

FINANCIAL FEASIBILITY ANALYSIS OF *VANDA DOUGLAS* ORCHID ORNAMENTAL PLANT BUSINESS IN GUNUNG SINDUR DISTRICT, BOGOR REGENCY

Siti Rochaeni¹, Titik Inayah², Wildha Ainun Ritonga³

^{1,2,3} Department of Agribusiness, Faculty of Sains, and Technology, UIN Syarif Hidayatullah
Jakarta

Email: wildhaainunr@gmail.com

Corresponding Author

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Abstract

Ornamental plants are widely used to beautify yards and gardens. In addition, many types of ornamental plants are used as businesses that generate profits. Ornamental plant business activities have great potential to be developed by an effort to grow the national and regional economies. One of the ornamental plants that have the potential to be developed is orchids.

The objectives of this study are calculating the business costs of *vanda douglas* orchid ornamental plants in Gunung Sindur District. Analyzing the business income of *vanda douglas* orchid ornamental plants in Gunung Sindur District. Analyzing the business prospects of *vanda douglas* orchid ornamental plants in Gunung Sindur district using, B/C Ratio, *Break Event Point* (BEP), *Payback Period* (PP), *Net Present Value* (NPV), and *Internal Rate of Return* (IRR). This research was conducted on orchid farmers in Gunung Sindur District with a population of 30 respondents. The data used in this study are primary data and secondary data. The data and information that has been collected are analyzed qualitatively and quantitatively which is processed with the help of *Microsoft Excel Software*.

The results showed that the business costs carried out by *vanda douglas* orchid farmers in Gunung Sindur District during the planting season amounted to Rp. 162,775,000, consisting of fixed costs of Rp. 46,574,400 and variable costs of Rp. 143,075,000. Income Rp. -33,775,000, receipts Rp. 129,000,000. The B/C value ratio of -0.20 indicates that the B/C value ratio is less than zero, the BEP of production volume is 1,627 bunches and the BEP price is Rp. 126,182, the *Payback Period* of -4.16 years the value of the *Payback Period* shows that the *vanda douglas* orchid business is negative, which means that farmers have not been able to return investment because they are losing money. Then the NPV value of the orchid business was Rp. -194,401,493 and was negative and the IRR value was 1.68% < 2%. So, it can be concluded that the *vanda douglas* orchid business carried out by farmers in Gunung Sindur District does not provide benefits and is not feasible to run in the future.

Keywords: Feasibility, Revenue, Business, Angrek *Vanda Douglas*

INTRODUCTION

The development of ornamental plant production from 2014 - 2018 orchids have the highest amount of production with an average development of 23.29 percent or Rp.

4,027,874.22 annually. This suggests orchid plants have the potential to be developed, compared to other ornamental plants. Orchids belong to the group of ornamental plants that have advantages over other types of flowers, the advantages of which are color, shape, size, texture, and many variations, besides that floriculture commodities such as orchids have aesthetic value. According to the Central Statistics Agency (2018), there are three largest contributors to orchid production in Indonesia, namely the provinces of West Java, Banten, and East Java. West Java Province is one of the largest contributors to orchids. One of the orchid production centers in West Java, namely Bogor Regency, Bogor Regency is a productive area in producing orchids because it is supported by good natural conditions for orchid cultivation. Bogor Regency has 40 sub-districts (Renstra Gunung Sindur District, 2018: 17) one of which is Gunung Sindur District which is divided into 10 villages, including Rawakalong Village and Cibinong Village, which are the centers of orchid ornamental plants. Orchids that are widely cultivated or cultivated in Gunung Sindur District are *vanda douglas orchids*, because they do not require large capital and are also easy to care for.

According to interviews from farmers, orchid cultivation is a business that has declined to be passed on to later generations. Along with the times the land decreased to be used as housing, which had an impact on reducing the number of farmers, because they did not have land. Farmers who did not have land eventually changed professions. The orchid business in Gunung Sindur District is homogeneous in terms of the characteristics of the business owned and the place where orchid farmers try. And besides that, in February 2020 until now, there was a Covid 19 pandemic in Indonesia. The government made a policy by imposing Large-Scale Social Restrictions (PSBB) resulting in reduced sales and impacting the income received by farmers. Declining sales can affect the income received by farmers and vice versa.

Based on the problems described, this study aims to 1) Calculate the business costs of *vanda douglas* orchid ornamental plants in Gunung Sindur District, 2) Analyze the business income of *vanda douglas* orchid ornamental plants in Gunung Sindur District, 3) Analyze the financial feasibility of *vanda douglas* orchid ornamental plant business in Gunung Sindur district.

RESEARCH METHODS

Research Time

This research was conducted in Gunung Sindur District, Bogor Regency with consideration of Gunung Sindur District. This research was conducted on 30 orchid farmers located in Rawakalong Village and Cibinong Village. This research was conducted from June – July 2020.

Data Types and Sources

The data used in the study are primary data and secondary data. Primary data were obtained through direct observations in the field and interviews using questionnaires addressed to *vanda douglas* orchid farmers in Gunung Sindur District, Bogor Regency. Secondary data in the form of data on the geographical condition of the research area.

Data Analysis

Business Income Analysis

Income is the difference between receipts and all costs, it is stated in the following formula:

$$L = TP - TB$$

Description:

L = *Vanda Douglas* orchid business profit in Kec. Gunung Sindur (IDR)

TP = Total acceptance of *vanda douglas* orchid business in Kec. Gunung Sindur (IDR)

TB = Total cost of *vanda douglas* orchid business in Kec. Gunung Sindur (IDR)

Profit Ratio Analysis (B/C Ratio)

Benefit Cost Ratio (B/C ratio) is commonly used in business feasibility analysis, which is a comparison between net cash and total costs incurred. (Cahyono, 2007: 99).

$$\text{B/C Ratio} = \frac{\text{VDO operating income}}{\text{Total cost of VDO}}$$

Break Even Point (BEP) Analysis

According to Cahyono and Juanda (2005: 84) It is formulated as follows:

BEP Production (Volume/tons)

$$= \frac{\text{Total business cost of VDO}}{\text{The sale price of the VDO}}$$

BEP Price (Rp/tons)

$$= \frac{\text{Total business cost of VDO}}{\text{Total production of VDO}}$$

Payback Period (PP) Analysis

The general formula of the *period payback* method is as follows:

$$\text{PP} = \frac{\text{Investment value of VDO}}{\text{Net Cash}}$$

Net Present Value (NPV) Analysis

According to Sunyoto (2014: 20) *net present value* (NPV) is a financial analysis used to measure whether a business is worth it in terms of the current value or net cash to be received compared to the value of now from the amount of investment spent.

$$\text{NPV} = \text{AKB} \left(\frac{1}{(1+i)^n} \right)$$

Information:

NPV : Net Present Value

AKB : Net Cash Flow

I : Inflation

$\frac{1}{(1+i)^n}$: Discount Factor (DF)

n : Multiple periods (years)

RESULTS AND DISCUSSION

Total receipts are obtained from the sales volume multiplied by the selling price. The volume of selling is obtained from the number of flower stalks produced divided by the number of seedlings per land area. The selling price per bunch is Rp. 100,000, judging from the sales volume of *vanda douglas* orchid cut flowers, which is 1,290 bunches multiplied by the selling price of Rp. 100,000 per bunch. So, the total receipt of Rp. 129,000,000 was obtained, the determination of the selling price of *vanda douglas* orchid cut flowers was determined by the agreement of both parties, namely between the seller and the collecting merchant. The sales volume of *vanda douglas* orchid cut flowers is assessed by binding units, wherein in one bunch of orchid cut flowers contains one hundred stalks of *vanda douglas* orchid cut flowers. Farmers can sell at least 30 bunches of *vanda douglas* orchids per planting season per 0.1 ha.

The income on the total costs includes fixed costs beyond depreciation costs and variable costs are deducted by receipts, the value of income describes the profit earned in each *vanda douglas* orchid farmer in Gunung Sindur District. The amount of business income of *vanda douglas* orchids is not sufficient because the income obtained is still insufficient to pay for the entire cost of purchasing production facilities. The *vanda douglas* orchid business has not been said to be successful because the revenue obtained is not sufficient to pay all costs incurred during the planting season, both fixed costs and variable costs and still produces a negative difference, namely a loss of Rp. -33,775.00.

The value of income obtained from the difference between receipts and costs has not shown enough success, and the feasibility of a business run by orchid farmers in Gunung Sindur District. Then more in-depth analysis is needed to find out this. The analysis can be done through the analysis of the cost of B/C ratio, *Break Even Points* (BEP), *Payback Period* (PP), *Net Present Value* (NPV), and *Internal Rate of Return* (IRR).

The B/C value of the ratio to the total cost of the planting season during September 2019 – February 2020, the B/C value of the ratio to the total cost is -0.20 which means that every Rp. 1,00,000 spent on the total cost of *the vanda douglas* orchid business in each farmer in Gunung Sindur District will provide an income of Rp. -20,000.

I know the BEP production of *vanda douglas* orchid business is 1,627 bunches. Indicates that the production BEP broke even in production volumes reached 1,627 bunches. If the production volume is less than 1,627 bunches in the planting season, the business will suffer losses, if the production volume is more than 1,627 bunches per planting season, the business will get a profit. The BEP price for farmers respondent to *vanda douglas* orchids is Rp. 126,182 per bunch, which means that the *vanda douglas* orchid business can break even at a selling price of Rp. 126,182 per bunch. If the selling price is less than Rp. 126,182, the business will suffer losses, and if the price is more, it will get a profit.

The *payback period* is -4.16 which is obtained from the comparison between the investment value and net cash multiplied by the life of the investment. The *Payback Period* value shows that *the vanda douglas* orchid business is negative, which means that farmers have not been able to return investment because they are losing money.

The *Net Present Value* (NPV) obtained by the *vanda douglas* orchid business in Gunung Sindur District is Rp. -195,888,010. The NPV result of *the vanda douglas* orchid business is Rp. -195,888,010 < 0 or negative value. Based on *the calculation of Net Present Value* (NPV), the *vanda douglas* orchid business is said to be unfit for future

development.

The of *the Internal Rate of Return* (IRR) obtained at 1.68% means that the maximum ability level paid by this business due to production is 1.68%. The IRR value is smaller than inflation, which is 2%. So that in terms of financial feasibility, *vanda douglas* orchid business is not feasible to run in the future.

CONCLUSIONS AND SUGGESTIONS

Conclusion of the results obtained the cost of business carried out by *vanda douglas* orchid farmers in Gunung Sindur District during the planting season amounted to Rp. 162,775,000, consisting of a fixed cost of Rp. 46,574,400 and a variable cost of Rp. 143,075,000. Income of Rp. -33,775,000 and Revenue of Rp. 129,000,000. The B/C ratio value of -0.20 indicates that the B/C value ratio is less than zero, the BEP production volume is 1,627 bunches and the BEP price is Rp.126,182, *Period's Payback* is -4.16 the *Payback Period value* which indicates that the *vanda douglas* orchid business is negative, which means that farmers have not been able to return investment because they lost money. Then the NPV value of the orchid business is Rp. -195,888,010 and has a negative value and an IRR of $1.68\% < 2\%$.

Vanda douglas run by farmers in Gunung Sindur District is not profitable and is not worth running. However, if you want to continue the orchid business, something must be improved in terms of sales so that the proceeds from the sale of orchids can pay costs during production, namely by increasing the selling price of orchids pertangkai. In addition, it can be by adding orchid seedlings to increase the number of production volumes and sales volumes.

BIBLIOGRAPHY

- Anindya, Devita. 2019. Analysis of Farming and Marketing of *Vanda Douglas* Orchid Cut Flowers in Pamulang District, South Tangerang City. [thesis]. Bogor: Bogor Agricultural Institute.
- Central Bureau of Statistics. 2018. *Orchid Production By Province 2014-2018*. Ministry of Agriculture of the Republic of Indonesia.
- Central Bureau of Statistics. 2018. *Ornamental Plant Productivity in Indonesia in 2014-2018*. Ministry of Agriculture of the Republic of Indonesia.
- Central Statistics Agency of Bogor Regency. 2020. *Inflation in Bogor Regency*. Bogor Regency in Numbers .
- Central Statistics Agency of Bogor Regency. 2020. Gunung Sindur District In Numbers.
- Central Statistics Agency of West Java Province. 2020. *Orchid Harvest and Production Area By District and City 2018*. West Java Province In Numbers.
- Ornamental Plant Research Center of the Agricultural Research and Development Agency. 2019. *Orchid Cultivation 2019*. [Online]. West Java. Available on: <http://balithi.litbang.pertanian.go.id/>. [Accessed 26 July 2020]
- Cahyono, Bambang. 2007. *Peanut Farming Techniques, Processing, and Analysis*. Semarang: CV. Miscellaneous Sciences.
- Cahyono, Bambang and Juanda Dede. 2000. *Cultivation and Analysis of Sweet Potato Farming*. Yogyakarta: Kansius.
- Department of Agriculture and Food Security. 2014. *The Charm of Tangel Orchids*. South Tangerang City: Religious Modern Intelligence.