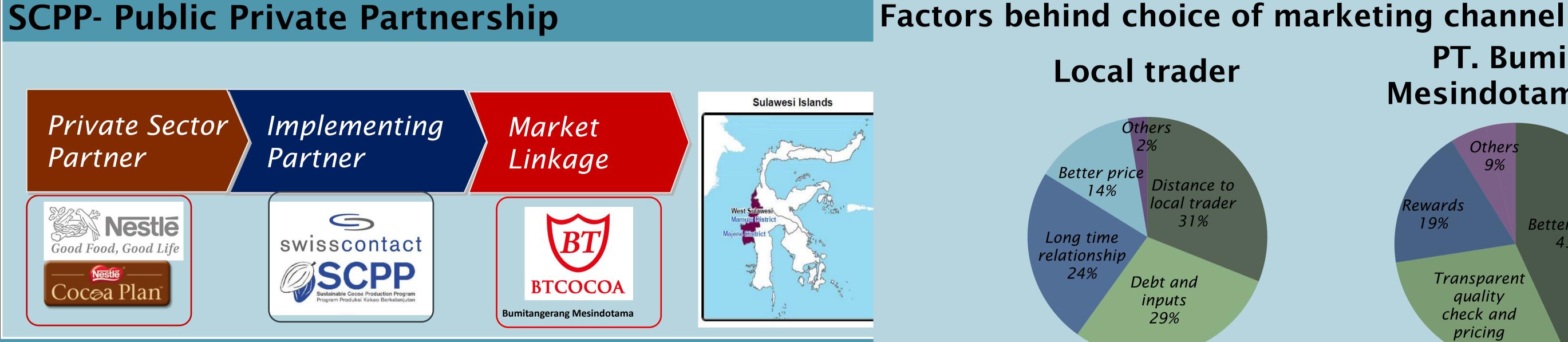
# Sustainable Cocoa Production Program (SCPP) Intervention in West Sulawesi, Indonesia: **Determinants and Cost Analysis of Premium Quality Cocoa Bean Production at Farm-level**

### Context

- Indonesia is the third largest cocoa producer in the world with 410,000 MT (in 2013/14)
- Indonesian beans are referred to as Free Air Quality (FAQ) or inferior quality in global trade
- Lack of fermentation at the farm-level, which enhances bean quality, is an important factor for inferior quality beans



# **Aim of the Research**

- To study the impact of SCPP intervention in West Sulawesi on the production of premium quality cocoa beans by individual farmers.
- To identify the critical factors influencing the production of quality cocoa beans at farm level.
- To assess the profitability of premium quality cocoa beans compared with the predominantly produced conventional quality cocoa beans.

### inputs 29%

Others

24%

Distance to

local trader

31%

Debt and

Informal relationships, interlocked credit-market and lack of demand for premium quality beans by local traders influence premium quality bean production. Farmers selling to BT Cocoa are free of debt from the local traders. Influence of credit on quality bean production is significantly proved with a p-value of 0.000 by Fisher's test.

**PT. Bumitangerang** 

Mesindotama (BT Cocoa)

Better price

43%

Others

9%

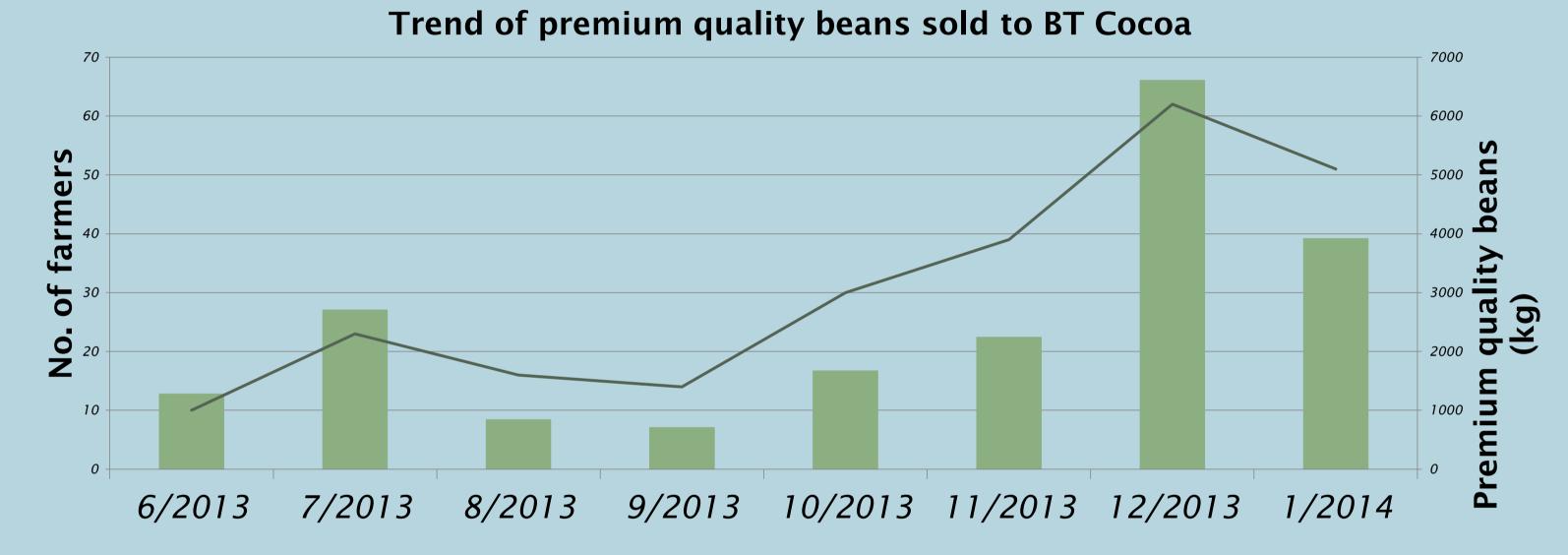
Transparent

quality

check and

Rewards

19%



## Methodology

## **Cocoa farmers**

Snowball sampling (starting at 9 different points) was used to gather information from 126 farmers (99 SCPP + 27 non-SCPP)

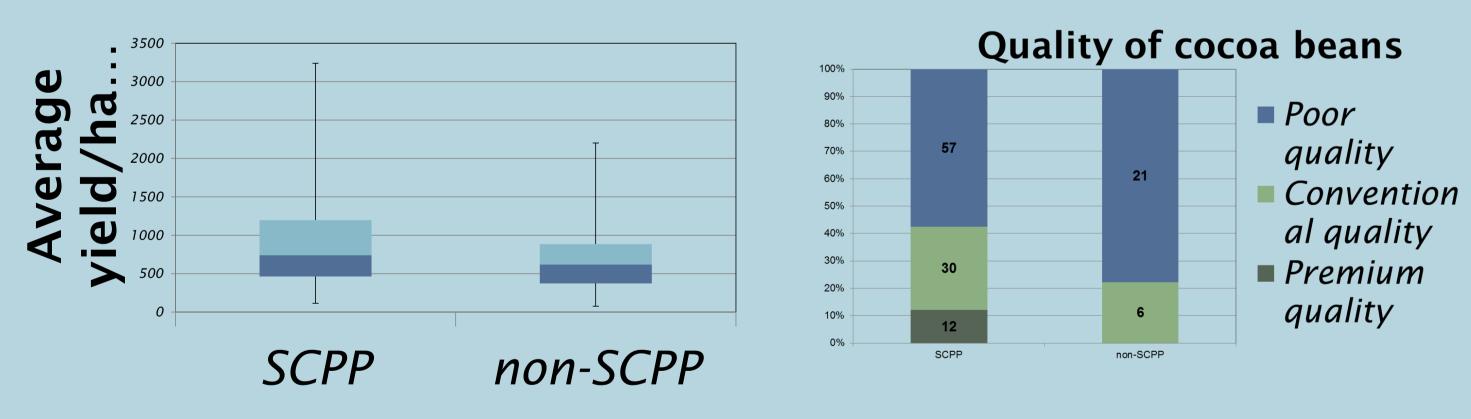
# Village Cocoa Collectors

Purposive sampling was used to gather information from 10 village cocoa collectiors through questionnarie with open and closed ended questions. In addition, a politician and BT Cocoa sustainability manager were interviewed.

Market Concentration Ratio is 0.20% (Open Market). Huge potential for BT Cocoa to attract the farmers to produce premium quality beans. Influence of market on quality bean production is significantly proved with a p-value of 0.000 by Fisher's test.

### Results

#### **Influence of SCPP intervention**



• Average productivity of SCPP supported farmers has increased. Premium quality cocoa beans are produced only by the SCPP supported farmers.

## **Cost Benefit** Analysis (CBA)

- Total Discounted Costs was higher for premium quality bean production (30.7 million IDR) than conventional quality bean (28 million IDR).
- Premium quality bean production is more profitable than conventional quality bean production and has a Nominal Benefit Cost Ratio (BCR), Net Present Value (NPV) and Internal Rate of Return (IRR) of 5.83, 100.3 million IDR and 4.97 respectively.
- Conventional quality bean production has the Nominal Benefit Cost Ratio (BCR), Net Present Value (NPV) and Internal Rate of Return (IRR) of 4.47, 92.4 million IDR and 4.48 respectively.

### **Conclusion and Recommendation**

SCPP intervention in West Sulawesi province is the pioneer and the facilitator to produce premium quality cocoa beans. Farmers fail to produce premium quality (unfermented) cocoa beans due to informal credit sources and subsequently lack of demand from the village cocoa traders. Premium quality cocoa beans are marginally profitable to the farmers than the conventional quality cocoa. The recommendations include collective value addition among farmers, and mandatory fermentation regulation. BT Cocoa could establish an inclusive supply chain by increasing the number of collecting stations (either fixed or mobile).

Bern University of Applied Sciences Η

Prema Dhanavel<sup>1</sup>, Ingrid Fromm<sup>2</sup>, Manfred Borer<sup>3</sup>

- 1&2-School of Agricultural, Forest and Food Sciences HAFL, Switzerland.
- > 3- Program Director, Sustainable Cocoa Production Program (SCPP), Swisscontact, Indonesia.