A Feasibility Analysis of the Expansion of Bandung-Based CV. Agung Tosakin's Ornamental Freshwater Fish Business

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ABSTRACT

The research aims to analyze the feasibility of Bandung-based CV. Agung Tosakin Group business, based on SWOT, R/C ratio BEP, and Period Payback analyses, and to analyze the sensitivity of the ornamental freshwater fish business as interpreted from the NPV value. The research was conducted from April 2018 to April 2019 at CV Agung Tosakin. The research method used was a case study with a descriptive quantitative analysis. The data used were primary and secondary data. Quantitative analysis was used in calculating Revenue Cost Ratio (R / C), Break Event Point (BEP), and Payback Period (PP). The analytical instrument used was the SWOT analysis. In terms of financial aspects, the expansion of CV. Agung Tosakin's freshwater fish business is feasible, with a production BEP value of 53,199 fishes, at the price of Rp 3,500 per fish. From the results of the calculation of sensitivity analysis by using a switching value, it is obtained that tolerable technical aspects and survival rate of freshwater fish is 48.98 percent; the limit of the decreases in market demands for the business to be still feasible is 24.82 percent; and the limit of the increases in raw material costs for the business to be still feasible is 51.55 percent.

Keywords: CV. Agung Tosakin, Ornamental Freshwater Fish, Business Feasibility

1. INTRODUCTION

Indonesia is the largest archipelago state in the world, consisting of 17,504 islands, with total coastline of 99,093 kilometer (Geospatial Information Bureau 2013) and sea area of 96,079.15 km^2, predominating the total area of Indonesia's territory. Indonesia's sea area is more than two and a half times of its land area (Figure 1).

Figure 1. Indonesia Map (Google).

As such, Indonesia has huge fishery potentials. One of the potentials is ornamental fishes, both ornamental freshwater and sea fishes. Indonesia's ornamental fish production in 2009-2016 was growing averagely by 16.62 percent per year. In 2009, it was 0.57 billion fishes, and in 2016 it steeply increased to 1.34 billion.

Ornamental freshwater fishes are potential to grow in Bandung. It can be seen from the production of ornamental freshwater fish cultivation in 2011, reaching 531,300 fishes. Despite being decreasing annually, it is expected that Bandung City will successfully boost its ornamental freshwater fish product.

Bandung is well known for its Frontosa, Mas Koki, Microrasbora galaxy, Guppy, Aligator, Puntius denisonii, and Black Ghost ornamental fishes. The three last ornamental fishes had been cultivated for the first time in the world. One of the ornamental freshwater fish enterprises in Bandung is CV. Agung Tosakin. It was established in 2012, operating in ornamental fish cultivation, supplying local-domestic demands, supplying export and import demands of ornamental fishes. The main types of ornamental fishes produced by CV. Agung Tosakin are Mas Koki and Platy Guppy. CV. Agung Tosakin's business has been going on for 5 years. Over time, the demands for ornamental freshwater fishes to CV. Agung Tosakin have been increasing consistently, but its production is not capable of meeting the whole demands. Accordingly, the researcher wants to know the feasibility of CV. Agung Tosakin's business if its production capacity is expanded.

The benefit of the present research is for the expansion of ornamental freshwater fish business in CV. Agung Tosakin. By conducting an analysis of the business feasibility on a financial aspect, potential losses can be avoided, by estimating the potential cost-benefit of a business in the future, while on technical aspect the production can be maximized, production facility utilization can be made more efficient, and losses can be minimized, and on market aspect the business revenue can be increased by winning market competition. The objective of the present research is to determine the feasibility value of CV. Agung Tosakin's ornamental freshwater fish business based on SWOT, R/C ratio BEP, and Period Payback analyses, and to analyze the strategy of expanding ornamental freshwater fish business in CV. Agung Tosakin.

2. MATERIALS AND METHODS

The research was conducted at CV. Agung Tosakin, Bandung City, West Java. It consisted of several stages, including preparation, data collection, data processing, and writing, beginning from April 2018 to April 2019. The research methods used were qualitative and quantitative analyses. The qualitative research was to analyze the business feasibility as seen from market and technical aspects.

The quantitative analysis technique was done to financial aspect by computing the business feasibility. On the financial aspect, Net Present Value (NPV), Interest Rate of Return (IRR), Net Benefit/Cost, Payback Period (PP), R/C ratio, SWOT, BEP, and sensitivity analyses by using Switching Value were conducted. The aid tool used in the research was Microsoft Excel.

2.1. Marketing Aspect

In the study of marketing aspect, demands, supplies, prices, market opportunities, marketing program, and marketing mix policies were analyzed, and alternative marketing strategies was found by a SWOT strategy analysis. According to Fine (2009), SWOT analysis is the systematic identification of some factors so as to formulate a company's strategy, where each company should maximize any strength and opportunity, and maximize weakness and threat.

The approach attempts to balance a company's internal strength and weakness and its opportunity and threat in the company's external area. The analyses consist of internal and external analyses. The internal analysis includes assessing strength and weakness factors, and the external factor includes opportunity and threat.

Strength

Strength is the strength condition in an organization, project, or business concept available. The strength analyzed concerns those factors that exist in the body of organization, project, or business concept itself.

Weakness

Weakness is the weakness condition in an organization, project, or business concept available. The weakness analyzed concerns those factors that exist in the body of organization, project, or business concept itself.

Opportunity

Opportunity is the opportunity condition in an organization, project, or business concept available. The opportunity analyzed concerns those factors that exist in the body of organization, project, or business concept itself.

Threat

Threat is the threat condition in an organization, project, or business concept available. The threat analyzed concerns those factors that exist in the body of organization, project, or business concept itself. The analysis of expansion strategy was identified by CV. Agung Tosakin's internal and external factors, while the formulation of expansion strategy used SWOT set. The tool used in preparing the company's strategic factors was a SWOT matrix. The matrix describes clearly how the existing internal opportunity and threat could be adjusted to the internal strength and opportunity available. The matrix can produce four sets of strategic alternative chances (Stapleton 2005).

S – O Strategy

This strategy was developed according to CV. Agung Tosakin's way of thinking, that is, by utilizing the whole strength to seize and utilize opportunity as big as possible. SO strategy uses the company's internal strength to utilize external opportunity.

S – T Strategy

This strategy used CV. Agung Tosakin's strength to overcome any threat. ST strategy uses the company's internal strength to avoid or reduce any external threat impact.

W – O Strategy

This strategy is applied according to the utilization of any existing opportunity by minimizing existing weakness. WO strategy aims to reduce internal weakness by utilizing external opportunity.

W – T strategy

This strategy is based on defensive activities and tries to minimize weakness and avoid any threat. WT strategy aims to reduce internal weakness and avoid external threat.

IFAS and EFA Analyses

IFAS (Internal Factors Analysis Summary) is the conclusion of an analysis of various internal factors that affect the company's survival. EFAS (External Factors Analysis Summary) is the conclusion of an analysis of various external factors that affect the company's survival, in this case CV. Agung Tosakin's survival. This stage is basically not simply a data collection activity, but also a classifying activity and pre-analysis. At the stage, data can be grouped into two, internal data and external data. The internal data can be obtained at the company itself, such as marketing, technical, and financial aspects. The external data can be obtained from outside the company, such as market analysis, competitor analysis, community analysis, supplier analysis, and certain stakeholder groups analysis (Helms 2010). According to Covin

(2006), the stage of internal factors identification or IFAS is done by listing all strengths and weaknesses of the company. In its presentation, the positive factors are written before negative factors (weakness). The same applies at the stage of the identification of the company's external factors or EFAS in listing all opportunities and threats.

2.2. Internal Factors Evaluation and External Factors Evaluation

IFE matrix is used to evaluate internal factors and to see the company's main strengths and weaknesses on its business functions, while EFE matrix makes it possible for a strategist to evaluate external factors. For input stage, an external factors evaluation (EFE) matrix and an internal factors evaluation (IFE) matrix are used. Both EFE and IFE matrices are processed by using several analytical steps. In external and internal factors identification, the initial step taken is to select information and identify external factors (opportunity and threat) and internal factors (strength and weakness) relating to the *nila* fish seeds by holding discussions and conducting interview by spreading questionnaires to both practitioners and experts (Chan 2011). The EFE matrix is used to analyze external environment so as to obtain the opportunity and threat factors that CV. Agung Tosakin was faced with in marketing its ornamental fishes.

The steps of IFE and EFE matrices preparation are as follows (Meredith 2009):

a. Arranges internal and external strength and weakness factors in column 1.
b. Gives a weight to each factor in column 2, from 1.0 (very important) to 0.0 (not important). The weight of all strategic factors in forms of strength, weakness, opportunity, and threat should be 1 in total. The weighting of each variable is done by proposing key external and internal factors to the company's management as the policy maker of the company (David).
c. In the column 3 of IFE and EFE matrices, the ranking in questionnaire is determined according to the condition of each factor in the company. The scales of rank used are: For internal factor analysis: 1 (major weakness), 2 (minor weakness), 3 (minor strength), 4 (major strength); for external factor analysis (opportunity and threat): 1 (poor), 2 (fair), 3 (good), 4 (very good). For opportunity factor, the rank assigned indicates the company's capacity in responding any opportunity available.
   For threat factor, the rank assigned indicates the company's capacity to avoid the threats encountered.
d. Moreover, in column 4, each weight value is multiplied with its rank value to obtain a score of all determinants.

The strategy matrix is based on two key dimensions, the total weighted IFE and EFE values. From CV. Agung Tosakin's IFE and EFE matrices, the score value is obtained. Then, to determine the company position in the strategy matrix, the following formula is used:

$$\frac{S-W}{2} \; ; \; \frac{O-T}{2}$$

where:

S = *strength*
W = *weakness*
O = *opportunity*

T   = *threat*

After obtaining the value of the calculation of external and internal strategic factor analysis results, the value is then entered into the prepared quadrant so as to find the company's strategy. The company's strategy is presented on Figure 2.
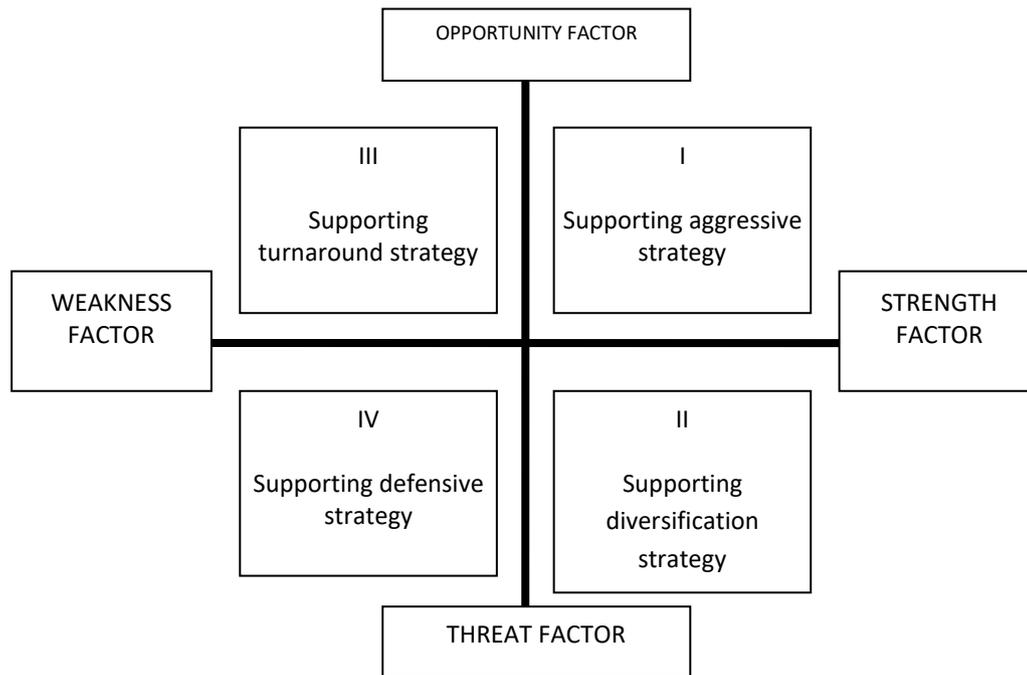
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                    ┌──────────────────────┐
                    │  OPPORTUNITY FACTOR  │
                    └──────────┬───────────┘
                               │
        ┌──────────────┐       │       ┌──────────────────┐
        │     III      │       │       │        I         │
        │              │       │       │                  │
        │  Supporting  │       │       │ Supporting       │
        │  turnaround  │       │       │ aggressive       │
        │  strategy    │       │       │ strategy         │
        └──────────────┘       │       └──────────────────┘
  ┌──────────────┐             │             ┌──────────────┐
  │  WEAKNESS    │─────────────┼─────────────│  STRENGTH    │
  │  FACTOR      │             │             │  FACTOR      │
  └──────────────┘             │             └──────────────┘
        ┌──────────────┐       │       ┌──────────────────┐
        │     IV       │       │       │        II        │
        │              │       │       │                  │
        │ Supporting   │       │       │  Supporting      │
        │ defensive    │       │       │  diversification │
        │ strategy     │       │       │  strategy        │
        └──────────────┘       │       └──────────────────┘
                    ┌──────────┴───────────┐
                    │    THREAT FACTOR     │
                    └──────────────────────┘
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Figure 2. SWOT Quadrant

2.3. Explanation

Quadrant I

This is a profitable situation. The company possesses some opportunity and strength so that it can seize the existing opportunity. The strategy applied in the condition is to support an aggressive growth policy.

Quadrant II

Despite being faced with some threats, the company still possesses strength internally. The strategy to apply is to use the strength in order to utilize long-term opportunities by a (product/market) diversification strategy.

Quadrant III

The company has a big market opportunity, but on the other side it is faced with some internal constraints/weaknesses. The focus of the strategy is to minimize the company's internal problems so that it can seize better market (turnaround).

That is a very unprofitable situation, where the company is faced with various internal threats and weaknesses. The focus of the strategy is to take some safety action to avoid more losses (defensive).

2.4. Financial Aspect

A financial analysis is one that compares whether or not a project is profitable during its lifetime (Karbo 2011). A financial analysis relating to fund source to get and its return is projected at a capital cost rate and the fund source. It includes:

a) Net Present Value (NPV)

An enterprise's NPV shows the net benefit a project receives for the project's lifetime at a specified interest rate. It may also be defined as the present value of cash flow incurred by an investment. In calculating a NPV, it needs to determine a relevant interest rate. Its mathematical equation form is as follows:

$$NPV = PVB - PVC$$

where:

NPV = Net Present Value
PVB = Present Value of Benefit
PVC = Present Value of the Cost

$$NPV = \sum_{y=10}^{n} \frac{Ay}{(1+i)^y} - IO$$

where:

I   = Discount rate used
At = After-tax annual cash flow in annual period y
t   = Number of years in the analysis
IO = Sum of investment (Initial Outlay)
n   = Last period of expected cash flow.

Criteria of the feasibility of investment:

i. NPV > 0, meaning that the project is profitable and feasible
ii. NPV < 0, meaning that the project cannot recover the cost incurred. In the other words, it is unprofitable and should not be carried out.
iii. NPV = 0, meaning that the project can return precisely the same social cost and opportunity cost of normal production factor, or in the other words it is neither profitable nor unprofitable (losing).

b) Net Benefit Cost Ratio (Net B/C Ratio)

Net B/C Ratio means the sum of return on each cost unit incurred for the project's lifetime. It is a number of comparison between the present value of positive benefit and that of negative benefit. Its mathematical equation form is as follows:

$$\text{NET B/C} = \frac{\sum_{i=1}^{n} N \, \overline{B(+)}}{\sum_{i=1}^{n} N \, \overline{B(-)}}$$

The criteria of investment based on NET B/C Ratio are as follows:

   i. Net B/C > 0, then NPV > 0, the project is profitable
  ii. Net B/C < 0, then NPV < 0, the project is unprofitable
 iii. Net B/C = 1, then NPV = 0, the project is neither profitable nor unprofitable.

c) Interest Rate of Return (IRR)

IRR is an interest rate that equates the present value (PV) of expected cash outflow and that of the expected cash inflow, or the interest rate that makes NPV = 0. IRR level reflects a maximal interest rate that the project can pay to the resources used. An investment is said as feasible if its IRR value is greater than the prevailing interest rate, and conversely if IRR value is less than the prevailing interest rate then the project is not feasible (Bolbol 2005). Its mathematical equation form is as follows:

$$\sum_{y=0}^{n} \frac{Bt}{(1+i)^n} = \sum_{y=0}^{n} \frac{Ct}{(1+i)^n}$$

where:

  I   = Discount rate used
  Bt = Sum of benefit in the period of year y
  t   = Number of year analyzed
  Ct = Sum of cost in the period of year y
  n   = last period of the expected cash-flow.

d) Payback Period (PP)

Investment return is one of the methods in assessing the feasibility of an enterprise, used to measure the time period of the used capital return. The faster the capital used can be returned, the better a project, because the capital used will be recovered faster and it may be utilized to finance other activities (Giuliano 2009). Its mathematical equation form is as follows:

$$PP = \frac{Net\ Investment}{Average\ annual\ operating\ cash\ flow}$$

e) Sensitivity Analysis

A sensitivity analysis is intended to see what will occur on a project analysis if there were any error or change in the bases of cost or benefit computation. The variation in a sensitivity analysis is switching value, that is, a computation to measure both maximum change of a change of inflow component (decrease in output price, decrease in production price) or change of outflow component (increase in production cost) still allowable for the business to stay feasible

(Gittinger 1986). This calculation refers to what is the extent of a change that occurs till NPV is null (NPV = 0).

3. RESULT AND DISCUSSION

3.1. Analysis of Internal Environment

CV. Agung Tosakin is a company operating in fishery sector that produces ornamental fishes in Bandung City. It was established in 2010 by an ornamental fish lover, Muhammad Agung Meidito, then 23-year old student of Fishery of Unpad. It was initiated by his hobby to keep and breed ornamental fishes. Then, he has a business idea of selling ornamental fishes. The enterprise was initially an in-home enterprise. Its production includes: koki kontes, koki, guppy, platy, molly, and sodaher. Its initial capital was Rp 35.000.000.

A. Strength

1) Fish quality. The fishes produced by CV. Agung Tosakin are very good. Some CV. Agung Tosakin's ornamental fishes are of good quality. It can be seen from their characteristics, including health, body shape, financial, color, eyes, body surface.

2) Skilled workers. The CV. Agung Tosakin's workers are skillful.

B. Weakness

1) Number of Workers, one of the factors that determine production quality. Deciding of the number of workers is a step of adjusting the portions of workers who are working. Till now, the number of CV. Agung Tosakin's workers is 6 (six).

2) Poor organizational structure. According to Shahbaz (2013), organizational structure is an organization's framework by which jobs are divided, grouped, and coordinated. A good organizational structure endeavors to realize working harmony, unlike a poor one.

3) Bad Financial Statement. A financial statement is a company's financial condition and business profit in a certain period time. In CV. Agung Tosakin, its financial statement is considered as bad because there is no specialized division to deal with it, and no regular annual financial statement.

C. Opportunity

1) Extensive Market Share. The target of ornamental fishes marketing is not influenced by age. From children to adults, people like the hobby. Even more, different circles love ornamental fishes. According to Mahapatra (2004), ornamental freshwater fishes are not only wanted by domestic markets but also have penetrated export markets. Export numbers are growing year by year. Thus, the opportunity of ornamental fishes to yield foreign exchange opens more widely.

2) Great Market Demands. Market demands for ornamental fishes are great, due to the large number of new ornamental fish lovers. There are needs for people to fill their aquarium in their houses, demands for frequent fish contest, demands for researches by educational institutions, and demands of aquarium and ornamental fishes shops.

3) Good Relationship with Consumers. CV. Agung Tosakin strictly keeps its good relation with its customers. It is intended for the consumers to be loyal ones.

D. Threat

1) Introducing CV. Agung Tosakin more widely by more effective promotion.

2) Seasonal selling. In ornamental fishes business, major threat on marketing aspect is seasonal selling. To overcome it, CV. Agung Tosakin doesn't sell seasonal ornamental freshwater fishes. The types of fishes that CV. Agung Tosakin sells include koki kontes, koki, guppy, platy, molly, and sodaher.

3) Fluctuation in Prices. The prices of best quality ornamental fishes are instable, due to different qualities of the fishes.

3.2. Matrix

The result of CV. Agung Tosakin's IFE Matrix Calculation shows that the strength factor value is nearly the same, i.e., around 0.3. It indicates that the strength of CV. Agung Tosakin is not limited to only a certain factor. However, its weakness values differ one from another. The highest value of CV. Agung Tosakin's weakness factor on the factor of worker number is 0.422. From the result of CV. Agung Tosakin's EFE Matrix table it is found that the biggest score value is on the factor of wide market share and big market demands by the same value of 0.429. Meanwhile, for the highest score value is on threat, on a price fluctuation factor of 0.397.

Table 1. IFE Matrix CV Agung Tosakin.

No	Internal Strategic Factors	Average weight	Average rating	Score
	Strength			
1	Good quality fishes	0.119	3.17	0.377
2	Skilled workers	0.131	3.00	0.393
3	Good business image	0.131	3.00	0.393
4	Experienced group head	0.131	3.00	0.393
	Total			1.556
No	Weakness			
1	Less number of workers	0.149	2.83	0.422
2	Poor organizational structure	0.208	2.00	0.417
3	Poor financial statement	0.131	3.00	0.393
	Total			1.231

Table 2. EFE Matrix CV Agung Tosakin.

No	External strategic factors	Average weight	Average rating	Score
	Opportunity			
1	Wide market share	0.143	3.00	0.429
2	Big market demand	0.143	3.00	0.429
3	Good relationship with customers	0.131	3.17	0.415
4	Investor support	0.131	3.17	0.415
	Total			1.687
No	Threat			
1	Ignorance on CV. Agung Tosakin	0.123	3.17	0.390
2	Seasonal selling	0.210	1.67	0.351
3	Price fluctuation	0.119	3.33	0.397
	Total			1.137

3.3. Analisys of Strategy Matrix

The analysis of strategy matrix is done by conducting an IFE matrix analysis that explains internal factor, that is, CV. Agung Tosakin's strength and weakness, and EFE matrix that explains external factor, that is, CV. Agung Tosakin's opportunity and threat. The strategy matrix analysis is used to make CV. Agung Tosakin's business expansion strategy. The strategy matrix analysis is based on two key dimensions, namely total weighted IFE and EFE total value, and from the weights score values are obtained. Then, both IFE and EFE matrices are combined to get an applicable strategy. The following is the computation of CV. Agung Tosakin's strategy matrix analysis:

$$\frac{S-W}{2} : \frac{O-T}{2}$$

$$\frac{1.556-1.231}{2} : \frac{1.687-1.137}{2}$$

$$0.162 : 0.275$$

Based on the result of the computation of IFE and EFE matrices combination, the values of IFE and EFE matrices are 0.162 and 0.275, respectively. That means, the two values are positive.

When entered into the business expansion strategy matrix, it is on quadrant I. Meredith (2009) says that if the result obtained belongs to quadrant I, the situation is profitable. The company has both opportunity and strength so that it can utilize the opportunity. The strategy applied in such condition is supporting an aggressive growth policy. The following is CV. Agung Tosakin's strategy matrix quadrant.
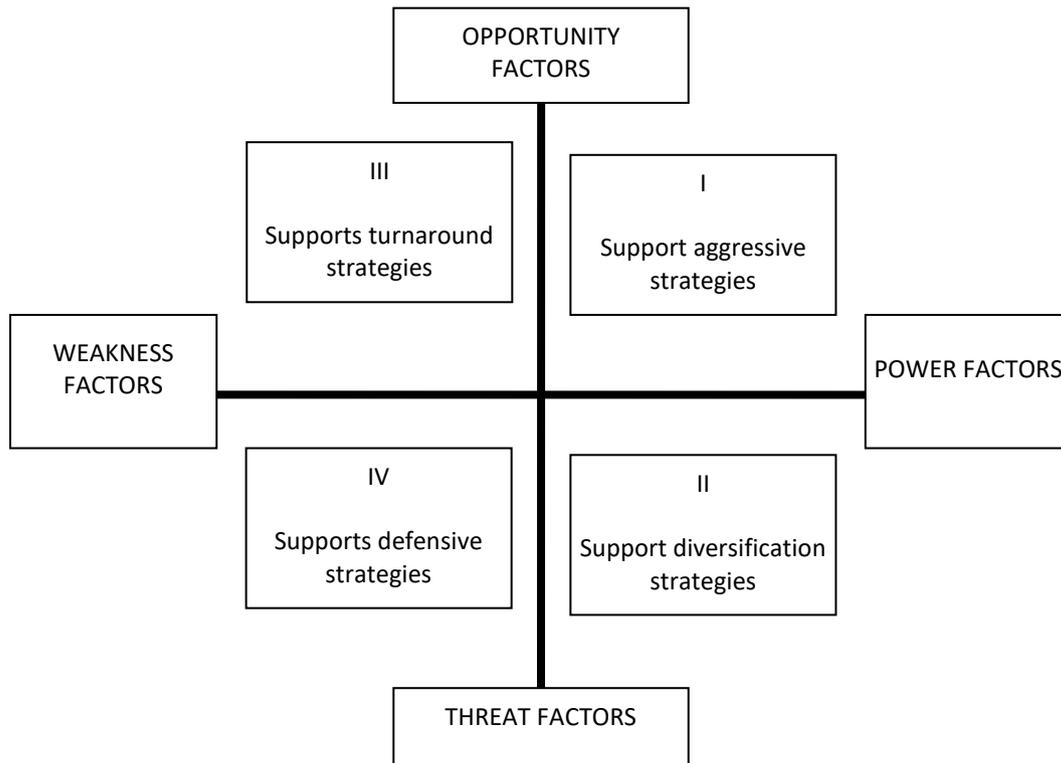

Figure 3. CV. Agung Tosakin's Business Expansion Strategy Matrix

Based on Figure 3, the business expansion strategy matrix is divided into 4 quadrants. Quadrant I is a strategic combination of strength (S) and opportunity (O) factors. Quadrant I is gained if the combination of the results of IFE and EFE values computation shows that both are of positive values. Quadrant II is a strategic combination of strength (S) and threat (T) factors. Quadrant II is gained if the combination of the results of IFE value computation is positive, and that of EFE value computation negative. Quadrant III is a strategic combination of weakness (W) and threat (O) factors. Quadrant III is gained if the combination of the results of IFE and EFE values computation shows that both are of negative values. Quadrant IV is a strategic combination of weakness (W) and opportunity (O) factors. Quadrant IV is gained if the combination of the results of IFE value computation is negative, and that of EFE value computation positive.

CV. Agung Tosakin's IFE and EFE factors scores are 0.162 and 0.275. The scores place a strategy to be applied in quadrant I, aggressive strategy, where the strategy is a combination of strength factor and opportunity factor. The strategy is also known as S – O strategy.

Internal / External	Strength (S)
	1. Good quality of ornamental fish 2. Skilled workers 3. Good business image 4. Very strong capital
Oppotunities (O) 1. Consistently increasing demands of ornamental fishes 2. Good relationship with consumers 3. Investors' support	S-O strategy 1. Increases production and marketing by maintaining the quality of fishes to negative produced and keeps skilled workers so as to win investors' support. $(S_{1,2}, O_{1,2,4})$ 2. Promotes good business image by utilizing the director's experience and leadership to keep good relationship with consumers. $(S_{3,4}, O_3)$

3.4. Managerial Implication

Based on the research result, it can be shown the managerial implication for CV. Agung Tosakin as follows: (1) On market aspect, an analysis of SWOT matrix and TOWS strategy is conducted to get a company strategy in facing with the opportunity and threat with strength and weakness of the company. Based on the analysis, an SO (Strength-Opportunity) strategy is obtained, that is, the company can increase its ornamental freshwater fish products and add the types (varieties) of ornamental freshwater fishes produced by good quality so as to boost market share in attempt to expand its business scale. Weakness-Opportunity (WO) strategy is gained by expanding products and markets, supported by money loaned from financial agencies and accompanied by the improvement of the company's management. The company's ST (Strength-Threat) strategy is gained by enhancing knowledge on the cultivation of certain types of ornamental fishes, which may be helpful for the employees in producing high quality products so that the products become competitive in markets.

Furthermore, the company should meet some requirement to be qualified for business loan, and attach a business feasibility proposal, useful in ensuring the financial agencies so that they are attracted to CV. Agung Tosakin's business. Reducing operational cost and selling products at more affordable prices than markets' prices in greater quantities will catch more customers and hence profits. By WT (Weakness-Threat) strategy, the company can enhance its knowledge on the cultivation of the type of ornamental fishes produced and improve the company's management system by among others keeping a financial statement and a proposal of business expansion feasibility as a requirement of proposing loan by CV. Agung Tosakin to ensure financial agencies. Efficiency of operational cost expenditure is needed to get a bid of selling prices affordable to consumers to make the company competitive in markets; (2) Based on the result of the calculation of economic raw material supply by an EOQ method, CV. Agung Tosakin can reduce its operational cost by ordering more in one year and the quantity of economic raw material purchase per order.

3.5. Financial Analysis

3.5.1. Production Cost

Based on the data obtained, the total fixed cost (TFC) expended by CV. Agung Tosakin annually is Rp 170,897,500, while for total variable cost (TVC) CV. Agung Tosakin expends Rp 15,300,000. CV. Agung Tosakin's total cost (TC) of production for a year is Rp 186,197,500. The annual total production cost value is obtained from the result of adding the fixed cost and the variable cost. At the variable cost, the sum of money to expend is variable each year. It is because it is uncertain that the production situation in the current year will be the same as that in next year.

3.5.2. Income and Profit

CV. Agung Tosakin's Total Income is Rp 299,600,000/year. The income is gained from the result of selling fishes of different types. The biggest income is gained from selling koki goldfishes, and the smallest from sodaher fishes. Meanwhile, in one year, CV. Agung Tosakin gets a profit of Rp 113,402,500. The profit is gained from the result of reducing total cost (TC) from total revenue (TR). Based on the production data, and sale data, CV. Agung Tosakin's financial analysis can be done, including R/C, BEP, and PP. The result of calculation shows that R/C value is 1.609. It means that CV. Agung Tosakin's business is feasible to carry out, being to have R/C value greater than one.

3.5.3. Break Event Point (BEP)

Based on the calculation of price Break Event Point (BEP), the value obtained on price BEP is Rp 6,790. It means that the minimal value of the selling price of CV. Agung Tosakin's ornamental fish for the company is neither profitable nor unprofitable (break event), and is Rp 6,790 on an assumption that all fish types are of the same price. The BEP value of production obtained is 53,199 per fish for all fish types. For the production cost to be recovered, for koki fish, the amount of fish to produce has to be 53,199 fish at a price of Rp 3,500 per fish. The BEP values of each fish type are as follows:

1) Koki kontes fish, the BEP value of price is Rp1,551,645 and production BEP is 620 fishes

2) Koki fish, the BEP value of price is Rp 9,309 and production BEP is 53,100 fishes

3) Guppy fish, the BEP value of price is Rp 62,065 and production BEP is 124,132 fishes

4) Platty fish, the BEP value of price is Rp 124,132 and production BEP is 124,132 fishes

5) Molly fish, the BEP value of price is Rp 93,098 and production BEP is 123,132 fishes

6) Sodaher fish, the BEP value of price is Rp 232,746 and production BEP is 124,132 fishes.

3.5.4. Internal Rate Return (IRR)

The calculation of internal rate return (IRR) analysis is done by finding average net cash inflow annually from which cast outflow is reduced. In this calculation, cash outflow is the amount of investment. The result of calculation shows that IRR value is 83.77% greater than

the loan interest rate of 6%. It means that the investment in the business is feasible and profitable but can only be profitable at an interest rate of less than 83.77%.

3.5.5. Payback Period (PP)

The result of the calculation of Payback Period on CV. Agung Tosakin's business shows that it has a value of 1.23 year. It means that the total investment on CV. Agung Tosakin's business will be recovered in a time period of 449 days or 1 year 2 months and 23 days. In terms of Payback Period, the business is feasible because the capital return is achieved before the project's lifetime.

3.5.6. Sensitivity Analysis

Sensitivity analysis is used to measure how feasible is a business if it is faced with any change. An analysis method of sensitivity against NPV (Net Present Value) based on its economic parameter comparison can provide information to the company as an anticipation of something occurring in the future resulting from any changes in economic parameters. Particularly in the present study they are ore price and mining cost, so that the result of analysis becomes a consideration for the company to continue or not mining activity by seeing the result obtained from each change scenario of the two economic parameters.

The result of sensitivity analysis shows that if an increase of operational cost by 15% to 50% takes place, it still shows a positive value and is still feasible.

3.5.7. Net Present Value (NPV)

Net Present Value is a money value from which the internal rate of the year has been deduced. It is assumed in the calculation that a discount factor by 6% per year for the coming 5 years refers to Indonesia Internal Rate in 2019 (Bank Indonesia 2019). The benefits in 0th, 1st, 2nd, 3rd, 4th, and 5th years are Rp 139,630,000, Rp 113,402,500, Rp 123,041.712.50, Rp 132,269,840.94, Rp 144,174,126.62, and Rp 157,870,668.65, respectively.

The result of NPV calculation by an aid of Microsoft Excel is Rp 420,086,045. The result shows that the value is greater than 1, meaning the investment is feasible to implement.

4. CONCLUSIONS

Based on market and technical aspects it is shown that CV. Agung Tosakin's business expansion is feasible to implement. Based on financial aspect, the expansion of ornamental freshwater fish business of CV. Agung Tosakin is feasible to implement by a production BEP value of 53.199 fishes at a price of Rp 3,500 per fish. The price BEP values of the fish types of koki kontes, koki fish, Guppy fish, Platty fish, Molly fish, and Sodaher fish are Rp 524,543, Rp 6,305, Rp 10,882, Rp 10,882, Rp 10,882 and Rp 10,882, respectively. The Net R/C fund is 1.609, meaning that for a net investment of Rp 1,00 expended will provide a profit of Rp1.609; by IRR of 83.77%, and NPV of Rp 420,086,045, indicating that the planned expansion is feasible and capable of returning the capital, by a Payback Period of 1.24 year. The result of sensitivity analysis calculation by using a switching value is found on technical aspect. Together, the tolerable survival level of ornamental freshwater fishes is 48.98 percent, below of which the business is getting unfeasible. On market aspect, the limit of decrease in market

demand for the business to be still feasible is 24.82 percent, below which the business is being unfeasible. On financial aspect, the limit of the increase in raw material cost for the business to be feasible is 51.55%, above of which the business is being unfeasible.

Thus, it is found the maximal change of a component's change allowable for the business to be still feasible.

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