

## **Production Forest with Plantation Forest Folk Policy in Indonesia**

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### **Abstract**

The three issues above are rooted in the low productivity of production forest in Plantation Forest Folk. It's evident in the realization of 26.06% licensed forest while the remaining 73.94% hasn't been licensed. From the licensed forest, only 40% has been realized (cultivated), while 92.60% hasn't been realized. The aim of this research is to explain the production forest with Plantation Forest Folk (Hutan Tanaman Rakyat or HTR) in Indonesia. The population in this study was all regencies which implement HTR development in Indonesia. The population size was 127 regencies. Using Slovin formula with 10% error rate in precision, a sample size 50 regencies was collected to be used for data analysis in this study. Data analysis technique used is Generalized Structural Component Analysis (GSCA). The analysis result in the previous part shows that Transglobal Leadership Intelligence has direct effect on Transglobal Leadership Behavior, Community Empowerment, Good Governance-based Forest Management, but no direct effect on Forest Productivity. It was also evident that Transglobal Leadership Behavior had direct influence on Community Empowerment, Good Governance-based Forest Management, but no direct effect on Forest Productivity. On the other hand, Community Empowerment and Good Governance-based Forest Management had direct effect on Forest Productivity. The research findings presented shows that (1) Transglobal Leadership Intelligence didn't have direct effect on Forest Productivity, but it had indirect effect through the mediation of Forest Productivity and Good Governance-based Forest Management, (2) Transglobal Leadership Behavior didn't have direct effect

on Forest Productivity, but it had indirect effect through the mediation of Forest Productivity and Good Governance-based Forest Management.

**Keywords:** Production Forest, Plantation Forest Folks.

## 1. Introduction

The three issues above are rooted in the low productivity of production forest in Plantation Forest Folk. It's evident in the realization of 26.06% licensed forest while the remaining 73.94% hasn't been licensed. From the licensed forest, only 40% has been realized (cultivated), while 92.60% hasn't been realized. In the first case, it's related to the role of a leader, whether the characteristics or intelligence of transglobal leadership. Leadership issue is a hot issue in forest management in Indonesia. In the latest case, abuse of power of regional heads happen in forest management in Indonesia. It's apparent that the hot issue emerges due to weak leadership. Upon further study, the low morality of leaders can damage the success of their organizations, in this case forest productivity. On the other hand, poor leaders don't have global thoughts, i.e. understanding legal, economic, government, and procedural environments where leaders have a functional role. Moreover, the fact above shows that leaders don't have good business aspect in managing forests, meaning understanding the components of every success in business which defines forest in the scope of the business spirit of the individual, not business spirit in communal life, considering forest belongs to all of us. An old case of a Regent permitting a decision letter (Surat Keputusan in Indonesian or SK) for HTR also shows the weak cultural side of a regional head. In conclusion, cultural intelligence is very important for a leader in managing forest. There are diverse cultures in this country and different political views shouldn't stop the release of licenses.

Various issues emerge related to HTR (*Hutan Tanaman Rakyat* in Indonesian, or Plantation Forest Folk) policies from Source: Directorate General of BUK, Ministry of Forestry, [1], as follow

**First**, the HTR licensing process. Based on the data of Directorate General of BUK (*Bina Usaha Kehutanan* in Indonesian or Forestry Enterprises) of the Ministry of Forestry on June 2015, from 746.220 hectares of forest, only 194.465 hectares had received licenses from regional heads or only 26.06% has received licenses. On the other hand, from 194.465 hectares which had been licensed, only 14.390 hectares or 7.40% has been realized, so on average the percentage of licensing and realization was 16.73%. It showed a problem in forest management in terms of the leadership of a regional head. The support of HTR development budget in provinces instead of regencies, as well as time delay between the legalization of the central government (ministry) and realization in regions which enables leadership succession in regions (processes before and after local elections which cause leadership change).

**Second**, community empowerment process. Until now, people haven't fully understood HTR program, although it has been socialized by regional and central governments. A major question is raised. Can the people manage HTR? Facts show that people venture in economic activities, mainly agricultural commodities (oil palm,

cocoa, rubber, etc.), forestry commodities aren't their main activities yet. On the other hand, people work and establish enterprises in agroforestry but there is no legality. With HTR, there will be legality, and they will be formal economic actors.

**Third**, related to forest management. Aside from good public governance, especially good forest governance, there are several obstacles in the field related to HTR program. Beside the problem of the support of HTR development budget at provincial level, salary payment and supplementary operation aren't on time.

The phenomenon above shows that now leaders have weak intelligence dimensions, especially moral, cultural, business, and global dimensions. Theoretically [2] mention that the three of them are included in transglobal leadership type, which doesn't exist in transactional leadership ([3]) and transformational leadership ([4]) yet which only view transactional side and transformational system between leaders and subordinates, which are still at local level, not considering global aspects related to larger public interests. Therefore, it can be concluded that Transglobal Leadership Theory should be implemented in forest management in. Regional heads who have transglobal spirit, meaning high cognitive, moral, business, cultural, global, and emotional intelligence, has some advantages compared with previous leadership theories (transactional and transformational). With intelligent leadership a (Transglobal Leadership) the performance in the field of forestry is expected to improve (in this case forest productivity).

Communal spirit which is the basis HTR development is a strength in supporting the concept of sustainable forest. It means that in HTR there are three things which are the responsibility of the government. Until now, forest management is gradually handed to the society. Society as HTR manager must be prepared for the science and technologies in the fields of forestry, management, and institution by socializing: (1) the responsibility to protect and secure forest areas; (2) the responsibility in managing forest areas; (3) the responsibility in utilizing forest areas and (4) the responsibility for the success of HTR.

In relation with transglobal leadership, community empowerment and (good governance-based) forest management, and the success of organization (productivity) are supported by several past studies. Several empirical supports have map several relations between variables which were developed in this study, such as: (1) Stephen Duthy [5] tested the influence of Dimension on Transglobal leadership behaviors. Effective and efficient forest productivity, the role of local governments, community empowerment activities can actively participate and receive benefits as well as government administration based on good governance. Several theories on leadership ([4], [6]), empowerment ([7], [8], [9]), and good governance ([10], [11]), as well as productivity ([12]) supported the test on between the variables relations in this study which was: (1) Does transglobal leadership intelligence have significant influence on transglobal leadership behavior, community empowerment, good governance-based forest management, and forest productivity, (2) Does transglobal leadership behavior have significant influence on community empowerment, good governance-based forest management, and forest productivity, (3) Does community empowerment have significant influence on forest productivity, (4) Does good

governance-based forest management have significant influence on forest productivity.

## 2. Methodology

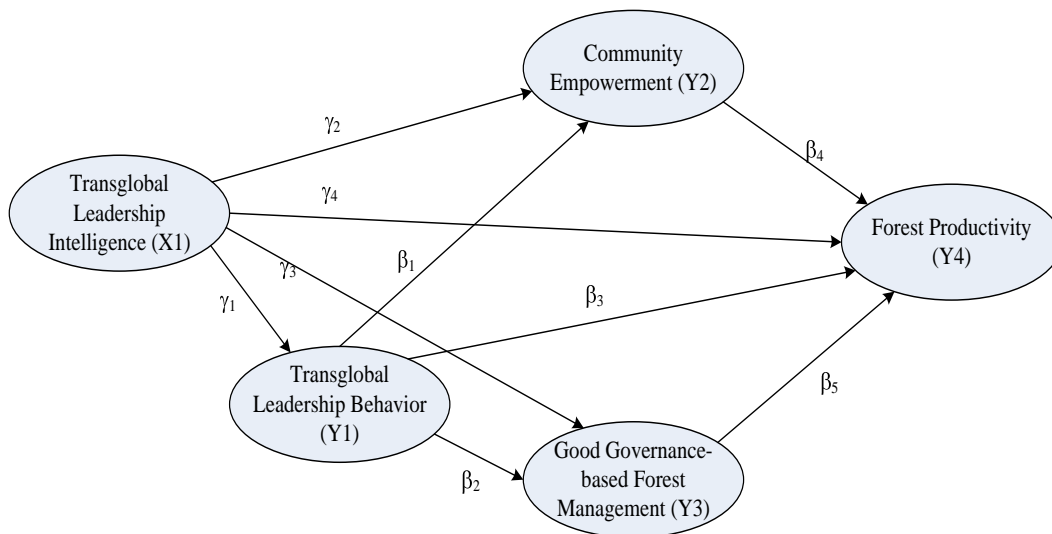
The population in this study was all regencies which implement HTR development in Indonesia. The population size was 127 regencies. Using Slovin formula with 10% error rate in precision, a sample size 50 regencies was collected to be used for data analysis in this study. Respondents for Transglobal Leadership Intelligence (X1), Transglobal Leadership Behavior (Y1), Good Governance-based Forest Management(Y3), and Forest Productivity(Y4) was the Head of Department of Forestry in every regency. Meanwhile Community Empowerment (Y2) variable was assessed by the Head of Department of Community Empowerment, Markets, Cooperatives, and SME. Therefore, the sample unit of this study was region/regency, while the analysis units (respondent) were the Heads of Department of Forestry and the Heads of Department of Community Empowerment. The measurement of each variables are shown in Table 1.

Data analysis technique used is Generalized Structural Component Analysis (GSCA) with Transglobal Leadership Intelligence (X1) as exogenous variable, Transglobal Leadership Behavior (Y1), Community Empowerment (Y2), Good Governance-based Forest Management(Y3) as intervening endogenous variables, and Forest Productivity(Y4) as pure endogenous variable with the framework as shown in Figure 2.

**Table 1:** Variables and Indicators

Variables	Indicators
Transglobal Leadership Intelligence (X1)	<ul style="list-style-type: none"> <li>• IQ or cognitive intelligences,</li> <li>• emotional intelligences,</li> <li>• business intelligences,</li> <li>• cultural intelligences,</li> <li>• global intelligences,</li> <li>• moral intelligences</li> </ul>
Transglobal Leadership Behavior (Y1)	<ul style="list-style-type: none"> <li>• resistance to uncertainty,</li> <li>• team connectivity,</li> <li>• pragmatic flexibility,</li> <li>• perspective responsiveness,</li> <li>• talent orientation</li> </ul>
Community Empowerment (Y2)	<ul style="list-style-type: none"> <li>• authority</li> <li>• confidence</li> <li>• trust</li> <li>• opportunities</li> <li>• responsibilities</li> <li>• support</li> </ul>

Good Governance-based Forest Management(Y3)	<ul style="list-style-type: none"> <li>• openness</li> <li>• accountables</li> <li>• fairness</li> <li>• participations</li> </ul>
Forest Productivity(Y4)	<ul style="list-style-type: none"> <li>• efective,</li> <li>• efficient,</li> <li>• economic</li> </ul>



**Figure 2:** Framework of Research

The equations to be solved for this structural model as follow:

$$\begin{aligned}
 Y_1 &= \gamma_1 X_1 + \varepsilon_1 \\
 Y_2 &= \gamma_2 X_1 + \beta_1 Y_1 + \varepsilon_2 \\
 Y_3 &= \gamma_3 X_1 + \beta_2 Y_1 + \varepsilon_3 \\
 Y_4 &= \gamma_4 X_1 + \beta_3 Y_1 + \beta_3 Y_2 + \beta_5 Y_3 + \varepsilon_4
 \end{aligned}$$

$\gamma$  is the coefficient of structural model between exogenous to endogenous variable,  $\beta$  is the coefficient of structural model between endogenous to endogenous variable, and  $\varepsilon$  the error of each endogenous variables.

### 3. Result and Discussion

The analysis result divide into three part. The first part is the adequacy of goodness of fit test. In model goodness of fit test, there are 4 measurements of goodness of fit which are FIT, AFIT, GFI, SMSR measurements, and one model determination measurement or  $R^2$  (Rsquare).

**Table 2:** Goodness of Fit Result

Criteria	Cut-off	Value	Result
FIT	$\geq 0.50$	0.729	Fit Model
AFIT	$\geq 0.50$	0.711	Fit Model
GFI	$\geq 0.90$	0.910	Fit Model
SRMR	$\leq 0.08$	0.053	Fit Model
$R^2 = 0.755 = 75.5\%$			

The table 2 above shows that the four criteria of model goodness of fit have met the cut-off values. Therefore, it could be concluded that the GSCA model was fit and could be used for hypothesis test in GSCA structural model. Total determination coefficient ( $R^2$ ) is 0.755 or 75.5%. This value indicates that diversity of data which can be explained by the developed GSCA model is 75.5%, or in other words, 75.5% of the information contained in the data could be explained by the model, while the remaining 24.5% was explained by other factors not in the model. Hair Ringle [27] states that  $R^2$  larger than 75% means model is very fit to have relevant predictive value, so GSCA model developed in this study was fit to use.

**Table 3:** Linearity Assumption

Relationship	P-value	Result
X1 -> Y1	0.5610	Linear
X1 -> Y2	0.6307	Linear
X1 -> Y3	0.2512	Linear
X1 -> Y4	0.4722	Linear
Y1 -> Y2	0.2319	Linear
Y1 -> Y3	0.7296	Linear
Y1 -> Y4	0.7615	Linear
Y2 -> Y4	0.6501	Linear
Y3 -> Y4	0.2204	Linear

The second part is the assumption for this model. In GSCA analysis, there is one assumption test, which is linearity assumption. Linearity assumption is assumption which require between the variables influence model to be linear. Linearity assumption test used Ramsey Reset Testmethod which is performed by *R* software. The reference used is if P-value  $> 0,05$  then linearity assumption is met (Gujarati, 1995). The complete result of linearity test is presented in Table 3, showing that P-values in the column are all above 0.05, so linearity assumption was met. Therefore, the result of GSCA analysis could be used because the requirement of between the variables linear relation was met.

The last part of the result of GSCA analysis is the result of structural model which is testing between the variables relation. The complete between the variables relations are presented in Table 4. Between the variables influence is significant if Critical Ratio(CR) > 1.96 (1.96 is critical value from Z Statistic Table). In the first relationship, which was the effect of Transglobal Leadership Intelligence (X1) on Transglobal Leadership Behavior (Y1), the coefficient value of structural model is 0.446, and the Critical Ratio (CR) is 2.64. Considering CR > 1.96, and structural model coefficient is positive, Transglobal Leadership Intelligence (X1) had significant and positive influence on Transglobal Leadership Behavior (Y1). It produced a conclusion that the higher the Transglobal Leadership Intelligence (X1) reflected in IQ, emotional, business, cultural, global, and moral intelligences of a Regional Head, the higher the Transglobal Leadership Behavior (Y1) which was shown a Regional Head's resistance to uncertainty, team connectivity, pragmatic flexibility, perspective responsiveness, and talent orientation. The result also shows significant effect of relationship number 2, 3, 5, 6, 8, and 9.

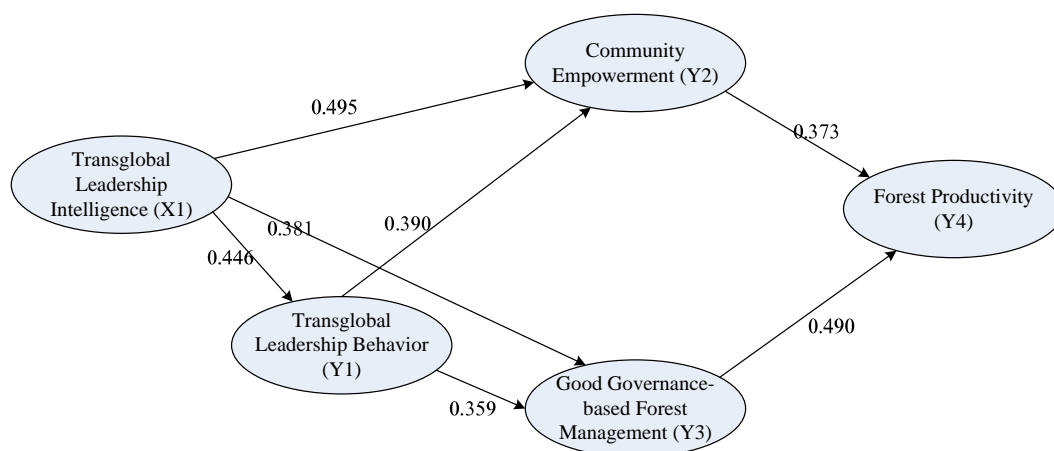
**Table 4:** Analysis Result of GSCA

No	Relationships	Coefficient	CR	Result
1	Transglobal Leadership Intelligence (X1) to Transglobal Leadership Behavior (Y1)	0.446	2.64	Significant
2	Transglobal Leadership Intelligence (X1) to Community Empowerment (Y2)	0.495	3.08	Significant
3	Transglobal Leadership Intelligence (X1) to Good Governance-based Forest Management (Y3)	0.381	2.38	Significant
4	Transglobal Leadership Intelligence (X1) to Forest Productivity (Y4)	0.106	0.67	Not-significant
5	Transglobal Leadership Behavior (Y1) to Community Empowerment (Y2)	0.390	2.52	Significant
6	Transglobal Leadership Behavior (Y1) to Good Governance-based Forest Management (Y3)	0.359	2.36	Significant
7	Transglobal Leadership Behavior (Y1) to Forest Productivity (Y4)	0.099	0.64	Not-significant
8	Community Empowerment (Y2) to Forest Productivity (Y4)	0.373	2.26	Significant
9	Good Governance-based Forest Management (Y3) to Forest Productivity (Y4)	0.490	3.00	Significant

The fourth relationship was the effect of Transglobal Leadership Intelligence (X1) on Forest Productivity (Y4) showed structural model coefficient of 0.106, and *Critical Ratio* (CR) of 0.67. Considering CR < 1.96, it indicated that Transglobal Leadership Intelligence (X1) didn't have significant influence on Community Empowerment (Y2). Therefore, the fourth relationship was rejected. The result also shows not-significant effect of relationship number 7.

Both relationship were studied further in the next test, which was indirect effect test. Solimun [28] describes in GSCA model that beside direct effect described in Table 4 above, there is indirect effect test. Indirect effect coefficient of Transglobal Leadership Intelligence (X1) on Forest Productivity (Y4) through Community Empowerment (Y2) is twice the direct influence of Transglobal Leadership Intelligence (X1) on Community Empowerment (Y2) which is 0.495 (in relationship-2 test), and direct effect of Community Empowerment (Y2) on Forest Productivity (Y4) which is 0.373 (in relationship-8 test). Both relationship number 2 and 8 are significant, so it could be concluded that Transglobal Leadership Intelligence (X1) had significant indirect effect on Forest Productivity (Y4) through Community Empowerment (Y2) with a coefficient of  $0.495 \times 0.373 = 0.185$ . Positive coefficient indicated that the higher the Transglobal Leadership Intelligence (X1), the higher the Forest Productivity (Y4), if mediated by higher Community Empowerment (Y2). Therefore, Community Empowerment (Y2) was a mediating variable of the relation between Transglobal Leadership Intelligence (X1) and Forest Productivity (Y4). The analysis also shows for three indirect effect as follow: 1), Transglobal Leadership Intelligence (X1), the higher the Forest Productivity (Y4), if mediated by higher Good Governance-based Forest Management (Y3). 2), Transglobal Leadership Behavior (Y1), the higher the Forest Productivity (Y4), if mediated by higher Community Empowerment (Y2). 3), Transglobal Leadership Behavior (Y1), the higher the Forest Productivity (Y4), if mediated by higher Good Governance-based Forest Management (Y3)

The analysis result in the previous part shows that Transglobal Leadership Intelligence has direct effect on Transglobal Leadership Behavior, Community Empowerment, Good Governance-based Forest Management, but no direct effect on Forest Productivity. It was also evident that Transglobal Leadership Behavior had direct influence on Community Empowerment, Good Governance-based Forest Management, but no direct effect on Forest Productivity. On the other hand, Community Empowerment and Good Governance-based Forest Management had direct effect on Forest Productivity.



**Figure 3:** Model of Research Findings



The model of research findings presented in Figure 3 shows that

- (1) Transglobal Leadership Intelligence didn't have direct effect on Forest Productivity, but it had indirect effect through the mediation of Forest Productivity and Good Governance-based Forest Management,
- (2) Transglobal Leadership Behavior didn't have direct effect on Forest Productivity, but it had indirect effect through the mediation of Forest Productivity and Good Governance-based Forest Management.

The findings above showed the important of the role of transglobal leaders (intelligence and behavior) in managing forest, which also required community empowerment aspect and good governance concept from government officials, whether in the central or regions. HTR concept is based on efforts to improve the welfare of people in and around forests by revitalizing the forestry sector, including by providing accesses to the communities to participate in effective management of forest areas, especially poorly-managed production forest areas. So, empty and abandoned areas will be managed with communities to be cultivated, maintained, and to regulate the harvest in the coming seasons, based on management principles of sustainable forest.

However, HTR development program is a national agreement which must be implemented soon. Therefore, all efforts to accelerate it should be prepared. Based on the critical problems in the field, there are 2 dominant factors which can influence the success of HTR development, i.e. adequate land for HTR development and public interest. In the field, both factors have varying situations. Some regions (regencies/cities) have identified adequate available land, but other regions haven't identified the land availability. It's the same in terms of public interest, some regions have high public interest and others have low public interest.

In terms of leaders and government officials, the recommended keyword in this study is mental revolution in bureaucratic reformation of forest management in Indonesia. Bureaucratic reformation is an effort to renew and make basic changes on the governance system, especially related to institutional (organization), administration (business process) and human resources aspects of officials (including leaders).

Some of the examples of bureaucratic reformation in Indonesia are "*revolusi mental* (mental revolution)" and "*nawacita*" concepts established by Indonesian President in 2014-2019 period, Ir. Joko Widodo or also known as Jokowi. The terms "*revolusi mental*" and "*nawacita*" are famously associated with the commitment of the government of President Joko Widodo, who is often called Jokowi, to develop the nation of Indonesia. Mental revolution—according to Jokowi—is a change of paradigm, mind-set, or political culture for nation-building consistent with the goals of Indonesian Proclamation for independence, justice, and welfare. This study recommended transglobal leadership type (intelligence: IQ, EQ, and SQ, reinforced by business intelligence, cultural intelligence, and global intelligence as explained in the previous sub-chapter) to realize mental revolution based on the realization of world-class government, as shown in the following figure.

Meanwhile, *nawacita* refers to 9 priority programs of Jokowi-JK government, which are:

- (1) Bringing back the country as a protector of the nation and provider of security for all citizens;
- (2) Making the government's presence constant by developing clean, effective, democratic, and reliable governance;
- (3) Building Indonesia from the periphery by strengthening regions and rural areas within the framework of a unitary state;
- (4) Rejecting a weak state by reforming the system and corruption-free, dignified, and reliable law enforcement;
- (5) Improving the life quality of Indonesian people;
- (6) Improving people's productivity and competitiveness in international market;
- (7) Realizing economic independence by moving strategic domestic economic sectors;
- (8) Revolutionize the nation's character;
- (9) Strengthening diversity and social restoration of Indonesia.

To restore bureaucracy to its real position and mission or role as a public servant, bureaucracy should be able and willing to perform steps of bureaucratic reformation which include change of behaviors which prioritize "neutrality, professionalism, democracy, transparency, and independence", along with improvement of work spirit, work method, and performance, especially in managing policies and providing public services, as well as commitment and empowerment of accountability of government agencies. To improve bureaucratic procedures, result-oriented bureaucracy is required.

Moreover, leaders who are committed to and competent in the country's bureaucratic reformation are urgently required, including in formulating agendas and implementing government policies and developments for public, increasing the resilience and competitiveness of the nation. Therefore, there should be structural reformation, such as independence of legal system and financial system of the country, along with improved transparency and accountability to the public.

#### **4. Conclusion and Recommendations**

Based on the objective of this research and analysis result and, the conclusion of this research are:

1. Transglobal Leadership Intelligence has direct effect on Transglobal Leadership Behavior, Community Empowerment, Good Governance-based Forest Management, but no direct effect on Forest Productivity. Transglobal Leadership Intelligence didn't have direct effect on Forest Productivity, but it had indirect effect through the mediation of Community Empowerment and Good Governance-based Forest Management.
2. Transglobal Leadership Behavior had direct influence on Community Empowerment, Good Governance-based Forest Management, but no direct effect on Forest Productivity. Transglobal Leadership Behavior didn't have direct effect on Forest Productivity, but it had indirect effect through the

mediation of Community Empowerment and Good Governance-based Forest Management

3. Community Empowerment had direct effect on Forest Productivity
4. Good Governance-based Forest Management had direct effect on Forest Productivity

From the research findings above and the conclusion of this research, the recommendation from this research were as follows:

- (1) These research findings enrich policy formulation theories, especially Leadership theory, as Transglobal Leadership was very appropriate for regional government agencies, especially Regional Heads by using intelligence accuracy and transglobal leadership behaviors would be able to increase forest productivity. On the other hand, they also supported community empowerment theory and good governance theory in formulating public policies. The findings showed that community empowerment and good governance mediate the relation between intelligence and transglobal leaders' behaviors on forest,
- (2) The research finding gave recommendations to the Ministry of Environment and Forestry that budget allocation was required for socialization of the importance of public participation in managing HTR policies, so that this HTR program is effective and efficient. On the other hand, the capability of reliable human resources, in this case regional/central government officials should be improved to manage forests better with the stakeholders.
- (3) The research findings recommended every regional head who implemented HTR program (as of June 2015 there were 127 regencies which managed HTR). Regents must have high intelligence, especially moral intelligence. Other intelligences are IQ, emotional, business, cultural, and global intelligences. On the other hand, Regents should have uncertainty resilience, team connectivity, pragmatic flexibility, perceptive responsiveness, and talent orientation. Cultivating intelligence and behaviors based on transglobal leadership are necessary to improve the performance of public organization in the governed regencies.

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