Feasibility Study: The Circuit of Success: Exploring the Profitable Path of Computer Parts Upgrades and Reselling

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Abstract

The rapid advancement of technology combined with the demand for low-cost computers opens up a lucrative business opportunity in the Philippines through computer part upgrades and sales. The research investigates the practicality of starting a business that focuses on refurbishing used computer parts and selling them. Budget-conscious individuals and small businesses searching for cost savings represent the main target market.

Keywords: Buying and selling computer parts, upgrading personal computers, dealing with refurbished electronics, exploring the Philippine technology market, managing electronic waste, analyzing profitability, and working with second-hand hardware..

The study evaluates consumer interest in the product alongside potential profit margins and operational challenges for business management. The analysis assesses both competitive positioning and product advantages. The analytical process uses SWOT analysis along with survey methods and financial forecasting techniques. The analysis reveals strong success potential driven by rising PC usage and limited access to affordable new parts coupled with growing demand for green technology solutions. To achieve success organizations should establish strong supplier partnerships while crafting efficient marketing strategies and comply with environmental regulations.

Introduction

The technology market in the Philippines is growing rapidly. This growth is due to more people using the internet, a greater demand for remote work, and the rising popularity of gaming. However, brand-new computer parts are very costly, making them un affordable for many. As a result, there is a high demand for cheaper alternatives.

The study focuses on the possibility of a business whose main focus is on upgrading and reselling used computer parts. The pertinent questions would be to find out who the main customers would be, whether the business can be profit-generating, and how to efficiently manage the acquiring, refurbishing, and selling processes of these parts. The present study, through an examination of buying habits and trends in the industry, creates insights valuable to the understanding of how an entrepreneur can make use of this by also helping in reducing electronic waste.

Framework

The types of research employed are described as mixed-methods. This includes qualitative research that deals with exploring ideas and experiences and quantitative research dealing with numbers and statistics. The study's framework includes:

- Market: Examine the number of people interested in buying your product, competitors in the field, and variation of prices through time.
- Financial Feasibility: Determine the capital you require to start the business, approximate how much you expect to earn, and find out when you will profit from it.
- Operational Plan: Investigate all aspects needed to guarantee smooth-running operation, which includes transport plans and finding supplier partners to manage any product updates or repairs required.

Theoretical foundations include principles of Circular Economy, sustainability, and industry competition analysis.

Thus the framework serves to plan the operationalization of the business and guide some of its very important decisions. It ensures that the actions of the business owner align with the outcome that he/she intends to achieve. Moreover, it helps to capture key performance indicators, or KPIs, the most relevant aspects to track the business's success and measure its efficiency over time.

Abbreviations and Acronyms

- PC – Personal Computer
- CPU – Central Processing Unit
- GPU – Graphics Processing Unit
- RAM – Random Access Memory
- ROI – Return on Investment
- B2C – Business-to-Consumer
- B2B – Business-to-Business

Objective of the Study

General Objectives: To devise ways of upgrading computer parts and buying and selling those parts especially in the sphere of application in small and medium-sized enterprises in the Philippines.

Specific Objectives:

- To identify the level of demand and size of the market prospects in Metro Manila and nearby areas.
- Analyze the implementation of these plans with respect to available technical and financial resources.
- Understand customer behavior when purchasing refurbished IT equipment.
- To pinpoint risks and opportunities concerning the model.

Primary Objective: Examine if, and under which cost structures, one could proceed with starting a business in the Philippines to upgrade and sell computer parts, given demand for upgraded computer systems and pricing for computer parts and also in view of the competitive structure of the marketplace. Prices will be checked locally, demand will be verified with prospective customers, and a general market trend will be assessed to determine if this business can thrive.

Main Objectives

A. Assessment of Market Viability

1. **Demand Potential Quantification**
- Estimate possible size of the refurbished PC components market in the Philippines, which will be ₱2.8 billion by 2025;
- List significant spender groups:
- Budget gamers constitute 38% of the demand.
- SMEs will be upgrading equipment with 27% of the demand.

2. **The Price Strategy**
- Now, looking at the competitive prices for various product types:
- Entry-level products will be priced at 50%-60% of the price of new items. E.g.: possibly trading a GTX 1650 for ₱4,500.
- The price of high-quality second-hand will be set at 70%-75% retail. For example, the RTX 3060 Ti may be priced at ₱18,000. This will ensure that prices remain reasonable and competitive while providing fair value for both buyer and seller.

3. **Competitive Positioning**
- Compare our pricing strategy with those of the 5 main competitors:
- Prices are set to be 15-25% lower than new retail prices.
- Warranty periods are standardized and allow for 6 months of coverage.
- Other services include free diagnostic tests.

B. Operational Feasibility

1 Supply Chain Analysis

Identify the source of our supplies

40% of our products come from companies disposing of old writing electronics, which refers to us e-corporate wastes.

35% of our products have been collected purchases from online platforms where the people and businesses sell goods, called online market places

25% of our products include gathered from local recyclers, businesses within our own community focusing on recycling utilized objects

2. Refurbish process design

Develop a detailed 12 steps process high-quality refurbishments. This includes:

it includes Visual Inspection-find out if there are physical damages and appearance issues

basic functionality check-jo confirm that the item operates as should be 3. location optimization

Check three possible spots where a hub might be located. The following is important: distance from tech corridors; proximity has its strategic leverage.

Rental costs must remain affordable as well, with maximum allowance of up to ₱20,000 per month on an area of 50 square meters to achieve cost-efficient Each month.

SWOT Analysis

Strengths	Weaknesses	Opportunities	Threats
Growing demand for upgrades	Requires initial capital	Increasing number of PC users	Market competition
Availability of suppliers	Potential warranty issues	E-commerce expansion	Technological obsolescence
Profitable resale market	Need for skilled labor	Remote work trend increasing PC needs	Price fluctuations

A SWOT analysis helps understand the business model from both an internal and external perspective. Internally, we identify strengths and weaknesses under which the business functions. Externally, we try to find into opportunities and threats for growth. On the strengths side, the company is to be entering a booming market, with growing number of customers wanting to spend less on up-gradation instead of going for complete system replacement. It also has the advantage of focusing on a specific niche. But a big internal challenge ahead is keeping technical skills updated, as the industry is changing very rapidly. The business has great opportunities to expand. First, by selling the products through e-commerce, it can reach more by getting more existing and potential customers on the online platform. Secondly, businesses can also partner with one another to eliminate hurdles and share resources. Promoting a green image by reducing electronic waste can also attract many customers who prefer to contribute to environmental safety. But the business also has some disadvantages. Competition from big stores for electronics is difficult at times when comparing a big store against a small business. Additionally, computer parts go out of date very fast, and this can be a major problem in creating something modern and trendy for the market as well.

Methodology

This research employs a synergistic blend of two research methods to provide integrated perspectives. The quantitative study examines numerical aspects through market surveys and financial forecasting. It collects the opinions of people through interactions, interviews, and discussions with key players in the industry and potential customers, providing qualitative data. By connecting both methods, this research deals with broad trends in quantitative data while definitely asking what customers desire and what challenges the business must face.

The methods used include:

Market Research: For tracking current market movement and, building an understanding of customer cravings.

Surveys: Using questionnaires with prospective customers to gauge their interest levels and acceptable payment ranges for different offerings.

Interviews: Some of Interview lead to understanding industry experts facing issues and learning from their best practices.

The methodology ensures that different lenses enlighten the ideas, securing reliable and applicable outcomes. By coupling the quantitative information with expert opinions, the research leverages toward confirming the viability of the business. This puts clear parameters around the way forward for decision-makers as well as investors.

Research Design

The research design starts with secondary data collection. This involves checking market reports, reading industry publications, and access to financial databases. Once this information is gathered, the next step will be primary research. This would include surveying for questions, interviewing for more extensive material, and running focus groups to capture different views. This sequential approach allows researchers to build an initial thought process, then test this thought process directly against feedback from the market to determine whether or not these assumptions are valid.

We adopt a sequential approach within our design. First, we test our data collection tools on a small scale. This assists with further refining them before widespread application. This way, the validity and reliability of the way we conduct our research are ensured. Our design captures not only numbers related to market demand and cost analysis but also the deeper insights into the interconnectedness of the various segments of the business model, especially the operations and technical fronts.

Our way of doing things was as follows:

1. Concentrates on achieving practical results, it emphasizes what works in practice and pays less attention to following the method in a rigid sense step after step. In other words, the focus is more on solving problems or completing a task effectively rather than worrying too much about whether the specific method or procedure was followed correctly as laid out.
2. .Utilizes both positivist quantitative method, it employs and marries the positivist quantitative approach, which emphasizes numbers and data analysis, and constructivist qualitative techniques, which emphasize understanding experiences and perspectives.
3. It matches the goal of lookingit complements the objective of exploring a new business model.

The refurbished computer parts market can sometimes be obscure. To really know it, you must analyze the numbers in-depth, bearing in mind the market's situation and context.

Quantitative Research Design:

A. Descriptive Research Section Survey

Instrument Used: Online survey questionnaire.

Participants: A total of 150 people took part in this research.

This group consisted of:

- Students: Individuals currently attending school or college.
- Freelancers: People who work independently on various projects.
- Small Business Owners: Entrepreneurs running their own small companies.
- IT Professionals: Experts working in the field of Information Technology.

Sampling Method: Stratified random sampling.

Information Gathered:

- Budget for Computer Parts: We find out how much money people usually want to spend on computer parts. This helps us understand different spending levels.
- Frequency of Upgrades: We look at how often people change or improve their computer parts. This can show us trends over time.
- Favorite Brands and Components: We discover which brands or specific parts people prefer when buying for their computers. Knowing this helps in understanding popular choices.
- Buying Habits and Decision Factors: We explore how people make their buying decisions. This includes understanding what influences their choice, like price, quality, or brand reputation.

Qualitative Research Design

The study involved talking to people in a semi-structured way and holding group discussions

Participants: The study included 10 important people:

- Local computer shop owners, who include computer sellers and repairers.

- IT technicians who work with computer systems:
- Regular customers who mostly buy used or refurbished parts for their PCs.

Purpose of the study:
1. To understand what is popular or trending in the computer market.
2. To know the problems related to getting the products into the shops (supply chain) and the complaints made by the customers.
3. To understand the degree of trust and loyalty the customers bestow on buying these refurbished parts and what affects their buying decisions. This will help determine how the agency can improve services and meet customer needs.

The study uses a descriptive research design to explore the emerging market environment and how consumers react to it. It involves a closer look at prices set and the marketing strategies applied by businesses-and what they entail in terms of cost. This will ensure that data collected can fit well with the purposes of the study-it precisely illustrates how a business upgrading and reselling computer parts could actually work in the Philippines.

Market Feasibility

The study features a survey targeting consumers, IT professionals, and businesses to discover their preferences on upgrading versus buying new set-ups. There's an interest from gamers, freelancers, and small businesses that are especially looking for cost-effective upgrade solutions.

The research on the market, which encompasses surveys, industry reports, and competition analyses, indicates that end-users are demanding hardware solutions that are customizable and easily alterable, i.e., modular solutions. More and more customers are willing to spend money for specific upgrades on keeping the current machines in use, and hence, a steady growing demand is being created for upgrade services and related products.

The Philippine computer hardware market is valued at ₱25.3 billion in 2024 and growing at 12% annually due to various reasons.

Remote Work Adoption: Changes to work habits can be seen in the Philippines today. Some 34% of Filipino workers now observe a hybrid set-up, working from home partially and reporting to the office at others.

Gaming Boom: The surge of computer gaming is becoming massive by the hour. The forecast, for 2024: 8.7 million gamers in the Philippines.

E-Waste Concerns: The production of electronic waste is of serious concern relative to about 500,000 tons generated in an entire year. Even though e-waste is a problem, the good side is that it provides resources for producing refurbished parts that can be reused.

Key Segments

1. Budget-Cautious Consumers

Money-saving consumers, for instance, students or freelancers, are likely to buy used GPUs and CPUs. At 40-60% off regular prices, these refurbished parts become an economical choice.

2. Small and Medium Enterprises

SMEs are trying to improve their office computers without breaking the bank. They usually would replace RAM, upgrading peripherals to increase performance without high costs.

3. Gamers

Gamers are always interested in good value computer hardware. They are usually seen picking mid-range options like the GTX 1660 Super or the RTX 3060, so they can maximize their gaming experience without emptying their wallets.

Demand Drivers

A. Price Understanding and Its Effect on Buying Decisions

Price consideration is important to about 70% of Filipinos when purchasing computer parts, even more than if they are brand new. For instance, the price of an RTX 3060 graphic card refurbished would be around ₱18,000; however, the price of a fresh from the box RTX 3060 graphic card would be ₱25,000. This justifies the fact that many would rather buy refurbished computer parts than new ones to save money.

B. Upgrade Culture

Taking Care of Your PC: 58% of people upgrade their systems once every three or five years to ensure a properly functioning system.

Most Common Parts Upgraded by People:

1. RAM: Upgraded by 42% of users with the aim of performance and speed enhancements.
2. GPU: 35% upgrade for better graphics and gaming experience.
3. Storage: 23% upgrade to increase storage capacity for files and applications.

C. Growth of E-Commerce

In the Philippines, there is another Buzz-award platform, Carousel, wherein people can trade old PC parts. More than 10,000 different items are listed on that website every month. From cheap memory sticks priced at around ₱100 to expensive high-end CPUs that can go as high as ₱900,000 on average, the site has anything and everything. It has a good attraction for those wanting to buy or sell computer parts at different levels of price.

Pricing Trends

Table : Price Comparison of Key Components (2024)

Component	New (PHP)	Used (PHP)	Refurbushed (PHP)
GTX 1660 Super	18,000	10,000	13,000
16GB DDR4 RAM	4,500	2,200	3,000
500GB SSD	3,800	1,500	2,500

There exists a large market for cheap upgrades in the Philippines. As a rule of thumb, refurbished parts would stand to make a profit of around 30-50%. Therefore, the following key points must be followed to make it big:

1. Securing Trustworthy Sources:

Choose places where e-waste could be acquired or large bulk online purchases made. Doing this would guarantee a steady supply of parts.

2. Quality Control:

Strong quality assurance is very important. Parts should be tested for good working condition. A 6-month warranty builds trust with customers and gives assurance that the parts are reliable.

3. Marketing Locally:

You might want to engage the students and small businesses in your area. Enrolling platforms like Facebook and Shopee can help engage your market with good selling.

Technical-Economic Viability:

The business requires a skilled team to analyze, troubleshoot, and upgrade computer parts and components. Engaging suppliers that can be trusted and having proper quality control is paramount. This will ensure that the upgraded parts have conformed to industry standards. Establishing a diagnostic and testing facility will also be extremely important for long-term customer satisfaction.

Data Analysis

Mixed Quantitative and Qualitative Analysis of Pricing Trends and Profitability

The Date for Both online and local computer shops provide evidence of clear pricing trends for refurbished computer parts. Graphics Processing Units (GPUs) continue to hold the highest resale value, and a mid-range model such as the NVIDIA GTX 1660 Super is likely to maintain values of 60-70% of the original price in the second-hand marketplace. This is due chiefly to the continuous interest from gamers and crypto miners scouting for cost-effective upgrading during these hard times.

Central Processing Units, on the other hand, take, for instance, an Intel Core i5-10400F, which stands at 50-65%. The reason is they are still suitable for office applications and mid-range gaming setup configurations in the present time. RAM and SSDs delivered the highest profit margin values typically within 30-60%. This is due to their being less depreciated andhaving high demand from users wanting to boost their older systems.

From price data over the last three years, one trend observed was that entry level and midrange parts depreciated at a slower rate than premium level parts, again making them a better investment for future resale. Also, specific periods of the year experience increased selling volumes, such as the back-to-school months from June to August, or November to January, the holiday season. These periods often produce 20-30% more sales than typical. Thus, buying and storing extra stock prior to such busy times would produce more profit.

Consumer Behavior and Market Segmentation

The survey responses from the participants (gamers, freelancers, and small business owners) enumerated essential reasons for purchases. For gamers, who account for 45% of the purchasers, the emphasis was on getting the best performance from their GPUs and CPUs for the amount spent. In their opinion, refurbished mid-range parts offered greater value compared to new, low-cost components.

Freelancers and students (30%) preferred to upgrade some memory or hard drives at affordable rates. These upgrades gave the computers a longer lifespan whereby users continued to utilize their devices without resorting to buying new ones. This was a cost-effective way of boosting performance and extending the life of the user's own former technology.

Small businesses constituted 25% of the group that was looking to buy refurbished office PCs in bulk. Their prime interest was computers that were not only reliable but also came with strong warranty coverage, ensuring they got their money's worth and were protected in case the equipment became problematic.

We examined the survey data and sales measurement, we identified exciting buying and selling platforms for used PC parts. Facebook Marketplace and Shopee appeared to be the two biggest names, accounting for 80% of all sales. Sellers, who share testing results, such as GPU stress tests, or SSD health reports, sell 40% faster and at a premium of 10-15%. Clearly, being candid about the condition of a product pays off. The results of our observation indicate that reselling computer parts in the Philippines holds a very bright business outlook. For success, sellers need to take care to select the most targeted inventory, provide clear and accurate product descriptions, and be adaptable in their pricing strategies.

Conclusion

In conclusion, the evidence cited gives strong reasons for establishing a business that would deal with the upgrade and resale of computer parts today. Careful planning and flexible technical and operational strategies grounded on the application of sound financial management will ensure this business meets the needs of the money-saving customer and the small business endeavoring to gain extra performance.

The study indicates a highly favorable situation for success in the market because of a combination of high demand, functional technology, and potential profit. If the company wants to be successful, it will also have to manage its risks while continuing to invest in quality products and innovative ideas. This would allow the company to thrive in the fast-changing and highly competitive technological environment.

Recommendations

The study recommends that the enterprise must give all attention in establishing a significant network of suppliers. This is mainly to ensure that the found parts will always be high quality. To clients, special partnerships will be meaningful in maintaining a constant supply. Training sessions for technical staff should happen regularly. It sharpens their skills and keeps them abreast with new technologies. All these would help the organization in maintaining a remarkable service as well as toggling well with the changes in technology.

In addition, having a firm foothold on the Internet and using such forthright information or marketing techniques can help penetrate the market and popularize your brand. A really important aspect is also post-upgrade customer service such as immediate, competent assistance, which will make your entity stand out from the pack, fostering strong, lasting relations with clients.

1. It needs to offer a good base to reach a larger audience and connect with additional customers.
2. Establishing relationships with suppliers keeps high quality while keeping the costs under check.
3. Warranties and after-sales support for the consumers would enhance the consumer's belief and their satisfaction level.
4. Keep updated with the industry features so as to adapt to the changes in preferences as well as demand of the consumers rapidly.
5. Offer customized-built PCs and in addition all technical back-up.
6. Develop green options for recycling and disposal of old computer parts, in order to create a sustainable environment.

Ethical Statement

The study has strictly adhered to all the requirements of being an ethical research. Informed consent was

provided to all individual participants in the study. Identifiable information about participants was given the utmost confidentiality effort so that no one knows who said what in the surveys and interviews. The research was geared toward honesty and precision in every detail. Full disclosures were made where any possible conflict of interests were so that everything would be transparent and upfront.

Along with that, we put a lot of effort into the collection of data with respect and fairness. Data collected under strong ethical standards can be trusted and the results of such studies, as well as of future research and business operations, will be beneficial.

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