Developing a Business Model Canvas for Online Classified Ads Platform: A Startup Case Study

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ABSTRACT: A growing culture of using the internet, aims to provide products and services that are modern and safe in the online advertising market. This study proposes a business model canvas for new startups classified online ads to gain a competitive advantage in the Indonesian market. Utilizing qualitative research, this study explores the development of an online classifieds business, with a focus on the integration of AI technology and in app payment systems. The proposed model includes product development, marketing and gathering user feedback. Likewise, the company can implement the proposed business model by developing its platform features and customer service.

KEYWORDS: Artificial Intelligence, Business Model, Data Collection, Online Classified Ads, Qualitative Research.

1.1 INTRODUCTION

Advertising has become an inseparable part of human life. In simple terms, advertising is information conveyed by producers to the public in the hope that the public will consume the products or services offered. Advertising has experienced the development of mass media starting from the device, direction of communication, and distribution used. Classified ads are long enough and powerful enough to introduce the product to the public.

Based on the We Are Social Report, the number of internet users in Indonesia reached 212.9 million in January 2023. This means that around 77% of Indonesia's population has used the internet. Seeing the trend, the number of internet users in Indonesia continues to grow every year with the average Indonesian using the internet for 7 hours 42 minutes every day. In addition, 98.3% of internet users in Indonesia use cell phones. For enterprise businesses, an increase in the number of internet users can be used to market and reach a wider range of consumers.

However, for small businesses such as SMEs, every money spent is very valuable because of limited capital to advertise at large and expensive costs. Online classified ads can help business owners reach a number of people in a certain geographic area and have flexibility in determining the story they want to communicate to consumers. Thus, an opportunity was found to build a classifieds start-up business that is able to compete at the Indonesian level. This opportunity arose because classified ads that were previously found in print media such as newspapers have been abandoned and changed along with technological developments. People rarely read newspapers and print media, but more often use the internet to find more information and spend more time on their smartphones. With online classified ads in online media, internet users can access them anywhere and anytime. Online classified ads also have several characteristics that are advantages, namely costs that need to be spent to place classified ads are cheaper and for certain categories, producers are still given free of charge to market their ads. In addition, advertisers can define when to publish without a publication deadline.

Online classified ads can use graphical features that create more value to attract consumers' attention. Based on the explanation previously presented, this opportunity must be maximized by providing an online classified advertising platform that can help businesses to market and sell their products or services with a wider market reach. So, the purpose of this study is to develop a competitive business model canvas for new online classified startups, focusing on the integration of AI technology and in app payment systems.

2.1 BUSINESS ISSUE EXPLORATION

Based on the data that has been presented and considering the opportunities for technological progress and the culture of people who have used the internet to continue to grow, the company is committed to providing the best products and services that are more modern and safer for users of online classified ads. Company itself has started to be developed but at this time the company still

does not have a business model what kind of they will run, so the formulation of the research problem is to analyze and propose a business model to gain competitive advantage in new online classifieds startup companies so that startups can compete in Indonesian.

2.2 CONCEPTUAL FRAMEWORK

The proposed conceptual framework aims to generate a business model canvas for competitive advantage by considering core competencies, core capabilities, and strategic assets. By utilizing company resources effectively, a company can achieve a competitive edge. Core capabilities, developed through the combination of resources, provide unique value to customers. Over time, these capabilities can become inimitable and serve as a source of competitive advantage. Strategic assets, valuable and difficult to imitate or replace, differentiate a company from its rivals. Utilizing intellectual property and customer data can further enhance a company's competitive advantage. Employing the framework can guide the formulation of a perceptual map and inform marketing strategies based on the obtained information.
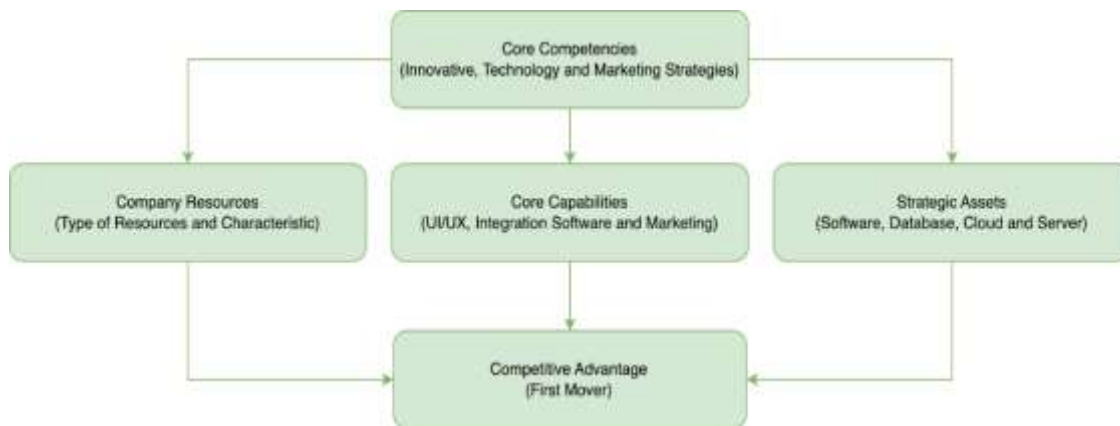

Figure 2.1 Conceptual Framework

2.3 RESEARCH DESIGN

Researchers will use qualitative research to fulfill the objective aspects of this study and focus on developing an online classifieds business. A qualitative methodology is used to better understand the needs of users of online classifieds services in order to provide better services and features to users. Qualitative research studies can provide the capacity to analyze through in-depth and flexible interpretation using only limited data (Azungah, 2018). Theoretical foundations and guidelines serve as the framework for research designs, encompassing assumptions, principles, and regulations that unify various concepts. In this particular study, the authors employ a conceptual framework to gain a competitive advantage, systematically dissecting ideas from identifying business issues to proposing implementation strategies. This study follows a structured approach influenced by Rothaermel (2017), encompassing three interrelated tasks in strategic management: analysis, formulation, and implementation of a strategic framework aimed at developing the most effective strategy for achieving a competitive advantage.
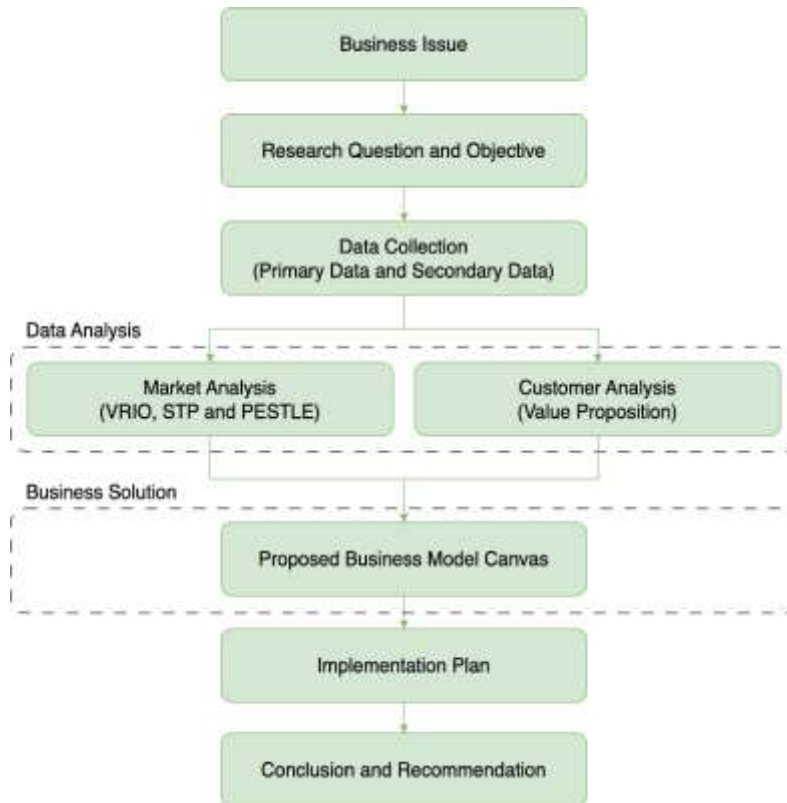
Figure 2.2 Research Design

2.4 DATA COLLECTION METHOD

2.4.1 PRIMARY DATA

The main source of data for this study is derived from in-depth interviews conducted with individuals who are users of competing company products. These interviews were conducted by selecting specific research subjects rather than using the entire population as research respondents. This approach is in line with Sugiyono's (2005) assertion that qualitative research is based on specific cases and social situations, rather than being determined by the population. The researcher establishes criteria for selecting respondents and categorizes them into two distinct groups, as follows:

A. Seller

As a seller through an application or website. Gender male or female aged between 18 to 35 years old. Have used at least one of OLX, Carousel, Trovit, Mitula to sell new or used products online in 2022.

B. Buyer

As a buyer through an application or website. Gender male or female aged between 18 to 35 years old. Have used at least one of OLX, Carousel, Trovit, Mitula to buy new or used products online in 2022.

After determining the criteria for respondents, the researcher arranged the interview questions as Table 2.1.

Table 2.1 Question List For Interview

Topic	Question
Screening question	- Name, gender, age, last education, income, domicile, and marital status - Have you ever sold or bought used items through online classifieds in 2022? - How many times to sell or buy used goods in 2022? - What app do you use to sell or buy used items?

General question	- What is your reason for using the application? - How do you get the latest information? - What are your pursuits, activities and hobbies? - Do you follow the social media of the application that is very important? What is the reason?
Online classified ads question	- Is choosing the application used based on UI/UX appearance very important? What is the reason? - Does the selection of the application used depend on the transaction or payment system? What is the reason? - Does the selection of the application used depend on the discount or voucher offer? What is the reason? - Is it really difficult to find the item you want to buy through an online classifieds application? If yes, what's the reason? - What items did you sell or buy, how much did the items cost, and what was the condition of the items? - What is the purpose or motivation in selling the item and advertising it through an online classifieds application? - Prefer to use applications with one category or many categories, what's the reason?
Pain & gain question (experience used classified online ads)	- What is the process of selling goods in the application that you use? Please explain! - Tell me about the shortcomings when selling new / used goods in the application (can be from features or during the process of selling goods) - Tell me about the advantages when selling new / used goods in the application (can be from features or during the process of selling goods) - Are you charged with other additional costs if you buy through the application? - What do you think of the ad posting fees charged in the application? (already cheap or expensive) - What do you think about the UI/UX appearance of the application? - How is the payment system provided in the application, and what do you think? Please explain! - What delivery system does the application provide? Please explain! - How long does it usually take for the goods to arrive and what you advertise sells well in the application, what is your opinion? - What's your opinion on the length of time items are sold in the app?

2.4.2 Secondary Data

Secondary data to be used in research can be in the form of qualitative data and quantitative data. Qualitative data was obtained through online media, articles and publications while quantitative data was obtained through statistical reports from the government, statistical agencies or other institutions.

2.5 DATA ANALYSIS METHOD

In this study, the researcher acts as a collector of research data and other instruments, such as users of competing products or the various data and documents that researchers take are only used as basic supporting analysis. Data analysis is done by managing data, looking for and finding patterns to find out what is important and what can be learned through the data obtained. The data analysis method uses several research frameworks as Table 2.2.

Table 2.2 Summary of Framework Used

Type	Framework	Data Source
Market Analysis	VRIO	• Observation • Internal company
	STP	• In-depth interview with competitor's product users • Online media and articles
	PESTLE	• Online media • Articles and publications • Statistics report
Customer Analysis	Value Proposition	• In-depth interview with competitor's product users
Marketing Strategy Formulation	BMC	• Result of analysis

3.1 ANALYSIS

The study employs a qualitative research approach, utilizing in depth interviews and document analysis to gather data. The data is then analyzed using thematic analysis to identify key themes and patterns.

3.1.1 INTERVIEW RESULT

Table 3.1 Interview Results From Users Acting as Sellers

Interview I	Interview II
Q: What is your age, gender, occupation and platform used? *A: 23 y.o, male, worker, OLX*	*Q: What is your age, gender, occupation and platform used?* *A: 23 y.o, male, business, OLX*
Q: Have you ever sold goods through online classified ads in 2022? How many times sold goods in 2022? *A: Yes, 5 - 10x a year*	*Q: Have you ever sold goods through online classified ads in 2022? How many times sold goods in 2022?* *A: Yes, 5 - 10x a year*
Q: The reason for using the application? *A: Because it's rarely used, the ads are direct, the ads are on the first page, lots of competition, and by location to location*	*Q: The reason for using the application?* *A: You can immediately see the ad on the first page, and many locations*
Q: What do you usually look for information on? *A: Social media (Instagram, Tiktok, Facebook, Twitter, Youtube)*	*Q: What do you usually look for information on?* *A: Search engines (Google, Yahoo and the like)*
Q: Items for sale? Price of goods sold? The condition of the goods being sold? *A: Camera, 4.8 million rupiah, Used*	*Q: Items for sale? Price of goods sold? The condition of the goods being sold?* *A: Laptops, guitars, bicycles, some are 3 million to 7 million, Used*

Q: Purpose or motivation in selling the item and advertising it through the online classifieds application? *A: Because the camera is no longer used, I sold it on OLX because electronic items such as cameras sell well*	*Q: Purpose or motivation in selling the item and advertising it through the online classifieds application?* *A: Needed money so I sold it and looked for a platform where people can easily find good quality used items*
Q: Prefer to use applications with one category or many categories? The reason? *A: Many categories, because you don't need to install many other applications*	*Q: Prefer to use applications with one category or many categories? The reason?* *A: Many categories, because if one category is not efficient to find other items, and need to open several applications*
Q: What is the process of selling goods in the application that you use? Please explain! *A: It's easy, it takes quite a long time and the negotiation process is a bit annoying because it's all negotiated*	*Q: What is the process of selling goods in the application that you use? Please explain!* *A: It's actually easy, but the negotiation process is a bit annoying because it takes a long time to bargain*
Q: Tell us about the shortcomings when selling new / used goods in the application (can be from features or during the process of selling goods) *A: The payment is difficult to meet there is no joint account*	*Q: Tell us about the shortcomings when selling new / used goods in the application (can be from features or during the process of selling goods)* *A: The payment is difficult to meet there is no joint account*
Q: Tell us about the advantages when selling new / used goods in the application (can be from features or during the process of selling goods) *A: Direct, simple, in one city*	*Q: Tell us about the advantages when selling new / used goods in the application (can be from features or during the process of selling goods)* *A: Direct, simple, in one city*
Q: What do you think of the ad posting fees charged in the application? (already cheap or expensive) *A: Free*	*Q: What do you think of the ad posting fees charged in the application? (already cheap or expensive)* *A: Free*
Q: What do you think about the UI/UX appearance of the application? *A: Simple but the information offered is unclear and limited*	*Q: What do you think about the UI/UX appearance of the application?* *A: Simple but the information offered is unclear and limited*
Q: How is the payment system provided in the application? Please explain! *A: Can only COD, no intermediary*	*Q: How is the payment system provided in the application? Please explain!* *A: There is no payment system in the application so I offer COD or account transfer*
Q: What do you think about the condition of the payment system? Please explain! *A: Very insecure*	*Q: What do you think about the condition of the payment system? Please explain!* *A: Very insecure*
Q: What delivery system does the application provide? Please explain! *A: Not provided*	*Q: What delivery system does the application provide? Please explain!* *A: Not provided*
Q: How long does it usually take for the items you advertise to sell on the app, and how do you respond to that? *A: 1 week, it's okay because several times selling quickly*	*Q: How long does it usually take for the items you advertise to sell on the app, and how do you respond to that?* *A: 1 week, it's okay to sell quickly*

Interview III	Interview IV
Q: *What is your age, gender, occupation and platform used?* **A**: *24 y.o, male, worker, OLX*	**Q**: *What is your age, gender, occupation and platform used?* **A**: *29 y.o, female, worker, Carousel*
Q: *Have you ever sold goods through online classified ads in 2022? How many times sold goods in 2022?* **A**: *Yes, 5 - 10x a year*	**Q**: *Have you ever sold goods through online classified ads in 2022? How many times sold goods in 2022?* **A**: *Yes, < 5x in a year*
Q: *The reason for using the application?* **A**: *Looking for a place to sell used goods*	**Q**: *The reason for using the application?* **A**: *Famous among my friends*
Q: *What do you usually look for information on?* **A**: *Search engines (Google, Yahoo and the like)*	**Q**: *What do you usually look for information on?* **A**: *Social media (Instagram, Tiktok, Facebook, Twitter, Youtube)*
Q: *Items for sale? Price of goods sold? The condition of the goods being sold?* **A**: *Camera, 3.7 million rupiah, Used*	**Q**: *Items for sale? Price of goods sold? The condition of the goods being sold?* **A**: *Kitchen cabinet, 1.3 million rupiah, Used*
Q: *Purpose or motivation in selling the item and advertising it through the online classifieds application?* **A**: *The item is no longer used and the condition is still good. Instead of selling it online, it's easier*	**Q**: *Purpose or motivation in selling the item and advertising it through the online classifieds application?* **A**: *The cupboard is no longer being used, so in order to sell it quickly and be seen by more people, I just sold it on Carousel*
Q: *Prefer to use applications with one category or many categories? The reason?* **A**: *Many categories, so you don't have to install multiple apps*	**Q**: *Prefer to use applications with one category or many categories? The reason?* **A**: *There are many categories, because each category gets dizzy and you need to remember the many functions of each application*
Q: *What is the process of selling goods in the application that you use? Please explain!* **A**: *It's easy, just upload a photo of the item being sold*	**Q**: *What is the process of selling goods in the application that you use? Please explain!* **A**: *It's easy to create an advertisement to sell goods, but it's a bit risky for payment transactions*
Q: *Tell us about the shortcomings when selling new / used goods in the application (can be from features or during the process of selling goods)* **A**: *The transaction isn't safe, because it's not from the application*	**Q**: *Tell us about the shortcomings when selling new / used goods in the application (can be from features or during the process of selling goods)* **A**: *Lack of a payment system like in other marketplaces, which makes consumers and sellers feel safe for transactions*
Q: *Tell us about the advantages when selling new / used goods in the application (can be from features or during the process of selling goods)* **A**: *Found lots of potential buyers looking for used items*	**Q**: *Tell us about the advantages when selling new / used goods in the application (can be from features or during the process of selling goods)* **A**: *The response from those who want to buy used goods is more than selling in other applications that I have used*

Q: What do you think of the ad posting fees charged in the application? (already cheap or expensive) *A: Free*	*Q: What do you think of the ad posting fees charged in the application?* *(already cheap or expensive)* *A: It's still relatively cheap, but it doesn't really help*
Q: What do you think about the UI/UX appearance of the application? *A: That's good enough*	*Q: What do you think about the UI/UX appearance of the application?* *A: It's easy and it's good*
Q: How is the payment system provided in the application? Please explain! *A: Nothing, must be outside the application*	*Q: How is the payment system provided in the application? Please explain!* *A: Nothing, COD with potential buyers*
Q: What do you think about the condition of the payment system? Please explain! *A: It's safe because you directly meet potential buyers but transactions outside the application*	*Q: What do you think about the condition of the payment system? Please explain!* *A: It's safe because you directly meet potential buyers but transactions outside the application*
Q: What delivery system does the application provide? Please explain! *A: There isn't any*	*Q: What delivery system does the application provide? Please explain!* *A: Nothing, I as a seller send it myself manually*
Q: How long does it usually take for the items you advertise to sell on the app, and how do you respond to that? *A: 1 month, quite a long time*	*Q: How long does it usually take for the items you advertise to sell on the app, and how do you respond to that?* *A: 1 month, just long enough to get buyers*

Interview V	Interview VI
Q: What is your age, gender, occupation and platform used? *A: 24 y.o, female, worker, Carousel*	*Q: What is your age, gender, occupation and platform used?* *A: 34 y.o, male, worker, Mitula*
Q: Have you ever sold goods through online classified ads in 2022? How many times sold goods in 2022? *A: Yes, < 5x in a year*	*Q: Have you ever sold goods through online classified ads in 2022? How many times sold goods in 2022?* *A: Yes, < 5x in a year*
Q: The reason for using the application? *A: Because it's easy to use*	*Q: The reason for using the application?* *A: When I looked around, it turned out that Google ads were in the top position*
Q: What do you usually look for information on? *A: Social media (Instagram, Tiktok, Facebook, Twitter, Youtube)*	*Q: What do you usually look for information on?* *A: Search engines (Google, Yahoo and the like)*
Q: Items for sale? Price of goods sold? The condition of the goods being sold? *A: Clothes and skincare, from 100 - 300 thousand rupiah, Used*	*Q: Items for sale? Price of goods sold? The condition of the goods being sold?* *A: House, 220 million rupiah, Used*

Q: Purpose or motivation in selling the item and advertising it through the online classifieds application? *A: It's no longer used & I need additional income so I'm selling it online so it's easier to sell because the condition of the item is still usable*	*Q: Purpose or motivation in selling the item and advertising it through the online classifieds application?* *A: Moving the location of the house because of work and so that the house can be sold quickly without brokers, hands directly from the first seller*
Q: Prefer to use applications with one category or many categories? The reason? *A: Many categories, because there are many references to other goods and you don't need to install many applications*	*Q: Prefer to use applications with one category or many categories? The reason?* *A: One category, because this makes it easier to find something in one place, not mixed with other categories*
Q: What is the process of selling goods in the application that you use? Please explain! *A: Take a photo, upload, enter a price, description, negotiate with the bidder or prospective buyer*	*Q: What is the process of selling goods in the application that you use? Please explain!* *A: We first send the application to Mitula and then contact the Mitula agent*
Q: Tell us about the shortcomings when selling new / used goods in the application (can be from features or during the process of selling goods) *A: There are many consumers who just want to cheat by providing fake transfer evidence and then asking for a refund*	*Q: Tell us about the shortcomings when selling new / used goods in the application (can be from features or during the process of selling goods)* *A: It took a while for our ad to be posted on Mitula*
Q: Tell us about the advantages when selling new / used goods in the application (can be from features or during the process of selling goods) *A: It's very easy to use*	*Q: Tell us about the advantages when selling new / used goods in the application (can be from features or during the process of selling goods)* *A: Agent Mitula is friendly to help make an advertisement for selling my house*
Q: What do you think of the ad posting fees charged in the application? (already cheap or expensive) *A: Free*	*Q: What do you think of the ad posting fees charged in the application? (already cheap or expensive)* *A: Free, no payment required*
Q: What do you think about the UI/UX appearance of the application? *A: Attractive and effective*	*Q: What do you think about the UI/UX appearance of the application?* *A: There's nothing difficult, it's normal*
Q: How is the payment system provided in the application? Please explain! *A: It's easy, because it already uses the applicable system*	*Q: How is the payment system provided in the application? Please explain!* *A: Outside the application direct communication with buyers*
Q: What do you think about the condition of the payment system? Please explain! *A: It's normal, because there is nothing from the application*	*Q: What do you think about the condition of the payment system? Please explain!* *A: It's safe because you meet directly with the buyer*
Q: What delivery system does the application provide? Please explain! *A: Send it yourself via Go-Send, JNE, or JNT*	*Q: What delivery system does the application provide? Please explain!* *A: There isn't any*

Q: How long does it usually take for the items you advertise to sell on the app, and how do you respond to that? *A: 2 weeks, that's fast*	*Q: How long does it usually take for the items you advertise to sell on the app, and how do you respond to that?* *A: 4 months, a long time to wait to be contacted by the buyer*

Table 3.2 Interview Results From Users Acting as Buyer

Interview I	Interview II
Q: What is your age, gender, occupation and platform used? *A: 24 y.o, male, worker, OLX*	*Q: What is your age, gender, occupation and platform used?* *A: 24 y.o, male, worker, Carousel*
Q: Have you ever sold goods through online classified ads in 2022? How many times sold goods in 2022? *A: Yes, < 5x in a year*	*Q: Have you ever sold goods through online classified ads in 2022? How many times sold goods in 2022?* *A: Yes, < 5x in a year*
Q: The reason for using the application? *A: Many sell and can find sellers in the same city as me*	*Q: The reason for using the application?* *A: Negotiable and many choices*
Q: What do you usually look for information on? *A: Search engines (Google, Yahoo and the like)*	*Q: What do you usually look for information on?* *A: Social media (Instagram, Tiktok, Facebook, Twitter, Youtube)*
Q: Items purchased? Price of goods purchased? Condition of the item purchased? *A: Keyboard, 1.2 million rupiah, Used*	*Q: Items purchased? Price of goods purchased? Condition of the item purchased?* *A: Speaker, 700 thousand rupiah, Used*
Q: Purpose or motivation in buying the item? *A: The specifications of the items being sold match what I'm looking for, and the location is the same as mine*	*Q: Purpose or motivation in buying the item?* *A: There are many choices of used goods that are still good and need speakers for the boarding house*
Q: Prefer to use applications with one category or many categories? The reason? *A: Many categories, because to buy more product choices and don't need to create another account*	*Q: Prefer to use applications with one category or many categories? The reason?* *A: Many categories, because it's easier to remember the accounts we created in just one application*
Q: What is the process for contacting sellers or advertisers in the app? Please explain! *A: It's easy, we contact via the cellphone number posted on the advertisement*	*Q: What is the process for contacting sellers or advertisers in the app? Please explain!* *A: It's easy, we contact through the application, we usually exchange WA numbers*
Q: What is the process of buying goods in the application? Please explain! *A: It's a bit complicated because we have to meet with the seller*	*Q: What is the process of buying goods in the application? Please explain!* *A: It's easy to just chat the seller*

Q: Tell us about the shortcomings when buying new / used items in the application (can be from features or during the process of buying goods) *A: Transactions outside the application are less secure, I think*	*Q: Tell us about the shortcomings when buying new / used items in the application (can be from features or during the process of buying goods)* *A: Goods are not guaranteed ORI (often find counterfeit goods)*
Q: Tell us about the advantages when buying new/used items in the application (can be from features or during the process of buying goods) *A: Lots of choices, can buy in the same city, no additional fees from the application when I buy*	*Q: Tell us about the advantages when buying new/used items in the application (can be from features or during the process of buying goods)* *A: Many choices, can see the location how far from the seller*
Q: Are you charged with other additional costs if you buy through the application? *A: There isn't any*	*Q: Are you charged with other additional costs if you buy through the application?* *A: There isn't any*
Q: What do you think about the UI/UX appearance of the application? *A: It's good enough and easy*	*Q: What do you think about the UI/UX appearance of the application?* *A: Great, just like any other easy*
Q: How is the payment system provided in the application? Please explain! *A: Nothing, the system is outside the application between the seller and the buyer*	*Q: How is the payment system provided in the application? Please explain!* *A: Nothing, outside the application directly deal with the seller*
Q: What do you think about the condition of the payment system? Please explain! *A: Less secure, must be smart in finding the right seller*	*Q: What do you think about the condition of the payment system? Please explain!* *A: It's fine*
Q: What delivery system does the application provide? Please explain! *A: Nothing, in other e-commerce we can usually choose a courier and wait for the goods to arrive a maximum of 3 days*	*Q: What delivery system does the application provide? Please explain!* *A: There isn't, so the seller sent it himself, depending on the agreement, you can directly use an expedition such as JNE/Sicepat*

Interview III	Interview IV
Q: What is your age, gender, occupation and platform used? *A: 29 y.o, male, worker, Mitula*	*Q: What is your age, gender, occupation and platform used?* *A: 27 y.o, male, worker, Trovit*
Q: Have you ever sold goods through online classified ads in 2022? How many times sold goods in 2022? *A: Yes, < 5x in a year*	*Q: Have you ever sold goods through online classified ads in 2022? How many times sold goods in 2022?* *A: Yes, < 5x in a year*
Q: The reason for using the application? *A: Focus more on one home choice*	*Q: The reason for using the application?* *A: Many choices of houses*

Q: What do you usually look for information on? *A: Search engines (Google, Yahoo and the like)*	*Q: What do you usually look for information on?* *A: Social media (Instagram, Tiktok, Facebook, Twitter, Youtube)*
Q: Items purchased? Price of goods purchased? Condition of the item purchased? *A: Rent house, 35 million/year, Used*	*Q: Items purchased? Price of goods purchased? Condition of the item purchased?* *A: Rent an apartment, 4.5 million/month, Used*
Q: Purpose or motivation in buying the item? *A: I really want to move house*	*Q: Purpose or motivation in buying the item?* *A: The price is right, the facilities are okay and according to what I like*
Q: Prefer to use applications with one category or many categories? The reason? *A: Many categories, because it makes it easier to find other items*	*Q: Prefer to use applications with one category or many categories? The reason?* *A: There are many categories, so we don't have to bother installing the application/downloading then registering*
Q: What is the process for contacting sellers or advertisers in the app? Please explain! *A: Sometimes it's difficult, the tenant doesn't respond, so it's difficult to contact*	*Q: What is the process for contacting sellers or advertisers in the app? Please explain!* *A: Easy, go straight to the seller*
Q: What is the process of buying goods in the application? Please explain! *A: All you have to do is call the seller's or tenant's contact number*	*Q: What is the process of buying goods in the application? Please explain!* *A: Call the contact number that has the unit*
Q: Tell us about the shortcomings when buying new / used items in the application (can be from features or during the process of buying goods) *A: Must contact the seller directly, sometimes slow response and already filled*	*Q: Tell us about the shortcomings when buying new / used items in the application (can be from features or during the process of buying goods)* *A: There are pictures that don't match when you visit the place*
Q: Tell us about the advantages when buying new/used items in the application (can be from features or during the process of buying goods) *A: Many types of houses and different distances*	*Q: Tell us about the advantages when buying new/used items in the application (can be from features or during the process of buying goods)* *A: The seller's contact information is written down so it's easy to contact*
Q: Are you charged with other additional costs if you buy through the application? *A: There isn't any*	*Q: Are you charged with other additional costs if you buy through the application?* *A: No*
Q: What do you think about the UI/UX appearance of the application? *A: It's fine and simple, I see*	*Q: What do you think about the UI/UX appearance of the application?* *A: Good, simple easy to understand*

Q: *How is the payment system provided in the application? Please explain!* **A**: *Outside the application, pay directly to the tenant*	**Q**: *How is the payment system provided in the application? Please explain!* **A**: *There isn't any*
Q: *What do you think about the condition of the payment system? Please explain!* **A**: *It's safe because you meet the tenants directly*	**Q**: *What do you think about the condition of the payment system? Please explain!* **A**: *Safe because transactions outside the application and directly related to the seller*
Q: *What delivery system does the application provide? Please explain!* **A**: *No delivery*	**Q**: *What delivery system does the application provide? Please explain!* **A**: *There isn't any*

Interview V	Interview VI
Q: *What is your age, gender, occupation and platform used?* **A**: *26 y.o, female, worker, OLX*	**Q**: *What is your age, gender, occupation and platform used?* **A**: *22 y.o, female, worker, Carousel*
Q: *Have you ever sold goods through online classified ads in 2022? How many times sold goods in 2022?* **A**: *Yes, < 5x in a year*	**Q**: *Have you ever sold goods through online classified ads in 2022? How many times sold goods in 2022?* **A**: *Yes, 5 - 10x a year*
Q: *The reason for using the application?* **A**: *There is no consideration, if the item I need I choose the application*	**Q**: *The reason for using the application?* **A**: *Because varied and efficient*
Q: *What do you usually look for information on?* **A**: *Social media (Instagram, Tiktok, Facebook, Twitter, Youtube)*	**Q**: *What do you usually look for information on?* **A**: *Social media (Instagram, Tiktok, Facebook, Twitter, Youtube)*
Q: *Items purchased? Price of goods purchased? Condition of the item purchased?* **A**: *Persian cat, 8 million rupiah, Used*	**Q**: *Items purchased? Price of goods purchased? Condition of the item purchased?* **A**: *Clothes, 100 thousand rupiah, Used*
Q: *Purpose or motivation in buying the item?* **A**: *Appeared on Google and I really want to buy a cat*	**Q**: *Purpose or motivation in buying the item?* **A**: *In accordance with fashion interests*
Q: *Prefer to use applications with one category or many categories? The reason?* **A**: *Many categories, because you can immediately search for many items in just one application*	**Q**: *Prefer to use applications with one category or many categories? The reason?* **A**: *Many categories, because it's easy to buy things in one application*
Q: *What is the process for contacting sellers or advertisers in the app? Please explain!* **A**: *It's easy because in the description there is already a direct seller's WA number that can be contacted*	**Q**: *What is the process for contacting sellers or advertisers in the app? Please explain!* **A**: *It's easy to just call the contact information in the ad*

Q: What is the process of buying goods in the application? Please explain! *A: No need to register the application, open the ad then read the description, look at the seller's wa number and then contact them to ask if the cat is still there or not. After that I made an appointment with the seller to meet and see the cat, then when it was okay I transferred it to the seller's account*	*Q: What is the process of buying goods in the application? Please explain!* *A: Deal with the seller then ask for an account number then transfer the purchase fee*
Q: Tell us about the shortcomings when buying new / used items in the application (can be from features or during the process of buying goods) *A: As long as I use the application, there are no deficiencies*	*Q: Tell us about the shortcomings when buying new / used items in the application (can be from features or during the process of buying goods)* *A: There are many sellers who sell goods that do not match the description given*
Q: Tell us about the advantages when buying new/used items in the application (can be from features or during the process of buying goods) *A: There isn't any*	*Q: Tell us about the advantages when buying new/used items in the application (can be from features or during the process of buying goods)* *A: Cheaper and negotiable*
Q: Are you charged with other additional costs if you buy through the application? *A: Free*	*Q: Are you charged with other additional costs if you buy through the application?* *A: There isn't any*
Q: What do you think about the UI/UX appearance of the application? *A: The UI is ugly because it looks messy with too many photos, the UX is just normal*	*Q: What do you think about the UI/UX appearance of the application?* *A: Attractive and efficient*
Q: How is the payment system provided in the application? Please explain! *A: Nothing, I was offered COD by the seller*	*Q: How is the payment system provided in the application? Please explain!* *A: There isn't, so outside of the application, you have to transfer accounts between banks*
Q: What do you think about the condition of the payment system? Please explain! *A: You have to make sure the seller is genuine or not by contacting first from WA and then going to the location to see the cat*	*Q: What do you think about the condition of the payment system? Please explain!* *A: The payment process is not very secure because there is no guarantee from the platform*
Q: What delivery system does the application provide? Please explain! *A: There is no delivery due to the COD purchase process*	*Q: What delivery system does the application provide? Please explain!* *A: Not from the application, so the seller sends via Gojek / JNE*

3.1.2 VRIO

Several data sources and their competitive advantages are obtained according to the VRIO framework which can be seen below.

Table 3.3 Company Competitiveness

No	VRIO Attributes	V	R	I	O	Competitiveness
A	Tangible resources					
1	Human resources	Yes	No	No	Yes	Competitive parity
2	Financial resources	Yes	No	No	Yes	Competitive parity
3	Physical resources	Yes	No	No	Yes	Competitive parity
B	Intangible resources					
1	Technological resources	Yes	Yes	No	Yes	Temporary competitive advantage
2	Product completeness and innovation	Yes	Yes	No	Yes	Temporary competitive advantage
3	Sales and marketing	Yes	No	No	No	Unused competitive advantage

As shown in table 3.3, company has different competitive levels applied to its resources and capabilities:

1) Temporary competitive advantage

The company possesses two temporary competitive advantages: technological resources and innovative product offerings, which are valuable intangible assets. These resources have been effectively managed by the company. However, these advantages are temporary as there are currently no competitors utilizing similar resources to innovate online classified advertising products and services. It is important for the company to continuously reassess these advantages in light of future growth conditions to maintain a competitive edge over rivals.

2) Competitive parity

The company possesses three competitive parities in the form of human, financial, and physical resources, which are valuable but commonly owned by other online classifieds service providers. Relying solely on these tangible resources is insufficient to attain a competitive advantage. It is crucial for companies to explore and acquire additional resources that can provide a distinct competitive edge.

3) Unused competitive advantage

The company possesses an untapped competitive advantage in the form of sales and marketing, which falls under intangible resources. Currently, the company has not leveraged this advantage to gain a competitive edge. It is crucial for the company to effectively manage their sales and marketing resources to establish a sustainable competitive advantage. By offering attractive discounts and implementing effective promotions, the company can attract more users to their online classified ad applications and ultimately increase their user base.

3.1.3 SEGMENTATION

Segmentation is analyzed to divide the broad market into smaller groups based on demographic, geographic, psychographic and behavioral characteristics. Therefore, researchers analyze market segmentation conditions as follows:

1) Demographics

In demographic segmentation, researchers divide the market into consumer groups based on age, gender, education and income. This demographic segmentation can help to better understand consumer needs and preferences, so that they can design more effective and efficient marketing strategies. The following is an explanation of segmentation analysis based on demographics:

a. Age

Based on interviews conducted, it was found that buyers and sellers in online classified ad applications are predominantly aged between 20-30 age range. This finding aligns with research by APJII and Katadata.co.id (2021), indicating that online classified ad service users in Indonesia are mainly within the 18-35 age group. Among these age groups, Millennials and Gen Z are the most prominent, with over 78% of these generations utilizing online classified ad applications, according to the IDN Research Institute (2022). This emphasizes the significance of age as a factor in understanding consumer behavior, particularly in the market for buying and selling used goods in Indonesia. Companies can optimize marketing platforms and channels to effectively reach the target market aged between 20-40 years, specifically targeting Millennials and Gen Z. Utilizing demographic segmentation based on age, companies can tailor marketing strategies by adjusting product offerings and prices to cater to the preferences of consumers in this age group.

b. Gender

Based on the interviews conducted, the online classifieds market exhibits a balanced gender distribution among buyers and sellers, with an equal percentage of 50%. This finding aligns with research by APJII (2020) and Katadata.co.id (2021), indicating that both men and women play significant roles in buying and selling used goods in Indonesia. APJII reports a male majority of around 55%, while Katadata.co.id suggests a female majority of around 55-60%. Understanding consumer behavior based on gender is essential for companies to develop targeted and effective marketing strategies. This can involve tailoring website design and advertisements to cater to the preferences of both genders.

c. Education

Based on the interviews conducted, the majority of online classifieds users engaged in buying or selling used goods have a bachelor's degree, accounting for approximately 51% of the interview subjects. This finding is consistent with secondary data, indicating that around 60% of online classified ad service users have higher or moderate levels of education, with 40% having at least a high school education. These findings are supported by research from APJII (2020) and Katadata.co.id (2021). APJII reports that approximately 75% of users of used goods buying and selling applications have a minimum education level of high school or higher, while Katadata.co.id suggests that around 55-60% of users hold at least a bachelor's degree. These results highlight the preference for selling or buying used goods among individuals with higher or moderate levels of education.

d. Income

Based on the results of interviews conducted, it is known that users of buying and selling used goods are dominated by subjects with incomes above IDR 4,500,000. However, there are also many users from the middle to lower income groups. Data from the IDN Research Institute (2022) shows that users from this community group have a sizable spending value, reaching 3-4 million *rupiah* per month. This shows that although users with high incomes still make up the majority, there is great potential for users with middle to lower incomes that companies can take advantage of. Therefore, companies can consider marketing strategies that can attract interest from both groups based on their income.

2) Geographical

Based on the interviews conducted, the majority of interview subjects reside in the Jabodetabek area, comprising 94% of the respondents. However, there were also participants from outside Jabodetabek who took part in online interviews, indicating a potential market beyond the area. Expanding market share outside Jabodetabek could lead to increased user base and sales. Geographic segmentation is crucial for effective marketing and sales efforts, especially in the context of digital services. Approximately 70% of digital service users in Indonesia are located in the Greater Jakarta area, including Jakarta, Bogor, Depok, Tangerang, and Bekasi. Therefore, companies can focus their marketing and business development in these major cities while also considering the significant customer base in smaller cities for further growth. To achieve national business penetration, it is vital to understand and cater to customer needs and preferences in each targeted area.

3) Psychological and Behavioral

Companies offering online classified ad services can use psychological segmentation to understand users' preferences for used goods based on social class, lifestyle, and hobbies (APJII, 2020; Katadata.co.id, 2021). This strategy involves targeting users seeking cost savings and value, those interested in sustainable living and environmental care, and individuals searching for unique or rare items for self-expression (IDN Research Institute, 2022). Furthermore, research indicates that 98% of respondents rely on social media for information, highlighting the active presence of online classified ad service users on these platforms. Thus, companies can leverage social media in their marketing strategies, emphasizing the need for a strong online presence and a user-friendly interface to enhance the user experience (IDN Research Institute, 2022). Effective marketing strategies should be tailored to the psychological characteristics and specific needs of each user. Companies can make efforts to understand the different preferences of users and adjust their marketing strategies, so that the activities of selling or buying used goods can attract more users. By considering psychological segmentation and utilizing social media as a marketing tool, companies can increase sales and achieve success in the online classifieds industry.

Based on the explanation above, researcher has mapped the market into 3 segmentation category, as follows:

a. Segment A
Man and woman aged between 10-17 years old domiciled in Indonesia. Elementary to high school education with an income between IDR 0 - IDR 1,500,000. Do not really need used items because they have been fulfilled by their parents.

b. Segment B
Man and woman aged between 18-35 years old domiciled in Indonesia. College student to workers with an income between IDR 3,000,000 - IDR 12,500,000. Looking for used items to save costs, sustainable lifestyle and get unique or rare items with a cheap price. Tech savvy, likes a variety of products and gets more information from social media and search engines.

c. Segment C
Man and woman aged between 36-60 years old domiciled in Indonesia. Workers to retirees with an income between IDR 8,000,000 - IDR 35,000,000. Looking for used items to save costs, sustainable lifestyle and get unique or rare items with a cheap price. Get information from television and billboards.

3.1.4 TARGETING
This is determined based on the results of interview analysis and data that has been collected in the discussion of segmentation. A brief explanation of the predetermined target market can be seen as below.

Table 3.4 Target Market Segmentation Groups

Segmentation	Target Market
Geographic	All Indonesian regions, urban areas
Gender	Male and Female
Age	18 - 35 years old
Occupation	College students to workers
Income Level	Lower to middle income (Rp 3,000,000 - Rp 12,500,000)
Personality	Digital presence and tech savvy, likes of variety product
Resources	Using social media and search engine to find information

Benefit Sought	a) To save costs and low prices b) Wants a sustainable lifestyle and cares for environment c) Wants to find unique/rare items and want to express themselves

3.1.5 POSITIONING

The company has an online classified ad application that provides quality service by offering various product categories to sell or buy used goods. In addition, the company also provides features for users to make transactions in the application. This is in line with the characteristics of the target market who are more familiar with technology so that if given features that can be directly implemented in one application, it will be more attractive to users of online classified ad services. The company also tries to give the impression that the brand it wants to convey to its users is one application for all the needs of buying and selling used goods easily, safely and more modernly so that the position of the company's products can be seen in Figure 3.1.
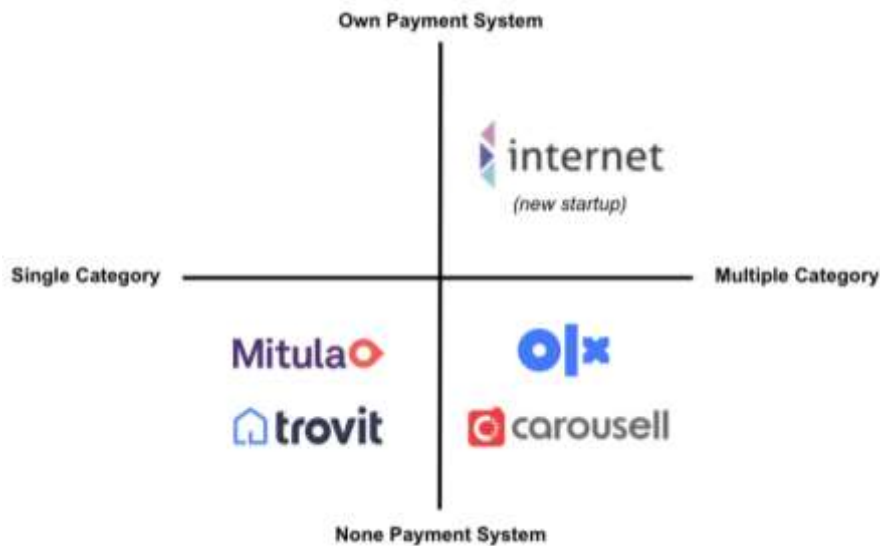
Figure 3.1 Perceptual Mapping

3.1.6 PESTLE

Based on the analysis that has been done using the PESTLE framework by looking at the conditions and the impact on the company, the following conclusions are obtained in Table 3.5.

Table 3.5 Summary of PESTLE Analysis

Type	Condition	Classification (based on impact for business)
Political Factors	Indonesia is entering a period of legislative and presidential elections in 2024. President Joko Widodo can no longer compete in the upcoming presidential election because he has served two terms. Labor laws, trade restrictions, political stability and more could change with a new leader.	Neutral
Economic Factors	The World Bank predicts a global economic recession in 2023. President Jokowi said that this uncertainty is very worrying for many countries, including Indonesia. Indonesia also	Opportunities

	experienced an increase in the number of unemployed, which reached 8.4 million people as of February 2022, and this figure could increase until the end of 2023.	
Social Factors	The development of technology and information makes it easier for the Indonesian people to obtain information about products and necessities. Annual spend on online search advertising in Indonesia is $828.6 million, 62.6% of which are purchases of products/services online and 13.7% of which are purchases of used goods through online shops.	Opportunities
Technological Factors	Artificial intelligence makes work easier by having mechanisms running on machine learning to applications and improving product quality and optimizing platform operations. AI detects suspicious activity, flags fraud, helps make transactions faster, and assesses threats to devices.	Opportunities
Legal Factors	Article 1320 of the Criminal Code states that a sale and purchase agreement is an agreement between the parties to make a lawful agreement in buying and selling online. According to Law No. 8 of 1999 concerning consumer protection, states that consumers have several rights, namely the right to choose goods, the right to receive compensation, and the right to act of discrimination.	Neutral
Environmental Factors	Carbon dioxide has a negative impact on global warming. This comes from the use of electricity, such as surfing in cyberspace which requires 365 kWh of electricity and online searches of 3.4 Wh per search. Overall, the IT industry contributes 2% of total greenhouse gas emissions due to the huge consumption of electricity.	Neutral

3.1.7 VALUE PROPOSITION MAP

Based on the results of the analysis that has been carried out, the relationship between the value proposition and the customer profile of users as sellers in online classified advertising services can be seen in Figure 3.2.
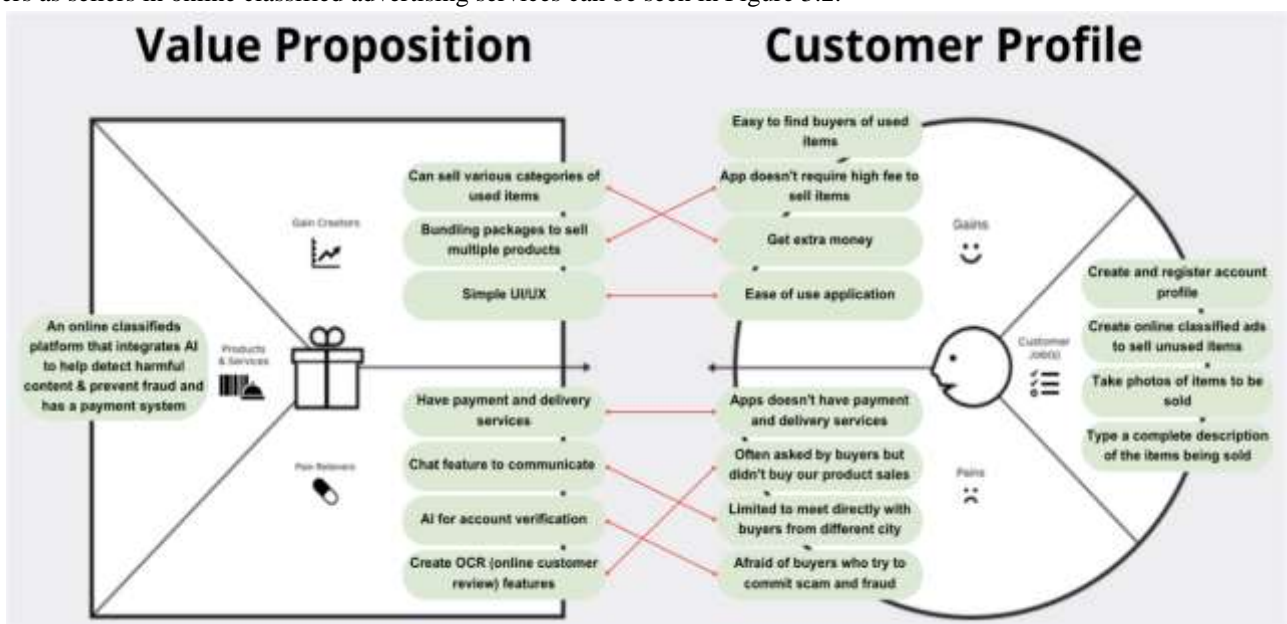
Figure 3.2 Value Proposition Map For Sellers

Based on the results of the analysis that has been carried out, the relationship between the value proposition and the customer profile of users as buyers of online classified advertising services can be seen in Figure 3.3.
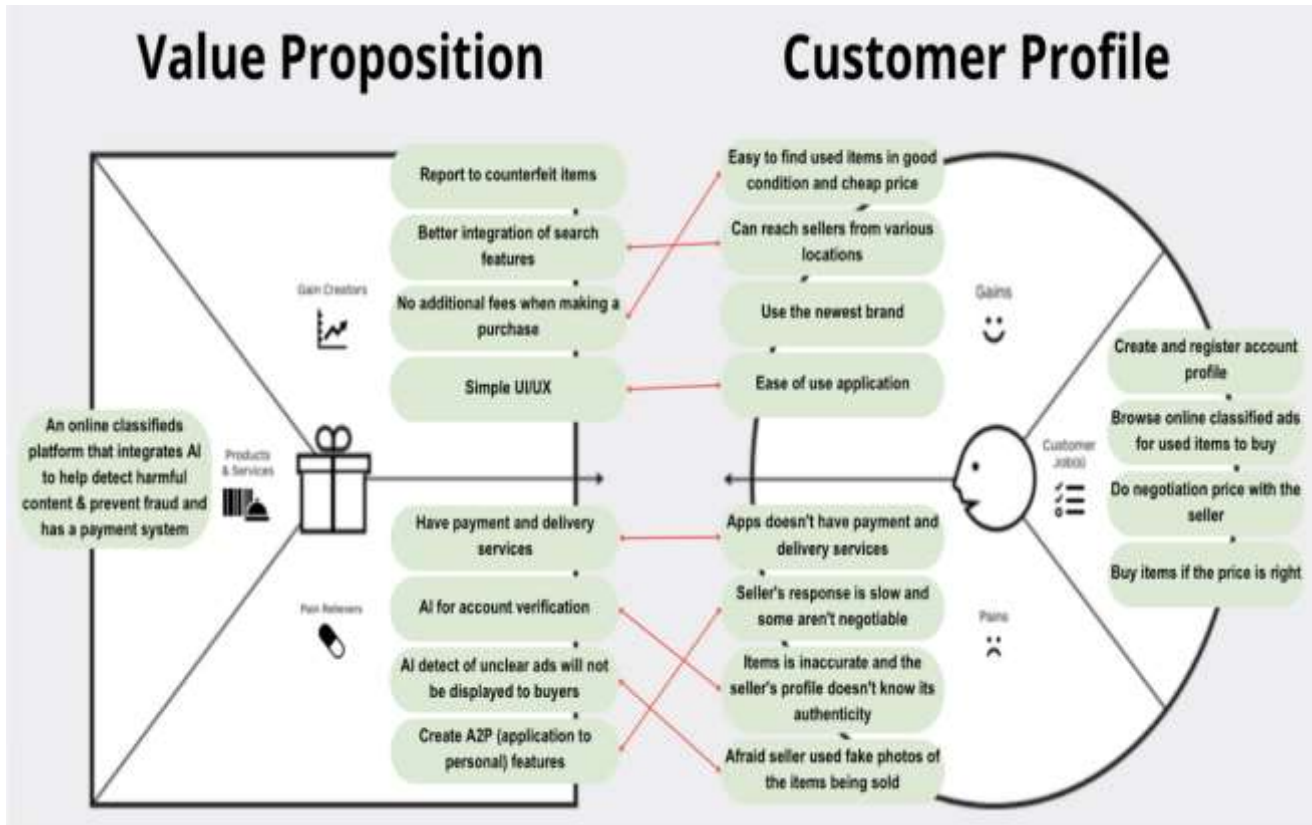
Figure 3.3 Value Proposition Map For Buyers

After identifying a value proposition map, companies can focus on creating products and services in online classified ads with several features and benefits from using AI. This feature can be developed by the company's programming team to accelerate feature development and get more loyal users of the application. To provide additional value to sellers or buyers, companies can provide a secure payment system through an application so that if there are users who want to make transactions quickly and safely, they can go through the system provided by the application. The development of mobile applications and desktop web applications needs to be built to provide convenience for users in creating online classified ads. For better transaction security, users can buy coins in the application which can be purchased using the rupiah currency, these coins will be used as a transaction authorization tool, but to maximize the customer experience, and also as a marketing tool to provide discounts and attractive offers to other application users.

3.2 BUSINESS SOLUTION

The solution proposed by researchers for companies is the application of the BMC (business model canvas) framework. This is because a sustainable business model will describe the relationship between the company's value proposition and business components. After analyzing the previous sub-chapters, the authors use the business model canvas to describe the relationship between the company's value proposition and other business components to ensure competitive advantage. The new business model described by researchers can be seen in Figure 3.4.

Figure 3.4 Proposed Business Model Canvas

3.3 IMPLEMENTATION PLAN

The company's current platform is a website based product. The proposed implementation plan includes stages such as product development, completion, sales and marketing, and gathering user feedback. Later, based on the user feedback, the company can then make improvements to the website and potentially develop a mobile application. The implementation plan details can be found in Figure 3.5.

Figure 3.5 Implementation Plan

4.1 CONCLUSION

Companies have the chance to foster original products and attract a larger user base. This opportunity arises from various factors: advancements in AI technology that facilitate fraud detection and prevention, a downturn in the economy that motivates individuals to generate additional income by selling secondhand items, and the growing preference for online shopping, which creates prospects for online classified advertising platforms. Furthermore, the company possesses a competitive edge by incorporating AI integration features and in app payment systems that are currently lacking in rival products. Additionally, the company's current focus is on enhancing product development and refining business models, thus it has yet to capitalize on the advantage it holds in sales and marketing activities.

Companies have the opportunity to focus on urban areas across Indonesia, targeting individuals aged 18-35, including students and workers earning between IDR 3,000,000 and IDR 12,500,000. By leveraging advancements in AI technology, companies can establish themselves as an online advertising platform that utilizes AI for fraud detection and provides convenient payment systems to users. Marketing and recruitment efforts make use of communication channels such as websites, social media, and mobile applications. The company also nurtures customer relationships through reward programs, FAQs, and live chat, ensuring customer satisfaction. This strategy enables companies to effectively reach their target markets and generate revenue through various means, including charges for creating online classified ads, additional fees for enhanced features and highlighting, and advertising fees from other brands looking to promote on their website or application. This revenue generation allows the company to cover operational costs.

Companies have the option to execute the suggested business model by establishing payment functionalities, shipping initiatives, and customer support services. Subsequently, the company can introduce a website and initiate sales and marketing endeavors. Users have the opportunity to share their feedback regarding the website's usability, which is then assessed for the purpose of enhancing the service. Additionally, companies can develop mobile applications that are compatible with Android and iOS devices, expanding their reach. Ultimately, companies can enhance customer experience and satisfaction, continuously assess and fulfill the requirements of online classifieds users.

4.2 RECOMMENDATION

This study proposes a competitive business model canvas for online classified startups, emphasizing the integration of AI technology and in-app payment systems. Future research should explore the implementation of this model in different market contexts. Also, The company can move forward with implementing the business model canvas and implementation plans created by researchers to bring them into reality. To thoroughly analyze customers, particularly those using the company's products, it is crucial to gather feedback and gain deeper insights into their preferences and constraints. This approach empowers the company to maintain its competitive edge and successfully contend with rival companies' offerings.

REFERENCES

1. *Asosiasi Penyelenggara Jasa Internet Indonesia* (APJII). (2020). *Data dan Fakta Penetrasi & Perilaku Pengguna Internet Indonesia* 2020. Retrieved May, 2023, from https://apjii.or.id/content/read/39/392/Data-Pengguna-Internet-Indonesia-2020
2. Disperindag. (2021, December 27). *PERLINDUNGAN KONSUMEN MENURUT UU NO 8 TAHUN 1999*. disperindag.sumbarprov.go.id. Retrieved May, 2023, from https://disperindag.sumbarprov.go.id/details/news/9218#:~:text=PERLINDUNGAN%20KONSUMEN%20MENURUT%20UU%20NO%208%20TAHUN%201999,-27%20Desember%202021&text=Konsumen%20adalah%20setiap%20orang%20yang,lain%20dan%20tidak%20unuk%20diperdagangkan
3. Ferdian, R. A. (2022, December 27). *Pemanasan Global: Penyebab Meningkatnya Suhu di Bumi* (2022). lindungihutan.com. Retrieved May, 2023, from https://lindungihutan.com/blog/pemanasan-global-dan-berbagai-dampaknya/
4. IDN Research Institute. (2022). Laporan Riset Perilaku Konsumen Online Indonesia. idntimes.com. Retrieved May, 2023, from https://research.idntimes.com/

5. Kusnandar, V. B. (2023, January 12). *Mayoritas Pengangguran Indonesia Berusia Muda pada Agustus* 2022. databoks.katadata.co.id. Retrieved May, 2023, from https://databoks.katadata.co.id/datapublish/2023/01/12/mayoritas-pengangguran-indonesia-berusia-muda-pada-agustus-2022

6. Mahdiyan, A. (2022). *Perekonomian dunia diprediksi akan dihantam resesi tahun 2023, bagaimana dengan pembangunan infrastruktur?* kpbu.kemenkeu.go.id. Retrieved May, 2023, from https://kpbu.kemenkeu.go.id/read/1173-1508/umum/kajian-opini-publik/perekonomian-dunia-diprediksi-akan-dihantam-resesi-tahun-2023-bagaimana-dengan-pembangunan-infrastruktur

7. Mihailova, M. (2020). The State of Agriculture in Bulgaria-PESTLE Analysis. Bulgarian Journal of Agricultural Science, 26(5), 935-942.

8. Novaya. (2021, March 11). 7 *Cara Kecerdasan Buatan Melindungimu Dari Penipuan Online*. idntimes.com. Retrieved May, 2023, from https://www.idntimes.com/tech/trend/nurul-aulia/7-cara-kecerdasan-buatan-melindungimu-dari-penipuan-online-c1c2?page=all

9. Osterwalder, A., Pigneur, Y., & Clark, T. (2020). Business Model Generation. John Wiley & Sons. Inc., Hoboken, New Jersey.

10. Patel, M., & Patel, N. (2019). Exploring Research Methodology. International Journal of Research and Review, 6(3), 48-55.

11. Puspapertiwi, E. R. (2023, March 03). *Prediksi Tingkat Pengangguran di Dunia* 2023, *Indonesia Nomor Berapa?* kompas.com. Retrieved May, 2023, from https://www.kompas.com/tren/read/2023/03/03/213000365/prediksi-tingkat-pengangguran-di-dunia-2023-indonesia-nomor-berapa-?page=all#:~:text=Indonesia%20diprediksi%20memiliki%20tingkat%20pengangguran,orang%20Indonesia%20tidak%20memiliki%20pekerjaan

12. Rosani, R., Iqbal, I., & Purwanti, D. (2021). *Analisis PESTEL Pada Lazismu Kalimantan Barat*. Qous Qazah Journal of Islamic Economics, 2(2), 29-37.

13. Rothaermel, F. T. (2017). Competitive Advantage, Firm Performance and Business Models. Strategic Management (3rd ed.). McGraw-Hill Education: New York, NY, USA.

14. Rothaermel, F.T. (2021). Competitive Advantage, Firm Performance and Business Models. Strategic Management (5th ed.). McGraw-Hill Education: New York, NY, USA.

15. Similarweb.com. (2023, January). Top Websites Ranking. Most Visited Classified Websites in Indonesia. Retrieved February, 2023, from https://www.similarweb.com/top-websites/indonesia/e-commerce-and-shopping/classifieds/

16. Simon, K. (2023, February 09). DIGITAL 2023: INDONESIA. Datareportal.com. Retrieved March, 2023, from https://datareportal.com/reports/digital-2023-indonesia

17. Wahid, H. (2022, December 27). *Stabilitas Politik 2023 dalam Bingkai Pertumbuhan Kesejahteraan*. nasional.kompas.com. Retrieved May, 2023, from https://nasional.kompas.com/read/2022/12/27/16175941/stabilitas-politik-2023-dalam-bingkai-pertumbuhan-kesejahteraan

18. Wajid, M. A., & Zafar, A. (2021). PESTEL Analysis to Identify Key Barriers to Smart Cities Development in India. Neutrosophic Sets and Systems, 42, 39-48.

19. Zaenuddin, M. (2021, October 16). *Tren Belanja Produk Bekas Semarak Kembali di Masa Pandemi*. katadata.co.id. Retrieved May, 2023, from https://katadata.co.id/muchamadnafi/foto/61697d86765f9/foto-tren-belanja-produk-bekas-semarak-kembali-di-masa-pandemi

20. Zaenudin, A. (2019, November 08). *Dunia IT Menyumbang Emisi Karbon yang Sangat Besar*. tirto.id. Retrieved May, 2023, from https://tirto.id/dunia-it-menyumbang-emisi-karbon-yang-sangat-besar-elcZ