Innovation of Business Model to Expand New Revenue Stream and Exploring Willingness to Pay in Café, Restaurant, and Business Sector to Waste Logistic Service in Urban Area: Study Case of NYAMPIH

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Abstract

The purpose of this study is to find out solutions and implementation of business model systems to get new customers when NYAMPIH starts to scale-up and market expansion to urban areas such as coffee shops, restaurants, and also other sector businesses in the city of Bandung. NYAMPIH is a smart application and educational platform that connects waste officers with their consumers. In this case, the transported waste has been categorized properly according to the facilities provided. After that, consumers can collect points given by officers when picking up their garbage and can be exchanged for prizes. Consumers only need to subscribe, so all organic and inorganic waste will not end up in the TPA/TPS, because we will process it back into a new value. NYAMPIH faces an obstacle, how to change one's habits to care about their own waste.

This study will use a qualitative approach by conducting observations, observations, and also interviews with a total of 30 respondents who have the position of manager and also the location cleaning division according to the market segment appointed by the researcher. The primary data used is the history of NYAMPIH operations with financial data, and for secondary data from literature reviews, journals, and books. Previously, the NYAMPIH market segment was housewives who lived in housing, but there was still a lack of comprehensive implementation when viewed from NYAMPIH's income so far. Therefore, this research is devoted to analyzing new business models with sales scenarios for new market segments. The location observation is used to obtain location information and also the problems faced by the respondents directly. Interviews were conducted to obtain validation regarding the business model which will later become the new guidelines for NYAMPIH. The results of this study indicate that NYAMPIH must expand its market segment broadly and large according to the results of observations and interviews that when market expansion will be NYAMPIH will be more prepared and can also be implemented comprehensively through the results of business models with new revenue streams. There is also to implement the location of the sector business that subscribes to NYAMPIH which will later become a zerowaste city area. After evaluation and scenario analysis, all divisional activities, including marketing, operations, finance, will be further improved for each activity that will be carried out in terms of developing NYAMPIH in the future.

Keywords: scale-up, expansion, location, performance, services, business model, revenue stream

Introduction

NYAMPIH is a platform or application that can connect scavengers and customers in urban areas such as café shops, restaurants, printers that produce paper waste, and also convection that produce some waste with a flexible pick-up system. Therefore our customers can use our services with subscription
before ordering, they must first categorize their waste. We take plastic bottles or cup packaging, paper or cardboard, food scraps, food and beverage packaging, cut fabric, and wood. After our consumers categorize their waste first, the waste will be transported by our officers and consumers will be given points which can later be collected and exchanged for ovo points as an exchange for organic waste and inorganic waste, and also for waste that can be reused by our market. Be one of the rewards.

NYAMPIH chose to prioritize the problem of organic and inorganic waste in the community, especially in the city of Bandung, because it is one of the important problems we face in our daily life. As a result, our idea is an application for a garbage collection service. However, we do provide a pick-up service with some added values:

i. Can contact trash operators online.
ii. Flexible time for our customers to contact the trash operator to collect their waste.
iii. Providing education to customers and scavengers about the environment, especially about important things in waste classification.
iv. Waste grouping before being transported to the TPA. (So, our scavengers can sell certain categories of waste to sellers and other categories will be transported to the TPA).
v. Membership and point system for customer loyalty.

Because of the potential of the NYAMPIH market, the demand has so far been high, only government transportation services are used for waste transportation services, there is no other choice. In fact, government transportation services have shortcomings, namely inflexible schedules and imprecise schedules so that households can only wait while garbage is transported. For that, households need transportation services that are flexible and can be ordered at any time. This could be a great opportunity for us to be the first to introduce this service and gain a large market share.

Business Issued Faced

NYAMPIH is still classified as a very young business since it was founded in 2019, the researcher also realized that the human resources working in NYAMPIH are still very limited, not comparable to NYAMPIH's planning projects for the future. NYAMPIH itself is a service that carries out many operational activities offline or goes directly to the field, but in this case not all of our resources have been involved in the field, which is a significant benchmark for future development. The researcher also analyzed that there is still a lack of capital and investment for our development system, it cannot be denied that NYAMPIH must have a large enough capital because we are technology-based and change people's habits. Currently NYAMPIH has entered the realm of a broader scale market, the researcher considers that by expanding a new market with additional resources, it will be one of the great opportunities for the development of our business, and also with a system that can later be adapted to the consumer market segment. And by analyzing the availability of a new segment to pay for NYAMPIH services, a plan that is very important and must be done because it can prepare all preparations from now on for the sustainability of NYAMPIH's business.

Conceptual Framework

The explanation of the framework is based on literature reviews to support when analyzing data and finding respondents to be used as research samples in more detail to show how the researcher’s research flow works. Then supported by methodology to create and explain a coherent and logical research scheme based on the views and beliefs of the researcher in carrying out this research. The researcher creates a conceptual framework based on several variables which will later become the researcher's conceptual in terms of finding data to fulfill this research. Judging from the research topic regarding NYAMPIH's system for waste management service to the business sector in urban areas, there are several supporting variables such as initial knowledge, price, and customer awareness.
Methodology

Define Objective & Problem

In this first stage, the researcher makes and defines several objective findings and also problems related to the topic which can be further analyzed through several research conducted. At this stage, the researcher must also identify problems that are core at the root that occur in the company’s business with current conditions, to find out what problems must be analyzed and become a good solution, especially for the development of the company both internally and externally.

Systematic Literature Review

This systematic method of literature review aims to identify, assess, and interpret all findings on a research topic, then to answer research questions (Kitchenham & Charters, 2007). The researcher must plan and design the best type of author to obtain the necessary data. To support the detailed research, it was carried out face-to-face by speaking directly and asking questions, after that the observation was filled through an online form, to get the results of the analysis from the identification of data and samples in a clear summary.

Conduct Qualitative Research

Data Analysis

Sampling & Data Collection

Conduct Qualitative Research

Systematic Literature Review

Define Research Problem

Figure 1: Research Methodology

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Conduct Qualitative Research
In this step of conducting qualitative research, it is to properly design research tools for researchers. In this case the researcher uses a direct observation and focus group process with several samples that meet the qualifications of the researcher.

**Interview Protocol**

Interviews provide the researcher with rich and detailed qualitative data for understanding the experiences of the participants, how they describe these experiences and what they mean to things these experiences (Rubin & Rubin, 2012). In this case, the researcher when conducting interviews with a sample of respondents can easily take the important points from each answer, then after conducting the interview the researcher will easily recap and analyze the interview's answers.

**Conclusion, Impact, and Reporting**

In this case, the researcher is in the final stages of research methodology, making conclusions, providing impact, and making reporting which is very important for the researcher to know the extent of the results of his research. In this last stage, it is the time for the researcher to collect things that are very meaningful and useful to support their research properly, into a report or writing containing the results of the analysis.

**Analysis and Result**

**Business Solution**

In this chapter, the researcher will begin processing the data that has been obtained from the solution related to the problems raised by the researcher to make it the best solution offering from the results of the previous analysis. In this case, the researcher uses several ways to process the data obtained such as analyzing general data obtained from statistics of West Java as a whole, then using the analysis of interview results by conducting open coding 1 and 2 after that grouping into selective data to make it easier for the researcher in making a decision from each analysis of the interview questions, then to make it easier the researcher also uses a general mind map to show the results of the interview analysis to answer the research question to analyze the results of respondents' want to subscribe on NYAMPIH service offering.

**Consumer Willingness to Pay Analysis**

The researcher conducted an observation and interviewed respondents who are managers on duty or divisions that usually take care of waste management in their business locations for willingness to pay analysis. In this case the researcher conducted of the location of the visit which became the criteria for the researcher to be interviewed further. The next output, the researcher can determine the business model according to the needs of each location in the urban sector and can find out how willing potential consumers will pay for NYAMPIH service. The researcher takes the focus first on the city of Bandung with a total of 30 café, restaurant, and business sector including locations that are the researcher's research to expand the market.

Furthermore, the data shows that problems that often occur and become very big problems according to the researcher in the urban area business sector, the waste is still mixed or combined with a percentage of 64.3% and only a small proportion of business locations have categorized their waste. and difficulties in sorting and categorizing the waste. In this case, the result of analysis can be seen from rates 1-6 which state that they do not want to really want to pay. And the results from 30 respondents' locations taken, the average of analysis shows a rate of 5 that the respondent's location is quite willing to pay and subscribe to NYAMPIH with prices and values that are tailored to the needs of each location. From the interview results obtained several statements of problems that occur in urban areas that run in this business sector, starting with asking a hook about the location of the business to asking for more details about waste management at the site, whether the services used previously were effective, especially
NYAMPIH will expand market therefore the researcher also asks about the price in accordance with the value and facilities provided by NYAMPIH at each location. The next output, the researcher can determine the business model according to the needs of each location in the urban sector.

Figure 2: Locations Interest for Willingness to Pay NYAMPIH service

![Locations Interest for Willingness To Pay NYAMPIH service Rate 1-6](chart.png)

Table 1: Subscription Price Category

| Location                                                                 | Subscription Price per Month |
|--------------------------------------------------------------------------|------------------------------|
| Kin’s Corner, Work Coffee, Fredo, MORGY,                                 | <Rp250.000                   |
| Coffee Colada, Teduh Coffee, Armor Kopi, Dakar, Kopi Tahura, 372 Kopi    |                              |
| Kedai Kopi 08, Kogarashi, Colada, The Soko, Utara, Work Coffee, Bahagia |                              |
| Coffee,                                        |                              |
| Kopi Selasar Sunaryo, Pizza Places, Jati Kopi,                           | >Rp250.000                   |
| Dreezel Coffee, LOY CAFÉ, Kopi Anjis, Cozy Cube, Four Points, Marugame |                              |
| Udon, Jardin, KFC, Burger King, Upnormal                                  |                              |

From the table above, it explains that from a total of 30 business locations that were the samples of the researcher, they provide price quotes for subscribing to NYAMPIH services per month. With 17 coffee shops and restaurants, business locations provide recommendations below Rp. 250,000 and for coffee and restaurants, 13 business locations offer prices above Rp. 250.00 with different offering values provided by NYAMPIH.

Interview Result Analysis

In this case the researcher analyzes the answers from the respondents and is used as an analysis for the interview results. Then from the results of each answer the researcher uses open coding, for open coding by conducting preliminary data collection to segment the information that the researcher gets during the location observation and interview with the manager on duty or related divisions.
Feasibility Analysis

Implementation Plan

In this case, the implementation of the above business solutions must involve all divisions of NYAMPIH. The analysis conducted by the researcher regarding the analysis of want to subscribe carried out by prospective new customers from the results of the expanded market later. However, the company must also be prepared if this business model approach does not match the results or undergoes some further changes.

Marketing

The current situation, especially during COVID 19 and towards the «new normal» is an important thing for many people to use social media while at home. It's an opportunity for us to make our services known by many people by posting at least 1 content per day throughout NYAMPIH's own digital marketing. The existence of social media also has benefits that not only increase sales, but we also use social media to analyze the market, potential consumers, to look for new opportunities for company development. NYAMPIH currently wants to expand the market more broadly with a fairly specific reach, through social media we can find potential consumers quickly through location features and hashtags. There is also a large part of our social media, especially our digital marketing to spread awareness to people who read our social media posts and to get feedback faster and easier while increasing visitors on all of our social media. We prefer content that fits our market.

Operational

Until now, we have several partners who are ready to process organic and inorganic waste. For organics, there is Wise Waste, a startup that is engaged in processing organic waste such as food waste or vegetables and fruit, which is made into maggot, organic fertilizer, and they also sell the results from the organic waste that was processed earlier. Furthermore, for inorganic waste, we collaborate with Loakarya, a startup that is engaged in upcycling waste where they process waste from plastic bottles, paper, tash bag, and also some wood, processed into new values such as furniture and also some other home decor. With an increase in market size, NYAMPIH will have a wider reach with its consumers,
then the income generated can also increase, and also the large community can feel the positive impact of NYAMPIH in their environment. For now, expand the market to B2B or the business sector such as coffee shops, restaurants, and several special printing houses in the Bandung City area itself.

**Finance**

For the finance division, NYAMPIH should further ensure that they will use the existing capital generated from the NYAMPIH grant following the incubator as optimally as possible by establishing the main financial performance indicator requirements for each division. Thus, the division of needs in the short term and long term, can be seen from the data that will help the finance division to more easily make optimal decisions and plans for all company activities.

**Research and Development**

In this case, NYAMPIH is already in the scale-up stage to expand the market. Research in this case is looking for the market as well as validating the planned market whether it is in accordance with the field results, then conducting some research and development to always see the opportunities that exist and become a good point of improvement or not for the company. The development team must make sure to always check and complete all existing requirements as a good preparation when the company expands later.

**New Business Model**

For almost two decades, managers, practitioners, and management theorists have used the phrase «business model». The capacity to create and analyze business plans is a significant and valuable component of management and advising competence. It is not possible to equate the BMC with a business plan, but it is certainly useful for the development of a business plan. Development efforts are carried out by updating several existing points in accordance with the NYAMPIH market expansion plan in the future.

Figure 4: New Business Model Canvas
New Strategy Approach

In this case, after the new business model canvas specifically for scale-up and market expansion is completed in accordance with the research that has been done, then the researcher makes several strategies that will later be devoted to the marketing, operations, and finance divisions with the aim of developing the company even better and also provide the best solution for each division so that it is more developed and has targets that are achieved in each of its development activities during the time after starting to expand the market itself.

New Market Sales Scenarios

In this case, the table is a sales scenario of NYAMPIH services per month in the city of Bandung in the entire area. With a target every month to get an additional at least 10 sector business locations that subscribe to NYAMPIH. From the results of the research, it is clear that for this sector business, the price applied by NYAMPIH is around Rp. 350,000 to Rp. 750,000 per month with different value offerings at each business location according to the needs of the location. With this table, it will be easier for the readers of this research to convince them that expanding the new target segment is the solution to get higher and optimal revenue. This table explains that the locations are for those who subscribe to sector business locations with a price range of Rp. 350,000 and also Rp. 750,000 and then for time alone starting from September to January with a monthly target of adding at least 10 locations or new consumers who subscribe to NYAMPIH.

Table 2: New Market Sales Scenarios per Month

| The Locations | Time | Sept | Oct | Nov | Dec | Jan |
|---------------|------|------|-----|-----|-----|-----|
| Subscriber Location fee Rp350.000 | 5    | 8    | 7   | 14  | 15  |
| Subscriber Location fee Rp750.000 | 5    | 3    | 6   | 2   | 6   |
| Total         |      | 10   | 11  | 13  | 16  | 21  |
| Total Revenue |      | Rp5.500.000 | Rp5.050.000 | Rp6.950.000 | Rp6.400.000 | Rp9.750.000 |

Future Research

Further research needs to be done to understand and implement NYAMPIH's own services and products. Especially when this research is still being hit by the COVID-19 pandemic where the researcher is still very limited in conducting research and looking for respondents, but in the future the company will continue to develop more innovative ideas, better operational systems and guarantee the comfort and benefits that will be felt later.
**Business Implication**

A well-formulated research design combined with a practice-based research topic produces fruitful preconditions that should result in helpful implications for practice. And to ensure that the best to worst scenario offers will be the choice for the company going forward in order to maximize opportunities and also the best development for the company. Each forecasting scenario provides activities for the development of better NYAMPIH in the future, especially when starting to expand the market later and has good implications for the company going forward. With a normal scenario, NYAMPIH can carry out normal activities for each division, but it is not as complete and optimal as the previous scenario because for the marketing division there are no adds on some of the company’s digital marketing platforms and for its own operations there is no door to door because of the COVID-19 condition, still very influential.

### Table 3: Business Implication

| Scenario          | Implication                        | Marketing       | Operation       | Finance       |
|-------------------|------------------------------------|-----------------|-----------------|---------------|
|                   |                                    | Adds            | Door to door    |               |
|                   |                                    | Paid Promote    | Socialization   | Best Income   |
| Best Scenario     |                                    | Exhibition Event| Service Quality |               |
|                   |                                    | Affiliate marketing | Collaboration with partners |          |
|                   |                                    | Endorsement to influencers | Socialization |          |
| Normal Scenario   | Paid Promote                        | Service Quality | Normal Income   |               |
|                   | Online Exhibition Event             | Collaboration with Partners |               |               |
| Worst Scenario    | Adds                               | Collaboration with Partners | Low Income    |               |

The table above shows the activities that can be carried out for each division if NYAMPIH reaches all scenarios that have been created and analyzed. Each forecasting scenario provides activities for the development of better NYAMPIH in the future, especially when starting to expand the market later and has good implications for the company going forward. The problem here is that if the pandemic is still ongoing, there are some offline activities that are postponed and become entirely online activities, but the researcher makes a significant offer to facilitate the company’s development in the future.

**Conclusion**

The first research question is about the current business conditions and also the operational activities that have been carried out by NYAMPIH at this time. This first question was answered after further analyzing the history of operational activities and also the company's market analysis using internal and external analysis. Previously there was no application of good and appropriate technology to facilitate the location of the sector's business. Then the second question of this research explains that there are still things that are not appropriate when using the old business model canvas to approach the new market segment.
therefore the researcher began to analyze and also make possibilities that will occur later, especially when expanding this market.

The researcher previously analyzed using the SWOT analysis method, then analyzed financial matters such as the company's Income Statement and Balance Sheet, to find out the direction of the company's future development, specifically in terms of cash flow. The third question is about the revenue analysis that will be obtained by the company when starting to expand the new market segment in the urban area. When viewed from the previous company's problems, namely regarding the lack of increasing sales in the previous market location, namely housing with housewives, because there are still many gaps and the lack of comprehensive implementation of this system NYAMPIH in the previous market, resulting in revenue that can still be unsatisfactory and also still a lot of expenses that occurred with the previous market, with these problems, the researcher in this study was allocated to find and determine a new market segment that was wider and larger to get optimal revenue.

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