# COMPARATIVE ANALYSIS OF BRUSH CUTTERS: KAMCO, KISANKRAFT AND STIHL

#### **Project Report**

Submitted in partial fulfilment of the requirements

For the award of the degree of

#### MASTER OF BUSINESS ADMINISTRATION



University of Calicut

By

**MENTO BIJU** 

**(YPAWMBA054)** 

IV Semester MBA

Under the guidance of

#### DR. NIJO VARGHESE

**Assistant Professor** 



#### NAIPUNNYA BUSINESS SCHOOL

Affiliated to University of Calicut, Accredited by NAAC with B++
Approved by AICTE, ISO 9001:2015 Certified
Pongam, Koratty East, Thrissur Dist.
Kerala. Pin: 680 308

MBA 2022-2024

**AUGUST 2024** 

**DECLARATION** 

I, MENTO BIJU, hereby declare that the project report entitled "COMPARATIVE

ANALYSIS OF BRUSH CUTTERS: KAMCO, KISANKRAFT AND STIHL" has

been prepared by me and submitted to the University of Calicut in partial fulfilment of

the requirement for the award of Master of Business Administration, is a record of

original work done by me under the supervision of Dr. Nijo Varghese, Assistant

Professor, Naipunnya Business School, Pongam, Koratty East., Thrissur

I also declare that project work has not been submitted by me fully or partly for the

award of any Degree, Diploma, Title or recognition before any authority.

Place: Koratty East, Thrissur

MENTO BIJU

Date:

YPAWMBA054

**AKNOWLEDGEMENT** 

I express my sincere thanks to The Almighty, without whom, this project would not

have been completed.

I am greatly obliged to Prof. Dr. Jacob P. M, The Principal, Naipunnya Business

**School,** Pongam, Koratty east, for their wholehearted support and encouragement.

I proudly utilize this privilege to express my heartfelt thanks and sincere gratitude to

my research guide Dr. Nijo Varghese, Assistant Professor NBS Pongam, for his kind

supervision, valuable guidance, continuous inspiration and encouragement in bringing

out this project report in time with a deep sense of involvement and confidence.

I am indebted to the company & higher officials for granting permission to do this

project work. I acknowledge my sincere thanks to all the staff and customers. Their co-

operation proved to be of an immense value in completing the research work.

I am also thankful to my beloved Family, Classmates and Friends for providing moral

guidance, assistance and encouragement throughout my project work.

Place: Koratty East, Thrissur

MENTO BIJU

Date:

YPAWMBA054

### TABLE OF CONTENTS

Chapter No.	Contents	Page No.
1	Chapter I - Introduction	1
1.1	Introduction	1
1.2	Statement of the Problem	3
1.3	Objectives of the Study	3
1.4	Scope of the Study	3
1.5	Research Methodology	4
1.6	Limitations of the Study	7
1.7	Industry Profile	8
1.8	Company Profile	15
2	Chapter II - Review of Literature & Theoretical Framework	29
2.1	Literature Review	29
2.2	Theoretical Framework	33
3	Chapter III - Data Analysis & Interpretation	70
4	Chapter IV - Findings, Recommendations & Summary	98
4.1	Findings	98
4.2	Recommendations	99
4.3	Summary	100
	Bibliography	
	Appendix	

# LIST OF TABLES

Table	Title of table	Page
no.		no
3.1	Age of respondents	72
3.2	Gender of respondents	73
3.3	Annual income of respondents	74
3.4	Most preferred brand by consumers	75
3.5	Satisfaction level of current brush cutter	76
3.6	The level unique functionalities of your brush cutter compared to others	77
3.7	Factors influencing the purchase decision of Kamco brush cutter	78
3.8	Factors influencing the purchase decision of Kisankraft brush cutter	79
3.9	Factors influencing the purchase decision of Stihl brush cutter	80
3.10	Response towards the cutting power of the current brush cutter	81
3.11	Level of completing task of brush cutter	82
3.12	User-friendliness of the brand	83
3.16	The trustworthiness towards the brands	84
3.14	Satisfaction of durability towards current brush cutter	85
3.15	Satisfaction level of overall value for money	86
3.16	Satisfaction level of the ergonomic design of your brush cutter	87
3.17	Satisfaction level of safety features of your brush cutter	88
3.18	Trust towards the user feedback you have read about your brush cutter	89
3.19	Satisfaction level towards user reviews	90
3.20	Satisfaction towards the warranty coverage provided for your brush cutter	91
3.21	The response based on the primary usage of the brush cutter	92
3.22	The overall reputation of your brush cutter aligns with your expectations	93
3.23	The frequency of using a brush cutter for tasks other than its primary purpose.	94
3.24	The ease of use of your brush cutter for different tasks	95
3.25	Represents the usage purposes and their brand choice	96

# LIST OF CHARTS

no.	Title of figures	Page
		no
3.1	Age of respondents	72
3.2	Gender of respondents	73
3.3	Annual income of respondents	74
3.4	Most preferred brand by consumers	75
3.5	Satisfaction level of current brush cutter	76
3.6	The level unique functionalities of your brush cutter compared to others	77
3.7	Factors influencing the purchase decision of Kamco brush cutter	78
3.8	Factors influencing the purchase decision of Kisankraft brush cutter	79
3.9	Factors influencing the purchase decision of Stihl brush cutter	80
3.10	Response towards the cutting power of the current brush cutter	81
3.11	Level of completing task of brush cutter	82
3.12	User-friendliness of the brand	83
3.16	The trustworthiness towards the brands	84
3.14	Satisfaction of durability towards current brush cutter	85
3.15	Satisfaction level of overall value for money	86
3.16	Satisfaction level of the ergonomic design of your brush cutter	87
3.17	Satisfaction level of safety features of your brush cutter	88
3.18	Trust towards the user feedback you have read about your brush cutter	89
3.19	Satisfaction level towards user reviews	90
3.20	Satisfaction towards the warranty coverage provided for your brush cutter	91
3.21	The response based on the primary usage of the brush cutter	92
3.22	The overall reputation of your brush cutter aligns with your expectations	93
3.23	The frequency of using a brush cutter for tasks other than its	94
	primary purpose.	
3.24	The ease of use of your brush cutter for different tasks	95
3.25	Represents the usage purposes and their brand choice	96

# CHAPTER I INTRODUCTION

#### 1.1 INTRODUCTION

In the rapidly evolving landscape of outdoor power tools, brush cutters have carved out a vital niche, offering versatile solutions for vegetation management across agricultural, residential, and commercial sectors. As the demands on these tools grow more sophisticated, so too do the expectations of consumers who seek efficiency, reliability, and value in their purchases. Brands such as Kamco, Kisankraft, and Stihl stand out in the market for their innovative offerings and have garnered a substantial following. However, the plethora of choices and the complexity of features available can often lead to consumer uncertainty. This underscores the necessity for a thorough analysis of the factors influencing consumer decisions and satisfaction, which this study aims to address.

Brush cutters, known for their ability to tackle dense brush and tall grasses where standard lawnmowers fall short, are indispensable for maintaining landscapes, managing agricultural fields, and controlling unwanted vegetation. The increasing reliance on these tools necessitates a deeper understanding of what drives consumer preference. Kamco, Kisankraft, and Stihl, three prominent brands in this domain, each bring unique strengths to the market. Kamco is often praised for its affordability and robust performance, making it a popular choice among cost-conscious consumers. Kisankraft is noted for its innovation and adaptability, catering to a broad spectrum of needs with a variety of models and attachments. Stihl, on the other hand, is renowned for its superior engineering and durability, appealing to those who prioritize long-term investment and brand prestige.

Despite the critical role of brush cutters, there is a lack of detailed comparative studies that evaluate the performance, user satisfaction, and overall value of different brands. Existing literature and consumer reviews tend to focus on isolated experiences or specific features rather than offering a holistic comparison. This fragmentation leaves consumers without a clear, comprehensive understanding of how these brands stack up against each other in terms of real-world application and satisfaction. Furthermore, the diversity in user requirements—from light garden maintenance to heavy-duty agricultural use—complicates the decision-making process, as each brand's models may cater differently to these needs.

This study aims to bridge this gap by providing a thorough analysis of consumer experiences and preferences regarding Kamco, Kisankraft, and Stihl brush cutters. By examining factors such as ease of use, durability, performance, customer service, and overall satisfaction, the research intends to offer valuable insights that can guide consumers in making informed purchasing decisions. Additionally, this analysis will highlight the strengths and weaknesses of each brand, providing manufacturers with critical feedback that can inform product development and marketing strategies.

In conducting this study, a mixed-methods approach will be employed, incorporating both quantitative data from consumer surveys and qualitative insights from in-depth interviews. This dual methodology ensures a well-rounded understanding of consumer experiences and preferences. Quantitative data will provide measurable insights into consumer satisfaction levels and brand performance, while qualitative data will offer nuanced perspectives on user experiences and expectations. This comprehensive approach is designed to capture the full spectrum of consumer interactions with brush cutters, providing a robust framework for evaluating the brands in question.

Ultimately, the findings of this study will not only enhance consumer awareness and confidence but also contribute to the broader discourse on product quality and customer satisfaction in the brush cutter market. By delivering a detailed comparison of Kamco, Kisankraft, and Stihl brush cutters, this research aims to set a benchmark for future studies and inform best practices for manufacturers striving to meet and exceed consumer expectations. In doing so, it will help shape the future of brush cutter development, ensuring that these essential tools continue to evolve in ways that best serve their diverse user base.

#### 1.2 STATEMENT OF THE PROBLEM:

The wide range of brush cutter alternatives available from Kamco, Kisankraft, and Stihl makes choosing a difficult procedure for customers. To properly navigate this market, one must have a thorough understanding of consumer preferences, the factors that influence purchasing decisions, and the metrics used to judge product performance and satisfaction. Nevertheless, there is a dearth of thorough comparative analysis that covers these factors in-depth, depriving customers of sufficient assistance to enable them to make decisions that are specific to their requirements and preferences. In order to draw clients, Kamco offers loan facilities through government initiatives, but other two brands also had clients without these credit facilities. In order to help customers make informed purchasing decisions, the current challenge is to execute a detailed comparison analysis of Kamco, Kisankraft, and Stihl brush cutters. This will yield insights into consumer preferences, product performance, and satisfaction

#### 1.3 OBJECTIVES:

- To determine most preferred brush cutter among KAMCO, KISANKRAFT & STIHL
- 2. To identify the Factors Influencing Purchase Decision of each brush cutter brands
- 3. To identify different brand choice of brush cutter for each Usage Purposes

#### 1.4 SCOPE OF THE STUDY

The scope of this study encompasses a comprehensive analysis of the brush cutter market, specifically focusing on Kamco, Kisankraft, and Stihl brands. This investigation aims to assess and compare the popularity, purchasing factors, and usage purposes influencing consumer choices across these brands. The study will utilize survey data from a diverse demographic of users to evaluate their brand preferences, usage patterns, and satisfaction levels. It will explore the technical attributes, user experiences, and customer support services associated with each brand. Additionally, the study will provide insights into how each brand performs in different application scenarios, including agricultural, residential, and commercial uses. By leveraging both

quantitative data analysis and qualitative feedback, the study aims to furnish actionable recommendations to consumers, manufacturers, and stakeholders, thus facilitating informed decision-making and strategic improvements in product offerings. This analysis is expected to enhance understanding of market dynamics and guide future innovations in the brush cutter industry.

#### 1.5 RESEARCH METHODOLOGY

Research methodology refers to the systematic and organized approach used by researchers to conduct scientific investigations and gather relevant data to answer research questions or test hypotheses. It provides a framework for planning, executing, and analysing research studies. Research methodology encompasses the overall research design, data collection methods, data analysis techniques, and interpretation of findings. The choice of research methodology depends on the nature of the research question, the type of data required, and the available resources. Quantitative methods will be employed to collect and analyse data through surveys and questionnaires distributed to the consumers. The survey will asses Consumer Preferences and Factors Influencing Purchase Decision. This will be done by circulating questionnaires to the both users and buyers of brush cutter of KAMCO, STIHL AND KISANKRAFT.

#### Research Design

Research design refers to the overall plan and structure that guides a research study. It is a systematic approach that outlines the methods, procedures, and strategies to collect and analyse data to answer specific research questions or test hypotheses. The research design is crucial because it determines the validity, reliability, and generalizability of the study's findings. A well-planned research design helps ensure that your methods match your research objectives and that you use the right kind of analysis for your data.

This study will employ a **descriptive research** design with a comparative approach. Descriptive research is appropriate for gathering detailed information about the current status of the phenomena, while the comparative approach allows for the evaluation of similarities and differences among the three brands.

**Population:** Population refers to the entire group of individuals who share a specific

trait as outlined by the researcher's sampling criteria. In this study population consist

of individuals in Aluva Kerala, who bought brush cutter.

**Sampling:** Sampling is the procedure of choosing a sample from the complete

population. The sampling method utilized in this research is 'Convenience

sampling'. Convenience sampling technique is chosen becauseit is quick, cost-

effective, simple, and the participants are easily accessible.

**Sample size:** The size of a statistical sample is the quantity of observations that

make it up. Any empirical investigation that seeks to draw conclusions about

a population from sample must take into account the sample size as a crucial

element. The sample size of this study is 132.

Scaling technique

The measurement employed for the research is 'Five Point Likert scale. A Likert

scale is a method employed to depict individuals' perspectives towards a subject. It

is the most commonly utilized method for scaling responses in survey research.

The Likert Scale is utilized to enable individuals to convey the extent to which

they concur or disagree with a specific statement with the following options:

Strongly disagree, disagree, neutral, agree, strongly agree

**Data Collection Methods** 

**Primary Data Collection:** 

a) Surveys and Questionnaires:

Questionnaire Design: Structured questionnaires with closed ended questions to

capture quantitative data (e.g., ratings on a Likert scale).

**Distribution**: Online platforms (social media,)

5

#### **Secondary Data Collection:**

- a) **Literature Review**: Analysis of existing research papers, market reports, and product reviews related to brush cutters.
- b) Company Documents: Brochures, manuals, and performance reports from Kamco, Kisankraft, and Stihl

#### **Data Analysis**

Data analysis is a critical step in the research process that involves transforming raw data into meaningful information, identifying patterns, relationships, and trends, and drawing conclusions from the data. There are various tools and techniques available to analyze data, and the choice of tools depends on the type of data, research questions, and the level of complexity required. The tool employed in this study is percentage analysis. It is a method of data analysis that involves expressing data as a percentage of a whole or a specific category. It is commonly used to understand the relative contribution or proportion of different components within a dataset. This technique allows researchers or analysts to compare and interpret data in a more meaningful way, especially when dealing with different scales or sizes of data.

#### Data analysis techniques

In order to achieve the goal of the research, the investigator had to rely on the original information. Original information refers to data that is gathered freshly and for the initial time using a survey. To ensure that participants respond to the questions openlyand honestly, they were made aware that there are no correct or incorrect answers to these questions and that their professional reputation would be kept completely confidential. The survey was distributed through Google Form using social media platforms, WhatsApp,

#### **Percentage Analysis**

The main purpose of percentage analysis is to standardize the responses of the participants. This analysis is conducted on all the data collected through the survey, primarily to understand the distribution of respondents in each category. Percentage analysis utilizes percentages to process the data. This approach converts the numbers into a range of 0-100 using percentages.

Percentage = (Number of confirmed respondents/total number of respondents) ×100.

#### Weighted average

The weighted average is computed by multiplying each value by its corresponding weight, summing these products, and then dividing by the total of the weights

Weighted Average= $wi\sum(wi*xi)$ 

#### Tools used for data presentation

The tool employed in this study is percentage analysis. Upon completion of a comprehensive survey with a finalized questionnaire, the data was systematically analyzed using Microsoft Excel for percentage analysis.

#### **Period of study**

The study was conducted for a period of 8 weeks from 1<sup>st</sup> April 2024 to 26<sup>th</sup> may 2024

#### 1.6 LIMITATION OF THE STUDY

- Due to limited time availability, the expected sample size (200) could not be met.
- The study was conducted only in a limited area (Aluva) and therefore may not be applicable for other areas.
- The study focused on a limited set of factors influencing the decision to buy brush cutters, derived from previous literature. Other potential factors were not included in this study.

#### 1.7 INDUSTRY PROFILE

India accounts for only about 2.4% of the world's geographical area and 4% of its water resources, but it has to support about 17% of the world's human population and 15% of the livestock. Agriculture is an important sector of the Indian economy, accounting for 14% of the nation's GDP and about 11% of its exports. Agriculture in India is currently growing at an average compound annual growth rate (CAGR) of 2.8%. About half of the population still relies on agriculture as its principal source of income, and it is a source of raw materials for a large number of industries. Accelerating the growth of agriculture production is therefore necessary not only to achieve an overall GDP target of 8% and meet the rising demand for food but also to increase the incomes of those dependent on agriculture and thereby ensure inclusiveness in our society (Anonymous, 2013). There was a record food grain production of 259.32 million tonne during 2011– 12, of which 131.27 million tonne was during the kharif season and 128.05 million tonne during the rabi season. The increases in production of wheat, bajra, maize, groundnut, and total oilseeds can mainly be attributed to increases in yields, whereas the growth in production of gram, tur, pulses, soybean, and cotton is driven by a combination of both expansion in area and increase in productivity. This situation necessitates the role of mechanization in terms of minimal use of inputs, time savings, and labor savings. Increasing demand for industrialization, Urbanization, housing, and infrastructure are forcing the conversion of agricultural land to non-agricultural uses. The scope for expansion of the area available for cultivation is limited. As per the agriculture census 2010-11, small and marginal holdings of less than 2- hectares account for 85% of the total operational holdings and 44% of the total operated area. The average holding size for all operational classes (small and marginal, medium, and large) has declined over the years and has come down to 1.16 hectares in 2010–11 from 2.82 hectares in 1970-71 (Anonymous, 2013). The availability of labor to work in agriculture is crucial to sustaining agricultural production. The population dynamics of Indian agricultural workers show that by 2020, the population of agricultural workers in the country will be about 230 million, of which 45% will be female workers (Table 1). It is predicted that the population in rural areas will decrease to 62.83% in 2025 and to 44.83% in 2050. Thus, there is going to be a significant role for farm workers in the country's agricultural production. Agricultural wages have traditionally been low due

to low productivity and large disguised unemployment in the agriculture sector. However, in recent years, there has been a sharp increase in agricultural wages due to economic growth, the adoption of employment generation policies like the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), and an increase in minimum wages under the Minimum Wages Act. However, agricultural wages, in general, are still much lower than industrial wages. This further strengthens the necessity for agricultural mechanization in a manner that is inclusive and suitable for Indian conditions.

At the start of the twentieth century. Indian agriculture was in a state of subsistence. By the year 1925–26, the total area under some major crops in undivided British India was: rice: 32 mha, wheat: 9.6 mha, and sorghum: 8.2 mha (Royal Commission on Agriculture, 1928). The yields were very low. In the years 1950–51, India produced only 50 million metric tons of food grain and a variety of other crops. By the years 2000–2001, India started producing about 700 million metric tons (Mt) of biological materials per year, including food grains, oilseeds, fruits, vegetables, sugarcane, milk, eggs, meat, fish, tea, coffee, fiber crops, floricultural produce, forest produce, and so on. The country has diverse agro-climatic conditions and consumer preferences, and hence it produces a vast variety of agricultural and livestock materials. India holds a major share of some of these products in the global context. However, their market potential is not being fully realized due to poor post-harvest management and inadequate infrastructure and programs for processing agro-produce.

By the middle of the nineteenth century, common agroprocessing industries included hand-pounding units for rice, water-power-driven flour mills, bullock-driven oil ghanies, bullock-operated sugarcane crushers, paper-making units, spinning wheels, and handloom units for weaving. In British India, during the year 1863, a note was written by the Governor of Madras State. Sir William Denison to the government of Madras state for laying greater stress on agriculture and agroprocessing (Royal Commission, 1928). Based on this, a set of improved machinery was brought from England for demonstration and adoption. It included threshing machines, winnowers, and chaff cutters, as well as steam ploughs, steam harrows, cultivators, seed drills, and horse hoes. The demonstration continued at Saidapet, near Madras, until 1871, with little outcome.

The Indian agricultural equipment market is experiencing rapid growth, with strong potential for future growth as well. The demand for agricultural machinery in the Asia-Pacific region was more than twice as high as in any other region. In Asia-Pacific, India has remained one of the primary nations that fuelled the growth of the agricultural equipment market. Tractors, power tillers, combine harvesters, rotavators, threshers, and rice transplanters are some of the equipment for which a surge in demand has been witnessed over the past few years.

The agricultural machinery industry is an important segment of the agribusiness sector in India and plays a crucial role in furthering agricultural development. In the organized (ASI) sector, the agricultural machinery industry accounted for 0.6% of all factories, 0.26% of fixed capital, 0.43% of employment, 0.76% of inputs, 0.79% of output, and 0.98% of value added in 1997–98. In terms of foreign trade, it accounted for 0.03% of exports and 0.01% of imports in 2001–02, with more than 50% of the exports being to Nigeria, the USA, and Bangladesh in 2002–03. The growth rate of imports in the 1990s was higher than that of exports. Haryana, Punjab, Tamil Nadu, and Maharashtra accounted for the bulk of the factories (Kaur, 2004). There have been some studies of the impact of liberalization on this industry and its adjustment strategies (Pillai, 2000).

The agricultural machinery and equipment industry comprises many segments, even in the organized sector. The other major parts of the industry are electric motors, diesel engines, pump sets, power tillers, drip and sprinkler systems, and tractor-driven implements. Many of these industries are characterized by subcontracting and ancillary systems where small units work for the larger parent units, supplying components or performing specific tasks in the manufacturing process. In 2000-01, there were 2226000 tractors, 127000 power tillers, 151000 combine harvesters, 3090000 threshers, 109000 planters, 2740000 seed drills, 2812000 cultivars, 2881000-disc harrows, and 311000 power sprayers (Venkateshwarlu, n.d.).

The current market for power tillers in India is estimated at 56.000 in 2013–14. The market for power tillers in India is mainly concentrated in the eastern and southern parts of the country, owing to the small land holdings per farmer in these regions and the high cultivation of rice crops. Overall power tiller density is 2.21 per thousand hectares of net sown area. The power tillers market in India is dominated by two players from

south India, viz., VST Tillers Tractors Ltd., Bangalore (Karnataka), and Kerala Agro Machinery Corporation Ltd. (KAMCO), Athani (Kerala).

The overall mechanization level in India is only 40–45%, even though 90% of the total farm power is contributed by mechanical and electrical power sources. However, all operations are not uniformly mechanized. Operation-wise, the level of mechanization varies from 42% for soil working and seed bed preparation to 29% for seeding and planting, 34% for plant protection, and 37% for irrigation. In the case of harvesting and threshing, the level of mechanization is 60–70% for wheat and rice and less than five percent for other crops. Operation-wise mechanization for harvesting, crop care, and seeding are top priorities for the farmers in India for cereals and horticultural crops. But the mechanization of the above operations is not up to the level of farmer expectations to date. Farmers need a complete mechanization package for major crops.

Today, India is recognized as a leading country in the world for the development and manufacturing of agricultural implements and equipment. The range of equipment includes tractors, harvesting and threshing equipment, plant protection machines, irrigation and drainage pumps, sprinkler systems, land development machinery, dairy and agro-processing equipment, etc. The overall demand for agricultural machinery increased during the last decade due to the non-availability of labor or the high cost of labor during peak sowing and harvesting seasons. The adoption of mechanization technology depends on the local manufacturers and after-sales services, besides credit and financial incentives provided by the government.

#### **GLOBAL SCENARIO**

The backbone of the Indian economy is agriculture. About 70% of the population depends on the agricultural sector for their livelihood. Many countries are now available to produce excess food grains, mainly because they use high-yielding varieties of seeds and modern agricultural machinery with a view to increasing their productivity, and then they are able to produce excess food grains in the present scenario. After the Industrial Revolution, even the agriculture sector all over the world witnessed a drastic change. A number of revolutions occurred during the 19th century. Higher productivity and greater output are the two major contributions to farm mechanization. Tillers form an integral part of farm mechanization and have a crucial role to play in increasing agricultural productivity. A tiller is a highly versatile piece of machinery with a multitude of uses. It is used in agriculture both for land reclamation and for carrying out various crop cultivations and is also employed for carrying out various operations connected with raising the crops by attaching suitable implements and to provide the necessary energy for performing various crop production operations involved in the production of agricultural crops. Tillers are capital-intensive, labour-intensive machines used as a mode of transport, in electricity generation, in the construction industry, and for haulage operations. It has now become an integral part of the farm structure. The application of tiller for agricultural activities that swept India during the last twenty years has erased the problem of farmers. The farm mechanization program in India aims to integrate the use of available human and animal farm power with mechanical sources of power to increase productivity. A rapid, major change in the economy was noticed by the general introduction of power-driven machines. With the entry of engineering technologies in the agricultural sector for the purpose of large production of crops using technological know-how, Kerala Agro Machinery Corporation Limited is the leading company in India trying to establish the engineering green revolution in India.

#### INDIAN SCENARIO

The agriculture industry is on the brink of a revolution that will modernize the entire food chain, as the total food production in India is likely to double. The excellent export prospects, competitive pricing of agricultural products, and standards that are internationally comparable have created trade opportunities in the agro-industry. This has further enabled the Indian agriculture industry to serve as a means by which every export and import from India and abroad can be fulfilled. This Indian agro-industry revolution brings along opportunities for profitable investment in the agriculture industry. The company provides a B2B platform with an agro-related catalog, trade exporters and importers directory, etc. that help make a way to production. India, being an agriculturally based economy, provides livelihoods to more than 75% of the population. The major portion of our income, that is, about 70%, is earned from agriculture. It is a depressed industry because of the low productivity., small size of farms, poor finances, and defective equipment. After achieving her independence in 1947, India found herself badly lacking the means to meet the food demands of her vast population. The existing agriculture scenario presented a dismal picture of traditional farming methods, low-yielding seeds, and primitive implements wholly unsuited to large-scale cultivation. The only solution lay in mechanized farming, which could turn around the virtual fortune of India. In order to achieve this objective, indigenous agromachinery units were to be set up. Without resorting to imports, which undoubtedly placed a heavy burden on the nation. Agriculture is a way of life, a tradition that, for centuries, has shaped the thought, the outlook, the culture, and the economic life of the people of India. Agriculture is considered to be the major activity of most people. Moreover, 200 million farmers and farm workers have been the backbone of India's agriculture. In the beginning, the farmers adopted the ancient method. The entire process, from sowing the seed until harvesting, was all done by the farmer himself. It was a really time-consuming one that required a lot of labor. The cost of production was very high, and the benefits are not promising.

#### STATE SCENARIO

Kerala Agro Machinery Corporation Ltd., a government undertaking in Kerala, was formed with the intention of manufacturing power tillers operated by diesel engines. The company came into existence in Athani, Ernakulam District, in 1973, when it started assembling power tillers under technical collaboration with M/s. Kubota Ltd., Japan. The product is now made in India and is suitably designed to meet Indian conditions. There are more than 1.5 lakh KAMCO power tillers operating in various states in India. Transport Corporation of India Ltd. has been associated with KAMCO for about 25 years and transports material to all parts of the country. The machines have to move directly to the concerned destinations in the same truck. It is here that TCI plays a major role in the movement of the machine and also ensures the availability of spare parts with all the dealers. An endorsement of excellent service from TCI has come by way of a certificate of appreciation from KAMCO. Mr. Sarvjeet Shukla (Controlling Manager, Ernakulam) is managing the relationship and keeping a watchful eye on service level for the customer. The KAMCO Kubota Combine Harvester and the KAMCO Kukje Paddy Transplanter are the latest introductions in the country from KAMCO. The transplanter takes away the burden of the dreary manual labour of transplanting the seedlings, thus taking away human fatigue in the transplanting operation. KAMCO has four assembly units located at Athani and Kalamassery in Ernakulam District, Kanjikode in Palakkad District, and Mala in Thrissur District of Kerala State. Provides direct employment to approximately. 600 people in its various units. It will be the endeavor of TCI to continuously enhance operational efficiency and value-add its services to strengthen the professional bond with KAMCO

#### 1.8 COMPANY PROFILE

Kerala Agro Machinery Corporation Ltd. (KAMCO), an ISO 9001 company, is a fully owned government undertaking under the ministry of agriculture engaged in manufacturing small agricultural machines mainly intended for the small and marginal farmers in the country. Established in 1973, the company has now completed 51 years of service. The company has four manufacturing units now in Athani, Kalamassery (both in Ernakulum District), Kanjikode (Palakkad District), and Mala (Trichur District). Athani Unit is the registered office of the company. At present, the company employs approximately 568 people in the four units. The company has been working profitably for the last 30 years. The company was incorporated with the intention of manufacturing and marketing agricultural machines for small and marginal farmers. The company's products now are a 9–12 HP diesel-operated power tiller, a power reaper running on a 3.2 HP kerosine engine, and a 9–12 HP diesel. Athani and Palakkad units manufacture diesel power tillers, whereas Kalamessery units manufacture diesel engines, and now Reaper units also. The unit that came up at Mala recently took up the production of reapers.

Kerala Agro Machinery Corporation Ltd. (KAMCO) has put forth efforts to promote mechanized farming. Established as a fully state-owned company, KAMCO caters to the farming requirements of small and marginal-scale farmers. Apart from supplying farm machinery, KAMCO organizes training programs for farmers on modern farming techniques.

The company enjoys the position of a premier manufacturer in the field. The products manufactured are fully indigenized, and there is no imported content in any of the items. The machines have acquired a reputation for quality and reliability. Kamco is an ISO 9001 organization with the aim of providing quality products at a reasonable price to the satisfaction of customers. The company enjoys all India sales through a network of about 45 dedicated dealers. Products are sold at a premium price at several places. They have acquired a brand preference because of the high quality and reliability associated with each piece of machinery. A power tiller is equipment suitable for small farm holdings for basic tilling operations. Instead of conventional ploughing, the tiller breaks the soil into fine parts, which is highly suited for paddy and wheat cultivation.

Originally of Japanese design, the machine has been modified later to perfectly suit Indian conditions.

KAMCO was originally conceived by Kerala Agro Industries Corporation Ltd. (KAIC), a central government and state government joint venture that promotes agro-based industries in Kerala by manufacturing farm equipment, machinery, and implements required for mechanized farming. During that time, the demand for agricultural machinery rose tremendously, and the government of Kerala decided to separate the manufacturing wing of KAIC to form KAMCO in 1973. This was the beginning of KAMCO.

The head office and first manufacturing unit of KAMCO at Athani in Ernakulam District of Kerala started off with a single product: the Power Tiller. The know-how was acquired through a technical tie-up with Japan's Kubota Corporation. The Power Tiller is a multi-utility machine that can be used for many agricultural applications, such as tilling, ploughing, weeding, pumping, puddling, levelling, spraying, hulling, and transportation. Soon, farmers took KAMCO Power Tiller to their farms and hearts, thanks to the superior quality performance and robust nature of the product. The unprecedented success of the first product meant that KAMCO had to expand its manufacturing capacity, and the company started its second unit at Kalamassery, where engines were made. Kamco could not rest on its laurels as a successful multi-unit corporation as the demand for its product kept on rising higher, leading to the formation of the third manufacturing unit at Kanjikode, Palakkad, for Power Tiller production. That was in 1995.

As a natural offshoot of its growth process, KAMCO focused on expanding its product range and upgrading its technology. This led to the development of the Power Reaper, a versatile harvesting machine. Production started in the Kalamassery Unit in 1997. A fourth manufacturing unit was opened in Mala. Thrissur in the year 2000 to increase Reaper production.

Again, product development was an ongoing process with KAMCO, and the company brought out the low-smoking 12 HP DI Engine in 2005. When this innovative product was fitted to the power tiller, the new Super DI Power Tiller was born, soon to conquer farmlands.

In 2010, a compact, lightweight power weeder/garden tiller with a 4 HP petrol engine suited for horticultural applications entered the bouquet of KAMCO products. In the same year, a compact 16-HP mini tractor for dry land applications was developed in collaboration with Mis. Barbieri SRL, Italy.

The regular expansion of manufacturing units continued with another, the fifth, manufacturing unit of KAMCO at Valiyavelicham, Kannur District, in 2014. In the following year, new additions to the product range included brush cutters and engine water pumps. A small, handy machine fitted with a 1 HP petrol engine to remove weeds from paddy fields, called a Paddy Weeder or Cono Weeder, is the latest addition to the product development range.

Besides new products, KAMCO continues to develop accessories and implements suitable for increasing the utility and durability of its machines.

Kamco's production empire expands to six state-of-the-art manufacturing units across the southern Indian state of Kerala. All these units employ stringent quality control and testing measures at every stage, from procuring raw materials to the finished products.

The registered head office at Athani, besides being the administrative command, also manufactures Power Tillers and Tractors. Kalamaserry, established in 1992, makes diesel engines. The third and fourth units are at Kanjikode, Palakkad, and Mala. Thrissur, respectively, in 1995 and 2000, power reapers were manufactured in these units. The fifth manufacturing unit was established in 2014 at Valiyavelicham, Kannur. The sixth unit for manufacturing tractors is also set up as Athani.

#### **VISION**

KAMCO, with other three decades of engineering excellence stand as the No. 1 power tiller manufactures on India. Not surprising with four state of the art production plants innovation R&D and stringer quality control system rated as one of the best of the country.

#### MISSION

- To be innovative, resourceful and profitable company
- To meet customer requirement of quality services and price consistently
- To make "Doing business with us easy and delightful to our customers
- To provide a congenial and entrepreneurial work environment in which employees can respond to the needs of business and service earn fair reward can be satisfied

#### **DEPARTMENTS IN KAMCO**

#### **Human Resource Department**

This department focuses on human resources in an organisation and works to boost individual development to the employees. They encourage a positive work environment and a strong interpersonal relationship. HR department focuses and works towards the welfare of the employees by providing the required training etc.

#### **FUNCTIONS: -**

- Training and development
- Recruitment and Selection
- Workplace Safety
- Conducting management development programme for officers
- Periodical assessment of employee performance carried out after training

#### **Marketing Department**

This department plays a vital role in the promotion of the company and makes sure that the goods and services are transferred to the clients in a proper manner. Company products are marketed to Tamil Nadu, Karnataka, Maharashtra, Orissa, Andhra Pradesh etc. The company has 45 dealers all over India.

- Regular demonstrations and service camps are being organised in various states.
- Company promotion
- Monitoring the competitors

#### **Finance Department**

This department plays a crucial role in a company as it manages the funds. They deals with all the financial transactions of a company, it includes all the receipts and payments for each and every division. As in the case of KAMCO its profit is way higher so this keeps track on the expenses and the funding sources.

#### FUNCTIONS: -

- Management of Receipts
- Management of Payments
- Auditing
- Budget and Budgetary control
- Costing

#### **Production Department**

Production is the main unit in a company. The basic purpose of this unit is manufacturing company's products and ensuring safety standards. This department focuses on assembly, maintenance and machining.

- Accountable for fixing problems relating to manufacturing
- Quality control
- Design of the product
- They should ensure the maintenance of the machines and its replacement
- They should minimize the risk of product failure
- They should use the resources and capital skilfully

#### **Quality Assurance Department**

This department is concerned in the development of a product. They are involved in the development of a product, testing of a product, packaging, delivery and quality control.

#### **FUNCTIONS: -**

- Quality assurance of a product
- Development of a product
- Testing
- They conduct auditing of product quality and inspections
- Executing corrective actions and procedures

#### **System Department**

This department deals with IT infrastructure. All the important data's or information regarding the company is maintained by this unit. This company department units are connected by LANs.

#### **FUNCTIONS: -**

- Hardware maintenance
- Software installation and update
- Security control
- Backup and recovery

#### **Material Department**

This department collects and distributes all the raw materials or supplies needed for manufacturing of the product. The company have more than 250 qualified vendors.

- Should ensure that the materials are available for the production
- Inventory control measures or related things should be reported to the board
- Should keep track on the raw materials
- Should maintain the least quantity of supplies possible

#### **Purchase Department**

This department creates a purchase order regarding the type of materials utilised, terms of payment, the rate, delivery schedule etc. after the approval from the materials department. Purchase of goods or any office supplies by departments should submit a purchase intent.

#### **FUNCTIONS: -**

- Vendor's performance is monitored, evaluated and accurately documented
- Verifies that the products constantly fulfil the purchase order's parameters and are of high calibre
- Should find reliable suppliers to meet the company requirements
- They develop and execute purchasing strategies

#### **Store Department**

This department collect the supplies from the suppliers and is kept them in the storage.

#### **FUNCTIONS: -**

- Product distribution
- Keeps supplies for the business
- They keep a note on stock return

#### **Research and Development**

Department This department is concerned with the strategy developments regarding the product, quality etc. KAMCO has a very strong research and development department.

- According to the feedbacks from the clients and from other departments corrections can be made
- They deal with product design and development
- They should maintain copies of all design of the product

#### **SWOT ANALYSIS**

#### Strength

- Strong and accepted products
- Good brand name and image
- Good management
- Following a systematic training programme for employees
- Good work environment
- Committed work force
- Broad marketing network through dealers
- Environment friendly surrounding
- Opportunity to present our opinions and recommendations

#### Weakness

- For recruitment and selection time delay will come
- Political interference
- Lack of development
- Trust in IT application is not adequate
- All products are mainly based on agricultural goods
- If agricultural field become dull it will affect the business

#### Opportunities

- Government support
- Boom in the farm mechanization
- Favourable export Good brand loyalty
- Dominating shares
- Collaborations can be made with reputed Agro companies

#### Threats

- Political interference
- Growth of private enterprises in the sector
- Changing government policies
- Competition from Korean and Chinese products (low cost)

- Price hike of components
- Potential of new entrants into the industry

#### **QUALITY SYSTEMS**

- Well defined quality system procedures adopted covering all activities to ensure quality of products & customer satisfaction
- Improvements are made on regular basis based on the feedback from the customers & dealers
- Regular interactions with all Venders including site visits to maintain and improve the acceptance level of components
- KAMCO Power Tiller certified for compliance with Minimum Performance Standards of Govt. of India
- KAMCO Power Reaper has been tested by SRFMT&TI, Ananthapur of Govt. of India

#### ISO 9001 - 2000 VERSION

- Improvement in the systems and improved Customer/Dealer satisfaction
- Comply with the requirement of Customers and applicable statutory/regulatory requirements
- Improvement in the effectiveness of the established quality systems
- Addresses Customer, Dealer, Vendor, Society, Employees & Shareholders for their requirement & satisfaction

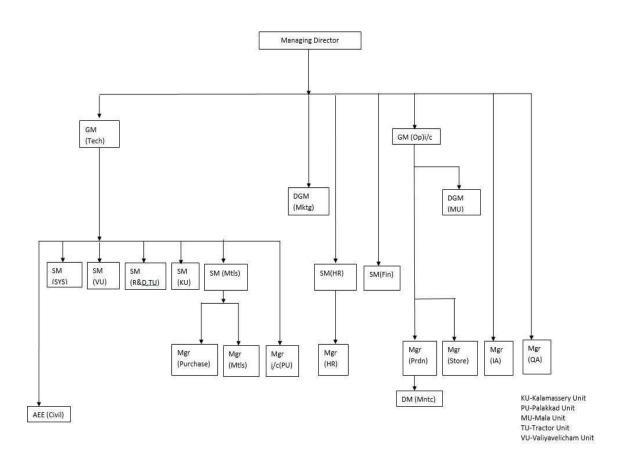
#### **QUALITY POLICY**

- a) Total customer satisfaction through quality products and services with improved technology and employee participation.
- b) Comply with the requirements of customers and the applicable statutory / regulatory requirements. The effectiveness of the established quality management system is continually improved to enable achievement of the policy.

#### **QUALITY OBJECTIVES**

- a) To ensure that the quality requirements of the products and services offered are maintained at all stages.
- b) To create a culture among all employees towards total quality concepts and productivity through total involvement and commitment of all employees
- c) To create healthy working environment for attainment of quality goals with excellence and to make quality a way of life
- d) To detect and prevent non-conformance and defects as early as possible and to eliminate them through appropriate changes to the Quality Management System
- e) To achieve and maintain Quality Leadership through continuous technology upgradation, improvements in techniques, systems and procedures.

#### ORGANISATION CHART



#### **FUTURE PLANS**

KAMCO is looking proudly ahead into a more promising future. Future will also see KAMCO's diversification products in the farm mechanization field contributing significantly to the realization of the Indian dream of self-sufficiency in food production and rededicating itself to the cause of self-reliance "and social responsiveness in the service of people without respite. Today KAMCO is a multi-product, multi-location company with two production units at Ernakulam district, one production unit at Palakkad district and one production unit at Trichur district. KAMCO has a number of diversifications. plans in the anvil. Its proposed foray into Research and Development activities will hopefully help it to develop new products in the future and live up to its promise, that its products will be "A boon for the farmer and a gain for the nation". The quality policy of KAMCO is "Total customer satisfaction through quality products and services with improved technology and employee participation

#### **PRODUCTS**

- KAMCO Power Tiller model KMB 200
- KAMCO Power reaper Models (KR 120M/KR 120H/KR 120DS)
- KAMCO Super DI POWER TILLER
- KAMCO Tractor Tera TRAC 4W
- KAMCO Diesel Engine Model ER 90
- KAMCO Beriberi B/30 Garden Tiller
- KAMCO Brush Cutter KBC 300

#### 1) KAMCO POWER TILLER KMB 200

Popularly known as the complete farming units just it can deal with host farming operations like tilling transporting etc. single headedly also it has been designed to function equally well in both well and dry soil conditions it has retained its market position as the No: 1 power tiller in India for the last there dealer, after marketing debut in the year 1973.

#### Advantages:

- Simple movement and controls easy banking
- Perfectly balanced and vibration for engine used to operations fatigue
- Fail sale safety devices help to prevent accidents
- automotive fuel control help to save previous fuel

#### 2) KAMCO POWER REAPER KR 120M

KAMO Power reaper is ideally suited for harvesting of paddy, Wheat, barley and similar crops. It harvests and makes windrows at rate of 3-4 hours hector. Since the fuel used is kerosene, cost of operations the lowest and it helps farmers to harvest his field at lower cost

#### 3) KAMCO SUPER DI POWER TILLER

It creates an ideal mixture of fuel and air with the swirl type internal parts The combustion chamber is placed in a cavity in the upper of the piston itself prevent beat loss and increase efficiency.

#### 4) KAMCO DIESEL ENGINE MODEL ER90

It is a 12 hp single cylinder Horizontal diesel engine with automatic fuel control mechanism and radiator cooking extremely compact and weighting only 140 kg. It has been well received in market owing to I's virtually trouble-free performance.

#### 5) KAMCO BARBIERI B/30 GARDEN TILLER

Introduce the all new KAMCO Barbieri B/30, and to handle the garden tiller with Italian technology and design the powerful Honda petrol engine ensure efficiency, reduced vibration and noise, low emission levels and low maintenance. Overall, it is an economy model that offers safe and comfortable operation. This tiller can be easily dismantled. Also, it is facilities easily transport across kind of grounds with the two rear wheels which can be easily lowered. The technology partner beriberi has over 15 years of expertise in producing a range of machines for small scale agricultural and gardening purposes

#### 6) GARDEN TILLER

KAMCO Garden tiller is a petrol engine, eco-friendly. Power tiller scalping gardening potato harvesting and for preparations at horticulture farms. A highly fuel-efficient power equipment with easy to control operations. Ideal for small medium and farmers.

#### ASSEMBLY TILLERS/REAPERS

Assembly line consists of:

- o Engine Assembly Line
- Transmission Assembly line
- o Tiller assembly line.
- > Transmission and Engine assemblies are converged to the Tiller Assembly Line where finished final power tiller is produced.
- > Stage inspection and testing in between different work stations, engine testing, etc. are effectively monitored for extensive quality checks at each stage, to produce excellent quality products as per standards
- ➤ All sub-assemblies of Power Tillers are inspected for conformity with specifications.
- ➤ All the Engines are tested at assembly for RTA norms to ensure Engine Emission Standards.
- Automated Modern Conveyor System Assembly line for Tractor Production.
- ➤ Well-trained mechanics and supervisors ensure the quality in various stages of assemblies.
- The management thoroughly monitors and co-ordinates the works to achieve maximum performance without any compromise in quality of the product.
- ➤ The Reaper is assembled in four Assembly stages.
- Engine Assembly: At this stage Engine and gear box are assembled and running tests are done.

- Assembly line-1: This is the first stage of Reaper chassis assembly where Engine-gear box assembly, Bevel gear box assembly and conveyor chains are fitted to the main frame. Then whole assembly is tested for running before passing on to the next stage
- Assembly line-2. At this stage the sheet metal components, guide rods, Star wheels, cutter assembly, etc. are fitted and tests are carried out.
- ➤ Assembly line -3: This is the final stage of Reaper production. Here the Chain Case for
- > Transmission of power and Wheels are fitted and required tests are done.

# CHAPTER II REVIEW OF LITERATURE & THEORETICAL FRAMEWORK

#### 2.1 REVIEW OF LITERATURE

A literature review is an essential component of any research study, thesis, or dissertation. It involves a systematic search and critical evaluation of existing scholarly works, such as academic articles, books, conference papers, and other relevant sources, that are related to the research topic

### **Concept of brand preference**

**Dominic Appiah** asserts that "the level of brand identification is determined by the extent to which a brand expresses and enhances one's identity, and this has a positive effect on word-of-mouth reports." Distinguishing proof is frequently connected to the causes and points of the association; in occurrences where the association is known to represent a specific reason, customers are probably going to relate to the mission of the organization and moreover to show dedication to its items".

### Perception of consumers towards brands in agricultural machineries

The 2014 study "Consumer-based brand research on agricultural machinery in China" by Song Su-Mei, Han Chin, and Sang Biao sheds light on how Chinese farmers perceive different brands of agricultural machinery. The authors discovered through a questionnaire survey that consumers paid more attention to local or national tractor brands, with Dong Fang Hong (YTO) being the most well-known brand. It was thought that foreign brands like New Holland and John Deere were more expensive, while domestic brands like Dong fang hong (YTO) and Foton were thought to be more affordable. This exploration reveals insight into the brand inclinations and buy aims of Chinese ranchers in the agrarian hardware market.

According to previous studies (Anderson and Narus, 1998; Grisaffe and Kumar, 1998), customer value is a reliable predictor of customer loyalty, repeat business, and switching behavior. A study of agricultural brands also supports a strong relationship between customer value and brand loyalty in the context of the agricultural market. This relationship is demonstrated by a direct effect on brand loyalty of overall perceived value and a mediated effect on brand loyalty of satisfaction with three components of customer value: social value, economic value, and emotional value (Dardak and Habib, 2010). Chen (2013) also found that customer satisfaction, rather than perceived value, influences customer loyalty in community supported agriculture (CSA).

#### Consumer behavior

Geetha and Jenifer (2014) concentrated on the shopper conduct towards acquisition of ecofriendly items in Coimbatore and demonstrated that customers in Coimbatore know about ecological issues and green items on the lookout.

Solanki, et al. (2013) examined the shopper purchasing conduct towards horticulture inputs in provincial area of Bardoli and uncovered that the respondents were primarily buying the Agri inputs from the helpful social orders for the reasons of reasonableness in charging and credit offices given to the ranchers and guaranteed that customers are cost delicate.

Altundaş ve Demirtola (2004) observed that horticultural motorization is a farming creation innovation as a reciprocal component which expands the viability of other rural sources of info, guarantees the financial effectiveness and works on the functioning circumstances.

Howard and Sheth (1969) have recommended that purchasers pursue a choice in the wake of considering the attributes of an item like cost, quality circulation, accessibility and administrations. Cash discounts have a significant impact on the purchasing decisions of cash-ready customers, according to Ingene and Levy (1982). When their purchases were at least of a moderate size, they got cash discounts.

According to a 1984 study by Mukesh Dhanna, a significant number of tractor owners actively participated in the purchasing process, with the primary motivation being to address labor shortages. The exploration likewise featured areas of strength for a for buying work vehicles on an acknowledge premise among respondents for different segment qualities. Additionally, the study found a significant correlation between income levels and payment preferences, highlighting the significance of comprehending consumer behavior in the agricultural machinery industry for the development of successful marketing strategies.

#### **Study on brush cutters**

The effectiveness of brush cutters equipped with various cutting tools in various plant cover areas was evaluated in the 2022 study by Parcianello et al., which was titled "Effective Operational Capacity of Brush cutter with Different Cutting Tools." The three separate experiments in the research shed light on how the choice of cutting tool affects brush cutters' operational efficiency. The discoveries demonstrated that the decision of cutting apparatus, especially the triple-circle sharp edge, altogether impacted the brush shaper's powerful functional limit, with higher effectiveness saw in regions with ryegrass and wheat cover. The importance of optimizing resources and increasing productivity in semi-mechanized operations was emphasized by the study's recommendations regarding the selection of cutting tools for particular plant species. Overall, the study provides useful information for enhancing the performance of brush cutters in agricultural and landscaping practices.

In the agricultural sector, cutting grass is a laborious process. In India, agribusiness has confronting serious difficulties of shortage of agrarian work not just top in seasons and nearly over time. It is extremely tedious and unpleasant activity. At ASPEE Agril, a power brush cutter with a swivelling head was developed. Mumbai-based Research and Development Foundation For the purpose of the test, three distinct forward speeds—0.8-1.2, 1.3-1.7, and 1.8-2.2 km/h—were utilized, as were three distinct swivelling shaft speeds—15, 20, and 25 rpm—and three distinct nylon wire lengths—10, 15, and 20 cm. The field had a maximum capacity of 0.123 ha/h. When compared to the previous brush cutter, the total amount of energy used was found to be 21.31 percent lower. **Kachhadiya DM**: Branch of Homestead Apparatus and Power Designing, CAET, Junagadh Farming College, Junagadh, Gujarat, India **Tiwari VK** is a professor and the head of the Department of Farm Machinery and Power Engineering at CAET, which is located in Junagadh, Gujarat, India. **July 2019** 

In their 2018 review, Bruno Bernard, Elisabeth Quendle, Souraya Benalia, and Antonio Mantella examined the word related takes a chance with connected with vibrations from involving a brush shaper in green region the executives. The exposure action value (EAV) of 2.5 ms22 was exceeded for both cutting heads, and the exposure limit value (ELV) of 5 ms22 was exceeded when using the brush knife, according to their findings. Operators were exposed to vibration levels that exceeded recommended thresholds. The brush knife generated higher acceleration levels than the mowing head, according to vibration spectra analysis, which revealed distinct acceleration peaks along the X, Y, and Z axes. These findings emphasize the significance of taking exposure values into consideration in order to reduce the risk of Hand-Arm Vibration Syndrome (HAVS) and the necessity of putting in place safeguards to protect workers from the health risks posed by prolonged exposure to hand-arm vibrations.

2015 saw Bello R. S., Baruwa A., and Orisamuko F. created and tested a prototype electrically powered brush cutter to address ergonomic issues and cut down on the costs of imported brush cutters. The prototype had an electric power pack that could run the device for up to four hours at a time and an ergonomic ground wheel roller designed to prevent carpal tunnel syndrome, which is common with handheld models. The brush shaper showed a powerful machine effectiveness of 46.67% and a sharp edge cutting productivity of 87.5%, with a base cutting level of 1.3 mm and the capacity to work under factor conditions. This machine, which offers a less expensive alternative to imported brush cutters, is estimated to cost N10,000.00.

K's research, which was titled "Preliminary Analysis of Vibration Hazards Due to the Use of Brush Cutters," In 2015, Wójcik delves deeply into the potential dangers posed by brush cutter vibration. The author emphasizes the critical need for effective measures to reduce vibration exposure for brush cutter operators by meticulously analysing various cutting elements and their influence on equipment vibration levels. This examination fills in as a vital asset in the domain of word related security, underlining the meaning of addressing and overseeing vibration perils to defend the prosperity of labourers in the finishing and ranger service areas.

### 2.2 Theoretical framework

The brush cutter market is thoroughly examined in this study, with a focus on user preferences, demographics, levels of satisfaction, and brand trust. Due to its affordability and suitability for agricultural uses, Kamco emerges as the leading brand, favoured by 34.09 percent of respondents. With preferences of 31.82 percent and 26.52 percent, respectively, Stihl and Kisankraft follow, indicating fierce competition among leading brands. According to the findings, the majority of brush cutter users are middleaged adults between the ages of 35 and 56, with a significant male majority of 90.15%. This indicates that middle-aged men use brush cutters most frequently, indicating a skewed user base that may influence marketing strategies. Overall, users are pleased with brush cutters, with 77.27 percent expressing satisfaction and 28.79 percent being extremely satisfied. Cutting power and completing tasks both receive high marks from users, with 64% and 86% indicating that they are good or excellent, respectively. 78.03% of users, despite their high level of satisfaction, report having trouble using brush cutters for various tasks. This highlights a significant usability issue that brands must address in order to improve the user experience and potentially increase their market share. Trust in brush shaper brands is significant, with 68.18% of respondents communicating trust and 53.79% finding the brand notoriety steady with their assumptions. This highlights the significance of maintaining quality and dependability in order to maintain consumer trust. It also indicates a strong alignment between brand perception and actual user experience. The factors that influence decisions about what to buy vary greatly between brands. Kamco clients are essentially determined by cost contemplations, scoring it most elevated at 4.51, while Stihl purchasers focus on toughness and cutting power, each scoring 4.47. This shows that while Kamco requests to cost-cognizant buyers, Stihl draws in those looking for elite execution and strength. Usage purposes also play a significant role in brand preference: 75% of consumers choose Kamco for agricultural purposes, 35% prefer Kisankraft landscaping/gardening and 100% prefer Stihl for trimming and clearing overgrown vegetation. Based on these insights, it appears that each brand has carved out distinct markets for brush cutters by matching the strengths of their products to specific user requirements. Utilizing these insights to improve market positioning and address user concerns is the primary focus of the study's recommendations. Kamco ought to

emphasize its affordability and durability to increase its appeal in the agricultural sector. Kisankraft can extend its piece of the pie by underscoring dependability and flexibility, especially in finishing and backwoods clearing. Stihl should keep promoting its superior efficiency and cutting power to homeowners and professional landscapers who are dealing with overgrown vegetation. All brands should prioritize user-friendly design enhancements and incorporate user feedback when addressing usability issues. User satisfaction and brand loyalty can be further enhanced by providing comprehensive customer support and updating user manuals with clear instructions. In addition, enhancing after-sales services with proactive maintenance programs and extended warranties is essential for fostering long-term customer relationships and preserving high levels of customer satisfaction. In order to expand the customer base, it is essential to target a more diverse demographic. By emphasizing features like safety and ease of use, brands should aim to attract female customers and younger users. New growth opportunities could be found by looking into niche markets like small-scale farming and urban gardening, which are in line with emerging consumer trends. Estimating techniques ought to be lined up with apparent worth, offering occasional advancements or packaged choices to draw in cost delicate clients without compromising brand trustworthiness. This strategy ensures competitiveness while preserving profitability and market perception of value. In rundown, this study highlights the unique idea of the brush shaper market, with fluctuating client inclinations and brand qualities. Tending to convenience challenges, improving client care, and focusing on different socioeconomics are key methodologies for brands to successfully keep up with and grow their market presence.

### **1.KAMCO** (Kerala Agro Machinery Corporation Ltd)

## **Product Range and Focus:**

KAMCO specializes in producing machinery specifically tailored for small-scale and traditional agriculture. Their product range includes power tillers, mini tractors, weeding machines, brush cutters, and rice transplanters. KAMCO's focus is on enhancing agricultural productivity for small and marginal farmers, particularly in regions with unique farming practices like those in Kerala and other parts of India.

### **Key Products:**

- Power Tillers: KAMCO's power tillers are known for their robust performance in small fields and tough terrains. These machines are designed for effective soil preparation and inter-cultivation.
- Mini Tractors: Their mini tractors offer a balance between functionality and affordability, making them suitable for small-scale farming operations.
- Weeding Machines and Brush Cutters: These tools are essential for crop management and maintenance, offering efficiency in weed control.

## **Innovation and Technology:**

KAMCO emphasizes simple yet effective technologies that cater to the specific needs of their target market. They prioritize durability and ease of maintenance, ensuring their machines can withstand challenging conditions while requiring minimal technical support.

### **Market Positioning:**

KAMCO is positioned as a budget-friendly option for small and marginal farmers who need reliable machinery without the complexities or high costs associated with larger, more technologically advanced equipment. Their products are designed to be user-friendly and accessible, catering to farmers who may not have extensive technical knowledge.

#### 2. KISANKRAFT

## **Product Range and Focus:**

KisanKraft offers a diverse range of agricultural equipment and tools, with a focus on affordability and practicality for small to medium-sized farms. Their product line includes sprayers, tillers, harvesters, seeders, pumps, and brush cutters. KisanKraft aims to provide solutions that enhance efficiency in farming operations while remaining economically accessible.

# **Key Products:**

- Sprayers: KisanKraft's sprayers, including battery-operated and manual versions, are designed for efficient pest control and crop protection.
- Tillers and Harvesters: Their tillers and harvesters are designed for versatility and efficiency, capable of handling a variety of soil conditions and crop types.
- Pumps: KisanKraft's pumps cater to irrigation needs, providing reliable options for water management in agricultural settings.

### **Innovation and Technology:**

KisanKraft focuses on cost-effective innovations that improve agricultural productivity. They leverage a mix of mechanical simplicity and user-friendly features, ensuring their products are accessible to a broad range of farmers. The brand invests in technologies that enhance operational efficiency without significantly increasing the cost.

### **Market Positioning:**

KisanKraft is positioned as a value-driven brand, providing practical solutions that offer good performance at competitive prices. They cater to farmers looking for reliable tools that do not require a significant capital investment, making their products suitable for a wide range of agricultural activities.

#### 3. STIHL

## **Product Range and Focus:**

Stihl is a global leader in the production of power tools and equipment for forestry, landscaping, and agriculture. Their product range includes chainsaws, brush cutters, trimmers, blowers, hedge trimmers, and augers. Stihl focuses on high-performance tools designed for professional and heavy-duty use, catering to both commercial and individual customers.

## **Key Products:**

- Chainsaws: Stihl's chainsaws are renowned for their power, durability, and advanced features, making them a preferred choice for forestry and heavy-duty applications.
- Brush Cutters and Trimmers: These tools are designed for precision and efficiency in managing vegetation, suitable for both agricultural and landscaping tasks.
- Blowers and Hedge Trimmers: Stihl's blowers and hedge trimmers are engineered for high performance, catering to maintenance and cleanup needs.

#### **Innovation and Technology:**

Stihl emphasizes technological innovation and advanced engineering. Their products feature cutting-edge technologies such as fuel-efficient engines, low-emission designs, and ergonomic controls. Stihl invests heavily in R&D to develop tools that meet stringent environmental standards while delivering superior performance.

### **Market Positioning:**

Stihl is positioned as a premium brand, known for high-quality, reliable tools that are built to last. Their products are aimed at professional users who demand the best in terms of performance, durability, and innovation. Stihl's reputation for excellence makes them a preferred choice for customers willing to invest in top-tier equipment.

### **Comparative Summary**

# **Product Offerings and Focus:**

- KAMCO focuses on small-scale, practical machinery tailored for traditional farming practices, offering a limited but essential range of products.
- KisanKraft provides a broad spectrum of affordable and practical agricultural tools suitable for small to medium-sized farms.
- Stihl delivers high-performance, professional-grade tools designed for intensive use in both agriculture and forestry.

## **Innovation and Technology:**

- KAMCO prioritizes simple and durable technologies that are easy to maintain, focusing on reliability and ease of use for small farmers.
- KisanKraft balances cost-effectiveness with functional innovations, aiming to provide accessible and efficient tools without high costs.
- Stihl leads with advanced technology and engineering, focusing on high performance, fuel efficiency, and environmental compliance.

## **Market Positioning:**

- KAMCO is positioned as a budget-friendly option for small and marginal farmers seeking reliable, no-frills machinery.
- KisanKraft serves as a value-driven brand offering practical solutions for a wide range of agricultural tasks at competitive prices.
- Stihl stands as a premium brand with a reputation for excellence, catering to professionals and customers looking for high-quality, durable tools.

The theoretical framework for this comparative analysis of brush cutters from Kamco, Kisankraft, and Stihl encompasses several key components that will guide the study. These components include consumer behaviour theories, product performance evaluation models, and the technology acceptance model (TAM). The framework integrates these theories to comprehensively assess consumer preferences, factors influencing purchase decisions, and overall product performance and satisfaction.

#### **Consumer behaviour theories**

Consumer behaviour theories provide a foundation for understanding how and why consumers make purchasing decisions. Key theories relevant to this study include:

- Maslow's Hierarchy of Needs: This theory posits that consumers' purchasing
  decisions are influenced by their desire to satisfy different levels of needs, from
  basic physiological needs to higher-level self-actualization needs. In the context
  of brush cutters, consumers might prioritize features that address safety
  (security needs), ease of use (comfort), and advanced functionalities (selfactualization).
- Theory of Planned Behaviour (TPB): TPB suggests that consumers' purchasing decisions are influenced by their attitudes towards the product, subjective norms, and perceived behavioural control. This theory helps in understanding how consumers' attitudes towards the performance, durability, and features of brush cutters influence their purchase decisions.
- Consumer Decision-Making Process: This process involves several stages, including problem recognition, information search, evaluation of alternatives, purchase decision, and post-purchase behaviour. By analysing this process, the study can identify which factors (e.g., brand reputation, price, features) are most influential at each stage.

#### **Product performance evaluation model**

To assess the performance and satisfaction with brush cutters, several evaluation models and criteria can be applied:

- **SERVQUAL Model:** This model measures service quality based on five dimensions: tangibles, reliability, responsiveness, assurance, and empathy. In the context of brush cutters, tangibles refer to the physical aspects of the product, reliability to its performance, responsiveness to customer service, assurance to warranty and support, and empathy to customer care.
- Product Quality Model: This model considers eight dimensions of product quality: performance, features, reliability, conformance, durability, serviceability, aesthetics, and perceived quality. These dimensions provide a comprehensive framework for evaluating brush cutters' overall quality and user satisfaction.

### **Technology acceptance model**

The Technology Acceptance Model (TAM) is useful for understanding how users come to accept and use a technology. It proposes that perceived usefulness and perceived ease of use determine an individual's intention to use a system, which in turn influences actual usage behaviour. Applying TAM to brush cutters, perceived usefulness can be equated with the effectiveness and efficiency of the brush cutters, while perceived ease of use can be related to their ergonomic design and user-friendliness.

#### Comparative analysis criteria

The theoretical framework also includes specific criteria for comparative analysis, derived from consumer behaviour theories, product performance models, and TAM. These criteria include:

- **Performance:** Cutting power, efficiency, ease of use.
- **Durability:** Build quality, reliability, longevity.
- **Price:** Initial cost, ongoing maintenance expenses.
- Features: Unique functionalities, ergonomic design, safety features.
- Customer Reviews: User feedback, satisfaction, overall reputation.

• Warranty and Support: Warranty coverage, availability of customer support services.

## Comparison of brush cutter brands

### **KAMCO** brush cutter

#### **Features:**

- Reliable
- Durable design,
- easy to start
- quiet operation lightest engines in their class
- excellent balance and low vibration
- Comfortable to use over long periods of time.

Engine make	Honda GX-35
Fuel	Petrol
HP	1.6
Fuel consumption	0.7- 0.9/Hr
Cutting device	Steel blade/ nylon rope
Engine type	4 strokes
Start	Recoil type

## **STIHL** brush cutters

#### **Features:**

- A gearbox and the drive shaft are straight, so that more torque and power can reach the cutting attachment.
- Machine comes with an anti-vibration system giving optimal usage. Get high grass-mowing performance with our top-class products.
- Ideal for professional grass cutting.
- Ergonomic bike handle

Engine make	Stihl 4 mix
Fuel	Petrol
HP	1.9
Fuel consumption	1.43 /Hr
Cutting device	Plastic /special steel
Engine type	4 stoke
Start	Recoil type

# Kisankraft brush cutter

## **Features**

- Refined motor for durability and high performance
- Low maintenance
- Light weight operation
- Fuel efficient
- Easy operation
- Reliable

Engine make	Kisankraft
Fuel	Petrol
HP	1.2
Fuel consumption	1L/Hr
Cutting device	nylon rope/ TCT blade
Engine type	2 strokes
Start	Recoil

# Brush cutter market swot analysis

Strength	Weakness
Ease of use	High cost
High durability	Noise pollution
Versatility	Low efficiency
Low maintenance	Unsuitable for heavy duty task
Opportunities	Threats
Growing demand	Intense competition
Innovation and technology	Stringent regulation
Rising consumer awareness	Fluctuating prices of raw materials

# **PESTEL Analysis of Brush Cutters Market**

#### **Political Factors**

The political factors of Brush Cutters market include government regulations, policies and rules that have an impact on the market. Governments of different countries have different regulations for the import and export of Brush Cutters. This can have a direct impact on the growth of the market. Government subsidies also play a role in the growth of the market.

#### **Economic Factors**

The economic factors of Brush Cutters market include the overall economic environment in the country. This includes factors such as GDP growth, inflation, interest rates, and exchange rates. These factors directly affect the demand and supply of Brush Cutters and have an impact on the market.

### **Social Factors**

The social factors of Brush Cutters market include the population size, demographics, culture, and lifestyle of the people in the country. These factors determine the demand for Brush Cutters in the market. If the people are more concerned about the environment, then the demand for Brush Cutters will be higher.

### **Technological Factors**

The technological factors of Brush Cutters market include the availability of advanced technology, which allows for improved efficiency and performance of Brush Cutters. This can lead to cost savings and increased demand in the market. The development of new technologies and products can also have a positive impact on the Brush Cutters market.

#### **Environmental Factors**

The environmental factors of Brush Cutters market include the environmental regulations and policies in the country. Governments are increasingly introducing regulations to reduce emissions and to promote the use of eco-friendly Brush Cutters. This can lead to increased demand in the market.

#### **Legal Factors**

The legal factors of Brush Cutters market include the laws, regulations, and policies that are in place in the country. These laws and regulations can have an impact on the market, as they can restrict or encourage the use of Brush Cutters. Different countries have different laws and regulations, so these factors can vary from country to country.

## **PORTER 5 Forces Analysis of Brush Cutters Market**

#### > Threat of New Entrants

The threat of new entrants in the brush cutters market is low. The barrier to entry is high due to the need for specialized knowledge, technology and capital investment to develop products and set up a distribution channel. This makes it difficult for new players to enter the market and compete with established players. Additionally, the presence of strong incumbents and their economies of scale can create an additional barrier for new entrants.

#### > Threat of Substitutes

The threat of substitutes in the brush cutters market is moderate. There are several alternative tools available that can be used to trim grass and shrubs, such as hedge trimmers and string trimmers. These tools offer similar performance and convenience, which can make them attractive substitutes for brush cutters. However, brush cutters offer a more powerful and efficient solution and are therefore preferred by many users.

### Bargaining Power of Suppliers

The bargaining power of suppliers in the brush cutters market is low. This is because the number of suppliers is large and the majority of them are small- and medium-sized businesses. This makes it difficult for suppliers to increase their prices or impose other terms on the buyers. Moreover, buyers have the option to switch suppliers to get better terms or prices.

### Bargaining Power of Buyers

The bargaining power of buyers in the brush cutters market is moderate. There are several large buyers in the market, such as retail chains and distributors, who can

negotiate better prices or other terms from suppliers. Additionally, with the availability of a wide range of products in the market, buyers have the option to switch suppliers if they are not satisfied with the terms or prices offered by their existing suppliers.

## Intensity of Rivalry

The intensity of rivalry in the brush cutters market is high. This is because there are several large players in the market competing for market share. Additionally, the product offerings from different players are similar, which makes it difficult for any one player to differentiate itself from others. This leads to intense competition in terms of pricing, product features, distribution, and marketing.

### 1. Introduction to Brush Cutter Market Dynamics:

The brush cutter market represents a dynamic landscape driven by diverse consumer needs and preferences. Understanding market dynamics involves analysing factors such as technological advancements, consumer behaviour, competitive strategies, and regulatory influences. In this context, Porter's Five Forces model provides a theoretical foundation for assessing the competitive intensity and attractiveness of the brush cutter industry.

#### 2. Consumer Behaviour and Purchase Decision:

Consumer behaviour theory, particularly the consumer decision-making process, plays a pivotal role in understanding how individuals select among alternative brush cutter brands. Models such as the Theory of Planned Behaviour (TPB) and the Consumer Decision-Making Model (CDM) offer frameworks for comprehending the cognitive processes and influencing factors that guide consumers' purchase decisions. This section of the study involves analysing factors such as brand perception, product attributes, social influences, and personal preferences that shape consumers' choices among Kamco, Kisankraft, and Stihl brush cutters.

### 3. Product Attributes and Performance Metrics:

The quality, features, and performance of brush cutters are essential considerations for consumers. Drawing from product management theory, this section focuses on assessing the technical specifications, durability, reliability, and innovation levels of

Kamco, Kisankraft, and Stihl brush cutters. Models such as the Kano Model and Quality Function Deployment (QFD) framework help evaluate product attributes based on customer requirements and preferences. Additionally, performance metrics such as cutting efficiency, fuel consumption, noise levels, and ergonomic design contribute to the comparative analysis.

#### 4. Customer Satisfaction and Loyalty:

Theoretical frameworks related to customer satisfaction and loyalty are instrumental in gauging the post-purchase experiences of consumers with Kamco, Kisankraft, and Stihl brush cutters. The Expectation-Confirmation Model (ECM) and the Herzberg's Two-Factor Theory provide insights into the factors that drive satisfaction and dissatisfaction among consumers. Moreover, theories of brand loyalty, including the Brand Equity Model and the Loyalty Ladder, help elucidate the relationship between product performance, customer experience, and repeat purchases.

#### 5. Market Segmentation and Targeting:

Segmentation theory forms the basis for understanding how different customer segments perceive and prioritize product attributes in the brush cutter market. Utilizing segmentation criteria such as geographic location, usage patterns, and demographic characteristics, this section of the study aims to identify distinct consumer segments and their preferences across Kamco, Kisankraft, and Stihl brush cutters. The STP (Segmentation, Targeting, Positioning) framework guides the formulation of targeted marketing strategies tailored to each segment's needs and preferences.

## 6. Competitive Strategy and Positioning:

Drawing from strategic management theories, this section examines the competitive strategies employed by Kamco, Kisankraft, and Stihl to gain a competitive advantage in the brush cutter market. Models such as Porter's Generic Strategies and the Resource-Based View (RBV) help analyze how these brands differentiate their products, leverage core competencies, and position themselves vis-a-vis competitors. Furthermore, the Blue Ocean Strategy framework offers insights into creating uncontested market spaces and driving innovation in product offerings.

### 7. Future Trends and Strategic Implications:

Anticipating future trends and implications is crucial for formulating strategic recommendations for stakeholders in the brush cutter industry. This section draws upon theories of innovation management, technology forecasting, and scenario planning to identify emerging trends such as electric-powered brush cutters, smart technology integration, and sustainable manufacturing practices. By extrapolating these trends, the study provides strategic insights for manufacturers to adapt their product development, marketing, and distribution strategies to meet evolving consumer demands and regulatory requirements.

#### Consumer purchase decision making process

Understanding the consumer purchase decision-making process for brush cutters involves examining a sequence of steps and influencing factors that consumers navigate from recognizing their needs to making a purchase. Here is a detailed exploration of this process, tailored to the brush cutter market:

### 1. Problem Recognition

### a. Trigger Events:

Need for Land Maintenance: Consumers may recognize a need for a brush cutter when they encounter dense undergrowth or overgrown vegetation in their property, garden, or agricultural land that manual tools or lawnmowers cannot handle effectively.

Professional Requirements: For professionals in forestry, landscaping, or agriculture, the requirement for efficient land clearing and maintenance can trigger the need for a robust and reliable brush cutter.

#### **b.** Influencing Factors:

Seasonal Changes: The onset of growing seasons or preparation for winter may prompt the need for a brush cutter.

Property Acquisition: New property owners might realize the need for a brush cutter to manage neglected or wild areas.

#### 2. Information Search

#### a. Internal Search:

Past Experiences: Consumers often draw on their past experiences with garden tools or machinery to inform their search for a brush cutter.

Word-of-Mouth: Recommendations from friends, family, or colleagues who own brush cutters can be pivotal.

#### b. External Search:

Online Research: Consumers utilize online resources such as manufacturer websites, online reviews, forums, and social media to gather information on different brush cutter brands and models.

Retailers and Experts: Visiting stores, consulting with sales representatives, or seeking advice from professionals in the field provides additional information.

Product Demonstrations: Watching product demonstrations or reading case studies can help consumers understand the capabilities of various brush cutters.

## 3. Evaluation of Alternatives

## a. Criteria for Comparison:

- > Technical Specifications: Engine power, cutting width, blade type, fuel efficiency, and weight.
- ➤ Brand Reputation: Trustworthiness, reliability, and innovation associated with Kamco, Kisankraft, and Stihl.
- ➤ Cost Factors: Initial purchase price, maintenance costs, and availability of spare parts.
- ➤ User Reviews: Feedback on performance, durability, and customer satisfaction.
- After-Sales Support: Warranty, repair services, and customer assistance.

## **b.** Decision Models:

➤ Compensatory Model: Consumers weigh the pros and cons of each alternative, considering how the strengths of a brush cutter might offset its weaknesses.

➤ Non-Compensatory Model: Certain criteria, such as engine power or ease of use, may be non-negotiable, leading consumers to eliminate models that do not meet these specific needs.

#### **Purchase Decision**

#### a. Influencing Factors:

- Availability: Availability of the preferred model in local or online stores can impact the decision.
- Promotions and Discounts: Special offers, discounts, or financing options can sway the decision.
- Peer Influence: Opinions of trusted individuals or experts can finalize the decision.

#### **b. Purchase Channels:**

- In-Store: Buying from physical stores allows consumers to inspect the product, ask questions, and make informed decisions.
- Online: Online purchasing offers convenience and access to a broader range of options and potentially better prices.

### 5. Post-Purchase Behaviour

### a. Product Usage:

- Performance Evaluation: Consumers assess whether the brush cutter meets their expectations in terms of efficiency, ease of use, and durability.
- Adaptation: Initial challenges in using the brush cutter might be overcome through practice or by seeking additional information.

#### b. Satisfaction and Feedback:

- Customer Satisfaction: Satisfaction depends on how well the product solves the initial problem and aligns with consumer expectations.
- Feedback Mechanisms: Consumers might leave reviews, participate in surveys, or recommend the product to others if satisfied. Conversely, dissatisfaction may lead to complaints or seeking alternatives.

#### c. Maintenance and Support:

- Routine Maintenance: Proper maintenance of the brush cutter is crucial for longterm satisfaction and performance.
- After-Sales Service: The quality of after-sales support, including warranty services and availability of replacement parts, influences ongoing satisfaction and brand loyalty.

## **Factors Influencing the Decision-Making Process:**

#### **Personal Factors:**

- Demographics: Age, income, occupation, and lifestyle can influence the type of brush cutter needed.
- Experience Level: Novices might prefer user-friendly models, while experienced users might opt for high-performance, professional-grade cutters.

## **Psychological Factors:**

- Perception: How consumers perceive the reliability and quality of each brand based on marketing and reviews.
- Attitudes and Beliefs: Pre-existing attitudes towards specific brands (e.g., Kamco's reputed affordability vs. Stihl's high quality).
- Motivation: The underlying motivation, such as achieving better land management, influences the urgency and nature of the purchase.

#### **Social Factors:**

- Cultural Influences: Cultural attitudes towards certain brands or the importance of land maintenance in different cultures can impact the decision.
- Social Proof: Influence from social groups or community standards, where the popularity of a brand among peers can affect individual choices.
- Economic Factors:
- Budget Constraints: Financial considerations, including the total cost of ownership, can impact brand choice.
- Economic Conditions: Broader economic conditions, such as a recession or economic boom, can influence consumer spending behaviour.

### 4 p's of brush cutter

The 4 Ps—Product, Price, Place, and Promotion—are essential elements of marketing strategy that help companies effectively position and sell their products. In the context of brush cutters, understanding and applying these 4 Ps can significantly influence market success and consumer satisfaction.

#### 1. Product

#### Product Definition:

Brush cutters are power tools used for clearing dense undergrowth, weeds, and brush in forestry, landscaping, and agriculture. They come in various designs, including handheld, backpack, and wheeled models, and feature different engine types such as petrol, electric, and battery-operated.

### **Key Product Elements:**

- Features: Engine power, cutting width, blade types (metal or nylon), handle design (loop or bicycle), and additional attachments.
- Quality: Durability, reliability, and performance in various terrains and vegetation densities.
- Design: Ergonomics for comfort, weight distribution, ease of use, and aesthetic appeal.
- Brand: Brand reputation, innovation, and trustworthiness (Kamco for affordability, Kisankraft for versatility, Stihl for high performance).
- Packaging: Protection during transport, user instructions, and branding elements that influence purchase decisions.
- Variety: Availability of different models and configurations to meet diverse consumer needs (e.g., residential vs. commercial use).
- Product Lifecycle Management:
- Introduction: Launching new models with advanced features.
- Growth: Expanding product lines and improving features based on consumer feedback.
- Maturity: Maintaining market share through upgrades and variations.
- Decline: Phasing out outdated models and introducing new technologies.

## 2. Price

## Pricing Strategy:

- Competitive Pricing: Setting prices based on competitors (Kamco, Kisankraft, and Stihl) to remain competitive while ensuring profitability.
- Value-Based Pricing: Pricing based on perceived value to the customer, considering factors such as durability, performance, and brand reputation.
- Cost-Plus Pricing: Adding a standard mark-up to the cost of production to ensure a profit margin.
- Penetration Pricing: Initially setting lower prices to gain market share quickly, especially for new entrants or models.
- Premium Pricing: Higher pricing for high-end models with advanced features and superior performance.
- Price Adjustment Tactics:
- Discounts: Seasonal discounts, bulk purchase discounts, or promotional offers to stimulate demand.
- Financing Options: Providing credit facilities or instalment payment plans to make high-end models more accessible.
- Bundling: Offering packages with additional accessories or maintenance services included at a lower total price than purchasing separately.
- Price Sensitivity:
- Market Segments: Understanding different segments such as residential users (more price-sensitive) versus commercial users (value durability and performance over price).
- Economic Conditions: Adjusting pricing strategies based on economic trends and consumer purchasing power.

## 3. Place

#### **Distribution Channels:**

- Direct Sales: Selling directly to consumers through brand-owned stores or ecommerce platforms. This provides control over branding and customer experience.
- Retailers: Utilizing home improvement stores, garden centers, and hardware stores to reach a broader audience. These channels offer consumer convenience and wider accessibility.
- Dealers: Authorized dealers specializing in outdoor power equipment can provide expert advice and support.
- Online Marketplaces: Leveraging platforms like Amazon, eBay, and specialized
  e-commerce sites to reach tech-savvy consumers and those seeking
  convenience.
- B2B Sales: Directly targeting businesses in landscaping, agriculture, and forestry sectors for bulk sales and long-term contracts.
- Logistics and Supply Chain:
- Inventory Management: Efficient management to ensure availability and minimize stock outs or overstock situations.
- Warehousing: Strategic placement of warehouses to optimize delivery times and reduce costs.
- Shipping: Reliable and cost-effective shipping methods to ensure timely delivery to retailers and end-users.
- Market Coverage:
- Local Distribution: Targeting local markets through retail stores and dealers.
- Regional Expansion: Expanding distribution to cover larger geographical areas with diverse needs.
- International Markets: Exporting to other countries and adapting to local regulations and consumer preferences.

#### 4. Promotion

# **Promotional Strategy:**

- Advertising: Utilizing digital, print, and broadcast media to create brand awareness and highlight product features. Online ads, TV commercials, and trade magazine ads are typical.
- Sales Promotion: Short-term incentives such as discounts, rebates, or bundled offers to boost sales during peak seasons or product launches.
- Public Relations: Building a positive brand image through press releases, product reviews, and participation in industry events or trade shows.
- Personal Selling: Engaging sales representatives to provide personalized demonstrations and consultations to potential buyers.
- Promotion Channels:
- Digital Marketing: SEO, social media marketing, email campaigns, and content marketing to engage with tech-savvy and online audiences.
- Traditional Marketing: Print ads in gardening magazines, billboards, and direct mail campaigns to reach local consumers.
- In-Store Promotions: Point-of-sale displays, product demos, and promotional materials in retail locations to attract and inform customers.
- Promotional Messaging:
- Product Benefits: Emphasizing key benefits such as efficiency, durability, ease
  of use, and unique features that differentiate each brand.
- Value Proposition: Communicating the overall value, including costeffectiveness, performance, and after-sales support.
- Brand Story: Crafting a narrative that highlights the brand's history, innovation, and commitment to quality.

### **Customer Engagement:**

- Feedback Mechanisms: Collecting customer feedback through surveys, reviews, and social media interactions to refine promotional strategies.
- Loyalty Programs: Offering rewards and incentives for repeat purchases and referrals to foster brand loyalty.

## **Consumer preference model**

Consumer preference model for brush cutters involves understanding the factors influencing consumer choices and structuring them into a coherent framework. This model helps predict how different attributes of brush cutters (such as those from Kamco, Kisankraft, and Stihl) influence purchasing decisions. Here's a detailed guide to develop a consumer preference model for brush cutters:

### **Identify Key Factors Influencing Consumer Preferences**

### a) Product Attributes

- Performance Metrics:
- > Engine Power: Higher engine power often appeals to consumers needing to cut through dense vegetation.
- > Cutting Width: Larger cutting widths can increase efficiency, preferred by consumers with larger areas to manage.
- Design and Usability:
- ➤ Ergonomics: Comfortable design and ease of handling can influence preferences, especially for prolonged use.
- Weight: Lighter models are often preferred for ease of maneuverability.
- Durability and Quality:
- ➤ Build Quality: Durable materials and robust construction can enhance the product's appeal.
- ➤ Blade Quality: High-quality, long-lasting blades are preferred.

- Safety Features:
- > Safety Mechanisms: Features like blade guards, anti-vibration handles, and automatic shut-off increase attractiveness.
- Noise and Vibration Levels:
- ➤ Noise Reduction: Lower noise levels are preferred for user comfort and compliance with regulations.
- ➤ Vibration Control: Reduced vibrations increase user comfort and safety.

#### b. Economic Factors

- Price and Value for Money:
- ➤ Initial Purchase Price: Competitive pricing can influence buying decisions.
- > Total Cost of Ownership: Includes maintenance costs and fuel efficiency.
- Financing Options:
- ➤ Loan Facilities: Availability of financing or government subsidies can be a deciding factor.

#### c. Brand Attributes

- Brand Reputation:
- Reliability: Well-known for producing reliable products.
- Customer Support: Strong after-sales support and warranty services can sway preferences.
- Innovation:
- > Technological Advancements: Preference for brands offering the latest technology or innovative features.

### d. External Influences

- Customer Reviews and Testimonials:
- ➤ User Feedback: Positive reviews can heavily influence consumer decisions.
- > Expert Recommendations:
- ➤ Professional Reviews: Endorsements from experts can add credibility.

#### e. Personal Factors

- User Needs:
- Application: Needs vary based on residential, commercial, or agricultural use.
- > Previous Experience:
- ➤ Brand Loyalty: Previous positive experiences with a brand can drive future purchases.

### 1. Maslow's Hierarchy of Needs:

Maslow's Hierarchy of Needs is a psychological theory that explains human motivation based on a tiered pyramid of needs. At the base are physiological needs, followed by safety, social belonging, esteem, and self-actualization at the top. This theory suggests that consumer preferences are influenced by their current level of need fulfillment. For example, a consumer whose primary concern is physiological (e.g., hunger) will prioritize basic food items over luxury brands. As consumers move up the hierarchy, their preferences shift towards products that provide safety, social acceptance, status, and self-fulfillment. This model helps explain why certain brands that align with higher-order needs (like social belonging or esteem) command stronger loyalty and higher willingness to pay.

## 2. The Theory of Planned Behavior:

The Theory of Planned Behavior (TPB) posits that consumer behavior is driven by intentions, which are influenced by attitudes, subjective norms, and perceived behavioral control. According to TPB, a consumer's preference for a brand is shaped by their positive or negative evaluation of the brand (attitude), the influence of significant others (subjective norms), and their perceived ease or difficulty of performing the behavior (perceived behavioral control). For instance, a consumer might prefer a brand not only because they like it but also because it is endorsed by friends and family, and it is easy to purchase. This theory underscores the importance of social influence and perceived control in shaping brand loyalty and preference.

#### 3. The Fishbein Model:

The Fishbein Model, also known as the Multi-Attribute Attitude Model, assesses consumer attitudes towards a product or brand based on various attributes and the importance assigned to each. According to this model, consumer preference is a function of the sum of beliefs about a brand's attributes multiplied by the importance of these attributes. For example, a consumer might prefer a brand of cereal that scores high on taste, nutritional value, and price. This model allows for a granular analysis of how different product attributes contribute to overall brand preference and can highlight areas for improvement or differentiation.

### 4.Brand Loyalty Model by Jacoby and Chestnut:

Jacoby and Chestnut's model focuses on the psychological commitment and behavioral consistency that constitute brand loyalty. This model differentiates between true loyalty, which is driven by a deep psychological commitment to a brand, and spurious loyalty, which might result from convenience or lack of alternatives. True loyalty leads to repeated purchases and positive word-of-mouth, while spurious loyalty may not withstand competitive pressures. Understanding this distinction is crucial for brands aiming to foster genuine, long-term loyalty among consumers.

### 5. The Kano Model:

The Kano Model categorizes product attributes into five categories: basic needs, performance needs, excitement needs, indifferent attributes, and reverse attributes. Basic needs are the fundamental expectations that must be met; performance needs influence customer satisfaction proportionally; and excitement needs are the unexpected features that can delight customers. The Kano Model helps brands identify which attributes are essential for maintaining customer satisfaction and which can be leveraged to create a competitive edge and enhance brand loyalty.

These models collectively provide a comprehensive understanding of consumer preferences and brand loyalty. They highlight the multifaceted nature of consumer decision-making, emphasizing the roles of psychological needs, social influences, perceived control, attribute evaluation, and psychological commitment. By applying these theories, businesses can develop strategies to better meet consumer needs, foster loyalty, and differentiate themselves in competitive markets.

#### **Switching Behavior of Consumers**

Consumer switching behavior refers to the tendency of customers to change their preference from one brand to another. This behavior can be driven by a variety of factors including dissatisfaction with the current brand, better offers from competitors, changes in consumer needs, or the appeal of new products. For instance, if a consumer consistently experiences poor quality or service, they may be inclined to switch to a competitor that promises better satisfaction. Additionally, the allure of innovative features or significant improvements in a competing product can prompt consumers to switch even if they are generally satisfied with their current brand. Understanding the triggers of switching behavior is crucial for businesses aiming to retain their customer base and for competitors looking to attract new customers

Brush cutters, essential tools for clearing vegetation and maintaining landscapes, face several challenges during their use. These problems can affect their performance, efficiency, and user experience. Below is a detailed exploration of common issues encountered with brush cutters and potential solutions.

## 1. Operational Challenges

### a) Engine Performance Issues

### • Starting Problems:

- > Symptoms: Difficulty in starting the engine, frequent stalling.
- ➤ Causes: Poor fuel quality, carburetor issues, or faulty spark plugs.
- > Solutions: Regular maintenance, use of fresh fuel, cleaning or replacing the spark plug.

#### • Power Loss:

- > Symptoms: Reduced engine power, inability to cut through dense brush.
- ➤ Causes: Blocked air filters, clogged fuel lines, or worn-out engine components.
- Solutions: Clean or replace air filters, check and clear fuel lines, inspect engine parts for wear.

## b) Cutting Efficiency Issues

#### • Dull Blades:

- > Symptoms: Inefficient cutting, requiring more effort and time.
- Causes: Regular wear and tear, cutting hard or abrasive materials.
- > Solutions: Sharpen or replace blades periodically, use appropriate blades for different vegetation types.

## • Jamming and Clogging:

- > Symptoms: Blades or cutting heads become jammed with vegetation.
- > Causes: Cutting dense or fibrous plants, debris buildup.
- Solutions: Regular cleaning, using high-quality blades, and ensuring the cutting area is clear.

## c) Handling and Ergonomics

## • Vibration and Fatigue:

- > Symptoms: User discomfort, fatigue, especially during prolonged use.
- > Causes: Poor ergonomic design, high vibration levels.
- Solutions: Choose models with anti-vibration features, ergonomic handles, and ensure proper use techniques.

## • Weight and Maneuverability:

- > Symptoms: Difficulty in handling, especially in tough terrains or extended operations.
- Causes: Heavy models, poor weight distribution.
- > Solutions: Select lighter models with better weight balance, use harnesses or supports.

### 2. Environmental and Safety Concerns

a) Fuel and Emissions

### • High Fuel Consumption:

- > Symptoms: Frequent refueling, increased operational costs.
- > Causes: Inefficient engine design, poor maintenance.
- Solutions: opt for fuel-efficient models, maintain the engine properly.

#### Emissions:

- > Symptoms: Excessive smoke, environmental pollution.
- Causes: Incomplete combustion, poor-quality fuel.
- > Solutions: Use eco-friendly engines, maintain optimal engine settings, use high-quality fuel.
  - b) Noise Levels

#### Excessive Noise:

- > Symptoms: Loud operation, potential hearing damage, neighborhood disturbance.
- > Causes: Inefficient mufflers, high engine speeds.
- > Solutions: Use models with noise reduction features, wear hearing protection.
  - c). Safety Hazards

## • Injury Risks:

- > Symptoms: Risk of cuts, bruises, or more severe injuries.
- > Causes: Lack of safety guards, improper handling, defective safety mechanisms.
- Solutions: Use safety guards, wear protective gear, ensure proper handling and maintenance.

#### • Fire Hazards:

- > Symptoms: Risk of fire due to engine heat or fuel leaks.
- ➤ Causes: Fuel leaks, poor engine ventilation, cutting dry vegetation.
- ➤ Solutions: Regularly inspect for fuel leaks, maintain proper engine cooling, avoid using near flammable materials.

## 3. Maintenance and Longevity

- a) Regular Maintenance Needs
- Frequent Maintenance:
- > Symptoms: Time-consuming maintenance, frequent component replacement.
- Causes: High usage, exposure to harsh conditions, poor design.
- > Solutions: Follow a strict maintenance schedule, use durable components.
- Part Availability:
- > Symptoms: Difficulty in finding replacement parts.
- ➤ Causes: Limited supplier network, discontinued models.
- > Solutions: Choose brands with good after-sales support, maintain a stock of essential parts.
  - b) Durability and Wear
- Component Wear and Tear:
- > Symptoms: Rapid wear of parts like blades, belts, and filters.
- ➤ Causes: Harsh operating conditions, inadequate component quality.
- Solutions: Use high-quality components, inspect and replace parts as needed.
- Corrosion and Rust:
- Symptoms: Rust on metal parts, affecting performance and lifespan.
- > Causes: Exposure to moisture, poor storage conditions.
- > Solutions: Store in dry conditions, use anti-corrosion treatments.

## 4. Usage and Application Challenges

- a) Adaptability to Different Terrains
- Handling Rough Terrain:
- > Symptoms: Difficulty in maneuvering, reduced efficiency.
- Causes: Inadequate design for rough terrains, lack of adjustable features.
- > Solutions: Choose models designed for varied terrains, use appropriate accessories.

- Vegetation Type Adaptation:
- > Symptoms: Inefficient cutting on different vegetation types.
- Causes: Inappropriate blade types, lack of adjustable settings.
- ➤ Solutions: Use suitable blades, adjust settings according to vegetation.

## b) User Expertise and Training

- Lack of Proper Training:
- > Symptoms: Inefficient use, increased risk of accidents.
- > Causes: Inadequate user training, complex operation instructions.
- > Solutions: Provide comprehensive training, simplify operation instructions.
- Improper Use:
- > Symptoms: Damage to the brush cutter, suboptimal performance.
- > Causes: Ignorance of proper usage techniques, misuse.
- > Solutions: Educate users on correct usage, offer usage guidelines.

# 4. Brand-Specific Issues

- a) Variability in Quality
- Inconsistent Quality Control:
- > Symptoms: Variations in product performance and reliability.
- > Causes: Poor manufacturing practices, inconsistent quality control.
- ➤ Solutions: Choose brands with a reputation for quality, ensure consistent manufacturing standards.
  - b) After-Sales Support
- Limited Customer Support:
- > Symptoms: Difficulty in getting service or parts.
- ➤ Causes: Poor customer service infrastructure, lack of local service centers.
- > Solutions: Prefer brands with strong customer support, maintain a good relationship with service providers.

### Marketing strategy for the promotion of brush cutter

Promoting brush cutters requires a multifaceted marketing strategy that targets various segments of the market, highlights product strengths, and leverages different promotional channels. Here's a comprehensive marketing strategy to effectively promote brush cutters:

## 1. Market Segmentation and Targeting

- a) Identify Key Market Segments
- ➤ Residential Users: Homeowners needing tools for lawn maintenance and light clearing.
- ➤ Commercial Users: Landscapers and property maintenance companies requiring durable and efficient brush cutters for professional use.
- Agricultural Users: Farmers and agricultural workers needing robust equipment for clearing fields and managing undergrowth.
- b) Tailor Marketing Messages
- > For Residential Users: Emphasize ease of use, affordability, and maintenance simplicity.
- > For Commercial Users: Focus on durability, efficiency, and cost-effectiveness for large-scale projects.
- For Agricultural Users: Highlight power, reliability, and ability to handle tough vegetation.

#### 2. Product Differentiation

- a) Unique Selling Points (USPs)
- ➤ Performance: Superior engine power and cutting efficiency compared to competitors.
- > Ergonomics and Design: Ergonomic handles, lightweight design, and user-friendly features.
- Durability: High-quality materials and build for long-term use.
- ➤ Safety: Advanced safety features like automatic shut-off and blade guards.
- ➤ Innovative Technology: Latest technological advancements, such as smart fuel injection systems and noise reduction.

- b) Product Line Strategy
- Economy Line: Basic models for budget-conscious users.
- Professional Line: High-performance models for professional and commercial use.
- > Specialty Line: Models designed for specific tasks or terrains (e.g., wetland cutters, forest-specific models).

# 3. Branding and Positioning

- a) Establish a Strong Brand Identity
- > Brand Values: Quality, reliability, and innovation.
- > Brand Personality: Dependable, user-friendly, and professional.
- b) Positioning Statement
- ➤ "Power and Precision for Every Terrain" emphasizing the brush cutter's ability to handle diverse environments with efficiency and accuracy.

# 4. Promotional Strategies

## a) Digital Marketing

- Website Optimization:
- ➤ Product Pages: Detailed descriptions, high-quality images, and user reviews.
- > SEO: Optimize for keywords related to brush cutting, landscaping tools, and vegetation management.
- Social Media Marketing:
- ➤ Platforms: Use Facebook, Instagram, and YouTube for product demonstrations, user testimonials, and promotional offers.
- > Content: Share videos of the brush cutter in action, tips for use, and maintenance guides.

- Email Marketing:
- ➤ Newsletter: Regular updates on new products, special offers, and maintenance tips.
- > Targeted Campaigns: Promotions tailored to previous buyers or segmented lists (residential, commercial, agricultural users).
- Online Advertising:
- ➤ Pay-Per-Click (PPC): Google Ads targeting relevant keywords.
- > Social Media Ads: Targeted ads on platforms like Facebook and Instagram.

# b) Offline Marketing

- Dealership Networks:
- ➤ Distribution: Develop partnerships with local hardware stores, agricultural supply centers, and garden equipment dealers.
- > Training: Provide training for sales staff to effectively promote and demo the product.
- Trade Shows and Exhibitions:
- Presence: Participate in industry-specific events like agricultural fairs and landscaping exhibitions.
- > Demonstrations: Live product demos to showcase performance and features.
- Print Advertising:
- Magazines: Ads in gardening, landscaping, and agricultural magazines.
- Brochures and Flyers: Distributed through dealerships, trade shows, and direct mail campaigns.

#### c) Sales Promotions

- Discounts and Offers:
- > Seasonal Discounts: Special pricing during peak seasons (e.g., spring and fall).
- ➤ Bundle Offers: Discounts on accessories or maintenance packages with purchase.

- Financing Options:
- ➤ Installment Plans: Easy payment options to reduce upfront costs.
- > Subsidies and Loans: Highlight availability of government subsidies or special loan programs for agricultural users.
- Loyalty Programs:
- > Incentives: Rewards for repeat purchases or referrals.

# d) Public Relations

- Press Releases:
- ➤ Product Launches: Announce new models or significant updates.
- ➤ Company News: Share achievements, such as awards or certifications.
- Media Relations:
- ➤ Interviews: Arrange interviews with company executives or product designers in relevant industry publications.
- Sponsorships:
- Community Events: Sponsor local gardening or agricultural events to increase brand visibility.

# 5. Customer Engagement and Support

#### a) Customer Service

- Helpline and Support:
- ➤ 24/7 Support: Provide round-the-clock customer service for troubleshooting and inquiries.
- Online Chat: Live chat support on the website.
- Warranty and Guarantees:
- > Extended Warranty: Offer extended warranty options for additional peace of mind.
- ➤ Satisfaction Guarantees: Money-back guarantee if the product doesn't meet expectations

## b) User Training and Resources

- Instructional Content:
- ➤ Videos: How-to videos on setup, use, and maintenance.
- Manuals: Comprehensive user manuals available online and in print.
- Workshops and Training:
- ➤ In-Person Training: Workshops at dealerships or community centers.
- ➤ Webinars: Online training sessions for broader reach.

# c) Feedback and Improvement

- Surveys and Feedback Forms:
- > Customer Surveys: Regular surveys to gather user feedback on product performance and satisfaction.
- ➤ Improvement Requests: Channels for customers to suggest improvements or new features.
- Product Development:
- ➤ Iterative Improvements: Use customer feedback to guide product development and updates.

# 6. Monitoring and Evaluation

# a) Performance Metrics

- Sales Data:
- > Tracking: Monitor sales figures to gauge the effectiveness of promotional strategies.
- > Segmentation: Analyze sales by market segment, region, and product line.
- Market Share:
- Comparison: Track market share relative to competitors to assess competitive positioning.

- Customer Satisfaction:
- ➤ Net Promoter Score (NPS): Measure customer satisfaction and likelihood of recommending the product.

## b) Adjustments and Optimization

- Campaign Analysis:
- ➤ Effectiveness: Evaluate the success of marketing campaigns and adjust strategies as needed.
- ➤ ROI: Calculate the return on investment for different marketing activities.
- Continuous Improvement:
- ➤ Feedback Loop: Regularly update marketing strategies based on performance data and market trends.
- Summary Example
- > Target Audience: Residential users, commercial landscapers, and agricultural professionals.
- Promotion Tactics:
- Digital: SEO-optimized website, social media campaigns, online ads, and email marketing.
- ➤ Offline: Trade shows, dealership promotions, print ads, and direct mail.
- > Sales Promotions: Discounts, financing options, and loyalty programs.
- ➤ Public Relations: Press releases, media interviews, and event sponsorships.
- Customer Engagement: Comprehensive support, instructional content, training, and feedback mechanisms.

# CHAPTER III DATA ANALYSIS AND INTERPRETATION OF DATA

## **Data Analysis**

Data analysis is defined as a process of cleaning, transforming, and modeling data to discover useful information for business decision-making. The purpose of Data Analysis is to extract useful information from data and taking the decision based upon the data analysis.

## Steps in data analysis;

# **Data Requirement Gathering**

First of all, you have to think about why do you want to do this data analysis? All you need to find out the purpose or aim of doing the Analysis of data. You have to decide which type of data analysis you wanted to do! In this phase, you have to decide what to analyze and how to measure it, you have to understand why you are investigating and what measures you have to use to do this Analysis.

#### **Data Collection**

After requirement gathering, you will get a clear idea about what things you have to measure and what should be your findings. Now it's time to collect your data based on requirements. Once you collect your data, remember that the collected data must be processed or organized for Analysis. As you collected data from various sources, you must have to keep a log with a collection date and source of the data.

### **Data Cleaning**

Now whatever data is collected may not be useful or irrelevant to your aim of Analysis, hence it should be cleaned. The data which is collected may contain duplicate records, white spaces or errors. The data should be cleaned and error free. This phase must be done before Analysis because based on data cleaning, your output of Analysis will be closer to your expected outcome.

## **Data Analysis**

Once the data is collected, cleaned, and processed, it is ready for Analysis. As you manipulate data, you may find you have the exact information you need, or you might need to collect more data. During this phase, you can use data analysis tools and software which will help you to understand, interpret, and derive conclusions based on the requirements.

# **Data Interpretation**

After analyzing your data, it's finally time to interpret your results. You can choose the way to express or communicate your data analysis either you can use simply in words or maybe a table or chart. Then use the results of your data analysis process to decide your best course of action.

#### **Data Visualization**

Data visualization is very common in your day-to-day life; they often appear in the form of charts and graphs. In other words, data shown graphically so that it will be easier for the human brain to understand and process it. Data visualization often used to discover unknown facts and trends. By observing relationships and comparing datasets, you can find a way to find out meaningful information

Table 3.1 Age of respondents

Age	Frequency
18-35	11
35-56	84
56+	37
Total	132

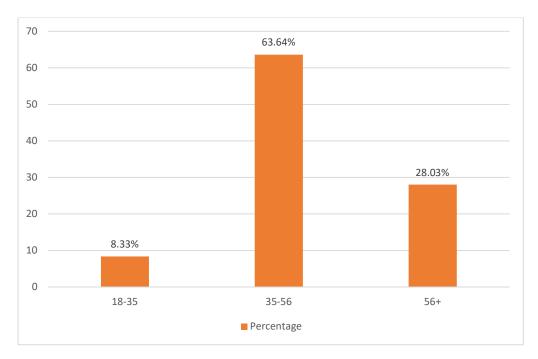


Figure 3.1 Age of respondents

**Interpretation:** The data indicates that the primary users of brush cutters are individuals aged 35-56, making up 63.64% of respondents. Those aged 56+ represent 28.03%, while the 18-35 age group accounts for just 8.33%. This suggests that middle-aged adults are the predominant users, likely due to their greater involvement in land management and maintenance activities.

**Table 3.2 Gender of respondents** 

Gender	Frequency
Male	119
Female	13
Prefer no to say	
Total	132

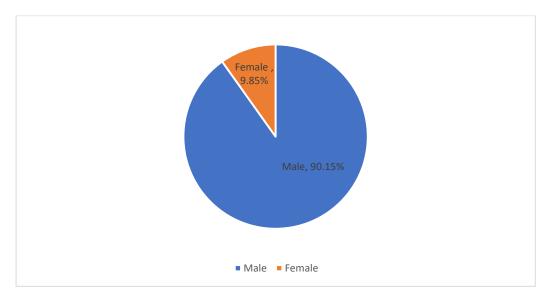


Figure 3.2: Gender of respondents

**Interpretation:** The majority of brush cutter users are male, comprising 90.15% of respondents, while females account for 9.85%. This suggests that brush cutters are predominantly used by men, possibly reflecting traditional roles in land management or physical labour.

**Table 3.3:** Annual income of respondents

Income	Frequency
Under 25000	4
25000-50000	16
50000-75000	79
75000-100000	25
Over 1000000	8
Total	132

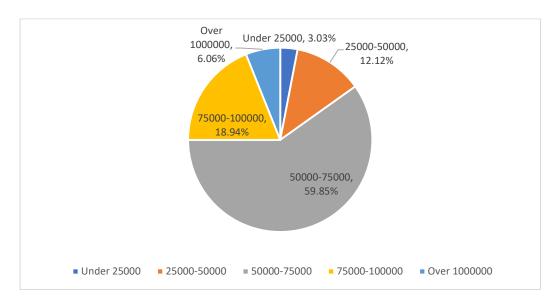


Figure 3.3: Annual income of respondents

**Interpretation**: The majority of respondents (59.85%) report an annual income in the range of 50000-75000, indicating a significant proportion of middle-income earners among brush cutter users. A considerable fraction (18.94%) earns between 75000-100000 annually, while smaller proportions earn under 25000 (3.03%), 25000-50000 (12.12%), or over 1000000 (6.06%). This suggests that brush cutter usage is prevalent among individuals with moderate to higher income levels, potentially reflecting the investment required for land maintenance equipment

Table 3.4 Most preferred brand by consumers

Brand	Frequency
Kamco	45
Kisankraft	35
Stihl	42
Others	10
Total	132

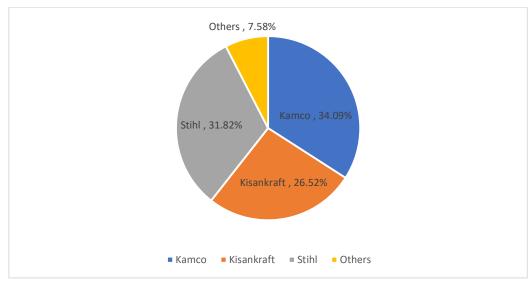


Figure 3.4: Most preferred brand by consumers

**Interpretation:** Among the respondents, Kamco is the preferred brush cutter brand for 34.1%, followed closely by Stihl at 31.8%. Kisankraft holds 26.5% of the market share, while 7.6% prefer other brands. This distribution indicates a competitive market where no single brand overwhelmingly dominates, though Kamco and Stihl lead slightly. This suggests that factors such as product features, performance, and brand reputation play significant roles in consumer brand preference.

Table 3.5 Satisfaction level of current brush cutter

Response	Frequency
Highly dissatisfied	5
Dissatisfied	9
Neutral	16
Satisfied	64
Highly satisfied	38
Total	132

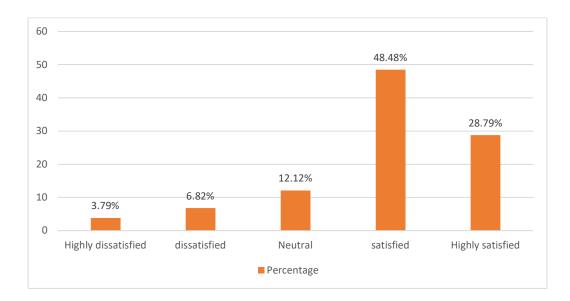


Figure 3.5: Satisfaction level of current brush cutter

Interpretation: The satisfaction levels with current brush cutters indicate a predominantly positive response among users. Nearly half of the respondents (48.48%) reported being satisfied with their brush cutters, while a substantial 28.79% expressed high satisfaction, highlighting overall positive user experiences. A minority of 12.12% felt neutral, suggesting no strong opinion either way. Conversely, dissatisfaction is relatively low, with only 6.82% of respondents dissatisfied and a mere 3.79% highly dissatisfied. This data reflects that the majority of users (77.27%) are content with their brush cutters, with significant satisfaction levels overshadowing the few negative experiences.

Table 3.6: The level unique functionalities of your brush cutter compared to others

Rating scale	Frequency
Very limited	1
Limited	5
Neutral	42
Innovative	75
Very innovative	9
Total	132

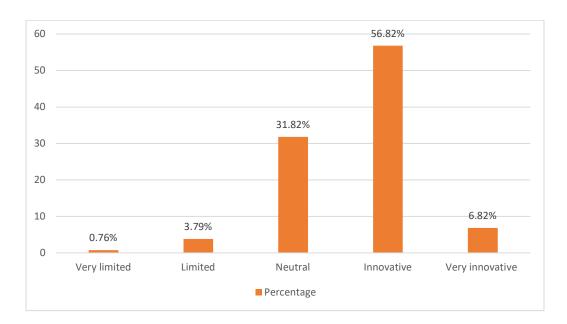


Figure 3.6: The level unique functionalities of your brush cutter compared to others

**Interpretation:** The majority of respondents (63.64% combining "Innovative" and "Very Innovative") perceive their brush cutters as having unique or advanced functionalities compared to others on the market, reflecting a generally positive view of these tools' distinctive features. However, the significant neutral group (31.82%) suggests room for enhancing perceived uniqueness to further distinguish these products. Only a small percentage (4.55%) view their brush cutters as having limited uniqueness, indicating that while most users are satisfied with the innovative aspects, a few feel improvements are needed to stand out more in the market.

Table 3.7 Factors influencing the purchase decision of Kamco brush cutter

Particulars	VI (5)	I (4)	N (3)	UI (2)	VUI (1)	Total	Weighted average
Durability	15	26	3	0	1	189	4.2
Price	26	17	1	1	0	203	4.51
Cutting power	17	25	2	1	0	193	4.28
Warranty& support	17	24	4	0	0	193	4.28
Consider user	8	23	12	2	0	172	3.82
feedback							
Ergonomic design	4	20	12	7	2	152	3.37

5 4.51 4.28 4.28 4.2 4.5 3.82 Weighted average score 4 3.37 3.5 3 2.5 2 1.5 0.5 0 Durability Price Cutting power Warranty& Consider user Ergonomic support feedback design **Factors** 

Figure 3.7: Factors influencing the purchase decision of Kamco brush cutter

Interpretation: The weighted averages reveal that price (4.51) is the most influential factor, closely followed by cutting power (4.28) and warranty & support (4.28), suggesting that buyers prioritize cost-effectiveness, operational efficiency, and aftersales service. Durability (4.2) also significantly impacts the decision, indicating a preference for long-lasting products. User feedback (3.82) and ergonomic design (3.37) are less critical but still noteworthy, implying that while consumer opinions and ease of use are considered, they are secondary to economic and functional aspects in the purchase decision.

Table 3.8: Factors influencing the purchase decision of Kisankraft brush cutter

Particulars	VI (5)	I (4)	N (3)	UI (2)	VUI (1)	Total	Weighted average
Durability	2	26	4	2	1	131	3.74
Price	12	9	10	4	0	134	3.82
Cutting power	4	21	7	2	1	130	3.71
Warranty& support	3	20	9	2	1	127	3.62
Consider user	4	20	8	3	0	130	3.71
feedback							
Ergonomic design	2	17	14	1	1	123	3.51

3.82 3.85 3.8 3.74 Weighted average score 3.75 3.71 3.71 3.7 3.62 3.65 3.6 3.55 3.51 3.5 3.45 3.4 3.35 Durability Price Consider user Cutting power Warranty& Ergonomic feedback design support Factors

Figure 3.8: Factors influencing the purchase decision of Kisankraft brush cutter

Interpretation: The weighted average reveals that price (3.82) as the most crucial factor, indicating that cost is a key consideration for buyers. Durability (3.74) follows, showing the importance of a reliable and long-lasting product. Cutting power and user feedback (both at 3.71) are also significant, suggesting that performance and consumer opinions play notable roles in the decision-making process. Warranty & support (3.62) and ergonomic design (3.51) are somewhat important but less so compared to other factors, suggesting that while after-sales service and user comfort are valued, they are secondary to price and durability.

Table 3.9: Factors influencing the purchase decision of Stihl brush cutter

Particulars	VI (5)	I (4)	N (3)	UI (2)	VUI (1)	Total	Weighted average
Durability	21	20	1	0	0	188	4.47
Price	6	23	13	0	0	161	3.83
Cutting power	22	18	2	0	0	188	4.47
Warranty& support	7	26	7	2	0	164	3.90
Consider user feedback	12	20	8	2	0	168	4
Ergonomic design	3	20	17	2	0	150	3.57

5 4.47 4.47 4.5 4 3.9 3.83 Weighted average score 4 3.57 3.5 3 2.5 2 1.5 1 0.5 0 Durability Price Cutting power Warranty& Consider user Ergonomic support feedback design **Factors** 

Figure 3.9: Factors influencing the purchase decision of Stihl brush cutter

Interpretation: The highest weighted averages indicate that durability (4.47) and cutting power (4.47) are the most significant factors for buyers, reflecting a strong preference for reliable performance and efficiency. User feedback (4.0) also plays a crucial role, underscoring the value of consumer reviews in the purchasing decision. Warranty & support (3.90) and price (3.83) are important considerations, suggesting that buyers look for value and dependable after-sales service. Ergonomic design (3.57), while still relevant, is the least influential factor, indicating that comfort is a consideration but secondary to durability and performance.

Table 3.10: Response towards the cutting power of the current brush cutter

Rating	Frequency
Very poor	3
Poor	5
Average	40
Good	55
Excellent	29
Total	132

Figure 3.10: Response towards the cutting power of the current brush cutter

**Interpretation:** A combined 64% of respondents rate the cutting power as "Good" (42%) or "Excellent" (22%), indicating strong overall satisfaction. About 30% of users find it "Average," suggesting room for improvement but overall functionality. Only a small percentage rate it as "Poor" (4%) or "Very Poor" (2%), indicating that negative perceptions of cutting power are minimal. This data suggests that most users find the brush cutter's cutting power to be satisfactory or better, highlighting its effectiveness in meeting user expectations.

Table 3.11: Level of completing task of brush cutter

Rating	Frequency
Very poor	
Poor	3
Average	16
Good	70
Excellent	43
Total	132

53%
50
40
33%
30
20
12%
10
Poor Average Good Excellent

Figure 3.11 Level of completing task of brush cutter

**Interpretation:** A substantial majority of respondents rate the task completion as "Good" (53%) or "Excellent" (33%), totaling 86%, which indicates high satisfaction with the tool's performance in achieving desired outcomes. About 12% find it "Average," suggesting that a minor segment sees potential for better efficiency or results. Only 2% rate it as "Poor," and there are no ratings for "Very Poor," implying minimal dissatisfaction. Overall, the data indicates that the brush cutter is highly effective at completing tasks for most users.

Table 3.12: User-friendliness of the brand

Rating	Frequency
Very poor	
Poor	
Average	23
Good	54
Excellent	55
Total	132

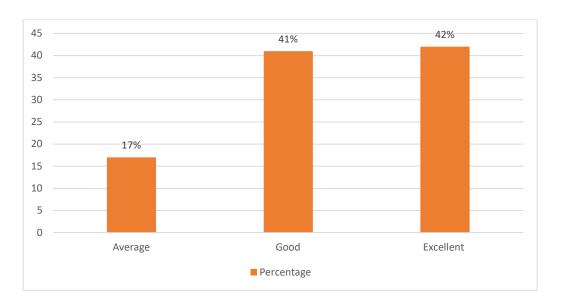


Figure 3.12: User-friendliness of the brand

Interpretation: The user-friendliness of a brush cutter brand, with ratings ranging from "Average" to "Excellent." The results show that a significant majority, 83%, rate the brand as either "Good" (41%) or "Excellent" (42%), indicating that most users find the brand easy to use and accessible. 17% rate it as "Average," suggesting a moderate level of satisfaction among some users. There are no ratings for "Poor" or "Very Poor," implying that no users find the brand difficult to use. Overall, the data suggests that the brand is perceived as highly user-friendly by the majority of users.

**Table 3.13: The trustworthiness towards the brands** 

Response	Frequency
Strongly disagree	1
Disagree	12
Neutral	29
Agree	83
Strongly agree	7
Total	132

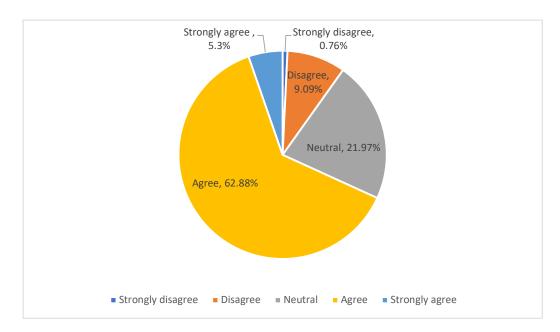


Figure 3.13 The trustworthiness towards the brands

**Interpretation:** The data indicates a generally high level of trust among respondents towards their brush cutter brands, with over 68% agreeing or strongly agreeing that they trust their brands. A significant portion of respondents (approximately 22%) remains neutral, possibly due to a lack of strong opinions or recent experiences. Only a small fraction (less than 10%) exhibits distrust, suggesting that issues of trust are relatively uncommon among the respondents

Table 3.14: Satisfaction of durability towards current brush cutter

Response	Frequency
Highly dissatisfied	2
Dissatisfied	2
Neutral	30
Satisfied	83
Highly satisfied	15
Total	132

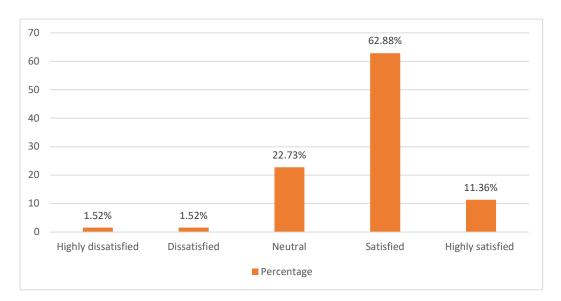


Figure 3.14: Satisfaction level of durability towards current brush cutter

**Interpretation:** The data reveals that a majority of respondents (over 74%) believe that their brush cutters are durable, reflecting high user confidence in product longevity. A notable portion (about 23%) remains neutral, suggesting that these users might need more experience or further proof to fully endorse the durability of their brush cutters. Only a very small percentage (around 3%) express dissatisfaction, indicating that concerns over durability are relatively rare among the respondents.

Table 3.15: Satisfaction level of overall value for money

Response	Frequency
Highly dissatisfied	1
Dissatisfied	3
Neutral	30
Satisfied	92
Highly satisfied	6
Total	132

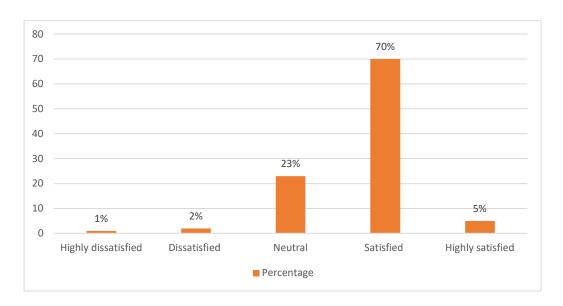


Figure 3.15: Satisfaction level of overall value for money

Interpretation: The majority of respondents (75% combining "Highly Satisfied" and "Satisfied") express positive satisfaction with the value for money of their brush cutters, considering both the initial and ongoing costs. A significant neutral group (23%) suggests a need for further investigation into what might sway them towards satisfaction. The small percentage of dissatisfaction (3%) points to limited concerns about value for money, highlighting general contentment but with some room for improvement in addressing the needs of those less satisfied.

Table 3.16: Satisfaction level of the ergonomic design of your brush cutter

Response	Frequency
Highly dissatisfied	1
Dissatisfied	1
Neutral	40
Satisfied	80
Highly satisfied	10
Total	132

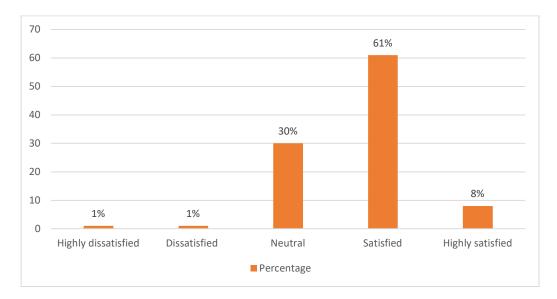


Figure 3.16: Satisfaction level of the ergonomic design of your brush cutter

Interpretation: The ergonomic design of brush cutters generally meets or exceeds user expectations, with 69% of respondents being satisfied or highly satisfied. The 30% of neutral respondents suggest that while the current ergonomic features are adequate, there is potential for enhancements to convert neutral users into satisfied ones. The minimal dissatisfaction indicates that most users do not encounter significant ergonomic issues, reinforcing the overall positive reception of the design. Manufacturers might focus on refining ergonomic aspects to further improve user comfort and satisfaction.

Table 3.17: Satisfaction level of safety features of your brush cutter

Response	Frequency	
Highly dissatisfied		
Dissatisfied	3	
Neutral	23	
Satisfied	95	
Highly satisfied	11	
Total	132	

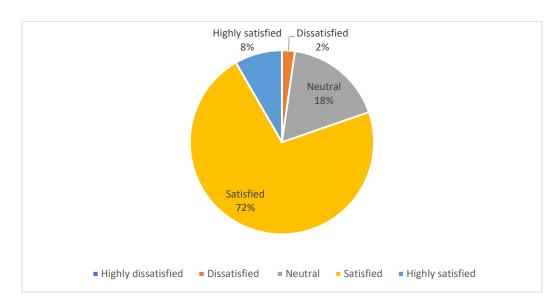


Figure 3.17 Satisfaction level of safety features of your brush cutter

Interpretation: The safety features of brush cutters are well-received, with 80.30% of respondents expressing satisfaction or high satisfaction. This positive response highlights that the safety measures are effective and meet user expectations. The neutral response from 17.42% of respondents suggests room for further improvements or better user education on safety features. The very low dissatisfaction rate (2.27%) suggests that significant safety concerns are rare, reaffirming the general effectiveness of the safety features provided. Manufacturers might focus on enhancing safety features or improving their perceived value to convert neutral users into satisfied ones.

Table 3.18: Trust towards the user feedback you have read about your brush cutter

Response	Frequency	
Strongly disagree	5	
Disagree	17	
Neutral	51	
Agree	54	
Strongly agree	5	
Total	132	

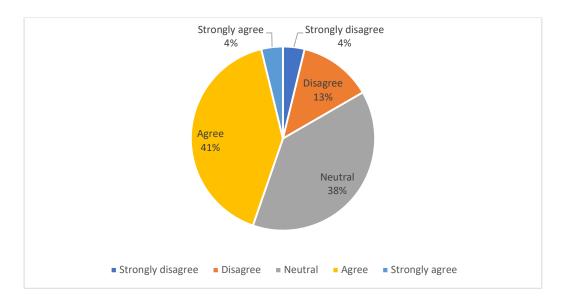


Figure 3.18: Trust towards the user feedback you have read about your brush cutter

**Interpretation:** Trust in user feedback about brush cutters is generally positive, with 44.70% of respondents either agreeing or strongly agreeing that they trust the feedback. This suggests that user reviews are an important and credible source of information for many users. However, a notable 38.64% of respondents remain neutral, indicating a balanced view that might be influenced by additional factors. A smaller group (16.67%) expresses distrust in user feedback, highlighting an area where manufacturers and review platforms could focus on improving the credibility and quality of user feedback to build greater trust among all users.

**Table 3.19:** Satisfaction level towards user reviews

Response	Frequency
Strongly disagree	3
Disagree	15
Neutral	43
Agree	65
Strongly agree	6
Total	132

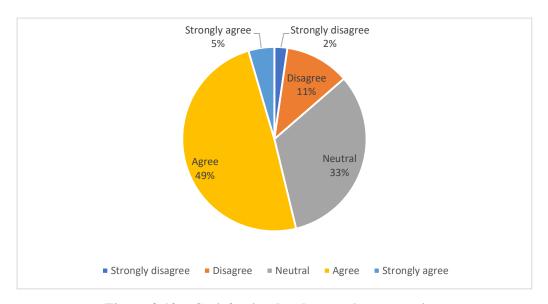


Figure 3.19 Satisfaction level towards user reviews

**Interpretation:** The majority of respondent's express satisfaction with their brush cutter based on user reviews, with over half (53.79%) agreeing or strongly agreeing. However, a significant portion remains neutral (32.58%), indicating a need for further investigation into the factors influencing their satisfaction.

Table 3.20: Satisfaction towards the warranty coverage provided for your brush cutter

Response	Frequency
Highly dissatisfied	
Dissatisfied	4
Neutral	40
Satisfied	82
Highly satisfied	6
Total	132

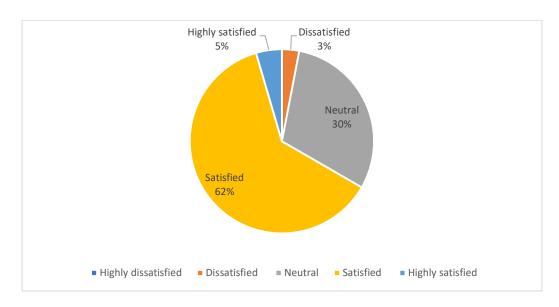


Figure 3.20: Satisfaction towards the warranty coverage provided for your brush cutter

**Interpretation:** The data on user satisfaction with brush cutter warranty coverage is generally positive. Most respondents (62.12%) are satisfied, and 4.55% are highly satisfied. Neutral responses make up 30.3%, indicating some ambivalence. Only 3.03% of respondents are dissatisfied, with no highly dissatisfied responses. Overall, 66.67% of users are content with the warranty coverage, highlighting favorable feedback and a lack of extreme dissatisfaction.

Table 3.21: The response based on the primary usage of the brush cutter

Uses	Frequency	
Clearing overgrown vegetation	53	
Trimming grass or weeds	24	
Landscaping or gardening	20	
Agricultural purposes	33	
Maintaining forest orwoodland areas	2	
Total	132	

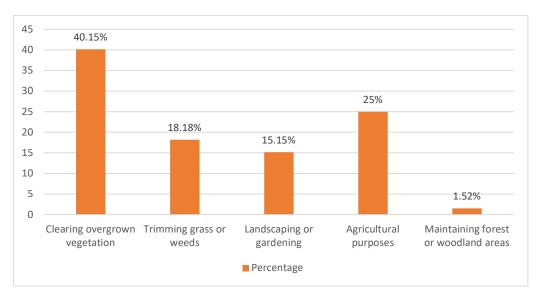


Figure 3.21: The response based on the primary usage of the brush cutter

Interpretation: The majority use their brush cutters for clearing overgrown vegetation (40.15%), indicating a common need for managing dense or tangled plant growth. Agricultural purposes are also significant (25%), reflecting use in farming or crop management. Trimming grass or weeds (18.18%) and landscaping or gardening (15.15%) are notable uses, highlighting their roles in lawn care and aesthetic maintenance. Maintaining forest or woodland areas is the least common use (1.52%), suggesting a niche application. Overall, the data shows that brush cutters are primarily used for managing overgrown areas and agricultural tasks, with a secondary focus on landscaping and gardening.

Table 3. 22: The overall reputation of your brush cutter aligns with your expectations

Response	Frequency
Strongly disagree	4
Disagree	23
Neutral	34
Agree	62
Strongly agree	9
Total	132

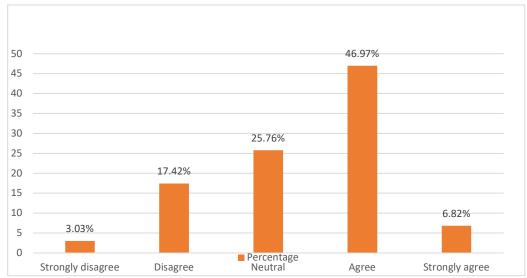


Figure 3. 22: The overall reputation of your brush cutter aligns with your expectations

Interpretation: A majority of respondents, 53.79%, either "Agree" (46.97%) or "Strongly Agree" (6.82%) that the reputation matches their expectations, indicating general satisfaction with the product's perceived quality and performance. A significant portion, 25.76%, remains "Neutral," suggesting that while they don't find the reputation inconsistent, they may have mixed feelings or lack strong opinions. Meanwhile, 20.45% "Disagree" (17.42%) or "Strongly Disagree" (3.03%), indicating that a notable minority feels the product's reputation does not fully meet their expectations. Overall, most users find that the brush cutter's reputation aligns well with their experiences, though there is room for improvement for some users.

Table 3.23: The frequency of using a brush cutter for tasks other than its primary purpose.

Response	Frequency
Never	11
Rarely	84
Occasionally	32
Frequently	5
Very frequently	
Total	132

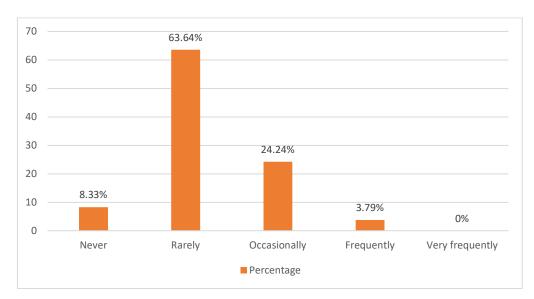


Figure 3.23: The frequency of using a brush cutter for tasks other than its primary purpose

**Interpretation:** The majority, 63.64%, "Rarely" use it for other tasks, suggesting that most users stick to its intended use. A significant portion, 24.24%, use it "Occasionally" for other tasks, indicating some versatility in its application. Only 3.79% use it "Frequently," and no respondents report using it "Very Frequently" for other purposes, which underscores a limited tendency to repurpose the tool. Additionally, 8.33% "Never" use it for other tasks. Overall, the data reveals that while the brush cutter is predominantly used for its primary function, a minority of users do find occasional alternative uses for it.

Table 3.24: The ease of use of your brush cutter for different tasks

Response	Frequency	
Very difficult	28	
Difficult	75	
Neutral	24	
Easy	5	
Very easy		
Total	132	•

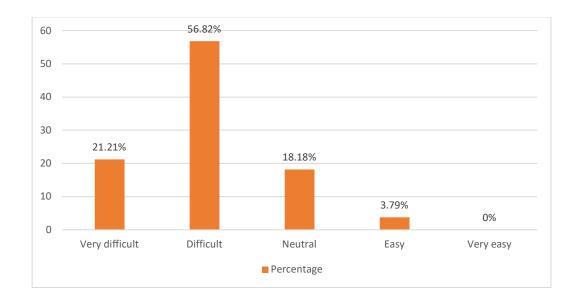


Figure 3.24: The ease of use of your brush cutter for different tasks

**Interpretation:** A significant majority, 78.03%, rate the tool as either "Difficult" (56.82%) or "Very Difficult" (21.21%) to use, indicating widespread challenges in handling the tool for varied tasks. 18.18% feel "Neutral," suggesting mixed or moderate experiences. Only 3.79% find it "Easy," and no respondents consider it "Very Easy," highlighting that ease of use is a notable concern. Overall, the data suggests that most users experience difficulty in using the brush cutter across different tasks, pointing to a potential need for design improvements or better user guidance to enhance usability.

Table 3.25: Represents the usage purposes and their brand choice

Brand	Clearing overgrown vegetation	Trimming grass or weeds	Landscapi ng or gardening	Agricult ural purpose s	Maintaining forest or woodland areas	Tot al
Kamco	12	6	2	25	0	45
Kisankraft	14	7	7	5	2	35
Stihl	25	9	7	1	0	42
Others	2	2	4	2	0	10
Total	53	24	20	33	2	132

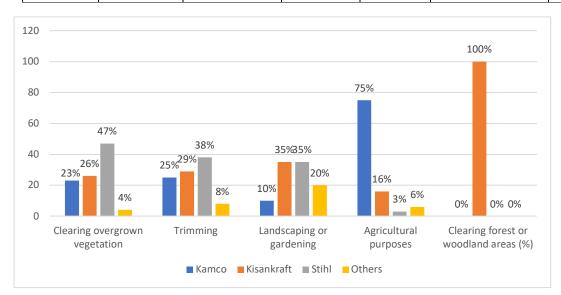


Figure 3.25: Represents the Usage Purposes and Their Impact on Brand Choice

# **Interpretation**

The table reveals brand preferences for brush cutters based on different usage purposes

- For clearing overgrown vegetation, Stihl is the most preferred brand, chosen by 47% of respondents, followed by Kisankraft (26%) and Kamco (23%), with other brands being minimally preferred (4%).
- In **trimming grass or weeds**, **Stihl** again leads with 38%, followed by Kisankraft (29%) and Kamco (25%), while other brands have limited preference (8%).
- For landscaping or gardening, Kisankraft and Stihl are equally preferred, each chosen by 35% of respondents, whereas Kamco has a lower preference (10%), and other brands are preferred by 20%.
- For **agricultural purposes**, **Kamco** is overwhelmingly preferred, chosen by 75% of respondents, indicating its strong performance in farming-related tasks. Kisankraft follows with 16%, while Stihl and other brands are rarely chosen for this purpose, with 3% and 6% respectively.
- For maintaining forest or woodland areas, Kisankraft is the exclusive brand preferred, with all respondents (100%) choosing it, while Kamco, Stihl, and other brands have no preference in this category.

Overall, Stihl is the leading brand for clearing overgrown vegetation and trimming grass or weeds, indicating strong performance in these tasks. Kisankraft dominates in maintaining forest or woodland areas and shares the lead in landscaping or gardening with Stihl. Kamco is highly preferred for agricultural purposes, suggesting its effectiveness in farming-related tasks. Other brands have minimal preference across most categories, indicating they are less favored by users.

# CHAPTER IV FINDINGS, RECOMMENDATIONS & SUMMARY

# 4.1 Findings

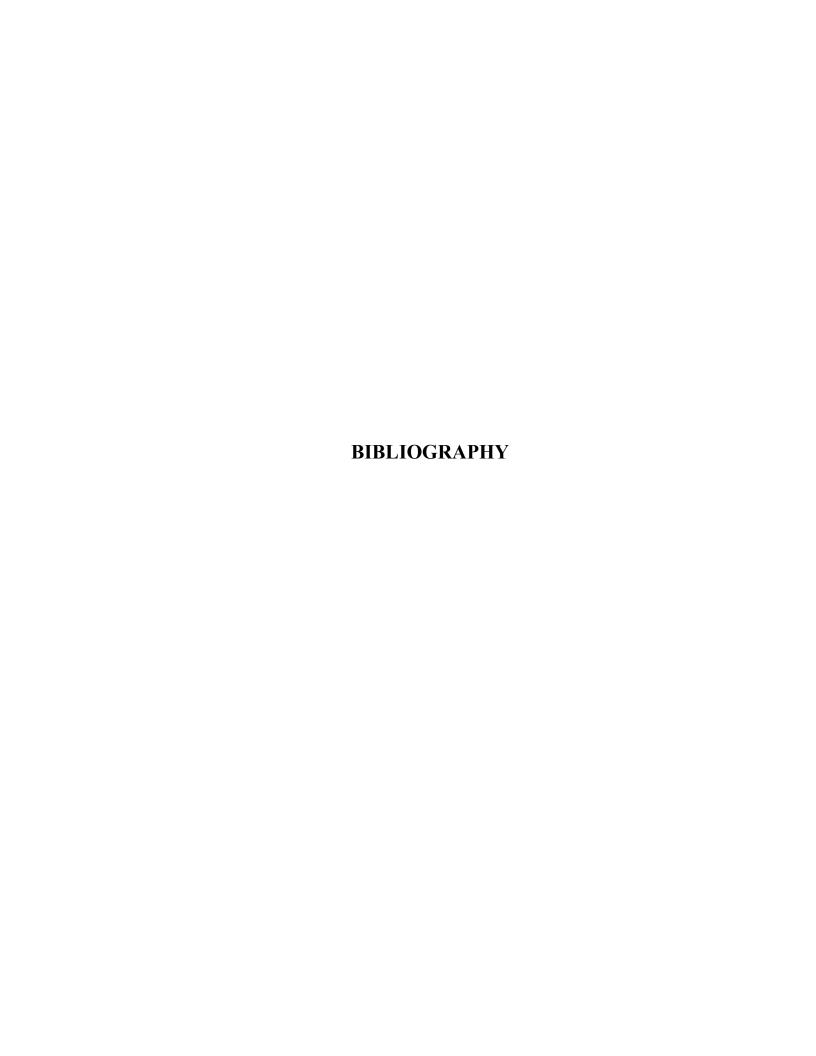
- Middle-aged adults (35-56 years) dominate brush cutter usage, comprising 63.64% of respondents, with males representing 90.15% of users. This demographic skew suggests that brush cutters are primarily used by middleaged men.
- Kamco emerges as the most preferred brush cutter brand over Kisankraft and Stihl. These findings are in line with the previous research of the 2014 study "Consumer-based brand research on agricultural machinery in China" by Song Su-Mei, Han Chin, and Sang Biao sheds light on how Chinese farmers perceive different brands of agricultural machinery. The authors discovered through a questionnaire survey that consumers paid more attention to local or national tractor brands,
- Factors influencing purchase decisions vary across brands: Price (4.51) is most influential for Kamco and Kisankraft buyers, while Stihl buyers prioritize durability (4.47) and cutting power (4.47).
- Stihl is the leading brand for clearing overgrown vegetation and trimming grass or weeds, indicating strong performance in these tasks. Kisankraft dominates in maintaining forest or woodland areas and shares the lead in landscaping or gardening with Stihl. Kamco is highly preferred for agricultural purposes, suggesting its effectiveness in farming-related tasks. Other brands have minimal preference across most categories, indicating they are less favoured by users.
- A majority of 78.03% find their brush cutters difficult or very difficult to use for different tasks. This highlights a usability challenge that could influence future product enhancements.
- Overall, 77.27% of users express satisfaction with their brush cutters, with 28.79% highly satisfied. Satisfaction levels are notably high across cutting power (64% rate as Good or Excellent) and task completion (86% rate as Good or Excellent).
- A majority (68.18%) of respondents trust their brush cutter brands, while 53.79% believe the reputation aligns with their expectations. This indicates strong brand trust and perceived quality consistency among users.

# 4.2 Recommendations

- To diversify their customer base beyond middle-aged male users, brands should target younger demographics and female users through campaigns that highlight ease of use and safety features. Exploring niche markets such as urban gardening or small-scale farming could also unlock new growth opportunities.
- Brush cutter companies should target middle-aged men with marketing campaigns, ergonomic designs to reduce fatigue, and enhanced safety features.
   Establishing user groups for experience sharing can foster brand loyalty.
   Tailored training programs can help this demographic maximize tool effectiveness.
- Kamco should reinforce its appeal in agricultural applications by highlighting affordability and durability, which are pivotal factors for its users. Kisankraft can expand its market share by focusing on reliability and versatility, especially in landscaping and forest clearing where it has strong associations. Stihl should continue to emphasize its superior cutting power and efficiency, appealing to both professional landscapers and homeowners tackling overgrown vegetation
- Addressing the reported usability challenges, all brands should prioritize userfriendly design improvements based on specific feedback from users.
   Enhancing user manuals with clear instructions and offering robust customer support channels will further improve user satisfaction and brand loyalty.
- Leverage the high satisfaction levels by collecting and showcasing user testimonials, and continue to focus on maintaining and improving cutting power and task completion capabilities, as these areas receive high satisfaction ratings.
- Brands should enhance after-sales service with extended warranties and proactive maintenance programs. By actively soliciting and implementing customer feedback, brands can continuously improve their products and maintain high levels of customer satisfaction.
- Aligning pricing strategies with perceived value and offering seasonal
  promotions or bundled options can attract price-sensitive customers without
  compromising brand integrity. This approach ensures that brands remain
  competitive while maintaining profitability and perceived value in the market.

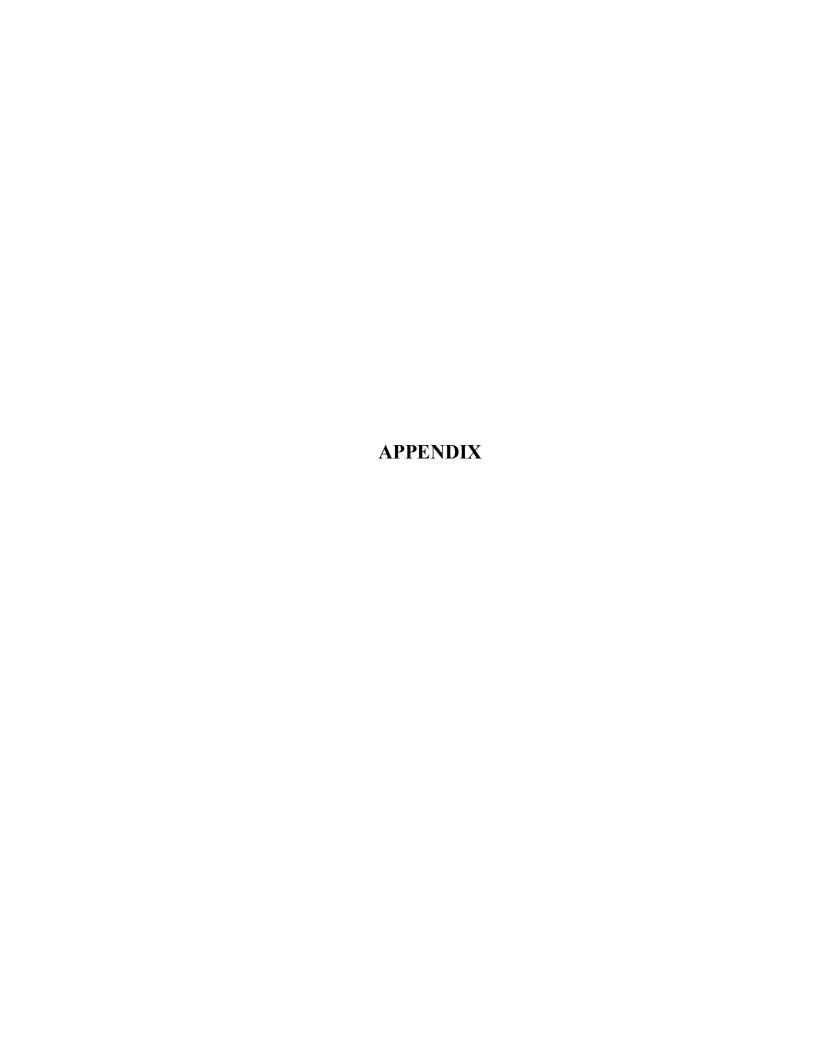
# 4.3 Summary

This study provides a detailed analysis of the brush cutter market, focusing on user preferences, demographics, satisfaction, and brand trust. Kamco leads in preference due to affordability and agricultural suitability, followed by Stihl and Kisankraft, indicating strong competition. The majority of users are middle-aged men, suggesting the need for targeted marketing strategies. User satisfaction is high, especially with cutting power and task completion, though many users report usability challenges, emphasizing the need for improved design and support. Brand trust is substantial, with users finding reputations consistent with expectations, highlighting the importance of quality and reliability. Each brand excels in different areas: Kamco in agriculture, Kisankraft in landscaping and forest clearing, and Stihl in vegetation clearing and trimming. Recommendations for brands include reinforcing their strengths, improving usability, enhancing customer support, and targeting diverse demographics, including younger and female users. Aligning pricing strategies with perceived value and offering promotions can attract price-sensitive customers. Addressing usability issues, enhancing support, and broadening demographic appeal are key to maintaining and expanding market presence.



# References

- Bello, R. S., Baruwa, A., & Orisamuko, F. (2015). Development and performance evaluation of a prototype electrically powered brush cutter. *International Letters of Chemistry, Physics and Astronomy*, 58.
- 2. Bello, R. S. (2020). Ergonomic modification and performance evaluation of a shoulder-strapped brush cutter. *Indian Journal of Engineering*, 17(48), 323-331.
- 3. Bernardi, B., Quendler, E., Benalia, S., Mantella, A., & Zimbalatti, G. (2018). Occupational risks related to vibrations using a brush cutter for green area management. *Annals of Agricultural and Environmental Medicine*, 25(2), 255-258. https://doi.org/10.26444/aaem/75684
- 4. Dixit, J., Hakak, F. A., & Saxena, A. (2022). Adaption of modified brush cutter for rice harvesting. *Agricultural Engineering International: CIGR Journal*, 24(1), 90-101.
- 5. Feng, J., Lu, P., Mu, W., Zhang, X., & Fu, Z. (2011). Farmers' brand perception toward agricultural machinery in China. *China Agricultural University*, No.17, Qinghua Donglu, Beijing, 100083, P. R. China.
- 6. Feng, J., Mu, W., Zhang, L., & Fu, Z. (2008). An empirical study on consumer's purchase intention in agricultural machinery market. *Commercial Research*, 2, 191-194.
- 7. Jagvir Dixit1\*, Fahd Ahmar Hakak1, Amal Saxena2 (1. College of Agricultural Engineering & Technology, SKUAST-K, Srinagar-190025 (J&K), India;2022 Adaption of modified brush cutter for rice harvesting. Dixit, J., F. A. Hakak, and A. Saxena. 2022. Adaption of modified brush cutter for rice harvesting. Agricultural Engineering International: CIGR Journal, 24(1): 90-101.
- 8. Kashima, J., & Uemura, T. (2010). Analysis of accidents related to brush cutter use. *Journal of the Japan Forest Engineering Society*, 25(2), 77-84.
- 9. Sivakumar, V. (2014). Farmer's opinion on performance of agricultural tractors. *International Research Journal of Business and Management (IRJBM)*, 3, 78-86.
- 10. Solanki, M. D., Panchal, N. V., & Desai, P. (2013). Consumer buying behaviour towards agriculture inputs: An empirical study in rural area of Bardoli. *Global Research Analysis*, 2(6), 117-118.



# Questionnaire

- 1. Name
- 2. Gender
  - o Male
  - o Female
  - o Prefer not to say
- 3. Age
  - 0 18-35
  - 0 35-56
  - 0 56+
- 4. What is your annual household income?
  - o Under 25000
  - o 25000-50000
  - o 50000-75000
  - o 75000-100000
  - o Over 1000000
- 5. Which brand of brush cutter are you currently using?
  - o KAMCO
  - o KISANKRAFT
  - o STIHL
  - o Others
- 6. How satisfied are you with your current brush cutter brand?
  - o Highly dissatisfied
  - Dissatisfied
  - o Neutral
  - o Satisfied
  - o Highly satisfied
- 7. How satisfied are you with the unique functionalities of your brush cutter compared to others?
  - o Highly dissatisfied
  - o Dissatisfied
  - o Neutral
  - o Satisfied
  - o Highly satisfied

8. What factors influenced your decision to purchase your current brush or
--

	1	2	3	4	5
Durability					
Price					
Cutting					
power					
Warranty					
& support					
Consider					
user feed					
back					

9.	How would you	rate the cutting power	of your brush cutter?

- o Very Poor
- o Poor
- o Average
- o Good
- o Excellent

10.	How	effective	is your	brush	cutter in	completing	cutting	task?
10.	110 11		15 , 0 41	OI GOII	Cuttor III	Completing	Cuttillia	tubit.

- o Very Poor
- o Poor
- o Average
- o Good
- o Excellent

# 11. How user-friendly is your brush cutter to use?

- o Very Poor
- o Poor
- o Average
- o Good
- o Excellent

# 12. Do you feel the company brush cutter is trustworthy?

- o Strongly disagree
- o Disagree
- o Neutral
- o Agree
- o Strongly agree

13. How s	satisfied are you with the durability of your current brush cutter?
0	Highly dissatisfied
0	Dissatisfied
0	Neutral
	Satisfied
0	Highly satisfied
O .	Tiginy saustica
14. How s	satisfied are you with the overall value for money of your brush cutter
consid	lering both initial cost and ongoing expenses?
0	Highly dissatisfied
0	Dissatisfied
0	Neutral
0	Satisfied
0	Highly satisfied
15. How s	satisfied are you with the ergonomic design of your brush cutter?
0	Highly dissatisfied
0	Dissatisfied
0	Neutral
0	Satisfied
0	Highly satisfied
16 Hows	satisfied are you with the safety features of your brush cutter?
0.110	Highly dissatisfied
0	Dissatisfied
0	Neutral
0	Satisfied
0	Highly satisfied
O	riigiiry satisfied
17. Do yo	ou trust the user feedback you've read about your brush cutter?
0	Strongly disagree
0	Disagree
0	Neutral
0	Agree
0	Strongly agree
18. Based	on user reviews, do you satisfy with your brush cutter?
0	Strongly disagree
0	Disagree
0	Neutral
0	Agree
0	Strongly agree

- 19. How satisfied are you with the warranty coverage provided for your brush cutter?
  - Very Satisfied
  - o Satisfied
  - o Neutral
  - o Dissatisfied
  - o Very Dissatisfied
- 20. For what primary purpose do you use your brush cutter?
  - o Clearing overgrown vegetation
  - o Trimming grass or weeds
  - o Landscape or gardening
  - o Agricultural purposes
  - O Maintaining forest or woodland areas
- 21. How frequently do you use your brush cutter for tasks other than its primary purpose?
  - Very frequently
  - o Frequently
  - o Occasionally
  - o Rarely
  - o Never
- 22. How would you rate the ease of use of your brush cutter for different tasks?
  - o Very easy
  - o Easy
  - o Neutral
  - o Difficult
  - Very difficult