Design Business and Website on the Establishment of Tour Guide and Tour & Travel Platform

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Indonesia is a country with 16,056 islands, well known for its natural wonders and cultural heritages. Indonesia's Travel and Tourism Competitive Index is 4.3. There is a good opportunity in establishing a business involving tour guide and tour package providers. In this paper, feasibility analysis is done based on market, technical, and financial aspect. The market aspect result shows total demand projection, which is 9,881 and 269 for tour guide booking transaction and tour package provider membership respectively during the first year of establishment. The technical aspect result shows the business process design, website design, and the operational need of the business. The total time needed for overall business process is 689.83 hours in the first year. And to operate the business the numbers of employees needed are one each for managing director, marketing, website admin, tour package provider manager, and tour guide manager. Two employees are also needed for each financial department and call centre position. The financial aspect result shows that the NPV of this business is IDR 162,798,046. The payback period is 4.339 years, and the IRR is 24.47%. The salary increase, demand decrease, and price decrease sensitivity are 6.96%, 2.86%, and 0.94% respectively.

Keywords: Feasibility, Sensitivity, Business Process, Website

1. INTRODUCTION

Indonesia is a country with 16,056 islands as of registered and verified by the United Nation. With its vast archipelago, Indonesia is well-known for its natural wonders and variety of cultural heritages. This creates a great opportunity for Indonesia to develop its tourism sector, especially because travel and tourism is one of the leading sectors that contributes to the country's economic development. Based on the report made by World Economic Forum [1], Indonesia is ranked 40 worldwide for its Travel and Tourism Competitive Index (TTCI) with the overall index of 4.3. Indonesian local and foreign tourist count are also increasing each year. Based on the data provided by BPS, the increase of local tourist from 2017 to 2018 reaches 32.58 million people and the increase of foreign tourist in 2017 to 2018 reaches 1.77 million people.

There are few trends happening in the tourism sector that is highlighted in this research. Based on the data provided by Statista, the tour package users are increasing each year and the tour package providers are shifting from offline to online sales channels. This shows that there is a good opportunity to start a platform that can accommodate the shift of tour package providers from offline to online sales channels, in order to attract the increasing number of tour package users. But not all travellers are willing to use ready-made tour packages due to the lack of customizability. Report published by Horwath HTL [2] shows that some travellers want to personalize their travel to further enhance travel experience. To accommodate customizability, tour guide services can be utilized. With the use of tour guide services, travellers can plan preferred travel itinerary but still receive the ease in travelling due to the information provided by these tour guides. From previous research done by Cheng et al. [3], tour guides are proven to be one of the most important factors that affects the intention to revisit a place. Thus, the use of tour guide services can further elevate Indonesian tourism sector.

There is a common thing about these trends—digitalization. Travellers tend to order travel services digitally, and tour package providers try to accommodate that by shifting to online sales channels. From these

trends and information, it is known that there is a good opportunity to start a business that involves tour package providers and tour guides. In particular, a business that can accommodate tour package providers to offer tour packages online, and also online tour guide bookings that can help tourists customize their tour. This research aims to design the business process, website, and to measure the feasibility of the business.

2. METHOD

The research is done to figure out the feasibility of the business based on market aspect, technical aspect, and financial aspect. The market aspect analysis is done by finding out the potential market, available market, and target market of the business by distributing questionnaires. After the market aspect data is obtained and processed, the next step is the technical aspect. It is done by designing the business process, proceeded by finding out the operational need that includes tour guide need, employee, and the overall office need. Website is also designed to accommodate the business process. Lastly, the financial aspect analysis is done. The data from market aspect and technical aspect is used to calculate the financial aspect. The result of financial aspect can then be used to calculate the business feasibility along with its sensitivity towards the changes in the variables of the business.

2.1 Feasibility Study

Feasibility study is a method used to find out the practicability of a proposal, business start-up or an idea [4]. Kasmir and Jakfar [5] defined business feasibility study as an activity to do in-depth study towards a certain activity or business that will be established in order to determine the eligibility of the business. In the previous research on the establishment of tempe business in Bandung, feasibility study was used to figure out the opportunity for business expansion [6]. In another research done by Hanaa and Chumaidiyah [7], similar method was applied to figure out the feasibility of kebaya boutique establishment. A research was also done to analyse the feasibility of steel sheet zinc plated and galvalume production factory establishment [8]. Aside for business expansion purposes, feasibility study can also be applied to new business ideas (start-ups) [9].

There are many aspects in the feasibility study, but the main focus in this research are market aspect, technical aspect, and financial aspect. Market and marketing aspects are needed to find out how large the target market of the business may be and how much potential the business has to grow [5]. Technical aspect is related to technical process or operation of a business which can be fatal if not analysed. Sunyoto [10] stated few things that should be taken into consideration in the technical aspect are design of product or service, production process planning, facility layout, location determination and material handling, design of jobs, product or service forecasting, and scheduling. In the financial aspect, the cost planning required to run the business is being analysed. Besides, the income and profit that can be gained is also analysed. As stated by Husnan and Suwarsono [11], financial analysis compares the costs and benefits of a business to know whether or not it will be profitable. The result of financial aspect is then used to calculate Net Present Value (NPV), Internal Rate of Return (IRR), and Payback Period (PBP).

Sartono [12] defined Net Present Value (NPV) as the difference between present value of net cash flow with the present value of investment. According to Rangkuti [13], NPV is a tool used to figure out the profitability of the investments invested. The business proposal is accepted if NPV is greater than zero. Internal Rate of Return (IRR) shows the rate of the return that the project will give. It is the percentage that compares the present rate if inflow with the present rate of outflow. The business or project is accepted if IRR greater than required rate of return. Titman et al. [14] defines Payback Period (PBP) as the number of years it takes to return the amount of investment towards a certain project or business. Project is said to be accepted if the calculated payback period is less than the company's or firm's specified payback period.

2.2 Sensitivity Analysis

Prices and costs may fluctuate over time. The feasibility of the business can be affected with the increase and decrease of cost and benefit variables in the business [15]. The sensitivity analysis is done by replacing values in the component of cost and benefits to see at what extent the change can still be feasible for the investment or give profit. The boundary of profit is when NPV value is equal to zero ($NPV=0$). When NPV is equal to zero, the IRR is equal to the discount rate used and benefit will be equal to cost. Sensitivity analysis can be used to show maximum value of expenses that can be incurred and minimum value of profit that can be received so that the company stays feasible.

3. RESULT AND ANALYSIS

3.1 Demand Projection

In the platform of the business, tour guides are offered along with tour package provider membership. The tour guide offered is divided into five types and each type has its own specification and pricing standard. The tour package provider membership allows tour package provider to join the platform and offer tour packages. The membership is divided into four types. Each type differs in price and number of tour package limit.

Questionnaire is designed and distributed to obtain the data for the market aspect. Potential market, available market, and target market is then calculated based on the result of the questionnaire. The target market for tour guide booking transaction is 0.10% of the available market, and 5% for tour package provider membership. Total demand projection is obtained from the overall market aspect analysis. The result shows that 9,881 tour guide booking transactions and 269 tour package provider joins the platform in year 2021. According to data provided by KEMENPAR in the accountability report of 2019 [16], average rate of tourist growth reaches 12.34% and the rate of business growth in the tourism sector reaches 4%. The increase in demand follows these rates, and the total demand projection for each year is shown in Figure 1.

Figure 1 Demand projection

3.2 Design of Technical and Operational Aspect

3.2.1 Business Process Design

The business processes involved in this business are tour guide registration, tour package provider registration, tour package provider member upgrade or downgrade, tour guide booking transaction, tour package booking transaction, tour guide refund, tour package refund, training, marketing, other internal activities, and other external activities. Figure 2 shows the business process for tour guide booking transaction. The total time needed by the financial department to execute two activities in the tour guide booking transaction process is four minutes.

The total time needed each year is then calculated by multiplying all the activities in all the business process with the demand projected. The result of the total time needed calculation is as shown in figure 3. The total time needed increases each year along with the increase of demand projected. The total time is then used to calculate the number of employees needed for the operational need.

Figure 2 Business process for tour guide booking transaction

Figure 3 Total time needed by business process

3.2.2 Website Design

The website is designed to accommodate the business process. The use cases needed by traveller (end-user) are order and cancel travel packages, order and cancel tour guide, login, and register. The use cases needed by tour guide are get tour guide transactions, edit profile, login, and register. The use cases needed by tour package

provider are order and cancel tour guide, manage tour packages, get tour package transactions, upgrade/downgrade membership, login, and register. The use cases for finance department are login and verify payment.

Figure 4. Use case diagram

The use cases for tour guide manager and tour package provider manager are approve document and information, and login. The use case for website admin are activate tour guide and tour package provider account and activate upgraded or downgraded tour package provider account. Aside from that, the registration for both tour guide and tour package provider triggers the activation request use case. The use case for the website is as shown in Figure 4.

3.2.3 Estimation of Operational Need

To accommodate the tour guide booking transactions, the number of tour guides that needs to be recruited is calculated. Figure 5 shows the number of tour guides needed each year. It increases along with the increase of demand projected. The employees needed to operate the business are calculated based on the business process. The result shows that the business needs one employee for managing director position, two for financial department, two acting as call centre, one for website admin, one for marketing, one for tour package provider

manager, and one for tour guide manager. The number of employees needed stays the same until 2025. The office of this business is located in Jln. Tukad Batanghari, Renon, Denpasar, Bali. The office has the meeting room facilities (includes equipment like projector, meeting chairs, meeting table, and speaker), office facilities (includes working desk, chair, laptop, file cabinet) for each employee, and other facilities (like musholla and toilet).

Figure 5 Total tour guide need

3.3 Feasibility Measurement

To establish the business, the fund needed is Rp288,409,392. It consists of purchasing tangible asset, intangible asset, and working capital for three months. The source of funding is 60% from owner's equity and 40% from bank loan with interest of 9.95%. The revenues and expenses are calculated and the projected cash flow of the business is as shown in Table 1.

Table 1 Cash flow

Year	2020	2021	2022
Period	0	1	2
Cash Out (Rp)	288,409,392		
Cash In (Rp)		42,641,114	78,302,149
Salvage Value (Rp)			
Working Capital (Rp)			
Net Cash (Rp)	(288,409,392)	42,641,114	78,302,149
P/f Factor	1	0.90622	0.82123
NPV (Rp)	(288,409,392)	38,642,029	64,303,770
Cumulative NPV (Rp)	(288,409,392)	(249,767,364)	(185,463,593)
Year	2023	2024	2025
Period	3	4	5
Cash out (Rp)		138,259,425	
Cash In (Rp)	96,101,646	183,645,432	140,124,069
Salvage Value (Rp)			103,694,569
Working Capital (Rp)			158,910,696
Net Cash (Rp)	96,101,645	45,386,007	402,729,334
P/f Factor (Rp)	0.74421	0.67441	0.61116
NPV (Rp)	71,519,580	30,608,884	246,133,175
Cumulative NPV (Rp)	(113,944,012)	(83,335,129)	162,798,046

The cash flow shows that the NPV of the business by the end of 2025 is Rp162,798,046 (NPV>0). PBP and IRR is then calculated based on the cash flow. The result shows that PBP is 4.339 years. The IRR obtained

from the business is 24.47%. IRR is greater than the required rate of return, which is 10.35%. Thus, the business is feasible.

3.4 Sensitivity Analysis

Sensitivity of the business is calculated and analysed. The first attempt is to calculate the sensitivity based on the increase of salary expense. The business is sensitive towards 6.96% increase of salary expense. The second attempt is to calculate the sensitivity based on the decrease in demand. The result shows that the demand sensitivity is 2.86%. Lastly, the price decrease sensitivity is calculated, and the business is known to be sensitive towards 0.94% of price decrease. If the increase and decrease reach these rates, the business will have NPV equal to zero. If the increase and decrease of each variable exceeds these rates, thus the business is no longer feasible.

4. CONCLUSION

Based on the result of the research, the market aspect result shows the total demand projection for tour guide transaction and tour package provider member. In 2021 it is projected that, the total tour guide transaction is 9,881, and the total tour package providers joining in as member is 269. The demand projected increases each year up to 2025. In the technical aspect, the business process is designed. The website is also designed to accommodate the business process. Based on the business process, the employee need is calculated and the result shows that the business needs 1 employee for managing director, 2 for financial department, 1 for marketing, 1 for website admin, 1 for tour package provider manager, 1 for tour guide manager, and 2 for call centre. The number of tour guide that needs to be recruited in 2021 is 406, and it increases each year along with the increase of demand projection for tour guide transaction. Office facility, meeting room facility, and other facilities are also needed in the office that is located in Jln. Tukad Batanghari, Renon, Denpasar, Bali.

Based on the financial aspect, the projected earnings after interest and tax is obtained. Then, NPV, IRR, and PBP is calculated. The result of the calculation shows that the NPV of the business reaches Rp162,798,046, with the IRR of 24.47% and PBP of 4.339 years. Because the NPV larger than zero, and IRR larger than required rate of return (10.35%), the business is said to be feasible. The feasibility of the business is sensitive towards 6.96% increase of salary expense, 2.86% decrease in demand, and 0.94% decrease in price. If the increase and decrease reach these rates, the business will have NPV equal to zero. And if it exceeds these rates, thus the business is no longer feasible. The limitation of this research is the use of secondary data for some parts of the research. And the suggestion for future research is to analyse the risk to establish the business.

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