Feasibility Study of PT. Fixall

Satria, A.D. 1, Soegoto, H. 2
Department of Management
Universitas Komputer Indonesia
Bandung, Indonesia

Abstract—**Today's business opportunities are wide open to prospective entrepreneurs by leveraging developments in information technology. PT. FixAll is a company that is engaged in providing informal services such as household appliance repair and other secondary household services such as repair of umbrella, shoe sole, clothing permit, leaked aluminum zinc stamp and provision of application-based property development for Android and iOS mobile operations system for the middle social and economic segmentation in Tasikmalaya city. The purpose of research to analyze feasibility study of business establishment of PT. FixAll from the financial aspect. Evaluation based on business feasibility study and business plan used parameters in financial aspect such as return on investment (ROI), break event point (BEP), net present value (NPV), profitability index (PI), payback period (PBP) and sensitivity analysis to find out how big the effect of change of benefits and cost for the feasibility of business. The result of feasibility study and business plan analysis from the aspect of finance aimed at the end according to the result of each parameter concluded the business plan of PT. FixAll can be realized.**

Keywords : Feasibility Study, Finance Aspect, Information Technology, Tasikmalaya

I. INTRODUCTION

In the current era of information technology, the use of smart devices or smartphones is a common thing that is commonly encountered. Quoted from the website of Kominfo, e-Marketer research institute states that the number of active users of smartphone devices in Indonesia in 2018 is expected to penetrate the number of 100 million people active smartphone users, e-Marketer also said Indonesia is in the 4th position active smartphone users after China, India and America.

Smart devices or smartphones now make it easier for users in Indonesia not only to communicate or to seek news and information only, but used to perform various types of digital transactions such as shopping, ordering tickets and ordering transport services online. This can be realized thanks to the increasingly affordable mobile broadband to access the internet.

The number of internet or netter users in Indonesia by e-Marketer experiencing rapid growth data, seen from the statistical data in 2014 of 83.7 million users to 112.6 million users by 2017 and this number will increase. In 2018 e-Marketer also predicts netter in Indonesia will penetrate the number 123 million users, this will make netter in Indonesia is in the 5th position of the world shift netter position in Japan which growth of internet usage more slowly. The following data internet users in the world according to e-Marketer.

Not only from the cost factor of affordable mobile broadband alone that makes active smartphone users increased, but the role of embedded operating system on the smartphone also contributed in contributing to the increase of the number of active users of smartphones in Indonesia. Quoted from the databoks.katadata.co.id page of the report titled Global Stashot: Digital in Q3 2017, reported that 72.9% of smartphone users in the world using Google's Android operating system.Inc, followed by the second position of 19.4% smartphone users in the world using iOS operating system from Apple.Inc and the rest of 7.7% using different types of operating systems outside of Android and iOS.

According to the results of the survey in 2017 by the Association of Internet Service Providers Indonesia (APJII), reported from the total penetration of Indonesian users of 54.68% of the total population of Indonesia of 262 million people, which means active internet users in Indonesia for 143.26 million people . Penetration of the largest internet user in Indonesia was in Java at 58.08%, while penetration of internet user based on gender of Indonesia consisted of male equal to 51,43% and female rest 48,57%, viewed by age of biggest user of internet in Indonesia in the year 2017 is in the age range 19 years - 34 years with a range of 49.52% followed in the 2nd position of the age range of 35 years - 54 years with a range of 29.55%, viewed based on the economic level of the largest user of internet in Indonesia in year 2017 is at a very low socio-economic level with a range of 74.62% followed in the 2nd position in the social economy with a range of 16.02%, and the last seen from the behavior of Indonesian users in 2017 to services that are often visited is the chat application for 89.53% and followed by the second position occupied by social networking applications amounted to 87.13%. The following report results in 2017 by the Association of Internet Service Providers Indonesia (APJII).

With the above data it can be concluded that there has been a change in the lifestyle and the social aspects of Indonesian society from non digital lifestyle to digital lifestyle, digital lifestyle also influence on business patterns

such as giving birth to digital startup, call it GoJek who was then born public dissatisfaction with the existing mass transportation modes and provide alternative transport solutions online to the people of Indonesia. In line with GoJek establishment of PT. FixAll Indonesia would like to offer alternative solutions for carpentry and home appliance repair services online.

Brokerage services and home appliance repair are still largely unexplored, providing detailed information on performance reviews, rendering and online service provider agendas. The service will be launched in Tasikmalaya city, considering the people in Tasikmalaya city have high level of carpentry service and household appliance repair because the character of society from young family in Tasikmalaya city is still high towards the improvement of household appliance compared to buying household appliances new.

Research Objectives, by conducting a feasibility study and a business plan, there are several expected research objectives including:

a. Assess the company's business plan of financial feasibility based on return on investment (ROI).

b. Assess the company's business plan of financial feasibility based on break event point (BEP).

c. Assess the company's business plan of financial feasibility based on net present value (NPV).

d. Assess the company's business plan of financial feasibility based on profitability index (PI).

e. Assess the company's business plan from financial feasibility based on payback period (PBP).

II. METHOD

Research Methods

Method of research in the form of feasibility study and business plan establishment of PT. FixAll from the standpoint of financial management especially in terms of financial aspects. There are also parameters used in terms of financial aspects such as return on investment (ROI), break event point (BEP), net present value (NPV), profitability index (PI) and payback period (PBP).

Return on investment (ROI) is performed for a ratio that shows the result of the amount of assets used in the company or a measure of management efficiency. This ratio shows the result of all assets controlled by ignoring the funding source, this ratio is usually measured by a percentage.

Break event point (BEP) is done to find out how big the breakeven point of business feasibility to be run.

Net present value (NPV) is performed to determine the net present value of the funds invested during the life of the project. Net present value (NPV) reflects the rate of return from the proposed level of the project effort, for which the value of a viable project effort must have a value of NPV> 0 then the project is not at a loss.

Profitability index (PI) is a method of calculating by finding the present value (PV) value of the estimated cash flow to be received from the investment, after the present value (PV) is obtained after it is compared with the amount of investment value of the project.

Payback period (PBP) is done in order to know the period used to recoup the initial investment, in other words payback period (PBP) is the time unit of the initial investment ratio value of cash inflows.

Data Analysis Method

Data analysis method in business feasibility study and business paln PT. FixAll from financial aspect is calculation of parameters as follows calculation of return on investment (ROI), calculation of break event point (BEP), net present value (NPV) calculation, profitability index (PI) calculation and payback period (PBP)

Is done quantitatively in the financial feasibility process of PT.FixAll to be established.

a. Return On Investment (ROI)

Return On Investmen (ROI) is a ratio that shows the result of the amount of assets used in the company or a measure of management efficiency. This ratio shows the result of all assets controlled by ignoring the funding source, this ratio is usually measured by a percentage.

b. Break Event Point (BEP)

Break Event Point (BEP) is an analysis to determine and look for the amount of goods or services that must be sold to consumers at a certain price to cover costs incurred as well as gain profit or profit.

c. Net Present Value (NPV)

Net Present Value (NPV) is a method of calculating net value (present) (Giatman, 2006). The Net Present Value (NPV) method converts all cash flows into the present value (P) and sums, so the present value (P) obtained reflects the net value of the entire cash flow that occurred during the planning horizon (Pujawan, 2003). Net Present Value (NPV) calculations require data on estimated investment costs, operating and maintenance costs and estimated benefits of the planned project (Afriyeni, 2012).

d. Profitability Index (PI)

Profitability Index (PI) is a method of calculating by finding the present value (PV) value of the estimated cash flow to be received from the investment, after the present value value (PV) is obtained after it is compared with the amount of investment value of the project.

e. Payback Period (PBP)

Payback Period (PBP) is a period required to recoup the investment expense (initial cash investment) after calculated with tax. (Giatman, 2006) states that the length of the refund period when the break even (BEP), if the cash flow component is annual. Payback Period is the ratio between initial cash ratio and cash inflow which result is the unit of time (Husain Umar, 2000: 200).

III. RESULTS

TABLE I BUSINESS CAPITAL

Investment	Description	Amount	Price	Total
Lease Ruko	Rent 1 Year	1	Rp 30,000,000	Rp. 30,000,000
Electric Installation		1	Rp 2,062,000	Rp. 2,062,000
Computer Devices	Asus CP3130 ID001D	10	Rp 6,100,000	Rp. 61,000,000
Telephone and Internet Installation	Biznet Home Internet	1	Rp 500,000	Rp. 500,000
Hire Web Hosting	ArdetaMedia.com	1	Rp 2,400,000	Rp. 2,400,000
Legality		1	Rp 6,000,000	Rp 6,000,000
Credit	BNI (10%)	1	Rp 10,196,200	Rp 10,196,200
Total				Rp. 112,158,200

In the table above can be seen, business capital requires investment amounting to Rp 112,1582,200 used for office rental in downtown Tentara Pelajar, electricity installation, computer equipment purchase, telephone and internet installation, web hosting rental fee for 1 (one) year and legality to the notary.

TABLE II DEPRECIATION PER MONTH

Investment	Description	Age	Total	Depreciation Per Month
Computer Devices	Asus CP3130 ID001D	24 Months	Rp. 61,000,000	Rp. 2,541,666
Total				Rp. 2,541,666

In the table above can be seen, the depreciation value with straight method amounting to Rp 2,541,666 per month consisting of rental shop, computer device and web hosting rental.

TABLE III WORKING CAPITAL PER MONTH

Working Capital	Description	Amount	Price	Total
Lease Ruko	Rent 1 Month	1	Rp. 2,500,000	Rp. 2,500,000
Labor				
	Junior Programer	1	Rp. 2,500,000	Rp. 2,500,000
	System Analyst	1	Rp. 4,000,000	Rp. 4,000,000
	Employee	8	Rp. 2,000,000	Rp. 16,000,000
Electricity		1	Rp. 3,000,000	Rp. 3,000,000
Telephone and Internet	Biznet Home Internet	1	Rp. 970,000	Rp. 970,000
Hire Web Hosting	Rent 1 Month	1	Rp 200,000	Rp. 200,000
Stationery and Office		1	Rp. 750,000	Rp. 750,000
Ads		1	Rp. 500,000	Rp. 500,000
Total				Rp. 30,420,000

In the table above can be seen, required working capital per month amounting to Rp 30,420,000 which is used for lease ruko, labor, electricity, telephone and internet, stationery and office as well as advertisement per month in the form of permit plug baligho in front of office. So that working capital required per year amounting to Rp 365,040,000, from the total working capital per month and total depreciation per month obtained investment cost per month for Rp 32,961,666.

TABLE IV ESTIMATED PROFIT OPERATING STATEMENT (OPENING PROFIT)

Component	Description	Amount	Price	Total
Registration	Per Person	100	Rp. 300,000	Rp. 30,000,000
Internet Access	Per person within 30 days	1000	Rp. 1,000	Rp. 30,000,000
Engineer	Inter Engineer Per Km	1000	Rp. 4,000	Rp. 120,000,000
Total				Rp. 180,000,000

In the table above can be seen, the estimated operating profit (opening profit) per month by amount Rp 180,000,000, obtained from registration fee per person is Rp 300,000, internet access per person is Rp 1,000 in one application access, and cost of technician per kilometer (km) is equal to Rp 4,000.

TABLE V DESCRIPTION OF GROSS PROFIT, EBIT AND EAT

Description	Value (Rp)
Gross Profit	Rp 149,580,000
EBIT	Rp 116,618,334
EAT	Rp 103,790,317

In the table above can be seen, gross profit per month is Rp 149,580,000 earned from income reduction of Rp Rp 180,000,000 minus working capital per month of Rp 30,420,000, earning before in tax (EBIT) per month amounting to Rp 116,618,334 earned from gross profit of Rp 149,580,000 minus investment cost per month of Rp 32,961,666 and earning after tax (EAT) per month amounting to Rp 103,790,317 earned from the tax deduction of income tax article 21 by 11% for earnings before in tax (EBIT).

IV. DISCUSSION

Return On Investment (ROI)

ROI = Net Income / Investment Capital

= (103,790,317 / 112,158,200) x 100%

= 9.25%

Based on the calculation of Return on Investment (ROI) that the business plan is feasible to run because the level of ROI is greater than 0 (zero), amounting to 9.25%.

Break Event Point (BEP)

BEP (Unit) = Total Cost / Registration Price

= 32,961,666 / 300,000

= 109.87

= 110 people

Based on the calculation of the Break Event Point (BEP) that the business plan is feasible to run if the level (BEP) of the unit when it reaches 110 registrants.

TABLE VI Net Present Value (NPV)

Months	Cash Flow	Factor PV	PV
		(10%)	
1	Rp 103,790,317	0.909	Rp 94,345,398
2	Rp 207,580,635	0.826	Rp 171,461,604
3	Rp 311,370,952	0.751	Rp 233,839,585
			Rp 499,646,587
Investment Capital			Rp 112,158,200
NPV			Rp 387,488,387

Based on the Net Present Value (NPV) calculation that the business plan is feasible to run because the NPV rate is positive at Rp 387,488,387.

Profitability Index (PI)

PI = NPV / Investment Capital

   = Rp 387,488,387 / 112,158,200

   = 3.45

Based on the calculation of Profitability Index (PI) that the business plan is feasible to run because the level of large PI of 1 (one), amounting to 3.45.

Pay Back Period (PBP)

PBP = (Investment Capital / PV year to) x 1 year

   = (112,158,200 / 94,345,398) x 1 year

   = 1.18 x 1

   = 1.18

   = 1 year 1 month

Based on the calculation of the Pay Back Period (PBP) that the business plan is feasible to run because of the Payback Period (PBP) rate for PT. FixAll got time for 1 year 1 month.

V. CONCLUSION

Based on the above calculation of the parameters include return on investment (ROI), break event point (BEP), net present value (NPV), profitability index (PI) and payback period (PBP). So we can know the feasibility study of establishment of PT. FixAll in Kota Tasikmalaya is feasible to run based on the above calculation of parameters including return on investment (ROI) is 9.25%, break event point (BEP) unit is 110 people, net present value (NPV) is positive at Rp 387,488,387, profitability index (PI) is 3.45 and payback period (PBP) is 1 year 1 month.

ACKNOWLEDGMENT

REFERENCES

[1] Afriyeni, Endang. 2012. Model Prediksi Financial Distress Perusahaan. Polibisnis. Vol. 4, No. 2, ISSN: 1858-3717. Hlm 1-10.

[2] Ali, Wandi Saputra. 2004. Studi Kelayakan dan Business Plan Ali Bakri Cake & Drinks. Bandung: Magister Managemet Universitas Komputer Indonesia.

[3] Arikunto, Suharsimi. 2010. Prosedur Penelitian Suatu Pendekatan Praktik. Jakarta: PT. Rineka Cipta.

[4] Bygrave, Wiliam D. 1994. The Portable MBA in Entrepreneurship. Jhon Willeys.

[5] Coulthard, Max., Andrea Howell dan Geoff Clarke. 1999. Business Planning: The Key to Sucess. Macmillan Education: Australia.

[6] Giatman, M., 2006. Ekonomi Teknik. Jakarta: Raja Gravindo Persada.

[7] Hisrich dan Peters. 1995. Entrepreneurship: Starting, Developing and Managing a New Entreprise. Irwin Publishing Ltd.

[8] Husain, Umar. 2000. Business: An Introduction. Jakarta: Gramedia Pustaka Utama.

[9] Kasmir dan Jakfar. 2009. Studi Kelayakan Bisnis. Jakarta: Kencana.

[10] Megginson. 2000. Small Business. Management: An Entrepreneur's Guidebook.

[11] Pujawan, I Nyoman. 2003. Ekonomi Teknik, Edisi Pertama. Surabaya: Guna.

[12] Sutrisno. 2003. Manajemen Keuangan (Teori, Konsep, dan Aplikasi), Edisis Pertama, Cetakan Kedua. Yogyakarta: EKONESIA.

[13] Umar, Husain. 2009. Studi Kelayakan Bisnis. Jakarta: PT. Gramedia Pustaka Utama.