gaebler, Ted, and Osborne, David. 1993. *Reinventing Government : How The Entrepreneurial Spirit Is Transforming*. Reading, MA. Addison Wesley Publishing Company.

[11] Hair, J.F. Anderson, R.E, Tatham, R.L, and Black, W.C.,1998. Multivariate Data Analysis, 5th Edition, Prentice Hall International: UK.

[12] Igbaria, M, N, Zinatelli, P. Cragg and A.L.M. Cavaye. 1997. Personal Computing Acceptable Factors in Small Firm: Structural Equation Model. MIS Quarterly,September., 279-299.

[13] Indrawati, Leni., Shafrullah, Faris, Ahmad Mansyur, Akbar, Bahrullah, and Lukman, Sampara, 2021, The Effect of The Implementation of Operational Education Costs on The Realization Good Governance in The Government of The DKI Jakarta Province, *Journal Natural Volatiles & Essential Oils*, 8 (5): 9405-9416.

[14] Joreskog, Karl and Dag Sorbom., 1993, LISREL 8 : Structural Equation Modeling with the SIMPLIS Command Language. Uppsala University, Scientific Software International, Inc, Chicago.

[15] Kapucu, N, 2008, Culture of Preparedness: household disaster preparedness. Disaster Prevention and Management Vol. 17 No. 4, pp. 526-535.

[16] Kihila, J. M, 2017.Fire disaster preparedness and situational analysis in higher learning institutions of Tanzania.Jàmbá: Journal of Disaster Risk Studies 9(1), a311. https://doi. org/10.4102/jamba.v9i1.311.

[17] Mac Callum, RC, M.W Browne and H.W. Sugawara. 1996. Power Analysis and Determination of Sample Size for Covariance Structure Modeling,Psychologhical Methods, 1. 130-149.

[18] Mohamed, I. F., Edwards, D. J., Mateo-Garcia, M., Costin, G., and Thwala, 2019. An Investigation into the construction industry's view on fire prevention in high-rise buildings post Grenfell. International Journal of Building Pathology and Adaptation https://doi 10.1108/IJBPA-05-2019-0048.

[19] Nimlyat, P. S., Audu, A. U. and Ola-Adisa, E. O, 2017. An Evaluation of fire safety measures in high-rise buildings in Nigeria. Sustainable Cities and Society.https://doi:10.1016/j.scs.08.035.

[20] Obasa, O. O. S., Mbamali, I., and Okolie, K. C. 2020a.Critical Investigation of Causes and Effects of Fire Disaster on Buildings in Imo State, Nigeria. IOSR Journal of Environmental Science, Toxicology and Food Technology (IOSR-JESTFT), 14(5), pp 07-15. https://doi: 10.9790/2402-1405010715.

[21] Obasa, O. O. S.,Mbamali, I., and Okolie, K. C. 2020b.Assessment of Fire Disaster Preparedness of Commercial Buildings in Imo State, Nigeria. IOSR Journal of Environmental Science, Toxicology and Food Technology (IOSR-JESTFT), 14(5), pp 56-67. https://doi: 10.9790/2402-1405015667.

[22] Okon, I. E. and Njoku, C. G. 2018.The Location of Fire Hydrants and Implications to Fire Disaster Management in Calabar, Cross River State, Nigeria.IOSR Journal of Humanities and Social Science (IOSR-JHSS). Vol. 23 No. 07, pp. 42-55.

[23] Olapoju, O. M. 2020, Unsafe motorization: A clog in the wheels of sustainable transportation. Transportation Research Interdisciplinary Perspectives 6 100153.

[24] Rigdon, E.E, and C.E., Ferguson., 1991. The Performance of the Polychoric Correlation Coefficient and Selected Fitting Function in Confirmatory Factor Analysis with Ordinal Data. Journal of Marketing Research, Sept, 491-497.

[25] Schultz, T. W, 1961. Investment in Human Capital,JSTOR The American Economic Review, Vol. 51, No. 1 Mar., pp. 1-17.

[26] Setiawati., Faris, Shafrullah., Leni, Indrawati., Suryadi., Nurhattati, Fuad., Matin., Putri, Ayu, Pratiwi., Kusnan., Asral. 2022. Implementation of Web-Based Budgeting System (e-Budgeting) to Increase Accountability of School Financial Management In Jakarta Selatan, *Journal of Positive School Psychology*, Vol.6, No.4, 3827 – 3835.

[27] Shafrullah, Faris, 2019. Corruption, Income Inequality, and Poverty in

Indonesia, *International Journal of Economics, Commerce and Management*. United Kingdom ISSN 2348 0386 Vol. VII, Issue 8.

[28] Steiger, J.H., 1990. Structural Model Evaluation and Modification : An Interval Estimation Approach.Mutivariate Behavioral Research, 25:173-180.

[29] Westcott, R. A. N., Ronan, K., Bambrick, H., and Taylor, M. 2017. Expanding protection motivation theory: investigating an application to animal owners and emergency responders in bushfire emergencies. BMC Psychology, 5:13 https://doi.10.1186/s40359-017-0182-3.