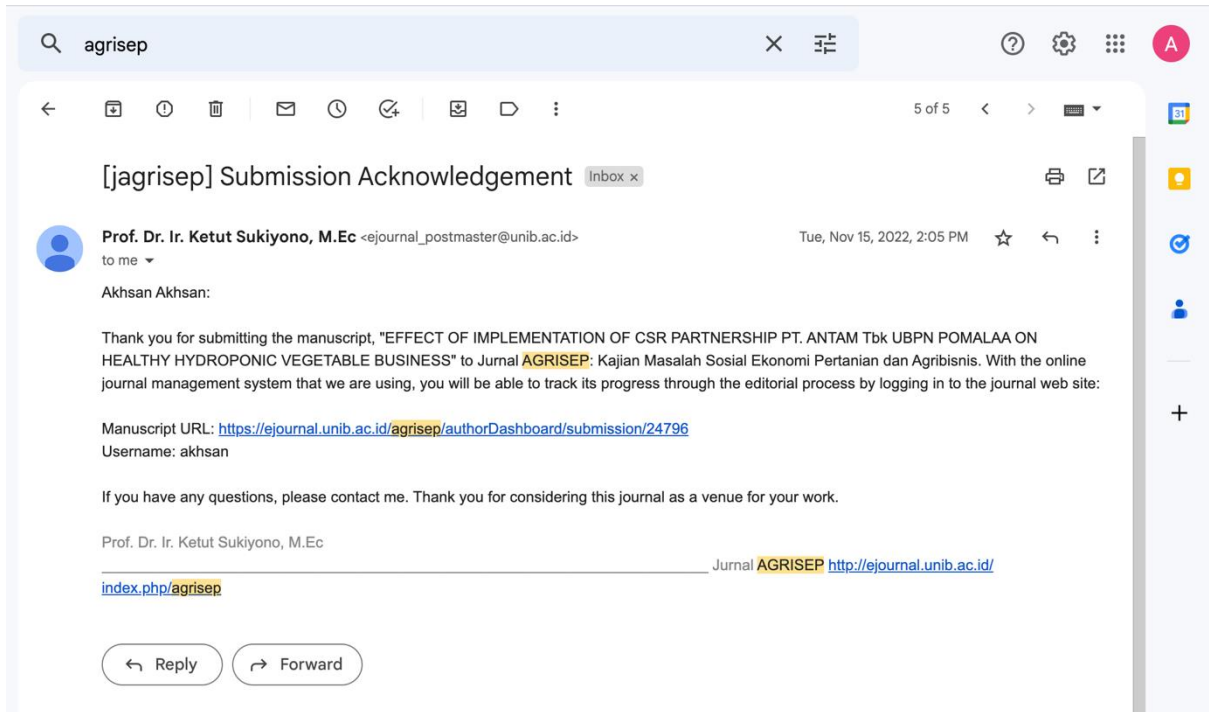


# EFFECT OF IMPLEMENTATION OF CORPORATE SOCIAL RESPONSIBILITY PARTNERSHIP PT. ANTAM POMALAA ON HEALTHY HYDROPONIC VEGETABLE BUSINESS

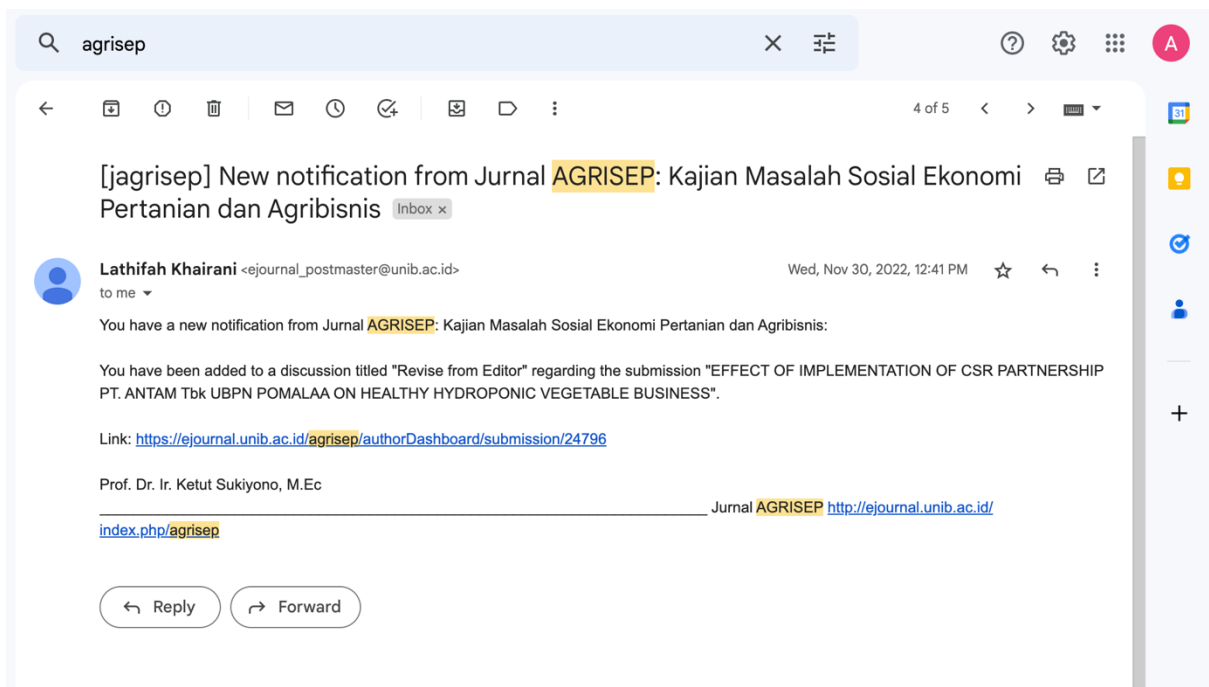
Akhsan, Arsy Mulyani, Didi Rukmana, Kanazawa Yuna and Nurlaela

\*Email correspondence : akhsandjalaluddin@gmail.com

## 1. Registered Mail (bukti mail register)



## 2. Submission



### 3. Reviewer/Editor Comments and Respons

**Feedback table for reviewers Round 1 (3.1)**  
**IN-DEPTH STUDY OF MULTIPLE CROPPING FARMING SYSTEMS: THE IMPACT ON COCOA FARMERS' INCOME**

Email correspondence : akhsandjalaluddin@gmail.com

Comment	Revision
Indonesia has provided about 1,951,270 hectares' area of cocoa plants (Fahmid et al., 2018). (What year ?)	In the period 2013-2017.
Cocoa is a perennial crop, why do the author did not include age of the tree? Why not include the variable of multiple cropping ?	The age of the cocoa trees of the respondents in this study were almost the same, because the farmers planted the trees at the same time. Therefore, the focus is on the role of agricultural extension in facilitating the needs of farmers..
Tribe or ethnic group? Better to use no of tribe or ethnic group	The correct use of the word is syllable. We have fixed it in the paper. The difference in ethnicity that is the research objective, whether information from other tribes affects farming behavior that has an impact on income.
If monoculture, what is the reason to include clove since your focus is on the cocoa?	Clove is a companion plant for cocoa. we made a comparison between farmers who only planted monocultures, namely cocoa and cloves. After that, we will see again how the farmers cultivate these two commodities simultaneously.
It does not make sense that multiple cropping produced higher production compared to monoculture. Please describe the monoculture and multiple cropping system in the field	Clove plants have many advantages for cocoa plants, some of the advantages as a shade plant and also the knowledge of farmers who cultivate polyculturally is better, in plant maintenance until harvest, so that the costs incurred are more efficient.

Comment	Revision
please explain your reason why in abstract R/C. Interpreted as demand compare to cost not revenue compare to cost.	Thank you, we have fixed it, in the abstract, the income should be greater than the costs incurred. Not demand.
please make the title of the article specifically describe the objective of the article and add content of the article show effect of implementation. If we talk about the effect of activities than we can't conclude the effect of activities based on firm or firm officer (as respondent). We better collect data and information from persons or community who using the capital form firm (PT Antam)	Implementation we mean in the title is how the company cooperates with business units in developing the business. The paper has explained the procedure for providing assistance from PT. Antam. After that the company provides funding and support in the form of hydroponic extension activities to increase sales value and assist marketing activities


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▶ <a href="#">Revision 2</a>	akhsan	-	0	<input type="checkbox"/>
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Please explain your answer. I await your further response in due course	lkhairani 2023-01-10 08:06 AM
<p>1. Reason why in abstract R/C. Interpreted as demand compare to cost not revenue compare to cost</p> <p>2. The title of the article does not specifically describe the objective of the article...where is the content of the article show effect of implementation. If talk about the effect of activities than we can't conclude the effect of activities based on firm or firm officer ( as respondent). We better collect data and information from persons or community who using the capital form firm (pt antam)</p> <p>Feedback+table+for+aauthors+AGRISEP (Akhsan).docx</p>	
<p>Dear reviewer</p> <p>We have attached our second revised</p> <p>110123 Feedback+table+for+aauthors+AGRISEP+(Akhsan).docx</p> <p>110123 Feedback+table+for+aauthors+AGRISEP+(Akhsan).docx</p>	akhsan 2023-01-11 02:27 AM

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[jurnalagrisep@unib.ac.id](mailto:jurnalagrisep@unib.ac.id)

**Acceptance Letter,**

January, 18<sup>th</sup> 2023

Dear Akhsan, Arsy Mulyani, Didi Rukman, Kanazawa Yuna, Nurlaela

Receipt Number: 52/AGRISEP/XVII/2023

We are pleased to inform you that, after the peer-reviewing process, your paper, "EFFECT OF IMPLEMENTATION OF CORPORATE SOCIAL RESPONSIBILITY PARTNERSHIP PT. ANTAM Tbk UBPN POMALAA ON HEALTHY HYDROPONIC VEGETABLE BUSINESS)" to publish in Jurnal AGRISEP: Kajian Masalah Sosial Ekonomi Pertanian dan Agribisnis, ISSN (Print) 1412-8837 ISSN (Online) 2579-9959.

We thank you for working with us. We hope that this cooperation would last and be a real contribution to humanity. Do not hesitate to contact us.

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Sincerely,

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**EFFECT OF IMPLEMENTATION OF CORPORATE SOCIAL RESPONSIBILITY PARTNERSHIP PT. ANTAM Tbk UBP POMALAA ON HEALTHY HYDROPONIC VEGETABLE BUSINESS**

<https://doi.org/10.31186/jagrisep.22.01.15-28>

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<p><b>Didi Rukmana</b></p> <p>Department of Socio Economic of Agriculture, Faculty of Agriculture, Hasanuddin University, Makassar, Indonesia</p>	<p><b>Kanazawa Yuna</b></p> <p>Regional Management Course, Graduate School of Agriculture, Saga University, Saga, Japan</p>
<p><b>Nurlaela</b></p>	



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## **EFFECT OF IMPLEMENTATION OF CORPORATE SOCIAL RESPONSIBILITY PARTNERSHIP PT. ANTAM Tbk UBPN POMALAA ON HEALTHY HYDROPONIC VEGETABLE BUSINESS**

*Pengaruh Implementasi Corporate Social Responsibility Partnership PT. Antam Tbk UBPN Pomalaa pada Bisnis Sayur Hidroponik Sehat*

*Akhsan<sup>1)</sup>; Arsy Mulyani<sup>2)</sup>; Didi Rukman<sup>3)</sup>; Kanazawa Yuna<sup>4)</sup>; Nurlaela<sup>5)</sup>  
<sup>1),2),3)</sup>Departement of Socio Economic of Agriculture, Faculty of Agriculture,  
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### **ABSTRACT**

*Hydroponics is an agricultural cultivation technique that uses water as a planting medium and with a special installation system that minimizes the use of chemicals in the cultivation process. Hydroponic healthy vegetable business is a hydroponic business located in Pomalaa, Southeast Sulawesi. Previously, this business operated alone in terms of marketing and cultivation which resulted in not optimal income obtained with existing resources. Existence of PT Antam operating in the Pomalaa area is expected to help hydroponic businesses with the concept of Corporate Social Responsibility (CSR). PT Antam has as a form of their responsibility towards the surrounding environment where the company is located. This research was conducted to determine the effect of the implementation of CSR partnership PT. Antam Tbk for the Hydroponic Healthy Vegetable business using a quantitative descriptive analysis research method, namely by observing the research location and processing data using the R/C formula. The results of this study indicate that  $R/C > 1$ , which means that the demand is greater than the costs incurred, or in other words, every IDR 1 cost incurred*

*can generate revenue of IDR 3.85, so it can be concluded that the Hydroponic Healthy Vegetable business is feasible for developed and generate profits for farmers.*

**Keyword:** *CSR, hydroponics, profits*

## ABSTRAK

*Hidroponik merupakan suatu teknik budidaya pertanian yang menggunakan air sebagai media tanam dan dengan sistem instalasi khusus yang meminimalisir penggunaan bahan kimia pada proses budidaya. Usaha sayur sehat hidroponik merupakan usaha hidroponik yang berada di Pomalaa, Sulawesi Tenggara. Sebelumnya usaha ini bergerak sendiri dalam hal pemasaran dan budidaya yang menyebabkan belum optimalnya pendapatan yang diperoleh dengan sumber daya yang ada. Adanya PT Antam yang beroperasi di wilayah Pomalaa diharapkan dapat membantu usaha hidroponik dengan konsep Corporate Social Responsibility (CSR). PT Antam mempunyai sebagai bentuk tanggung jawab mereka terhadap lingkungan sekitar dimana perusahaan itu berada. Penelitian ini dilakukan untuk mengetahui pengaruh pelaksanaan kemitraan CSR PT. Antam Tbk terhadap usaha Sayur Sehat Hidroponik dengan menggunakan metode penelitian analisis deskriptif kuantitatif yaitu dengan melakukan observasi pada lokasi penelitian dan mengolah data dengan menggunakan rumus R/C. Hasil Penelitian ini menunjukkan bahwa  $R/C > 1$  yang artinya permintaan lebih besar dari biaya yang di keluarkan, atau dengan kata lain setiap Rp, 1 biaya yang dikeluarkan mampu menghasilkan penerimaan sebesar Rp 3.85, sehingga dapat disimpulkan bahwa usaha Sayur Sehat Hidroponik layak untuk dikembangkan dan menghasilkan keuntungan bagi para petani.*

**Kata Kunci:** *CSR, hidroponik, profit*

## INTRODUCTION

Partnership approach apart from developing certain technologies also empowered farmers in terms of enhanced access to technology and market (Ponnusamy, 2013). Partnership is basically a collaboration between two or more parties accompanied by coaching and development by taking into account the principles of mutual need, mutual strengthening and mutual benefit. The purpose of the partnership is to have a positive impact on the partnering parties, including increasing income and improving the quality of partner community resources. One fruitful area of cross-disciplinary partnership is in bringing together modelling communities from different fields (Vermeulen et al., 2012)

Attention has been focused on the aspects of Corporate Social Responsibility (CSR), related to agribusiness, as noted by Luhmann & Theuvsen (2016) Luhmann and Theuvsen (2016). They argue that the follow-up studies should be aimed particularly at the increasing the value of the CSR

(Popova et al., 2019). CSR is continuously growing and businesses are struggling to comply and maximize on its benefits (Razafindrambinina & Sabran, 2014), CSR is an action or concept taken by the company (according to the company's ability) as a form of their responsibility to the surrounding environment where the company is located. Examples of the forms of responsibility vary, ranging from carrying out activities that can improve community welfare and environmental improvement, giving scholarships for underprivileged children, provision of funds for the maintenance of public facilities, donations for village/community facilities that are social and useful for the community at large, especially people who are around the company environment CSR presents a premier channel through which farmers and agribusiness actors may discharge their ethical responsibilities (De Olde & Valentinov, 2019). CSR continues to evolve from a concept, to a conceptual framework that includes dimensions that are categorical and potentially measurable (Morgan et al., 2018).

CSR program can have a positive impact on hydroponic vegetable business owners, because the programs carried out by CSR are in the form of giving or distributing funds as well as technical guidance through extension activities which can be used as capital to build a business that provides benefits and benefits to others. CSR Pyramid is probably the most recognized model of CSR, with its four levels showing the relative significance of economic, legal, ethical and philanthropic responsibilities respectively (Uduji et al., 2021). CSR implementation at PT. Antam is more of an effort to meet the needs of the community and the interests of various parties. This is a consequence of the impact it has on the physical and social environment as is generally accepted in mining company operations (Meisanti et al., 2012). This is realized in the form of meeting the basic needs of the community around the mine in terms of education, health, employment, social infrastructure and so on.

Agricultural enterprises provided a wide range of social services in rural areas such as transport infrastructure, construction, cultural, kindergarten and healthcare facilities, different services for the village population, which were subsidized by the state (Levkivska & Levkovych, 2017).

Community Development Program (Comdev) is focused on six areas of sustainable community development programs, including a). increasing access and quality of health providers, b). increasing access and quality of health services, c). local economic improvement, d). preservation social and cultural values, e). environmental conservation and rehabilitation and f). strengthening community institutional capacity and local government.

Based on a commitment to social responsibility that is in line with the company's mission, namely carrying out a sustainable business, PT. Antam Tbk pays attention to three important aspects of the Triple Bottom Line (profit, people, planet) namely the management of environmental, social and

environmental impact aspects of the company's operations which include managing aspects of relations with the community, compliance with regulations and economic impacts on society as outlined through programs the company's CSR program itself.

Hydroponic healthy vegetable business is one of the hydroponic vegetable suppliers in Pomalaa, Southeast Sulawesi. The resources owned by the company in terms of marketing are still limited, so that revenue is still not optimal. The existence of PT. Antam, which is located around business units, can become a new market, as a form of responsibility to the surrounding community. Organic vegetables are vegetables which during their maintenance activities are cultivated without using chemicals. This makes organic vegetables considered healthier and have good business prospects alternative for limited agricultural land and can be carried out on low fertility land and areas densely populated. Commodities that can be selected in hydroponic cultivation are endive, green curly lettuce, red curly lettuce, lollo rossa, butterhead, christine, packcoy, monde and Romain lettuce which are rarely cultivated by conventional farmers (Kunto & Budiana, 2014).

Hydroponic cultivation is more environmentally friendly because it does not use pesticides, does not leave residue and requires more efficient water and plants grow faster. The weaknesses of the hydroponic cultivation system include the initial investment is quite expensive, the workforce must be trained and the market selection must be right (Kunto & Budiana, 2014). Hydroponic technology has many advantages (Roidah, 2014).

Lettuce is not native to Indonesia, but can be cultivated in Indonesia. Lettuce plants grow optimally at an air temperature of 15-25 °C (Setyaningrum & Saporito, 2012) with an optimal humidity of 80-90%. Lettuce can grow at an altitude of 50-2,200 m above sea level, although lettuce is able to grow in the lowlands but the results are not good. This plant is also a plant that requires moderate light (Wigjopranoto et al., 2015). The light requirement of lettuce is between 200-400 footcandle.

A person is categorized as consuming enough vegetables if he eats at least 5 servings of vegetables per day for 7 days a week and is categorized as lacking and categorized as less if he consumes vegetables less than these provisions. It can be concluded that vegetables and fruits are recommended for daily consumption. Along with the development of the business after partnering, the problem that is often faced is the marketing strategy that often affects the company income and also weather factors that affect the growth of vegetables. So that a question arises How the Effect of CSR Partnership Implementation PT. Antam Tbk UBPN Pomalaa Against Hydroponic Healthy Vegetable Business.

## RESEARCH METHOD

This research was conducted in Kolaka Regency, Southeast Sulawesi from February to March 2022. The selection of research locations was based on the consideration that the potential for hydroponic cultivation is very widespread in Kolaka Regency. In addition, Kolaka Regency is also the location of the respondent's residence in this study.

The research method used to collect data is relevant to the problems discussed, namely:

1. Observation: According to (Manalu, 2019) observation is a way of collecting data by observing directly in the field. Observation is data collection which is done by directly observing the Kolaka Hydroponic Community and PT. Antam.
2. Interviews: According to (Astuti, 2018) interviews are data collection techniques that are carried out through face-to-face and direct questions and answers between data collectors and researchers to informants or data sources. Interviews were carried out, namely data collection carried out by giving several questions directly directly to the respondent concerned. Informants for this study were selected using a purposive sampling method, namely owner of a hydroponic business and head of the CSR division of PT. Antam
3. Documentation: According to (Astuti, 2018) documentation is a way to provide pictures that occur at the research site by using accurate evidence from recording sources. Documentation is done in the field, namely by taking some pictures needed during the research.

Analytical method used in this research is quantitative descriptive analysis. The quantitative descriptive approach method is a research method that aims to explain an event or an event that occurs in the form of meaningful numbers. In this study, this method was used to find out how much income hydroponic lettuce cultivation was in partnership with CSR PT. Antam Tbk, in the following manner:

1. Farming Business Analysis: This analysis is to calculate the profit by identifying the total revenue minus the total cost. Total revenue or total revenue is obtained from the price multiplied by the number of products, while the total cost or total cost is obtained from the calculation of the sum of fixed costs and variable costs used in cultivation. Profit calculation method seen is per harvest. Profits are obtained based on the results of the calculation of the total revenue minus the total cost. Farming is said to be profitable if it gets a profit of more than zero ( $\pi > 0$ ).

$$\pi = TR-TC$$

Notes:  $\pi$  = Profit (Rp/Ha), TR = Total Revenue (Rp/Ha), and TC = Total Cost (Rp/Ha)

2. Farmers' income is analyzed using R/C analysis which shows the balance between farming costs and income generated in rupiah (IDR) (Tawakal et al., 2019). Comparison between Revenues and Costs This analysis is calculated to determine the comparison of revenues with costs. Where if the R/C value of farming is greater than one ( $R/C > 1$ ) then farming is considered profitable and feasible to be developed, on the contrary if the R/C value of farming is less than one ( $R/C < 1$ ) then farming is considered unprofitable.

$$R/C = TR/TC$$

$$R/C = \frac{PY}{(FC + VC)}$$

Notes:  $R/C$  = Revenue cost ratio,  $P_y$  = Output price,  $FC$  = Fixed Cost,  $VC$  = Variabel Cost,  $Y$  = production quantity,  $TR$  = Total Revenue, and  $TC$  = Total Cost

## RESULT AND DISCUSSION

### Overview of Research Locations

Healthy Vegetables Hydroponics is one of the lettuce cultivation businesses located in Kolaka Regency which is located at Jalan Badewi No. 1 Village of Balandete. This business is incorporated in the Kolaka Hydroponic Community, which has 14 members consisting of 3 business owners of the Jaya Wundulako Alam Salad House, Herman's Salad House and Hydroponic Healthy Vegetables. In this business has 2,000 lettuce planting holes. Lettuce is one of the horticultural commodities that has not been registered in the national vegetable commodity production. Lettuce is not included in the main commodities, both the priority scale and the main vegetable commodity, but lettuce has the potential to be developed in Indonesia because it has quite bright economic prospects (Masitah et al., 2021).

Collaboration system that exists between PT. Antam Tbk and the Hydroponic Healthy Vegetable Business, namely the Partnership Program where the partners enter into an agreement in the form of a contract, providing land, facilities and labor, while the partner companies provide costs and capital. The Cooperation Contract that has been agreed upon by CSR PT. Antam Tbk with the Hydroponic Healthy Vegetable business for 5 years.

Funds that have been channeled to the owner of the Hydroponic Healthy Vegetable business are then developed to build a hydroponic lettuce cultivation business. Not only that, every month the owner of the Hydroponic Healthy Vegetable business must also provide as many as 1,500 lettuce trees of which 50 pcs are sold to Antam's UKM, 50 pcs are sold to Pawon Ayu Restaurant, 80 pcs are sold to mobile vegetable sellers, 20 pcs are sold to Burger Fun , and 300 pcs sold to the market through the Kolaka Hydroponic Community shop.

### **CSR Partnership PT. Antam Tbk with Hydroponic Healthy Vegetable Business**

Responsibility of a company as a public organization, which hopefully gives benefit to a social community and environment, especially the agricultural sector is more active to implement CSR (Syamni, 2018). The implementation of Antam's partnership and community development program is carried out as a manifestation of the implementation of the principles of Good Corporate Governance (GCG) and corporate social & environmental responsibility based on assistance to entrepreneurs from economically weak groups, cooperatives, and the community as stipulated in the Law of the Republic of Indonesia No. 19 of 2003 concerning State-Owned Enterprises. partnership and community development program management. Kolaka Hydroponic Community in Kolaka Regency partners with CSR PT. Antam Tbk on the basis of their own will because of the guarantee of market certainty and credit for production facilities from CSR PT. Antam Tbk for business actors. The company also provides guidance to business actors from the beginning of planting to post-harvest. This guidance is intended to monitor all activities of business actors related to the management of hydroponic lettuce cultivation, with the aim that business actors can produce lettuce of good quality in accordance with the wishes of the company. Partnerships function to strengthen sustainable development that can increase the resilience and welfare of the surrounding community (Famiola & Adiwoso, 2016; Zainuddin Rela et al., 2021).

CSR is implemented in many ways depending on the company's resources (Desfiandi et al., 2019), to become a CSR partner participant of PT. Antam Tbk, a hydroponic business actor in Kolaka Regency only needs to join or become a member of the Hydroponic Community, when the business actor has become a member of the Hydroponic Community, the business actor will immediately become a partner of CSR PT. Antam Tbk. Partnership pattern must also pay attention to how the culture of the surrounding community is in order to avoid conflicts that will occur (Rudito, 2014). Based on the results of interviews that have been carried out between researchers and respondents, data is obtained about how the partnership pattern is carried out by the Hydroponic Healthy Vegetable business with CSR PT. Antam Tbk which can be presented in the figure 1.

Based on the Figure 1, it can be explained that the partnership program budget implemented by CSR PT. Antam Tbk 2% of the funds are taken from processing profits. Then the company provides regulations to business actors by making a proposal for submitting a partnership, after the proposal is submitted to the company, then the CSR selects the proposal and evaluates the type of business, place of residence and condition of the partner. Partners who have passed the selection then sign a partnership contract for 5 years. In the final stage, the distribution of funds is done through Bank Mandiri.

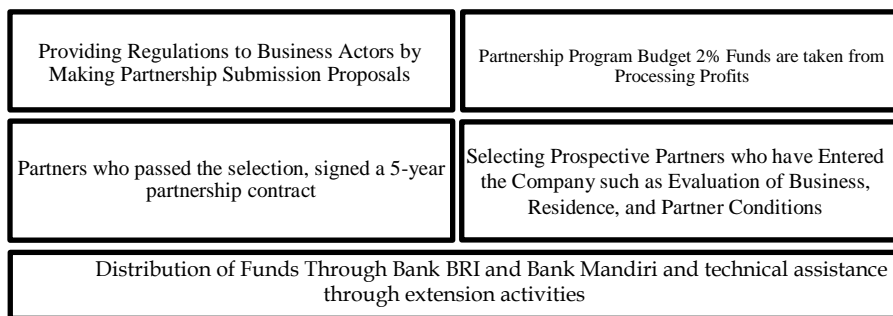


Figure 1.  
How The Partnership Pattern Is Carried Out By The Hydroponic Healthy Vegetable Business With CSR PT. Antam Tbk

To this point, the partnership between CSR PT. Antam Tbk with Hydroponic Healthy Vegetables is still running, although there are several problems that become a weakness in this partnership pattern. The problems that arise during the course of this partnership pattern, namely:

1. Lettuce marketed to UKM Antam is not completely sold out. The supply of lettuce contained in Antam's UKM is not fully in the interest of buyers. Sometimes there are some unsold lettuces that rot and are not fit for consumption. This is due to because of the lack of customer interest in shopping at Antam SMEs located in Pomalaa District.
2. Profit taking by CSR PT. Antam Tbk which handles the marketing aspects of the product is too large so that it is felt to be unfair by business actors. Lettuce sold by business actors to UKM Antam for IDR 10,000/pc. Meanwhile, UKM Antam sells the lettuce to consumers for IDR 12,500/pc. In addition, lettuce that has good quality and not good does not have a price difference. The company still buys from business actors for IDR 10,000/pc. This makes the profits obtained by business actors are not maximized.

The partnership pattern that has been established is quite helpful for the Hydroponic Healthy Vegetable business when the business had not partnered with CSR PT Antam Tbk. Funding and outreach activities obtained from CSR PT. Antam Tbk through the Kolaka Hydroponic Community is quite helpful for business actors in setting up their businesses. Socialization activities carried out were in the form of extension activities about hydroponic cultivation. Agricultural extension activities have a very strategic position in the process of agricultural development, especially in developing the capabilities, knowledge, skills and attitudes of the main actors and business actors (Mujiburrahmad et al., 2020).

### Profit Approach

Companies are formed with the aim of generating optimal profits (Butar & Hidayat, 2021). The profit approach in hydroponic lettuce cultivation is to classify the total revenue and total costs of cultivation which consist of fixed costs and variable costs. Revenue from hydroponic lettuce cultivation can be calculated from the yield of the average productivity of lettuce harvest per acre multiplied by the average price obtained throughout the year for each kilogram of lettuce. Detailed calculations can be seen in Table 2.

Table 2. Profits in One Growing Season

Number	Description	Unit	Value
1	Productivity	Kg/are	166.67
2	Price	IDR/Kg	35,000
3	Revenue	IDR	5,833,450

Source: Primary Data Processed, (2022)

In one production process, it takes 25 to 30 days. However, under certain conditions, harvesting can be done when the plants are about 40 to 45 days after sowing (Umikalsum, 2020). In one harvest season, business owners must provide 1,500 lettuce trees of which 50 pcs are sold to Antam UKM, 50 pcs are sold to Pawon Ayu Restaurant, 80 pcs are sold to mobile vegetable sellers, 20 pcs are sold to Burger Fun, and 300 pcs are sold to the Market through the Kolaka Hydroponic Community shop.

Lettuce farmers cultivate lettuce on an area of 1.2 acres. On this land, an average of 2000 lettuce seedlings are planted in 2,000 available planting holes with an average productivity of 1 kg / 3 pcs of lettuce. So that on an area of 1.2 acres the average production amount is 166.67/kg. the price of lettuce does not change every day because the average selling price of lettuce in the market is IDR 10,000/pc. The calculation results show that lettuce farmers get revenue from the sale of the lettuce harvest of IDR 5,833,450/are per 1 planting season.

Profits are obtained from the revenue minus the total cost of farming. This lettuce cultivation business incurs two types of costs, namely fixed costs and costs variables. Some of the costs incurred can be seen in detail in Table 2. Hydroponic Healthy Vegetable business actors who cultivate lettuce only pay a fixed fee of IDR 300,000 per 1.2 acres per season where the cost comes from depreciation of equipment such as pumps and pipes.

Table 3. Cost Components in One Growing Season

Number	Components	Cost	Amount	Unit	Price (IDR)	Amount (IDR)
Cost Permanent						
	Cost depreciation					
1	equipment		1	Ha	300,000	300,000
	Amount					300,000
Cost Variable						
Seeds						
2	Seeds Lettuce		1	packaging	65,000	65,000
	Amount					65,000
Drugs						
3	Nutrition A		5	Liter	10,000	50,000
4	B nutrients		5	Liter	10,000	50,000
	Amount					100,000
Use of Other Inputs						
5	Rockwool		1	Ball	950,000	950,000
6	Plastic Packing		1	Roll	95,000	95,000
7	Slotips Vegetable		1	Roll	5,000	5,000
	Amount					1,515,000
	Total Cost					5,833,450
	Cost Per kilogram					35,000

While the variable costs incurred in this lettuce cultivation business include the cost of seeds, drugs and the use of other inputs. Lettuce farmers cultivate lettuce of the same variety. The price of lettuce seeds that lettuce farmers use is IDR 65,000/pack. In an area of 1.2 acres requires 1 pack of lettuce seeds. The nutrients used are type A mix and B mix with as much as of each 5 liters. The price per liter of nutrition is IDR 10,000. In cultivating this hydroponic lettuce, business actors use workers such as families who help in the harvesting process. While the cost of using other inputs such as the cost of purchasing Rockwool is IDR 950,000/1 ball. Purchase of plastic packing IDR 95,000/roll and the purchase of Slotip Sayur is IDR 5,000/roll.

The total cost of lettuce cultivation per 1.2 acres per 1 planting season is IDR 1,515,000. If the productivity of lettuce per 1.2 acre is 166.67 kilograms then the total cost for each kilogram of lettuce is IDR 35,000. This lettuce profit is obtained from revenue minus costs, which is IDR 5,833,450. And the cost of

cultivation is IDR 1,515,000. So that the profit in the amount of IDR 4,318,450. Per 1.2 acres per 1 planting season, this shows that the profit is above 0, which means that lettuce cultivation provides benefits for farmers. Lettuce is a vegetable that has economic value compared to other leafy vegetables (Novitasari et al., 2020).

### **Comparison Between Revenue and Cost**

Revenues and costs of hydroponic lettuce cultivation business can be calculated R/C ratio, namely:

$$R/C \text{ ratio} = \frac{\text{IDR } 5,833,450}{\text{IDR } 1,515,000} = 3.85$$

The estimation results show the number 3.85 which indicates that the  $R/C > 1$ , which means that the revenue is greater than the costs incurred, or in other words, every IDR. 1 of the costs incurred is able to generate revenues of IDR. 3.85, so it can be concluded that the Hydroponic Healthy Vegetable business is feasible to be developed and generate profits for farmers. And the partnership implemented by CSR PT. Antam Tbk provides decent benefits for Hydroponic Healthy Vegetable business players.

## **CONCLUSION AND SUGGESTION**

### **Conclusion**

Calculation results show the number 3.85 which indicates that  $R/C > 1$ , which means that the revenue is greater than the costs incurred, or in other words every IDR 1 the costs incurred are able to generate revenue of IDR 3.85, so it can be concluded that the Hydroponic Healthy Vegetable business is feasible to develop and generate profits for farmers. And the partnership implemented by CSR PT. Antam Tbk provides a decent profit for the Hydroponic Healthy Vegetable business.

### **Suggestion**

Cultivating vegetables hydroponically is more efficient than conventional vegetable cultivation, this can be seen from the use of large land areas and their productivity. So that the hydroponic system is very suitable to be applied as an effort in implementing urban farming systems.

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