

# **“The Economic Value of CSR Activities”**

**~ from the Perspective of Civic-Society only ~**

by

**Universitas Paramadina**

**Presentation date 28 June 2010 by Sugeng Purwanto PhD., FRM**

**Based on Research by PA CSR Ltd.**

**“The Study on  
Economic Value per Unit of Corporate Social Responsibility  
in Indonesia”**

**Research team:**

- **Sugeng Purwanto, Ph.D., FRM**  
(coordinator & modeling developer)
- **Iin Mayasari, PhD.**  
(member and data collector)
- **Afifah Shihab (administrator)**

**Advisors:**

- **Anies Baswedan, Ph.D.**
- **Totok Soefijanto, Ed.D**

# Problem Definitions\*)

This research is developed based on these problems:

- There are many CSR activities in Indonesia but not all considered sustainable
- There are many CSR activities but are not well defined
- There is lack of understanding about the sustainability of CSR activities in Indonesia
- There is a need for a model to address the need of civic-society and express the benefit to them which corporations and government can use to take action with reference to those benefits.

\*) Universitas Paramadina to conduct research from the perspective of civic-society (recipient) only of selected CSR area. The perspectives of Corporations and Government are done by other Universities

# Research Objectives

- To list 30 CSR activities in Indonesia
- To develop quantitative model to measure economic value for the benefits of civic-society of selected CSR activities
- To model four CSR activities as a pilot quantitative model combined with qualitative analysis

# Selection of thirty CSR Activities

<b><u>CSR Activity</u></b>	<b><u>Category</u></b>
<b>SME trainings and developments</b>	<b>Community development</b>
<b>Partnership with farmers</b>	<b>Community development</b>
<b>Local infrastructure improvement</b>	<b>Economics development</b>
<b>Low cost residential development</b>	<b>Economics development</b>
<b>SME entrepreneurship, trainings, micro financing</b>	<b>Economics development</b>
<b>Physical facilities for education</b>	<b>Education</b>
<b>Scholarship</b>	<b>Education</b>
<b>Clean water and sanitation</b>	<b>\Environment</b>
<b>Environment preservation</b>	<b>Environment</b>
<b>Harmonization of business and environment</b>	<b>Environment</b>

# Selection of thirty CSR Activities

<u>CSR Activity</u>	<u>Category</u>
Land rehabilitation	Environment
Periodic maintenance of local roads	Environment
River normalization	Environment
Waste management	Environment
Water recycling (water and sanitation)	Environment
Water treatment project	Environment
Free health and medical services	Health
Free medical check-up	Health
Immunization for children	Health
Medical services for employees and their families	Health

# Selection of thirty CSR Activities

<u>CSR Activity</u>	<u>Category</u>
Mother and child health services	Health
Nutrition program	Health
Management competence	Human capital building
Library	Human capital building
Charity to the less fortunate families	Poverty alleviation
Food aids	Poverty alleviation
Poverty and disaster relief	Poverty alleviation
Public infrastructure development	Public facilities
Public roads maintenance	Public facilities
Human aids for daily needs and catastrophe	Socio-cultural

# **Quantitative Model Development**

**Economic Value per unit CSR Activity” (“EV CSR”) studied for four CSR activities:**

- CSR on education (scholarship)**
- CSR on education (student loan)**
- CSR on health**
- CSR on environment (water and sanitation).**

# CSR on Education (Scholarship)

## Model set-up.

Age of graduated from high school	18 years
Salary growth of high school graduated	5% annually
Under graduated (S1) schooling time	4 years
Salary of S1 graduated	IDR 30 million/ year
Salary growth of S1 graduated	15% annually

## S1 tuition fee and living costs

Year 0	IDR37.00million	PV(at 10%)	IDR37.00 million
Year 1	IDR38.85million	PV(at 10%)	IDR35.32 milion
Year 2	IDR40.79million	PV(at 10%)	IDR33.71 million
Year 3	IDR42.83million	PV(at 10%)	<u>IDR32.18 million</u>
Total	IDR159.47		IDR138.21

million

million

**IDR39.97**



# **CSR on Education (Scholarship)**

**EV CSR =**

**Annuities of Benefits/Annuities of costs \* 33years/4years**

## CSR on Education (Scholarship)

Income difference between high school graduated and S1 graduated (in IDR million).

	Annual Income High school Graduated	Annual Income S1 Graduated	Yearly Differential	Present Value of Difference (NPV) at 10% discount rate
Year 0	12.00	0	-12.00	-12.00
Year 1	12.60	0	-12.60	-11.45
Year 2	13.23	0	-13.23	-10.93
Year 3	13.89	0	-13.89	-10.44
Year 4	14.59	30.00	15.41	10.53
Year 5	15.32	34.50	19.18	11.91
Year 6	16.08	39.68	23.59	13.32
Year 7	16.89	45.63	28.74	14.75
Year 8	17.73	52.47	34.74	16.21
Year 9	18.62	60.34	41.72	17.70
Year 10	19.55	69.39	49.85	19.22

	Annual Income High school Graduated	Annual Income S1 Graduated	Present Value of Yearly Differential	Difference (NPV) at 10% discount rate
Year 28	47.04	858.76	811.71	56.29
Year 29	49.39	987.57	938.17	59.14
Year 30	51.86	1,135.70	1,083.84	62.11
Year 31	54.46	1,306.06	1,251.60	65.21
Year 32	57.18	1,501.97	1,444.79	68.43
Year 33	60.04	1,726.26	1,667.23	71.79
Year 34	63.04	1,986.35	1,923.31	75.28
Year 35	66.19	2,284.31	2,218.11	78.93
Year 36	69.50	2,626.95	2,557.45	82.73
Year 37	72.98	2,626.95	2,948.02	86.70
Total	1,292.51	22,960.96	21,668.45	1,373.66 (Sum of NPV) 143.54 (annuities of benefit)

# CSR on Education (Scholarship)

<u>Benefits</u>	<u>Costs</u>	<u>EV CSR</u> .
NPV	IDR1,373.66M	
Annuities of Benefit	IDR143.54M	
Accumulated benefit	IDR21,668.45	
	PV of tuition costs	IDR138.21M
	Annuities costs	IDR39.97M
	Accumulated costs	IDR159.47M

29.62 times

# CSR on Education (Student Loan)

Beginning of loan repayments	One year after graduated from S1
Interest rate of loan	5% annually
Installments	Installment of loan starting from year 5 with equal amounts of around 50% of income in year 5.

Repaid loan will be used to fund new student loans so that the fund is revolving. The sooner the repayment tenor, the more powerful the revolving fund. EV CSR of revolving fund is the sum of the economic value of the first loan and its consecutive revolving loans upon repayments.

$$\begin{aligned}
 \text{EV CSR}_{\text{revolving}} = & \\
 & (\text{Annuities of net income after loan repayments} / \text{Annuities of costs of education} * 33\text{years} / 4\text{years})_{\text{first fund}} + \\
 & \text{PV}[(\text{Annuities of net income after loan repayments} / \text{Annuities of costs of education} * 33\text{years} / 4\text{years})_{\text{second fund}} + \\
 & (\text{Annuities of net income after loan repayments} / \text{Annuities of costs of education} * 33\text{years} / 4\text{years})_{\text{third fund}} + \\
 & \dots + (\text{Annuities of net income after loan repayments} / \text{Annuities of costs of education} * 33\text{years} / 4\text{years})_{\sim \text{fund}}]
 \end{aligned}$$

# CSR on Education (Student Loan)

## Benefits

NPV

**IDR1,307.60M**

Annuities of Benefit

**IDR136.64**

Accumulated Benefits **IDR21,511.05**

## Costs

PV of tuition costs **IDR138.21M**

Annuities of costs **IDR39.97M**

Total accumm. Costs **IDR159.47M**

## EV CSR

**95.70 times**

# CSR on Health

Model set-up.

If school terminated:

Age of leaving school	15 years
Highest education	Preliminary school or junior high school
Expected unstable income after schooling	IDR3.6M/year (0.3M/month)
Income growth	0%

If school is not terminated (until high school):

Salary of high school graduated	12 million/year
Salary growth of high school graduated	5% annually
Terminal year for calculation	40 years (age of 55 years)

Costs of health care.

Hospital 3 months: $3 \times 30 \times \text{IDR}200,000$	18M
Medicine and doctor	<u>12M</u>
Total	30M

Economic value per unit CSR:

**EV CSR = Annuities of Benefits/Annuities of costs \* 37years/ 1 year**

# CSR on Health

## Benefits

NPV IDR180.17M

Annuities of Benefit IDR18.56M

Accumulated benefit IDR1,155.71

## Costs

PV of costs IDR36M

Annuities of costs IDR36M

Total (accum.) costs IDR36M

## EV CSR .

19.07 times

# CSR on Environment (water and sanitation)

## Model set-up.

Opportunity loss caused by bad water sanitation:

Salary of high school graduated after graduated	12 million/year
Salary growth of high school graduated	5% annually
Terminal year	27 years (age of 55 years)
Applied discount rate	10%

Costs of sanitation apparatus (water purification) equipments

Equipments costs	IDR1.5M
Annual operating costs	0

**EV CSR = Annuities of Benefits/Annuities of costs**



# CSR on Environment (water and sanitation)

<u>Benefits</u>		<u>Costs</u>		<u>EV CSR</u> .
PV	IDR218.93M	PV of costs	IDR1.5M	15.00 times
Annuities of Benefit	IDR22.55M	Annuities of costs	IDR1.5M	
Accum. benefit	IDR1,292.51			

# SUMMARY

<b><u>CSR Activity</u></b>	<b><u>Economic Value per Unit CSR</u></b>
<b>Education (scholarship)</b>	<b>29.62 times</b>
<b>Education (student loan)</b>	<b>95.70 times</b>
<b>Health</b>	<b>19.07 times</b>
<b>Environment (water sanitation)</b>	<b>15.00 times</b>

# Qualitative Models

Qualitative discussions cover three issues

1) Sustainability

2) Time of Effect

3) Overlapping Ratio.

These three categories are expected to provide additional explanation of the Economic Value per unit CSR and address the issues of urgency and importance.

# QUALITATIVE FACTORS

## Sustainability

- Frequency.
- Ownership.
- Self survival.

## Time of Effect

- Immediate.
- Slow.

## Overlapping Ratio

- Broad.
- Narrow.

# Sustainability

Sustainability is one of important factors in the CSR activity. A CSR activity considered sustainable will be preferable because of its impact to civic-society as recipient. Below is parameter developed to define sustainability of a CSR activity.

**Frequency.** The CSR activity which is sustainable will provide “repetition” impact to the subject. For instance, the scholarship will provide fund to the prospective students with two results: 1) The fund will create economic value which have power of multiplier effect of the fund disbursed; 2) The fund may be returned the funder so that the same CSR process can be repeated in the future for different subject (revolving fund).

# Sustainability

## Ownership.

The CSR activity which is sustainable will create sense of belonging which can be signed with contribution, such as: nurturing the existence of the respective CSR, multiplier (snowballing effect) of which the CSR activity attracts more and more people to do the similar process.

## Self survival.

The CSR activity which have its own power to survive. For instance, granting CSR activity as education support to children will be nurtured by the recipient to guarantee the activity can be completed. Other CSR activity such as tree plantation may be left unprotected if the government do not apply policy to protect them.

Student will build efforts so that the scholarship granting to her will be continued until her study accomplishment.

# Time of Effect

## Immediate.

If the objective of a CSR activity is realized within one year, such activity is considered immediate.

## Slow.

If the objective of a CSR activity is realized beyond one year, such activity is considered slow.

# Overlapping Ratio

**Broad**. If the CSR activity is inter-related with other CSR activities more than 50% of total number of activities selected, then such CSR activity is called broad.

**Narrow**. If the CSR activity is inter-related with other CSR activities less than or equal with 50% of total number of activities selected, then such CSR activity is called narrow.



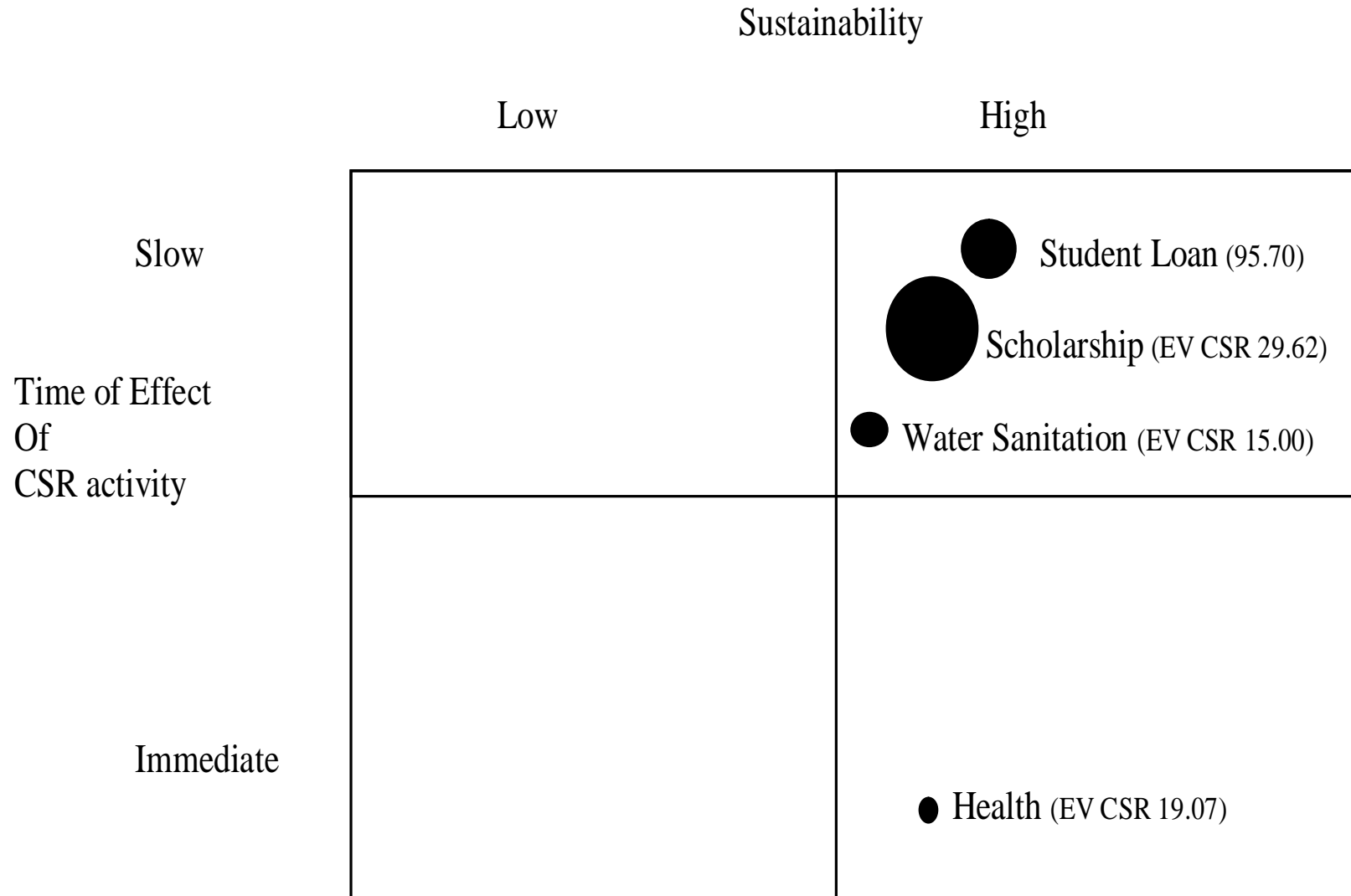
# Matrix Sustainability versus Time of Effect

		Sustainability	
		Low	High
Time of Effect Of CSR activity	Slow		<ul style="list-style-type: none"> <li>■ Student Loan (95.70)</li> <li>■ Scholarship (EV CSR 29.62)</li> <li>■ Water Sanitation (EV CSR 15.00)</li> </ul>
	Immediate		<ul style="list-style-type: none"> <li>■ Health (EV CSR 19.07)</li> </ul>

## Matrix of Sustainability vs Overlapping Ratio.

		Sustainability	
		Low	High
Overlapping Ratio of CSR activity	Narrow		<input type="checkbox"/> Health <input type="checkbox"/> Water Sanitation
	Broad		<input type="checkbox"/> Student loan <input type="checkbox"/> Scholarship

# Matrix Sustainability versus Time of Effect with Overlapping Ratio



## **Recommendation to Industry**

The recommendation to industry is based on long-term-mutual benefits between industry and civic-society through development of organic-links.

○If the industry chooses CSR activities which are not related directly with business activities, the CSR activity to be chosen based on Economic Value per unit CSR along with and high Overlapping Ratio.

○If the CSR activity chosen has direct relationship with the business, the CSR activities should have immediate Time of Effect and high sustainability (represented with high Economic Value per unit of CSR activity)

## **Recommendation to Regulator (Government)**

○In order to create an organic-link between industry and civic-society, the regulator should create a system which clearly explain those mutual benefits. Some activities should be mandatory but others should not. The creation of organic-link will ensure long-term sustainability of CSR activities.

○The government policy could intervene the implementation of CSR activities which provide sustainable benefits to civic-society by creating immediate benefit to corporations. Policies such as tax incentive and public announcement may create those mutual benefits. Immediate mutual benefits to corporations should be in place to ensure creation of organic-link between corporations and civic society so that CSR activities could become sustainable.