The Effect of Incentive Participation Program and Social Capital on Public Participation, and Public Welfare as a mediators of Forest Management in the Baluran National Park

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ABSTRACT

Public participation effect and public welfare as a mediation forest management was conducted in forest conservation in the Baluran National Park, East Java, Indonesia. The problem faced that buffer villages Wonorejo, Watu Kebo, Bajul Mati, Sumber Waru and Sumber Anyar always exploit the forest product for their economic reasons. The purposes of this research are to: (1) analyze and explain incentive participation program has a positive significant effect on public participation; (2) analyze and explain social capital has a positive significant effect on public participation; (3) analyze and explain public welfare mediates incentive participation program effect on public participation; (4) analyze and explain public welfare mediates social capital's effect on public participation; and (5) analyze and explain public welfare has a positive significant effect to optimize public participation. The survey method and questioner by purposive sampling with 170 households as a member or group of the forest community training centre in the buffer villages. Validity and reliability of instrument and examine hypothesis using software Warp PLS. The results shows: (1) incentive participation program has a positive significant effect on public participation; (2) social capital does not have a positive significant effect on public participation; (3) public welfare mediates incentive participation program on public participation partially; (4) public welfare mediates social capital's effect on public participation partially; and (5) public welfare has positive significant effect on public participation to optimize public participation in conservation forest management. Practical implications of this research are able to give knowledge and information of local government and people to consider the importance of public participation in conservation forest management in the Baluran National Park.

Introduction

A national park, as a forest conservation area, has a variety of flora and fauna which can be relied upon to ensure the human survival for now and future (PHKA, 2008). The majority of these parks have now faced threats and interferences such as encroachment, and illegal cultivation continues to increase over time (Tahajuddin, 2015). Threats and disturbances in these areas are caused by various factors,

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namely (a) the institutions role in forest conservation management and local population participation level of the are still not optimum (especially in the case of those living around the forest); (b) the lack awareness about the conservation area is still very low among local people; (c) the education level of local people is low; and (d) there is a lack of agricultural land (Muntasib, 1999; PHKA, 2008).

Public participation in forestry management program is very important. The assumption is the rural communities are part of the problem in the forestry management. Because they are trying to meet the needs from the forest resources, as well as by involving local people in forest management is part of the solution (Robert Fisher, 2007).

During the period 2000-2005, the forest converted both planned and unplanned, reached up to 1.089.560 million ha with a total area of deforestation was estimated 21% (Kartodihardjo, 2013). Indonesia as a tropical forest and as the third richest biodiversity in the world after Brazil and the Democratic Republic of Congo with a total area reached 130.68 million ha, but as many as 72% have been lost. Forest damage also occurred in the community forest, which about 10 km from the edge of the forest area (Adi Nugroho, 2008; Tahajuddin, 2015). The destruction of forests was 3.8 million ha/year, or a mean of 7.2 ha per minute. Forest destruction has effects such as landslides, droughts, floods, global warming and ozone layer destruction and the extinction of flora and fauna richness.

Based on Baluran (2014a) to anticipate any problems, then should change vision and mission includes: (1) managing wildlife and habitats effectively, efficiently, and sustainably in order to restore wildlife and habitat, such as the conditions of the early 1960s; (2) managing ecotourism through ecotourism and special interest to increase tourist visits and state revenue.

The problems faced by Baluran National Park (BNP) are problems with buffer villages of Wonorejo, Watu Kebo, Bajul Mati, Sumber Waru and Sumber Anyar. To reduce the problems, then the management of Baluran National Park in collaboration with community leaders to form a group or a community organization such as farmer groups, forest village community institutions, cultivators agricultural land, group of tourism and travel ser-

vices, forest community training centre in order to join and participate in the forest management.

The forest destruction in Baluran National Park includes: (i) forest fires in 2014, with 132 fires covering an area of around 2.005,90 ha. Rather than natural factors, the main causes of forest fires are local people not acting responsibly, a lack of security personnel guarding the forest, and weak law enforcement. Forest fires impact heavily on the flora and fauna. (ii) Clearing activities as a result of 400 ha being devoted to agricultural plants business. (iii) Timber theft (as well as theft of firewood, fruit tart, hazelnut, *gebang* trees, ornamental fish and over grassing) especially in the Labuhan Merak resort. (iv) Cattle grazing is a problem that is quite prominent, especially in the areas of Karangtekok, Labuhan Merak, and Balanan with about 3.450 ha. Cattle grazing (cows and goats) is widespread, with an average of 1.447 head of cattle per day. As a result of this illegal grazing, the soil becomes solid, which is harmful to plants and vegetation that could potentially be survival disruption of the park, as well as deer, antelope, and bison (the unique wildlife of Baluran National Park). (v) Local transmigration settlements since 1976, covering an area of 57 ha in Pandean area of Wonorejo village. (vi) Illegal encroachment and the tilling of the soil. (vii) Hunting of wildlife by people with firearms, snares, poison, and sap that often occurs during the dry season. Various factors affect the behavior and movement patterns of animals, including a limited source of drinking water for animals, especially in the dry season. Based on the above phenomena, this paper focuses on the damaged forest in the Baluran National Park, caused by the poor level of public participation ((Baluran, 1997, 2014b; Sabarno, 2001; Syafi'i, 2013).

Based on the above phenomenon, this paper focuses about a damaged forest in the Baluran National Park, caused by the poorness of public participation. Forest management efforts based on public participation in the Baluran National Park as the urgency of the forestry development and the development of rural communities.

There are some previous studies which discuss public participation in the forestry management program. These include: (1) the effects of incentive participation program for social forestry manage-

ment in increasing public participation by Adhikari (2014); Djamhuri (2012); Kaseya (2016); (2) incentive participation program effects in relation to welfare by D. B. Rahut (2015); William (2013); Das (2010); (3) the social capital effects on public participation by Sara (2011); Sharpe (2012); (4) social capital effect on public welfare by Grootaet (1999); Narayan (1997); and (5) how welfare effect on public participation in development programs as done by D. B. Rahut (2015) (2015); and Akamani (2015).

The issue of differences in measurement of incentive participation program is the first gap in this research. Adhikari (2014) measured incentive participation program with six indicators, they are: (1) access to forests and availability of forest products, (2) financial support to supplement household income, (3) social security and cohesion through local institution building, (4) investment in local community infrastructure and development, (5) well-dened & enforced property rights over forest resources assigned to the users, and (6) payment for environmental services. The research's purposes of Adhikari (2014) are: (1) to determine the relationships between different incentive participation program and the level of public participation of user group members; (2) to explore how households might respond to any changes in the incentive participation program, in terms of their decision to participate in common property resource governance; and (3) to propose/recommend how organizational incentive participation program can be better integrated in order to induce more effective public participation of users in the governance and management of property resources. The indicators of public participation were measured based on (1) membership length; (2) representation on the executive committee; (3) level of public participation in meetings, (4) in decision-making, and (5) in implementation; and (6) overall benefits.

While Djamhuri (2012) measured incentive participation program with seven indicators, they are: (1) Forest village population); (2) villages forests/ WPH; (3) Number of forest village community (LMDH) trustee board members; (4) Percentage of Tumpang Sari Farmers on the LMDH trustee board; (5) Tree coverage on foundation of the LMDH; (6) Current tree coverage; (7) Trustee board members attendance of routine meetings. The indicative num-

bers of LMDH trustee board members and percentage of Tumpang Sari Farmers on LMDH trustee board consist of: (a) formal education; (2) household annual income; (3) use of feed/fodder from state forest land; and (4) use of firewood from forest land.. Djamhuri (2012) said Tumpang Sari is an incentive participation program which is traditional in forest management. Government and society integration provides a better incentive participation program in the hope that the public will be will contribute in the state forest management.

Kaseya (2016) measured incentive participation program with three indicators, they are: (1) civic education, (2) financial incentives both transport and lunch allowances, and (3) scheduling of forums/meetings. The study result was corroborated by the findings from the open interview which indicated that 62.5 percent of the respondents concurred that financial incentives are offered to participants. Measurements of incentive participation program in this research refers to Adhikari (2014); Djamhuri (2012); and Kaseya (2016), but its indicators are based on research object conditions.

The second gap of this research is the differences of social capital's measurements done by Grootaet (1999); and Narayan (1997). Grootaet (1999) measured social capital into six dimension of social capital, they are: (1) density of membership, (2) heterogeneity index, (3) meeting attendance, (4) decision making index, (5) membership dues, and (6) community orientation. Narayan (1997) measured social capital into six variables, they are: (1) heterogeneity members, (2) inclusiveness members, dan (3) performances members. Social capital's indicators consist of: (1) membership, (2) characteristic of membership; (3) values and individual's behaviours. Measurement of social capital in this study refers to Grootaet (1999); and Narayan (1997), who measures social capital as a factor in the reduction of poverty and increase in prosperity, but indicators of social capital of this research based on research object condition. Welfare provision would increase the role of public participation in development. Increased public participation will reduce transaction costs and the cost of control, raise output and further improve the welfare of the community. D. B. Rahut (2015) suggested increasing public participation in collaborative forest management (CFM) while adding wel-

fare as a mediation variable which will affect social capital and also affect public participation.

The novelty of research are: (1) to examine the integrative model with purposes to insure wether incentive participation program, social capital and public welfare still have positive significant effect on public participation; (2) to analyze the level of public participation based on participation in planning program, implementation, benefit-sharing; and evaluation and monitoring of the forest conservation management in Baluran National Park. After all, the purposes of this study that were presented here will be to analyze and explain: (1) the effect of incentive participation programs on public participation; (2) how welfare mediates the effects of incentive participation programs on public participation; (3) social capital's effect on public participation; (4) how welfare mediates social capital's effect on public participation; and (5) welfare's effect on public participation.

This study take place in forest conservation in the Baluran National Park, Situbondo-East Java-Indonesai. According to Baluran (2014a) the management system in Baluran National Park separated by three zones. Based on director general of forest conservation and nature, number SK.228/IV- SET/ 2012 and the date in December, 26, 2012 stated that some zones in Baluran National Park are (1) Core zone around 6,920.18 ha (red coloured); (2) Jungle zone around 12,604.14 ha (yellow coloured); (3) Advantages zone around 1,856.51 ha (light blue coloured); (4) Traditional zone around 1,349,21 ha (green coloured); (5) Special zone around 738.19 ha (dark blue coloured); (6) Marine protection zone around 1,174.96 ha (blue coloured); and also (7) Rehabilitation zone around 365. 81 ha (brown coloured).
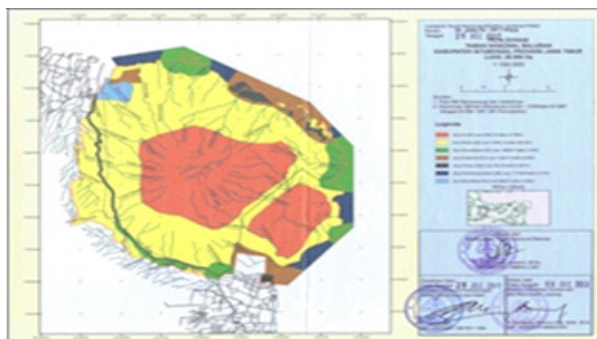

Fig. 1. Zoning of Baluran National Park

Literature Review

Krajewski (1999) in his book of "Operations Management Strategy and Analysis", based on workforce management strategy concept, he said the human resources is an important issue as a technology process. The capabilities of managers and employee and how they be organized, trained, and motivated, can give competitive advanteges of an organization. Restructuring organization done which purposes to improve the organization for customer's satisfaction (Krajewski, 1999).

Cohen (1997) and Adhikari (2014) even said that an important concept in economics is not money, but rather to incentive participation program. The incentive something that motivates people to do the choices in decision making. Incentive participation program do not have to be money, but it can be also a social award. The right incentive participation program not only in money but also increase social status and dignity of individuals who receive it will cause social interaction in both communities and organizations have been more helpful. Based on the formulation of the problem, research objectives, descriptions of theoretical and empirical and conceptual framework above, it can put forward the hypothesis that a temporary answer will still be verifiable.

Materials and Method

Data were collected during July-December 2017 through interview, research questionnaires, and documentation. Interview was conducted to determine the respondents' answers to a questionnaire relating to the variables that have been used in this study.

The sampling method is purposive sampling and unit analysis is of heads-of-household who are members of the forestry community training center, 170 respondents in total. The construct validity of reflective indicators were tested based on convergent validity, discriminant validity, composite reliability (Kock, 2015). Variable with formative indicators were tested based on the values of full collinearity variances inflations factor.

The method of data analysis used in this study is structural equation modeling using WarpPLS 5.0. Accoring to Solimun (2010), if the structural model

consist of recursive and the latent variables have formative, and reflective or mixed, so the best analysis approach is *Structural Equation Modelling* (SEM) WarpPLS (SEM PLS). This study used a quantitative approach (positivist or mainstream) this research is working with numbers, the data is a tangible, analyzed using statistics to test hypotheses or answer specific research questions and to make predictions that a particular variable affects other variables (Creswell, 2003).

To test mediation roles the causal-step approach of Baron and Kenny was used. The best way to test for mediation effects is by counting the VAF value (Variance Accounted For), which can determine the indirect effect relative to the total effect (Hair, 2014).

According to Baron (1986) the causal step approach has four mediation effects they are: Non mediation, if VAF value <20%; Partial mediation, if VAF value is around 20% ≤ 80%; Full mediation, if VAF value > 80%; Suppressed mediation, if the direct effect sign changed after inclusion of the mediation variable.

Research Hypothesis

Based on the literature review above it can be described the conceptual framework oh the study as a basis for the hypothesis formulations are as follows:

H1: Incentive participation program has a positive significant effect on public participation.

H2: Social capital has a positive significant effect on public participation.

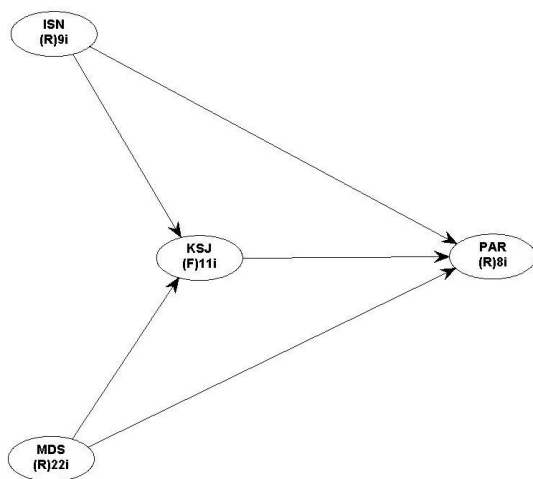**H3**: Public welfare mediates incentive participation program effect on public participation

Fig. 2. Research Hypothesis Model

H4: Public welfare mediates social capital's effect on public participation

H5: Public welfare has a positive significant effect on public participation.

ISN is a latent variable of incentive participation program with four reflective indicators of X_{11}: Incentive of training, X_{12}: Incentive of agricultural tools, X_{13}: incentive of cash payement, and X_{14}: Incentive agricultural land use.

MDS is a latent variable of social capital with five reflective indicators of X_{21}: helping each other, X_{22}: social norm, X_{23}: network interaction, X_{24}: trust level, X_{25}: group's help.

KSJ is a latent variable of public welfare with four formative indicators of X_{31}: household's income; X_{32}: household's education, X_{33}: household's health, X_{34}: supporting facilities.

PAR is a latent variable of public participation with four reflective indicators of Y_{11}: Public participation at the meeting; Y_{12}: Public participation in decision making, Y_{13}: Public participation in implementing of decision, and Y_{14}: Public participation in evaluation.

Results and Discussion

Analysis of Variables

Descriptive analysis of variables aims to interpret each variable based on the frequency distribution and the average score of respondents was categorized into five categories using a Likert scale.

According to Adhikari *et al.* (2014) incentive public participation defined as those mechanisms that positively effect on an individual's attitude and behavior, which then motivates their active public participation in collective arrangements for improved governance and management of their forest resources.

Incentive participation program variable consist of four indicators (Incentive of training, Incentive of agricultural tools, incentive of cash payement, and incentive agricultural land use) are categorized as not good conditions (3.81<4.00). The highest loading is the incentive participation program of agriculture tools (0.971), mean score (3.97), but it is still reflected not good condition (<4.00). The lowest mean score is the incentive participation program of training (3.67) is reflected as not good condition and effects the

level of public participation, especially in developing the quality of human resources. The lowest mean score (incentive participation program of training) impacts on the negative word of mouth / NWOM (Richins, 1984). Based on the research of Richins (1984), people who fell unsatisfaction about the incentive participation program of training, then he/she will tell to every other thirteen people. This can be reduced the level of public participation in forest conservation management in BNP.

The social capital variable is consist of five indicators (reciprocity, social norms, network interaction, level of trust in the community group, and buffer villages group donations) are categorized as not good conditions (3.93<4.00). The highest loading factor is social norms (0.738) and means score is (4.21) is reflected as good condition. But the lowest mean score is buffer village group's donation (3.64) is reflected as not good condition and effects the level of public participation. The lowest mean score is buffer village group's donation also impact on the negative word of mouth /NWOM (Richins, 1984).

Welfare variable is consist of five indicators (household income, household education, household health, and household supporting facilities) are categorized as not good condition (3.81<4.00). The highest loading factor is household's income (0.664) and mean score (3.86) is reflected as not good condition and effects the level of public participation (<4.00). The lowest mean score is supporting facilities (3.73) is reflected as not good condition and effects the level of public participation. The lowest mean score is supporting facilities also impact on the negative word of mouth /NWOM (Richins, 1984).

Public participation variable is consist of four indicators (participation in planning program, participation in implementation, participation in benefit-sharing, and participation in monitoring and evaluation) are categorized as not good condition with average score is 3.85 or less than 4.00. The highest loading factor is participation in implementation (0.804) and mean score (3.85) is reflected as not good condition. The lowest mean score is participation in planning program (3.68) is reflected as not good condition and effects the level of public participation. The lowest mean score is participation in planning program, also impact on the negative word of mouth /NWOM (Richins, 1984).

Convergent and Discriminat Validity

Convergent Validity

Convergent validity testing is performed to identify the items of instrument indicators as indicators from a latent variable. The convergent validity test result based on all of the outer loading values are more than 0.6 (>0.6). Therefore, it can be concluded that this research has met the requirements of the convergent validity

Incentive participation program with its indicators X_{11} =0.706, X_{12} =0.971; X_{13} =0.960, and X_{14}=0.966, are more than 0.30 (> 0,30) meets convergent validity. Social capital with its indicators X_{21} =0.701, X_{22} = 0.738, X_{23} = 0.827, X_{24} = 0.823, X_{25} = 0.56, are more than 0.30 (>0.30) meets convergent validity. Public welfare with its indicators X_{31}=0.664, X_{32}=0.576, X_{33} =0.848, and X_{34} =0.800, are >0.30 meets convergent validity. Public participation with its indicators Y_{11} =0.722, Y_{12}=0.876, Y_{13} = 0.804, Y_{14}= 0.527, are >0.30 meets convergent validity.

Discriminant Validity

A discriminant validity test was performed after those for convergent validity. It is to identify the validity of instrument items in a model (Solimun, 2017). The result of the discriminant construct validity test of the square roots of AVE are higher than the variable correlation score, then the variable meets the criteria of discriminant validity.

Discriminant validity from each indicator of this research are (a) Incentive participation program with its indicators X_{11} with loading factor is 0.669 and cross loading are 0.355, -0.124,0.183, because loading factor > cross loading meets discriminant validity. X_{12}=0.971 with -0.080, 0.036, and -0.024, also meets discriminant validity. X_{13} =0.960 with -0.098, 0.013, and -0.045 meets discriminant validity. X_{14} =0.966 with -0.069, 0.036, and -0.058 meets discriminant validity.

Social capital with its indicators: X_{21} = 0.701 and cross loading are -0.128, 0.255, and -0.125. X_{22}= 0.737 with -0.237, 0.322, and -0.114. X_{23}= 0.827 with 0.100, -0.164, and 0.128. X_{24}= 0.823 with 0.107, -0.174, and 0.140. X_{25} = 0.566 with 0.165, -0.242, and -0.087 also meet discriminant validity because loading factor > cross loading.

Public welfare with its indicators X_{31}=0.663 with

Table 1. Correlations among l.vs. with sq. rts. of AVEs

| | Correlations among l.vs. with sq. rts. of AVEs | | | |
	ISN	MDS	KSJ	PAR
ISN	0.888	0.525	0.515	0.444
MDS	0.370	0.737	0.250	0.388
KSJ	0.459	0.250	0.730	0.037
PAR	0.380	0.388	0.037	0.621

Source: Data analysis Warp PLS, 2017

cross loading 0.298, -0.313, and -0.042. X_{32}=-0.575 with 0.201, -0.041, and -0.220. X_{33}=-0.849 with -0.121, 0.098, and -0.008. X_{34}=-0.800 with -0.263, 0.184, and 0.202 also meet discriminant validity.

Public participation with its indicators Y_{11}=0.778 with the cross loading 0.247, 0.654, and -0.239. Y_{12}=-0.714 with -0.501, -0.214, and 0.359. Y_{13}=0.818 with -0.022, -0.280, and -0.147. Y_{14}=0.827 with 0.573, 0.355, -0.124 meets discriminant validity.

If the square roots AVE more than variable correlation, so that the variable meets discriminant validity. ISN with its indicators has square roots AVE 0.888 with variable correlation 0.525, 0.515, and 0.444 meets discriminant validity. MDS has square roots AVE 0.737 with variable correlation 0.370, 0.250, and 0.388. KSJ has square roots AVE 0.730 with variable correlation 0.459, 0.250, and 0.037. PAR has square roots AVE 0.621 with variable correlation 0.380, 0.388, and 0.037 meet discriminant validity.

Instrument Reliability

Composite reliability coefficients

The composite reliability coefficients values in this research are more than 0.70 (> 0.70) so all variables meet reliability. Variable of ISN (incentive participation program) is 0.944, MDS (social capital) is 0.784, KSJ (public welfare) is 0.817, and PAR (public participation) is 0.858.

Consistency Internal Reliability

The consistency internal reliability values in this study also more 0.60 (> 0.60), so called consistency internal are reliable. These reasons can be found from Cronbach alpha values that ISN (incentive participation program) is 0.916, MDS (social capital) is 0.760, KSJ (public welfare) is 0.701; and PAR (public participation) is 0.732.

Model fit and quality indices

Model fit can be found based on the p-value for APC and ARS must be smaller from 0.05 or means significant. Beside that, AVIF as a multycolinierity must be smaller also from 5. The output shows the goodness of fit criteria with (APC)=0.276, P<0.001and (ARS)=0.282, P<0.001 and also significant. The AVIF value is 1.350 also have met fit criteria. The p-value for APC and ARS must be smaller from 0.05 or means significant. Beside that, AVIF as a multycolinierity must be smaller also from 5. The output shows the goodness of fit criteria with (APC)=0.276, P<0.001and (ARS)=0.282, P<0.001 and also significant. The AVIF value is 1.350 also have met fit criteria.

Profil of Variable with Indicators

The highest loading factor of incentive is X12 with score 0.971 and average score 0.502, the highest loading factor of social capital is X23=0.827 and average score 0.270, the highest loading factor of public welfare is X33=-0.849 and average score 0.502, and for public participation variable the highest loading factor is Y14=0.827 and average is 0.470.

Path coefficients and P values

All the path coefficients predictor variable effect to respond variable effect positive and significant. ISN (incentive participation program) to PAR (public participation) with coefficient value 0.269 and p value 0.001 is significant positive.

ISN to KSJ (public welfare) with coefficient value 0.363 and p value <0.001 significant positive. MDS (social capital) to PAR with coefficient value 0.308 and p value <0.001 significant positive.

MDS to KSJ with coefficient value 0.343 and p value is <0.001 significant positive. KSJ to PAR with coefficient value -0.096 with p value 0.14 is not significant, because p-value is more than 0.5.

Output Laten Variable Coefficients

R-squared shows some percentage of respond variable can be distinguished by predictor variable. R-squared with higher value so the model is better, but R-squared only can be used for response variable.

Based on the results R-squared for public participation (PAR) variable is 0.670 that means contributions of variable effect incentive participation pro-

Table 2. Output Latent Variable Coefficients

	ISN	MDS	KSJ	PAR
R-squared			0.427	0.670
Adj. R-squared			0.418	0.662
Composite reliability	0.868	0.874	0.857	0.849
Cronbach's alpha	0.827	0.849	0.813	0.795
Avg. Var. Extrac	0.791	0.542	0.531	0.647
Full collin. VIF	2.151	1.034	3.230	2.678
Q-squared			0.555	0.666

Source: Out latent Variable Coefficients Warp PLS, 2017

gram, social capital (MDS), and welfare (KSJ) on public participation (PAR) is 67 % and the rest in 32 % by another variable outside the research model and error.

Composite reliability value and Cronbach alpha can be used to know research instruments. Based on the above output, the composite reliability >0.70 and Cronbach alpha > 0.60 for all variables. Then all variables in this research have met the reliability criteria.

The Average Variances Extracted (AVE) is used to evaluate the discriminant validity, with criteria must be > 0.50. Based on the above output that AVE values are : (1) incentive participation program variable is 0.791; (2) social capital variable is 0.542; (3) welfare variable is 0.531; and (4) participation variable is 0.647. All the variable met the AVE value criteria >0.50 and meet the discriminant validity.

Full collinearity VIF is a complete collinearity test result consist of vertical and lateral multicollinearity. Lateral collinearity is a collinearity between a predictor latent variable with criteria and can be used to test the common method bias.

The criteria full collinearity test value must be <3.3. This research has met full collinearity criteria with < 3.3, they are 2.151 for ISN, 1.034 for MDS, 3.230 for KSJ, and 2.678 for PAR.

Q-squared used for predictive test or the relation from all of the predictor latent variable on criterion variable. The Q-squared result can be negative, but R-squared result must be positive.

The estimation result of this output above shows good predictive variable with 0.555, and 0.666 value are more than zero.

Path coefficients and P values

Based on table 4, can be explained that all the path
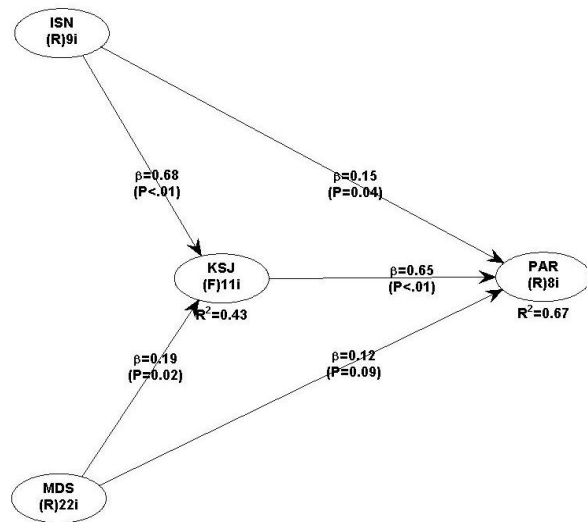
Table 3. Output Path Coefficients

Path coefficients				
	ISN	MDS	KSJ	PAR
ISN				
MDS				
KSJ	0.680	0.187		
PAR	0.153	0.120	0.648	
p-values				
	ISN	MDS	KSJ	PAR
ISN				
MDS				
KSJ	<0.001	0.017		
PAR	0.042	0.089	<0.001	

Source: Output Path Coefficients Warp PLS, 2017

coefficients predictor variable effect to respond variable effect positive and significant. ISN (incentive participation program) to PAR (public participation) with coefficient value 0.153 and p value 0.042 is positive significant. ISN to KSJ (public welfare) with coefficient value 0.680 and p value <0.001 positive significant. MDS (social capital) to PAR with coefficient value 0.120 and p value 0.089 not positive significant. MDS to KSJ with coefficient value 0.187 and p value is <0.017 positive significant. KSJ to PAR with coefficient value 0.648 with p value <0.001 is positive significant.

Output Correlations Among Latent Variables

Output Correlations among latent variables is a correlation coefficient among variables with the p-value. The output is very important to evaluate discriminant validity of the research instrument. The criteria used is square roots of average variance extracted (AVE) that is diagonal column value and given bracket sign must be higher than a correlation of all latent variables at same column. The discriminant variable for ISN already fulfilled the square roots of AVE is 0.901, more than 0.370, 0.459, and 0.380. Validity for MDS also meet the square roots of AVE is 0.737 also >0.370, 0.250, and 0.388. Variable KSJ also fulfills the validity requirements because the square of roots AVE is 0.730 >0.459, 0.250, and 0.037. Variable PAR also meets the validity square roots AVE is 0.621 > 0.099, 0120, and -0.166.

Source: Output Path Coefficients Warp PLS, 2017

Hypothesis Results Using WarpPLS

Direct Hypotesis

H1: Incentive participation program has a positive significant effect on public participation.

   Incentive participation program effect on public participation with path coefficient score 0.153, and p-value 0.042. Because p-value is less than 0.05 (0.042< 0.05, so it is called significant and this hypothesis is received. The results support the theory of incentive from Robbins (2007); Luthan (2006); and Adhikari *et al.* (2014). This research also empirically support research from Adhikari (2014), and Djamhuri (2012).

H2: Social capital has a positive significant effect on public participation.

Social capital (MDS) effect on public Participation with path coefficient score 0.120, and p-value 0.089. Because p-value is more than 0.05 (0.089 > 0.05, so it is also called not significant and this hypothesis is not received. The test results does not support the theory of social capital (Woolcock, 1998), as well as not supporting empirical research of Zare Sara (2011), and Dag Wollebæk and Per Selle (2003).

Mediation Hypothesis

Based on figure 3, all of the indirect effects are significant/positive because p-values are less than 0.05. The third step is to test mediation effect by using the

VAF formula. The formula of VAF= (p12 * p 23)/ (p12. * p23 + p13). The results of the mediation test using the VAF method are as follows:

H3: Public welfare mediates incentive participation program effect on public participation.

Incentive participation program on public participation by the mediation of welfare is positive significant, with p-value <0.001, less than 0.05..

   VAF= (0.680 X 0.648)/ (0.680 X 0.648) + (0.153)
   VAF= (0.440)/ (0.440 + 0.153)
   VAF= 0.440 / 0.593
   VAF= 0.741
   VAF= 74,1%. This means that welfare mediates incentive participation program on public participation as a partial mediation. Welfare mediates incentive effect (74,1%) on public participation.

   Public welfare (KSJ) effect in mediating incentive participation program (ISN) on public participation (PAR) with path coefficient score 0.363 and p-value <0.001, less than 0.05, so it is called that public welfare mediates incentive participation program effect on public participation is significant. The test results support of empirical research from Rahut *et al.*, (2015); William M. Fonta *et al.,* (2009); Nimai Das & Debnarayan Sarker (2010).

H4: Public welfare mediates social capital effect on public participation.

   Social capital's effect on public participation by the mediation of welfare is positive significant with p-value 0.023, less than 0.05.
   VAF= (0.187 X 0.648)/ (0.187 X 0.648) + (0.120)
   VAF= (0.121) / (0.121+ 0.120)
   VAF= (0.121) / (0.241)
   VAF= 0.502
   VAF= 50.2%. This means welfare mediates social capital's effect on public participation as a partial mediation. Welfare mediates social capital's effect (50.2%) on public participation.

   Public welfare (KSJ) effect in mediating social capital effect on public participation with path coefficient score 0.343 and p-value=<0.001 also less than 0.05, it is called that public welfare effect in mediating social capital effect on public participation is positive and significant. The results support the theory of social capital Grootaert (1999). Further

Fukuyama (2000) argues that there is a close relationship between social capital with the level of public welfare of a community or nation. The results also support the empirical study of Grootaet (1999); Narayan dan Pritchett (1997); Chan, Raymond et.al (2002): Yusuf, S.A. (2008).

H5: Public welfare has a positive significant effect to optimize public participation.

Public welfare (KSJ) to PAR with coefficient score is 0.648, and p-value <0.001. The coefficient score is positive and p-value is less than 0.05, so KSJ (public welfare) has positive significant effect on public participation for optimizing people to participate in forest management in the Baluran National Park. And also if people receive more incentive and able to increase their welfare they will more participate in forest management in the Baluran National Park as well. The test results support of empirically research from Rahut (2015); and Akamani (2015).

Conclusions

Based on the results of discussions and research findings, several conclusions can be stated as follows:

1. Incentive participation program has positive significant effect on public participation in managing the forest conservation in the Baluran National Park.
2. Public welfare mediates incentive participation program's effect on public participation as a partial mediation.
3. The social capital dos not have positive effect on public participation in managing the forest conservation in the Baluran National Park.
4. Public welfare mediates social capital's effect on public participation as a partial mediation.
5. Public welfare has a positive significant effect on public participation in managing the forest conservation in the Baluran National Park. This because the public welfare is a key success in managing forest conservation in the Baluran National Park.

Policy Recommendations

Based on the findings of this study, may put forward suggestions into recommendations as follows:
Strategies should be taken by manager to man-

age the forest conservation in the Baluran National Park, that can give benefit to improve public welfare are: (1) improving the forest institution role to involve public particaption of a team/member (Krajewski, 1999). Involving a team/member of the forest community training centre, is one of a strategy to increase public participation in managing the forest conservation in the Bauran National Park (Krajewski, 1999), (2) increasing the public participation by giving incentive of training and knowledge of forest conservation, (3) increasing the buffer village group's donation for member or group of the forest community training centre in the buffer villages, (4) giving and help the supporting family facilities to improve the productivity and public welfare of the forest community training centre member, (5) the role of forest institution should increase the public participation of the forest community training centre member (participation in planning program, participation in implementation, participation in benefit-sharing, and participation in monitoring and evaluation) in managing forest conservation program, (6) utilizing the management policy that is transparent and accountable to maximize conservation efforts, including the implementation of sustainable tourism, (7) take advantage of global support and the communication efficiency of coordination to improve the competitiveness of the ecotourism, (8) develop the design for the optimization of natural resources for the public welfare of the surrounding community, (9) the optimization of biodiversity conservation, community empowerment, resources of tourist attractions, and mobilizing global support for the restoration of degraded areas.

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