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Role of Supply Chain in Cocoa Blue Print Model Performance in National Development Program

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Abstract. **This paper aims to reveal the application of Blue Print Model in the national cocoa movement program in Indonesia. This model compares the achievement of targets with expectations. The study was carried out by comparing targets to be achieved with targets obtained on three variables: seed rejuvenation, side-grafting activities, and intensification of cocoa plants. The results show that the target obtained is different from the expected target in the three variables. This means that the implementation of Blue Print Model in the national cocoa movement program was unsuccessful. However, with the integration of supply chain factors and blur print performance (BPP) measures, it is found that there is a significant relationship between the both. Meanwhile, some factors of supply chain have also shown their insignificant influence on the value of BPP.**

Keywords - *blueprint, model, cocoa, national movement program, farmer.*

1.   Introduction

In Indonesian economic system, the agricultural development, especially plantations, is one sector that has a significant contribution to Gross Domestic Product (GDP). As part of efforts to support economic growth, the government implements strategies through interventions through development programs.

Indonesia is one country that very potential in cocoa plantations. The total area of cocoa plantations in Indonesia is about 1,587,136 ha consisting of 1,491,808 ha (93.9%) of which are smallholder plantations, around 49,489 ha of large state plantations, managed by State-Owned Enterprises (BUMN), and 45,839 ha of large plantations managed by the private sector, the number of farmers is about 1,475,352. However, the findings of Roshetko and Evans [1] place cocoa as a priority commodity for agroforestry smallholders in Southeast Asia.

Production of 809,583 tons cocoa puts Indonesia as the third largest producer country in the world after Ivory Coast and Ghana. This situation places the position of cocoa as the third largest foreign exchange earner from the plantation sector after oil palm and rubber [2]. In particular, in 2002 cocoa production in Indonesia was dominated by smallholders who contributed around $ 521 million to the acquisition of state exports [3]. In fact, based on community needs and productivity, cocoa is a plant that has a high selling value [4].

However, the potential of the plantation area owned by Indonesia is not significant to the cocoa production that should be achieved. If the cocoa plant is productive, the production can reach around 2 tons /ha/year [5]. The cocoa production in South Sulawesi province in 2009 was 164,443.97 tons, in 2010 it increased become 172,083.00 tons, in 2011 the production reached 196,695.00 tons, but in 2012 the conditions differed from the previous year. The cocoa production decreased to 176,000 tons [6][7]. Some of the problems that hamper the effectiveness of cocoa production among others, the cacao trees that are around 5-25 years old in severely damaged conditions, and the quality of cocoa seedlings are sourced. This the caused by the production and quality is low. The attack of insect pests and pathogenic fungi, such as pests and diseases of Cocoa Fruit Borer [8], fruit rot, Heliopolis sp, vascular streak dieback (VSD), is a difficult obstacle to overcome today because the impact not only loses results but also negative impacts on the environment [9]. The pest can reduce cocoa yield from 80% -90% [10]. Rahmanullah [11]also show that in South Sulawesi province, the clove plants are the most profitable plant, followed by coconut-cocoa gardens, so that the land use pattern is the mixed garden.

One way of government policies is the formation of a coordination team for the National Movement to increase production and quality of cocoa. This program is a top-down policy in which decision recommendations must be the same action starting from the government level to the district government [12][13].

In this program, the government uses a blueprint approach model. One important part in this program is the effectiveness of program achievement in the form of measurement activities that explain and analyze actual change achievements that have been achieved in the field compared to the targeted changes that have been previously determined [14].
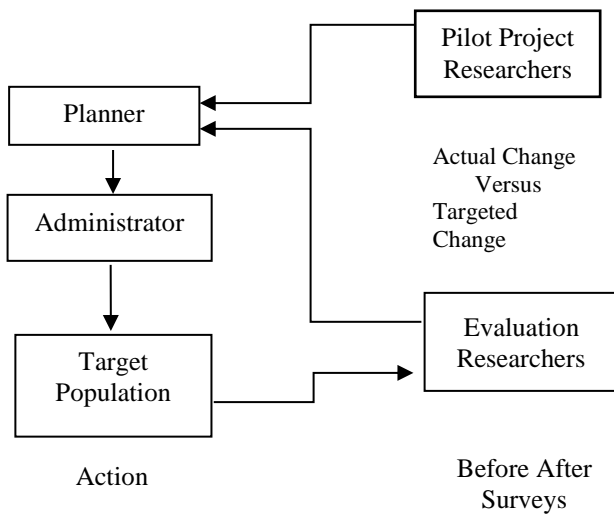
Tested Models

Figure 1. Blueprint model of David Korten. Source; *People Centered Development* [14].

The Blueprint describes the target population of the program, in this case, farmers who have cocoa plantations and meet the requirements set out in the blueprint model. The next stage in this blueprint model is the implementation stage of the development program which is the execution stage of the national program. The Blueprint program involves bureaucrats, farmer advocates, and cocoa farmers. At this stage the involvement of all stakeholders in working together so that program objectives are achieved. In other words, the program is successful at the level of cocoa farmers and encourages increased development in the plantation sector. Based on this description, this study illustrates the effectiveness of the implementation of the Blue Print approach to the Cocoa national program [15][16].

2. Research Method

This study measures and analyzes actual change outcomes produced by the cocoa national movement program in three activities (rejuvenation, rehabilitation, and intensification) which are targeted changes with a comparison of the blueprint approach model with the Stufflebeam Evaluation Model [17][18]. This means that the actual change program achievement-oriented program effectiveness shows its benefits for the community. However, if a targeted change is not achieved, the cocoa national movement program is considered unsuccessful at the farm level. In addition, this study has developed a structural questionnaire, covering the title of supply chain items and their influence on the value of blue print performance measures. For supply chain, factors like strategic supplier partnership or SSP with eight items, customer relationship management or CRM with six

items,, information sharing or IS with five items, and information quality or IQ with four items are under observation. In addition, to measure the factor of blue print performance or BPP, five items are also added in the questionnaire. After the development of questionnaire, a sample of 202 respondents is finally observed over a time of six weeks through a team of data collection experts. For the analysis purpose, both descriptive and regression analysis are conducted and finding are presented.

Table 1. The measurement of Program effectiveness in five criterias.

	Efficiency	Effectiveness	Impact	Relevance	Sustainability
General goal			What are the positive and negative impacts, both directly and indirectly arising during project implementation?	Are "project objectives" and "general objectives" considered to be objectives during the evaluation?	How far the recipient organization is able to participate Do you have a positive impact on the project after the collaboration is stopped?
Goal of project		Is the "project goal" achieved and how many contributions are contributed Is it "output"?			
Output	How many "inputs" are converted to "output				
Input					

3. Results and Discussion
3.1 Rejuvenating of Cocoa Somatic Embryogenesis seed

Cocoa plantations that are old are around 15-30 years old even though their production is low, but they are still a source of income that can meet some of their daily needs. Farmers receive assistance in the hope that cocoa production from *Somatic Embryogenesis* seedlings will be higher compared to the results obtained from previous crops.

Cocoa production every harvest season before the national movement program is implemented, as follows:

harvesting in May-June is 5 guides, harvesting in July-August production decreases by about 3 guides, subsequent harvests in September-October farmers receive 5 guides. If you add up the results obtained by 13 guides, the total production is 455 kg /ha/year.

Cocoa farmers in Noling Village have received national movement program assistance from the government since 2009. Input rejuvenation assistance programs consist of *Somatic Embryogenesis* seeds, fertilizers, pest and disease poisons, as well as funds for logging cocoa trees Rp. 750,000 in each plantation that covers 1 ha. *Somatic Embryogenesis* seed is a seed used to rejuvenate farmers' cocoa plantations.

It turned out that the local cocoa harvest was the same as the production of *Somatic Embryogenesis* cocoa trees. The fruit of *Somatic Embryogenesis* cacao is small so the cocoa beans are also small, high in water content if weighed so that the price is reduced so that it is also cheaper compared to the price of local cocoa.

The cocoa production of *Somatic Embryogenesis* seed rejuvenation in plantations with an area of 1 ha yields about 100 kg-217.64 kg. the production is different from the local cocoa trees that are 15-20 years old. The production is around 350 kg-455 kg / ha / year. The use of *Somatic Embryogenesis* seeds is not able to improve the quality and production of cocoa in Noling Village. Therefore the national movement Cocoa Program with *Somatic Embryogenesis* seed rejuvenation activities is not effective.

3.2 The Side-rafted cocoa

Rejuvenation with *Somatic Embryogenesis* seedlings of cocoa in Noling Village did not show an increase in results if we looked at the contents of the program that had been set in the blueprint, namely improving the quality of cocoa production.

The research results at Noling village showed that in 1 ha of cocoa production the production did not increase, ie only around 13 to 15 sacks. Likewise, with the aim of improving quality, it also cannot be achieved. The current condition shows that the quality of cocoa beans is of poor quality because the seeds are small and many are hardened and wrinkled due to pest and fruit rot, and cocoa fruit *(Heliopolis SP)*.

Based on the research findings, the production of side-grafted of cocoa and rejuvenation in the first harvest from the beginning planted is about 3 guides in the garden which covers 0.5 ha. For *Somatic Embryogenesis* cocoa, it only produces about 5 sacks - 6 sacks in 1 ha/year. This

fact explains that the cocoa national movement program on side grafting activities, rejuvenation activities and intensification activities is not able to increase the production and quality of cocoa, so the cocoa national movement program in Noling Village is not effective.

3.3 Intensification of Cocoa

The cocoa intensification method is carried out by weeding weeds, pruning protective trees, pruning cocoa staples, garden sanitation, fertilizing, and controlling pests and diseases.

Intensification is a garden maintenance activity, and branch pruning that is not needed in cocoa growth serves to irradiate so that diseases and pests do not survive on cacao trees, as well as tree fertilization for growth and increased production.

The Noling Village community has integrated their lives with cocoa and is very skilled with side grafting and top grafting techniques. However, they need counseling about prevention and eradication of pests and diseases.

At the same time, fertilization by farmers is also limited in conditions so that when trees need further fertilization, fertilizer and growth are not available.

Based on the above findings it can be said that the Cocoa national movement program with intensification activities is not able to improve quality and productivity, thus this program is not effective.

4. Discussion

The cocoa national movement program with three types of activities includes side grafting, rejuvenation with somatic embryogenesis and intensification. Three types of activities were implemented in 2009-2012. Based on research obtained through a study of the cocoa national movement program in Noling Village, in particular, side-grafting activities (using 2-stem entres, connected to 15-year-old cacao staples) it was known that since the program implemented in 2009 side grafting cocoa did not show increased production or improved quality.

The results showed that in 1 ha, the cocoa production achieved before and after side-grafting activities was not different. The results obtained were 7 sacks up to 13 sacks, for 3 times the harvest season in 1 year, this production was obtained before the implementation of side grafting activities. After side grafting is implemented, the results obtained are the same, namely 10 sacks of 13 sacks equivalent in 1 ha for every three harvest seasons. This explains that for side-grafting activities, using cocoa

S1 and S2 as connection material cannot increase production.

Improving the quality of cocoa beans on side-grafting activities, based on the results of the study, was also not achieved. Cocoa beans from side grafting have the same quality cocoa fruit as the quality of locally produced cocoa fruit. This can be seen from the side grafting cocoa fruit which some seeds are attacked by pests and diseases and mixed with sand and dirt.

Regarding the management after the cocoa harvest, basically the farmers do not carry out the fermentation process, thus affecting the low quality of the cocoa beans. The reasons for farmers not doing fermentation are, among others, (1) because the fermentation process takes a long time which is approximately 1 week, (2) requires workers who have to be paid work, while farmers are not able to pay wages, (3) difference in price fermented cocoa with unfermented cocoa is not much different, that is only Rp. 1,000-Rp. 2,000 in 1 kg of cocoa. The price of fermented cocoa is Rp. 12 000 / while unfermented the price is Rp. can sell cocoa beans all the time because the collectors are willing to buy cocoa beans at any time.

The ease of marketing of cocoa for farmers quickly encourages them not to do fermentation. Because the price of fermented cocoa is only slightly different from unfermented cocoa. Based on this, side-side activities cannot encourage the improvement of cocoa quality.

After rejuvenating the seeds of somatic embryogenesis, cocoa grows with a higher stem appearance compared to cocoa originating from other seeds, accompanied by the appearance of more leafy leaves on the upper stem. The number of fruit is more but the size of the fruit and seeds is smaller than the size of other varieties of cocoa fruit.

The rejuvenation of cocoa production with somatic embryogenesis seedlings in a garden of 1 ha is around 172.41 kg. The production is different from the local cacao trees that are 15-20 years old, the production is around 350 kg - 455 kg/ ha/year. Factors that are very influential on the quality of fruit are *somatic embryogenesis* cocoa seeds that are not in accordance with the natural conditions in Noling Village. Planting for SE seedlings is the first experience experienced by farmers in Noling. The attitude of the farmers in Noling showed that they would never again agree to plant the seeds for the second time if the program provided the seeds for planting in their respective gardens. Farmers in Noling have agreed on this matter.

Another factor that affects the quality of cocoa beans is the behavior of every farmer that varies. Field findings indicate that the behavior of farmers in Noling varies. For example, the price of cocoa increases from the price they are usually motivated again to take care of cocoa in their respective plantations. If the price of cocoa starts to fall again, then the opposite happens. Even farmers switch their activities to other commodities such as patchouli, nutmeg, coffee, pepper or cloves.

Conversely, farmers who consistently maintain their cocoa plants will survive to maintain their gardens. These farmers are not affected by the price of cocoa which fluctuates. Such farmers are not many in number, usually in one farmer group only 2 or 3 people. The farmer is very diligent and diligent in taking care of his garden. If the other farmers who get cocoa yield in 1ha / year are 7 sacks, the farmer who can diligently obtain 13 sacks in 1ha / year. This result was obtained inside grafting activities.

Farmers who are diligent in planting and maintaining cocoa plants have gardens that contain cocoa plants that vary in type, age, and planting techniques. These types include side-grafting cocoa from the cocoa national program, top-grafting cocoa, and side-grafting cocoa from clones from fellow friends and farm families. Diligent farmers certainly get more production when compared to farmers who pay less attention to their gardens.

Based on the results of the study, it is known that those who are diligent can produce cocoa continuously. The cocoa trees that have been harvested will be used up after 3 times of picking (13 kg/ha), but the other trees follow again to be harvested even though the production is in small quantities (10 kg/ha). This situation continues continuously so that it can also be relied on to cover the needs of farmers and their families every day. This is not experienced by other farmers as a result of their differences in cocoa farming.

The cocoa national movement program activities consist of (1) rejuvenation with *somatic embryogenesis* seeds, (2) Side connection and (3) Intensification can be explained in the range of average production as follows.

Table 2. Cocoa Production in Three Cocoa National Program Activities in Noling Village.

No	Activities	Informant	Number of trees	Wide (ha)	Production (Kg)	Product kg/ha

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No	Program	Code				Means
1	Rejuvenation	UD				
		AS	800	0,8	140	175,00
		UM	850	0,8	140,5	165,29
		AA	1700	1,7	370	217,64
			500	0,5	90	180,00
		HS	500	0,5	90	180,00
		RR	950	0,9	180	189,00
		AM	400	0,4	40	100,00
					Means	172,41
2	Side-Rafting	IM				
		RH	650	0,76	560	736,84
		AC	130	0,15-0,32	130,2	868,66
		SL	280		250	781,25
		AS	215	0,24	200	800,00
		TH	560	0,65	490	753,84
		AK	590	0,69	525	760.00
			620	0,72	530	736,11
					Means	776,67
3	Intensification	YY	560	0,66	212,5	321,96
		AH	560	0,65	230,0	354,00
		MH	300	0,35	130,2	372,00
		IL	550	0,64	198,1	309,53
			430	0,51	188,5	369,60
			280	0,32	110,5	345,31
		MM				
		ID				
					Means	345,40

In the rejuvenation program with *somatic embryogenesis* seedlings, farmers obtain low production around 172.41 kg/ha/year. Furthermore, inside grafting activities, farmers obtain an average production of around 776.67 kg /ha /year, and the production of the Intensification program is around 345.40 kg/ha/year. Thus, cocoa production from the results of the national program is not able to increase production. Basically, this is a classic problem faced by cocoa farmers every day.

The stakeholders of Cocoa national program explained that the production target was 1500 kg/ha/year-2000 kg/ha/year. Cocoa production obtained by farmers participating in the program does not meet the program targets set by the government. Not achieving the production target is also supported by Pujiyanto [5][19]. Endang Sulistyawati[20] explained that cocoa production in Damsel was 731.1 kg / 1.25 ha/year, South Banawa was 793.1 kg 0.9 ha/year, and Palolo was 526 kg / 0.975 ha/year. These findings indicate that cocoa plants are no longer productive because the age of the plant has been 25 years [21]. The potential yield of cocoa plants can reach 2000kg / ha/year. This finding explains that the cocoa program in Noling Village is not able to achieve the program target so the program is not effective.

Based on the results of the research in Noling Village, *somatic embryogenesis* seed rejuvenation activities with actual change were 172.41 kg/ ha/year, actual change side connections obtained 776.67 kg/ ha/year, and actual change intensification was 345.40 kg/year, when compared to the targeted change program, the national program is 1.5 tons / ha-2 tons / year, thus this finding explains that the quality and production of cocoa is not increasing, so that the cocoa national program in Noling Village, Luwu District is not effective.

Referring to table 2 which explains the effectiveness of the program, then it is applied to the Cocoa national program, the program's effectiveness can be realized if the program objectives are achieved, namely the target of the program is 1.5 tons/ha / year-2 tons/ ha/year can be realized. However, it was proven that the cocoa national

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program in Noling was unable to improve its quality and production, because the program only reached 776.67 kg/ha/year and the quality of cocoa beans did not increase, thus the cocoa national program in Noling Village, Luwu District was not effective.

Table 3. Findings of the Cocoa National Program in Noling Village in the Blue Print Approach Theory [14][17].

No.	*Blueprint Approach* (DC Korten, 1984)	CIPP Stufflebeam evaluation (1999)
1	The cocoa national program is directly implemented in farmers	Context evaluation; ▪ Does not involve the team from BPTP South Sulawesi province.
2.	• The number of companions is only 9 people. • Side-grafting activities • Intensification of wrong targets.	Evaluation of Inputs; • The number of companions is only 9 people • Evaluation of human resources, funds, inputs still needs to be improved.
3.	Evaluation with Targeted change and actual change; • Achievements are lower than the target program; 345.40kg /ha/year-776.67 kg/ha/year. Program target of 1.5 tons/ha/year-2ton/ha/year.	Process of Evaluation • Process evaluation still needs to be improved. • Side-grafting and intensification activities are not right on target
4.		The product of Evaluation: • The cocoa national program is unable to improve the quality and production of cocoa. • This evaluation needs to be done well and more thoroughly. • Achievements are lower than program targets; 345.40kg / ha / th-776.67 kg / ha The target program is 1.5 tons / ha / year-2ton / ha / year.

Table 3 above explains that the cocoa national program in Noling Village did not carry out the acclimatization process, meaning that it did not carry out *somatic embryogenesis* seed suitability testing at the cocoa plantation location in Noling Village, the seeds were planted directly in the cocoa plantation. Furthermore, the program implementation activities were not carried out properly as explained by David Korten and Stufflebeam, so that the achievements of the cocoa national program in Noling Village were lower than the program targets.

The evaluation process focuses on the implementation of the cocoa national program. However, this process was not carried out well as evidenced by the existence of side grafting cases carried out on plants that were aged 20 years and over, intensification was carried out on plants that were 20 years to 27 years old. But this procedural error was not followed up with repairs. This stage should be carried out by the formative evaluation that seeks to realize standard operating procedures. Evaluation of the output of the cocoa program in Noling Village measures and assesses program outcomes, namely the cocoa national products produced by the national program.

Based on the findings of the study the program could not realize the scope of the program's objectives, namely improving the quality and production of cocoa beans. Achievement is lower than the target, in other words, targeted change is compared to actual change; 1500 kg / ha / year-2000 kg / ha / year: 345.40kg / ha / year-776.67 kg / ha / year. Good quality cocoa cannot be produced due to disease in the cocoa beans and not through the fermentation process. The number of facilitators was only 9 people who had to accompany the program in 22 sub-districts, 97 villages limited human resource input resulted in the program is ineffective.

The findings of this study explain that the ability of farmers is limited in buying fertilizer so this affects the production of cocoa. Cocoa production in the field shows the results (for side grafting activities) are almost the same as the production with local cocoa. Side-grafting cocoa production only reached 776.67 kg/ha, while local cocoa production was around 400 kg-500 kg. Especially for farmers who diligently take care of their gardens, they get cocoa production around 500 kg-600 kg. This is the case for two or three farmers in one farmer group. Cocoa production of side-grafting activities showed an increase in certain farmers, but in general cocoa production obtained by farmers in Noling Village with side-grafting activities did not experience a significant increase.

Based on the findings of the study, the cocoa national program in Noling Village from 2009 to 2013, with side grafting, rejuvenation, and intensification activities did not succeed in increasing the production and quality of cocoa. Thus the research findings indicate that the cocoa national program in Noling Village is not effective.

The ineffectiveness of the Cocoa national movement program in Noling is different from the cocoa national program in other regions, as shown in the results of fertilization treatment on side grafting plants in AIAT West Kalimantan shows that real fertilizer can increase cocoa productivity by 0.4 tons/ha compared to how fertilization farmers [22][23]. In addition, the results of research in Konawe District, South Konawe and Kolaka, Southeast Sulawesi showed that the success of side

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grafting by farmers was around 60% [24]. This success occurs because they collaborate with stakeholders such as BPPT and farmers as is also the case in Ghana [25][26].

Looking at the description in table 3 above, there are problems related to institutional roles and community participation. The role of the institution in the form of not involving BPPT locally in helping the success of the program. At the same time, people as program actors are not involved in decision making..

Table 4 provides the findings for the descriptive results. It is found that for SSP, eight items, for CRM, six items, for IS, five items, and finally for IQ, four items have been considered under the title of supply chain management practices. For the measurement of blue print performance, five dimensions are also presented with their mean score, deviation, minimum and maximum range of the responses. For SSP, highest mean score is 3.48 (SSP5), followed by SSP4 which is 3.39 respectively. In addition, for CRM1, average trend in the responses is 3.32, following by the mean score of 3.25 as shown by CRM3. Meanwhile, for information sharing, highest mean score is presented by IS1, followed by IS2 and IS4 respectively. In addition, information quality indicators have presented a mean score of above three, with the deviation from the mean value in the range of 1-1.22. For the performance measurement of blue print model, five items are also presented under descriptive findings. Highest mean score is shown by BPP3, followed by BPP2.

Table 4. Descriptive Statistics of the Data Set

Variable	Obs	Mean Std.Dev.		Min	Max
Strategic Supplier Partnership SSP					
SSP1	202	2.911	1.354	1	5
SSP2	202	3.351	1.226	1	5
SSP3	202	2.995	1.359	1	5
SSP4	202	3.396	1.234	1	5
SSP5	202	3.485	1.121	1	5
SSP6	202	2.639	1.383	1	5
SSP7	202	3.025	1.283	1	5
SSP8	202	3.153	1.282	1	5
Customer Relationship Management CRM					
crm1	202	3.332	1.231	1	5
crm2	202	3.119	1.303	1	5
crm3	202	3.252	1.254	1	5
crm4	202	3.238	1.324	1	5
crm5	202	2.866	1.341	1	5
crm6	202	2.847	1.346	1	5
Information Sharing IS					
is1	202	3.936	1.089	1	5
is2	202	3.911	1.052	1	5
is3	202	3.728	1.172	1	5
is4	202	3.886	1.023	1	5
is5	202	3.728	1.106	1	5
Information Quality IQ					
iq1	202	3.619	1.221	1	5
iq2	202	3.653	1.119	1	5
iq3	202	3.807	1.092	1	5
iq4	202	3.748	1.129	1	5
Blue Print Performance BPP					
bpp1	202	3.011	1.442	1	5
bpp2	202	3.079	1.416	1	5
bpp3	202	3.193	1.348	1	5
bpp4	202	3.043	1.438	1	5
bpp5	202	2.926	1.36	1	5

Table 5 provides the findings for the impact of various dimensions of SSP on BPP1 in the region of Indonesia. It is observed that if the business will rely on few suppliers, it will positively affect all the performance measures from BPP1-BPP2 respectively. It means that few suppliers are in fever for the BPP by all five means as observed under present study. The level of significance for their respective coefficients is 1 percent and 5 percent. While the factor of SSP2 have shown its insignificant influence

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on all five dimensions of BPP under full sample of the study. Meanwhile through SSP3 (suppliers are selected based on the quality) has shown its significant and positive influence on BPP1 with the coefficient of .160 and standard error of 0.0861. It means when the suppliers will be selected on quality measures.   However, remaining four measures of BBP have shown their insignificant relationship with SSP3. The factors like SSP5 and SSP6 have also demonstrated their insignificant impact on all BPP measures in present study.

In addition, regular resolution of the problems with the suppliers, it will positive affect the BPP1 with the coefficient of .170. It means that more the problem resolving with the supplier, more the BPP1 in the region of Indonesia. For SSP8, effect on BPP4 is -0.151, significant at 10 percent. It means that more the active involvement of supplier in new idea development, adversely the impact on BPP4.

Table 5. Impact of SSP on BPP

	(flexibility performance)	(resource performance)	(output performance)	(employee efficiency)	(efficiency performance)
VARIABLES	BPP1	BPP2	BPP3	BPP4	BPP5
SSP1: replying on few suppliers	0.0225***	0.188**	0.4732***	0.931***	0.455***
	(0.0090)	(0.0790)	(0.0772)	(0.0781)	(0.0750)
SSP2: rely on few high-quality suppliers	0.0126	-0.00959	0.0263	0.0251	0.0167
	(0.0917)	(0.0913)	(0.0837)	(0.0879)	(0.0849)
SSP3: suppliers are selected based on quality	0.160*	-0.114	0.0290	-0.0964	-0.0154
	(0.0861)	(0.0846)	(0.0816)	(0.0850)	(0.0775)
SSP4: working to develop long term relationship with the suppliers	0.0134	0.142	0.00505	0.0850	0.127
	(0.0874)	(0.0874)	(0.0877)	(0.0895)	(0.0818)
SSP5: help the suppliers to improve their service quality	-0.0172	-0.0210	0.101	0.103	0.0960
	(0.0896)	(0.103)	(0.0872)	(0.0981)	(0.0906)
SSP6: actively involve the supplier is strategic decision, where necessary	-0.0743	0.0636	0.0266	0.0829	-0.0657
	(0.0811)	(0.0765)	(0.0738)	(0.0762)	(0.0730)
SSP7: regularly resolve the problems with supplier	0.170*	0.110	0.112**	0.0906	0.0104

s					
	(0.0970)	(0.0970)	(0.0551)	(0.0819)	(0.0883)
SSP8: actively involves the supplier in new idea development	0.0745	-0.0989	0.0515	-0.151*	0.0666
	(0.0936)	(0.0867)	(0.0893)	(0.0907)	(0.0909)
Constant	3.045***	2.799***	2.515***	2.842***	2.213***
	(0.475)	(0.487)	(0.453)	(0.490)	(0.435)
Observations	202	202	202	202	202
R-squared	0.341	0.234	0.262	0.424	0.321

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 6 provides the output for the effect of CRM on BPP factors under full sample consideration. It is found that with sharing of fair play with the customer, there is a negative and significant influence on the value of BPP1. It means that CRM1 has its significant but negative influence on BPP1 in the region of Indonesia. However, the rest of the indicators have shown their insignificant relationship with CRM1. For CRM2, effect on BPP4 is 0.204 with the standard error of 0.0819. It means that frequent follow up with the customers is positively influencing on BPP4 in Indonesia. Meanwhile, CRM3-4 have shown their insignificant influence on all the factors of BPP.

Besides, the frequent evaluation of formal and informal complaints of the customers has shown its positive and significant impact on BPP3 with the coefficient of .174 and standard error of 0.0834. It means that more the frequent evaluation of formal and informal complaints of the customers, positive the influence on BPP3. However, CRM6 has shown its insignificant relationship with all the

dimensions of blue print performance measures in Indonesia.

Table 6. Impact of CRM on BPP

	(flexibility performance)	(resource performance)	(output performance)	(employee efficiency)	(efficiency performance)
VARIABLES	BPP1	BPP2	BPP3	BPP4	BPP5
CRM1: sense of fair play is shared with customers	-0.163*	-0.0773	0.0660	-0.0648	0.0842
	(0.0965)	(0.0863)	(0.0795)	(0.0880)	(0.0934)
CRM2: frequent interaction with the customers	0.0303	-0.0359	-0.0241	0.204**	0.0150
	(0.0890)	(0.0820)	(0.0811)	(0.0819)	(0.0812)
CRM3: frequent follow up with the customers	0.0340	-0.0471	0.0149	0.0902	-0.0653
	(0.0945)	(0.0864)	(0.0869)	(0.0961)	(0.0961)
CRM4: determination of future customer expectat	0.0676	0.0773	0.117	0.0227	-0.00851

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ion					
	(0.0826)	(0.0818)	(0.0776)	(0.0805)	(0.0786)
CRM5: frequent evaluation of formal and informal complaints of the customers	-0.0184	0.0315	0.174**	0.000259	-0.0277
	(0.0869)	(0.0812)	(0.0834)	(0.0888)	(0.0794)
CRM6: periodical review of relationship with the customers.	-0.0281	0.0628	0.0698	-0.0340	0.0968
	(0.0894)	(0.0837)	(0.0859)	(0.0845)	(0.0813)
Constant	3.260***	3.083***	2.920***	3.612***	2.618***
	(0.418)	(0.417)	(0.373)	(0.407)	(0.383)
Observations	202	202	202	202	202
R-squared	0.019	0.014	0.036	0.041	0.014

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 7 provides the findings for the impact of IS and IQ on the indicators of BPP. It shows that the factor of IS1 has its insignificant influence on all the factors of BPP, which says that sharing of propriety information with the supplier has no influence on performance of blue print

model in Indonesia. However, the factor of IS2 (informing the trading partners in advance of changing needs) has shown its positive and significant influence on BPP1, BPP2, and BPP3 respectively. It shows that there is a significant and direct impact of IS2 on first three measures of BPP under full sample of the study. In addition, remaining indicators of IS have shown their insignificant influence on the value for BPP items. For information quality, It is found that timely sharing of information with the supplier or IQ1 is positively and significantly impacting on BPP2 with the coefficient of 0.302 and standard error of 0.0988. It means that there is a direct influence on information sharing on the value of BPP2. However, the factor of IQ2 has shown its insignificant influence on all the dimensions of blue print performance measures. While IQ3 and IQ4 have shown a direct influence of 0.122 and 0.261 on BPP5, significant at 5 percent respectively. It means that with the adequate and reliable information sharing, there is a significant influence on BPP5 in the region of Indonesia. As per the explanatory power, Model 1 has shown a variation of 25.1 percent while Model 2 has a value of 16 percent approximately.

Table 7. Impact of IS on BPP

	(flexibility performance)	(resource performance)	(output performance)	(employee efficiency)	(efficiency performance)
VARIABLES	BPP1	BPP2	BPP3	BPP4	BPP5
IS1: sharing of propriety information with the supplier	0.0613	-0.0210	0.0584	0.0841	0.00277
	(0.131)	(0.130)	(0.123)	(0.130)	(0.123)
IS2: Informs its trading	0.744***	0.134**	0.223***	0.0957	0.0398

partners in advance of changing needs					
	(0.047)	(0.042)	(0.022)	(0.149)	(0.143)
IS3: keep informing trading partners about changing issues	-0.0961	-0.0581	-0.147	-0.0333	0.0539
	(0.121)	(0.121)	(0.117)	(0.121)	(0.109)
IS4: exchange of information with the supplier on regular basis	0.0608	0.144	0.0502	-0.212	-0.00564
	(0.141)	(0.130)	(0.138)	(0.139)	(0.125)
IS5: Trading partners share business knowledge	0.0621	-0.0277	0.121	0.129	-0.122
	(0.116)	(0.132)	(0.124)	(0.123)	(0.117)
IQ1: timely sharing of information	-0.130	0.302***	0.0528	0.0235	0.130
	(0.0944)	(0.0988)	(0.0848)	(0.103)	(0.0854)
IQ2: complete sharing of information	-0.00621	0.0223	-0.153	0.0390	0.155
	(0.117)	(0.113)	(0.130)	(0.134)	(0.125)
IQ3: exchanged information is adequate	0.0470	-0.154	-0.159	-0.0276	0.112***
	(0.127)	(0.134)	(0.114)	(0.142)	(0.019)
IQ4: exchanged information is reliable	0.145	0.0485	0.0358	-0.0581	0.261**
	(0.141)	(0.130)	(0.137)	(0.143)	(0.114)
Constant	2.720***	2.671***	3.793***	2.884***	2.551***
	(0.471)	(0.482)	(0.442)	(0.528)	(0.470)
Observations	202	202	202	202	202
R-squared	0.251	0.162	0.141	0.121	0.152

Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$

5. Conclusion and Recommendation

The cocoa national movement Program (actual change) in Noling Village in three types of activities namely the rejuvenation of cocoa *somatic embryogenesis* seedlings, side grafting, and intensification, were not able to be

implemented. Therefore, the cocoa national Program is not effective. The reason is the program was not implemented as the blueprint program procedur.

The impacts caused by the national program include increasing the skills of farmers in terms of cultivation of cocoa crops such as sanitation, pruning, and picking of fruit according to a predetermined time. Farmers are increasingly skilled in terms of propagation of entries, even farmers who have extensive gardens are given the opportunity to cultivate entres and market to local communities and some areas in Sulawesi.

To increase the production and quality of cocoa, the government needs to apply the management function in the cocoa national program through the recruitment of professional assistants, as well as involving community participation in the cocoa national program planning.

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