



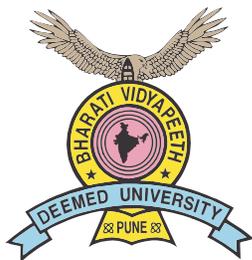
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Prof Dr. Vivek Saoji
Vice Chancellor
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Vice Chancellor speaks

Research is what propels humanity forward. It's fueled by curiosity: we get curious, ask questions, and immerse ourselves in discovering everything there is to know. Learning is thriving. Without curiosity and research, progress would slow to a halt, and our lives as we know them would be completely different. Research unlocks the unknowns, lets you explore the world from different perspectives, and fuels a deeper understanding. In some areas, research is an essential part of success.

The business world heavily benefits from academic research. Businesses use research to understand markets and make profitable decisions. This benefits consumers as well. A business wouldn't be effective if it has no idea what consumers wanted.

By bringing out a quality research journal, IMED is helping the research scholars, academicians and Industry professionals to express their ideas and publish innovative ideas that would help not only the students but also the society at large.

I commend and congratulate MED for publishing the JMSR which would be a right platform for recognizing and disseminating the new research, insights, alternatives, perspectives, solutions, etc.

I send my best wishes to the editorial board, the research contributors and everyone else connected in publishing JMSR-a well-known and reputed research publication.

Prof Dr. Vivek Saoji

Chief Editor's Message

I would like to wish everyone good health and safety. I hope that 2023 will bring good health, happiness, and prosperity for everyone.

Over the past years, there have been peaks and troughs for all of us. Economic trade, war, and globalisation did not change when the entire world was experiencing a crisis. While COVID-19 brought many nations to the verge of a recession, it also opened up fresh possibilities for global networking and collaboration. In this era, management education must be comprehensive and inclusive. As a result, we ensure that technical expertise and research are given equal weight through JMSR.

As a research journal, IMED's JMSR publishes theoretical and empirical research in all management-related fields. The journal welcomes submissions on a variety of subjects such as business trends, technological developments in science and business, industrial analysis, corporate stewardship, socio-economic trends, entrepreneurship, and many more.

Because having strong research skills is directly correlated with being able to recognize and change one's own and societal behaviour, IMED strongly supports research and offers a platform for it. IMED has spent decades educating and embracing students by transforming them into ethical corporate leaders.

Research helps people learn and gain knowledge, but it also boosts confidence and raises public awareness, all of which help a scholar grow academically, socially, and personally. Our faculty members and the students have worked together to foster excellence in management, innovation, and entrepreneurship.

I'd like to use this chance to express my congratulations to all the researchers, faculty members, and business professionals whose papers were included in this issue.

I convey my best wishes and warm regards to you and your families.



Dr Sachin S. Vernekar
Dean- FMS BVDU
Director-IMED

A handwritten signature in black ink, appearing to read 'S. Vernekar'.

Dr Sachin S. Vernekar
Dean- FMS BVDU
Director-IMED

From the Editor's Desk

Greetings Everyone!

Welcome to IMED's JMSR. The authors whose work is featured in the Journal of Management Science and Research (JMSR) have helped to close the gap between academia and society. This issue has been purposefully created to pique the interest of the readers and offer them a stimulating environment in which to understand and demonstrate the researcher's methodology.

This issue invites papers across different domains like 'Growth Prospects and export potential for Indian spices and their Valuable Products', 'Attrition and talent acquisition', 'High performing work teams and innovation in Kodak vs Canon', 'Business Analytics using B.I. tools for Retail Garment Firm', etc.

One paper focuses on Attrition and talent acquisition whereas another paper portrays the study on factors influencing consumers' adoption of wearable technology devices in India.

For the creation of this journal, an enormous amount of research and work was put in, and we anticipate that the research paper will have a similar impact. With JMSR, we hope to connect with more researchers and aid them in generating the most recent work through experimentation, dialogue, and analysis from various academic fields.

We thank all of our readers, contributors, and authors for their support over the years, which has enabled us to lay a solid foundation and turn research into a crucial stage in the institute's development.

In order to continue on this path and fully develop JMSR, we also take this chance to invite submissions for upcoming issues.

Happy Reading!

Editor
Dr. Ranpreet Kaur

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Growth Prospects and export potential for Indian spices and their Valuable Products

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ABSTRACT

India is a major producer of high-quality spices such as black pepper, cardamom, and turmeric, and the export of Indian spices has been growing in recent years. The Indian government has been supportive of the spice export industry through initiatives such as the National Mission on Medicinal Aromatic Plants. One of the main challenges facing the Indian spice export industry is the lack of standardization and quality control, but the government and industry groups are working to address this issue. The growth of the organic and functional food markets has created new opportunities for Indian spice exports, particularly for organic and medicinal spices. Spices have culinary, health, economic, environmental and cultural importance. The global business of spices is a complex and multifaceted industry that involves the cultivation, processing, and distribution of spices worldwide, driven by increasing demand for diverse and flavorful food, focused on health and wellness.

Introduction

The spice industry plays a crucial role in cultivation and is widely used in everyday cooking. Value addition is an effective method for increasing the value of the product by processing, packaging, and marketing. This process involves transforming the product from its original state to a more valuable state, leading to a significant increase in its value. Many value-added spices are currently being utilized in the market, which imparts an extraordinary taste to food preparations. Value addition has several key benefits such as, ease of transportation, consistent flavors, low bacterial contamination, high value from the food industry, used as additives, and in the pharmaceutical industry. Some notable value-added products that are widely used around the world include black pepper powder, pepper oleoresin, cardamom

oil, curcumin, turmeric oleoresin, blanched ginger, garlic paste, onion powder, coriander oleoresin, and more. The potential for a business venture in this field is vast, and the year-round production of value-added items to meet the global population's needs is attainable.

Keywords- Spices, Value added products, Global spice market, Export Indian spices, National Mission on Medicinal Aromatic Plants (NMMP), Spice Board of India's (SBI), Quality Control and Standardization scheme, Foreign trade

Objectives of the study-

- To analyze and evaluate the current state of the Indian spice industry, including the production, processing, and export of spices and their value-added products.

- To identify the key drivers of growth and opportunities for expansion in the Indian spice industry, as well as to identify any challenges or barriers that may be hindering the industry's growth.
- To evaluate the export potential of Indian spices and their value-added products in key markets, and to provide recommendations for how the industry can capitalize on these opportunities to increase exports and improve competitiveness in the global market.
- To consider the environmental and cultural importance of Indian spices.

Research Methodology

Descriptive research has been undertaken to study the present status of spices production and marketing coupled with analysis of backward and forward linkages in spices trade and to explore the possible channels of spices marketing and exporting that could replace the existing channels and prove to be more successful. Only secondary data was required for fulfilling the objectives of the study. Secondary data related to Books, journals, magazines and the internet are also used as a data source.

The information gathered was first arranged then examined and derivations drawn and deciphered based on straightforward factual instruments.

Importance of spices and its value added products

India is a major producer of spices and is known for its high-quality spices such as black pepper, cardamom, and turmeric. The country's large and diverse spice production, coupled with its favorable climate, has made it a major player in

the global spice market (Gidwani, B & et. al., 2022).

The export of Indian spices has been growing in recent years (Shukla, A., Sharma, V., & Bhide, H., 2015), driven by increasing demand from countries like the United States, China, and the United Arab Emirates. The Indian government has also been supportive of the spice export industry, with initiatives such as the National Mission on Medicinal Aromatic Plants (NMMP) aimed at promoting the cultivation and export of medicinal and aromatic plants.

One of the main challenges facing the Indian spice export industry is the lack of standardization and quality control (Kotsanopoulos, K. V., & Arvanitoyannis, I. S., 2017). However, the government and industry groups are working to address this issue through initiatives such as the Spice Board of India's (SBI) Quality Control and Standardization scheme (Paul, J., Parthasarathy, S., & Gupta, P., 2017).

Additionally, the growth of the organic and functional food markets has created new opportunities for Indian spice exports. The increasing demand for organic and functional ingredients in food and personal care products is driving demand for organic and medicinal spices such as turmeric, ginger, and ashwagandha (Sharangi, A. B., & Acharya, S. K., 2018).

Some of the main importance of spices and its value-added products include:

1. Culinary uses: Spices are an essential ingredient in many traditional cuisines around the world and are used to add flavor, aroma, and color to food. They can also be used as natural preservatives, which can help to extend the shelf life of food products.

2. **Health benefits:** Many spices and their value-added products have been found to have medicinal properties and health benefits. For example, turmeric has anti-inflammatory properties and is a rich source of antioxidants, ginger is used to alleviate nausea and is also a natural anti-inflammatory, and black pepper can help to improve digestion.
3. **Economic benefits:** The production and export of spices and their value-added products can provide significant economic benefits, particularly in developing countries where many spices are grown. The export of spices can also help to promote foreign trade and contribute to the overall economic development of a country.
4. **Environmental benefits:** Organic and sustainable cultivation of spices can have a positive impact on the environment. Organic farming methods can help to reduce the use of harmful chemicals and promote biodiversity, while sustainable cultivation practices can help to conserve natural resources and reduce the environmental impact of farming.
5. **Cultural heritage:** Spices have been an important part of human history and culture for thousands of years and continue to play a central role in many traditional cuisines and medicinal practices around the world.

Global business of spices

The business of spices is a complex and multifaceted industry that involves the cultivation, processing, and distribution of spices worldwide(Thomas, L., & Sanil, P. C., 2019). It is a large and growing industry, with

global spice exports valued at over \$3 billion per year.

One of the main drivers of the spice business is the increasing demand for diverse and flavorful food around the world. As consumer tastes and preferences continue to evolve, the demand for a wide range of spices and spice blends is expected to continue to grow.

Another important factor in the spice business is the increasing focus on health and wellness. Many spices and their value-added products have been found to have medicinal properties and health benefits, which is driving demand for these products. The organic and natural health market also provides opportunity for the business of spices.

The cultivation of spices is a labor-intensive process, and the majority of the world's spices are grown in developing countries, particularly in Asia and Africa. The cost of labor, land, and other inputs can vary widely between countries, which can affect the profitability of the spice business. Additionally, the lack of standardization and quality control in the spice industry can also be a challenge, which can affect the reputation of the business(Bala, D. M. L., & Sudhakar, K., 2017).

The spice business is also affected by changing consumer trends and economic conditions. For example, a recession can lead to a decline in consumer spending on luxury goods and services, including spices, while food trends and innovations may lead to new opportunities for growth.

Demand for spices in India

Demand for spices in India is high due to the country's large population and love for flavorful food(Nair, B. B., & Mohanty, P. P., 2021). Some of the major spices in demand in India include:

1. **Turmeric:** It is used in many traditional

Indian dishes and is known for its medicinal properties.

2. Cumin: It is widely used in Indian cuisine and is a key ingredient in many spice blends such as garam masala.
3. Cardamom: It is used in sweet and savory dishes, as well as in chai tea.
4. Coriander: It is used in many Indian dishes and is a key ingredient in many spice blends.
5. Black pepper: It is widely used as a seasoning and is known for its medicinal properties.
6. Red chili powder: It is used to add heat and flavor to dishes.
7. Mustard seeds: It is used in many Indian dishes and is a key ingredient in many spice blends.

Growth Factors in the spice industries

The growth prospects for the spice industry in the future are positive, as the demand for spices is expected to continue to increase globally (Bala, D. M. L., & Sudhakar, K., 2017). Here are a few factors that are likely to contribute to this growth:

1. Growing population: As the global population continues to grow, the demand for food is also increasing, which in turn is driving the demand for spices.
2. Changing dietary habits: As people become more health-conscious, they are turning to spices as a way to add flavor and nutrition to their food, while reducing their consumption of salt, sugar, and artificial ingredients.
3. Rising income levels: As people's incomes increase, they are able to afford to

purchase more diverse and higher-quality spices, which is driving growth in the industry.

4. Increasing interest in ethnic cuisine: With the increasing diversity of global populations, there is a growing interest in ethnic cuisines which use a variety of spices, this is also contributing to the growth of the spice industry
5. E-commerce and digital platforms: the use of digital platforms to reach the customers globally is providing more opportunities for spice industries to expand their businesses.
6. Growing awareness about the health benefits of spices: recent studies have shown that spices have a variety of health benefits, such as reducing inflammation, improving digestion, and reducing the risk of chronic diseases, which is encouraging more people to use spices in their cooking (Bhat, M. H., Jain, A. K., & Fayaz, M., 2018).

Overall, the spice industry is expected to continue to grow in the future, driven by increasing demand for high-quality, diverse, and healthy spices (Joshi, D., Singh, H. P., & Gurung, B., 2015).

Insights in terms of monetary values and quantity of spices which has been exported from India in the past years

India is one of the largest producers and exporters of spices in the world (Sugasini, D., & et. al., 2018). According to data from the Indian Ministry of Commerce and Industry, in the financial year 2019-2020, India exported spices worth \$3.1 billion.

In terms of quantity, in the financial year 2019-2020, India exported around 4.2 million metric tons of spices. The top exported spices by

volume were pepper, chilli, cumin, turmeric, and ginger.

However, it is worth noting that the spice export industry has been affected by the COVID-19 pandemic in 2020 and 2021 (Goyal, A., 2020), which has led to disruptions in supply chains and decreased demand for certain spices in some markets. As a result, the export of spices from India may have decreased in value and quantity in 2020-2021.

It's also worth noting that India exports a wide variety of spices like Cardamom, nutmeg, mace, bay leaves, fennel seeds, fenugreek, dill seed, celery seed, caraway seed, aniseed, and more (Palanivelu, V. R., & Apdhulkathar, A., 2016).

Technological advancements in global Spice Industries

There have been several technological advancements in the global spice industry in recent years (Gidwani, B & et. al., 2022). Some of these include the use of automation and robotics in spice processing and packaging, the development of new preservation techniques to extend the shelf life of spices, and the use of technology such as DNA barcoding to ensure the authenticity and purity of spices. In addition, the use of advanced analytical tools, such as mass spectrometry and chromatography, has allowed for more accurate identification and characterization of individual spices. These technological advancements have led to increased efficiency and quality control in the spice industry (Nehal, N. & et. at., 2021).

Export potential for small scale industries

Small businesses have the potential to export their products and services to international markets (Ummyiah, H. M., & et. al., 2017). But

they often face challenges such as lack of resources, knowledge, and access to capital. However, with proper planning, support, and resources, small businesses can successfully enter and compete in international markets. Government agencies and non-profit organizations can provide assistance with market research, export planning, and access to financing. Additionally, small businesses can also take advantage of online platforms and e-commerce to reach a global customer base.

It's a personal belief that small industries have several advantages when exporting goods, including:

1. **Niche products:** Small industries often specialize in niche products that are in demand in certain markets. This allows them to target specific customer segments and gain a competitive edge.
2. **Flexibility:** Small industries tend to be more flexible than larger ones, which allows them to quickly adapt to changing market conditions and customer needs.
3. **Lower overhead costs:** Small industries typically have lower overhead costs than larger ones, which allows them to offer competitive pricing on their products.
4. **Strong relationships with suppliers and customers:** Small industries often have strong relationships with their suppliers and customers, which can lead to better communication and collaboration.
5. **Entrepreneurial mindset:** Small industry entrepreneurs tend to be more adaptable and have an innovative mindset, enabling them to take calculated risks and seize new opportunities.
6. **E-commerce and digital platforms:** Small industries have the advantage of utilizing

digital platforms to reach a wider customer base and to export their products.

7. Government support: Small industries may have access to government programs and services that provide financial assistance, training, and other resources to help them export their products.

Exporting products is an opportunity to expand reach and growth of business. Indian small scale industries are having unique and valuable products that are in demand in the global market. With proper planning and support, most of them can successfully enter and compete in international markets. They have the potential to make a real impact in the global economy (Wani, S. A., & et. al., 2017).

Conclusion

Spices and value added products of spices are having huge demand throughout the globe. The demand is increasing year by year . By increasing the export of these products the nation's economy can be significantly improved. GDP growth in horticulture would be higher as well. Foreign exchange would also be more. Hence, the government must give emphasis on promotion of export of spices and its products by aiding small and medium scale enterprises. Value addition of spices would bring more income generation to the farmers and small scale industries. However there is also scope and need for improvement in processing methods and export of spice and its value added products.

In conclusion, the demand for spices is increasing globally due to growing interest in diverse and flavorful food, as well as the health benefits associated with certain spices. The major markets for spices include the United States, China, and the European Union, while

the demand for organic and non-GMO spices is also growing.

Spices and their value-added products have a number of important benefits and uses. In conclusion, the business of spices is a large and growing industry, driven by increasing demand for diverse and flavorful food, as well as the health benefits associated with certain spices. However, it is also a complex and multifaceted industry that is affected by a wide range of factors, including labor costs, quality control, consumer trends, and economic conditions. To be successful in this business, companies must be aware of and adapt to these factors.

Overall, the global spice industry is expected to experience steady growth in the coming years, driven by increasing demand in developed markets, growing popularity of natural and organic products, rising demand for functional ingredients, and increasing disposable income in developing countries.

References-

1. Bala, D. M. L., & Sudhakar, K. (2017). An overview of export performance of agricultural products in India. *IOSR Journal of Business and Management*, 19(2), 01-05.
2. Bhat, M. H., Jain, A. K., & Fayaz, M. (2018). Indian herbal drug industry: challenges and future prospects. *Plant and Human Health*, Volume 1, 657-673.
3. Gidwani, B., Bhattacharya, R., Shukla, S. S., & Pandey, R. K. (2022). Indian spices: past, present and future challenges as the engine for bio-enhancement of drugs: impact of COVID-19. *Journal of the Science of Food and Agriculture*.
4. Goyal, A. (2020). Post COVID-19: recovering and sustaining India's growth.

- Indian Economic Review, 55(1), 161-181.
5. Joshi, D., Singh, H. P., & Gurung, B. (2015). Stability analysis of Indian spices export-a Markov chain approach. *Economic Affairs*, 60(2), 257.
 6. Kotsanopoulos, K. V., & Arvanitoyannis, I. S. (2017). The role of auditing, food safety, and food quality standards in the food industry: A review. *Comprehensive Reviews in Food Science and Food Safety*, 16(5), 760-775.
 7. Nair, B. B., & Mohanty, P. P. (2021). Positioning spice tourism as an emerging form of special interest tourism: perspectives and strategies. *Journal of Ethnic Foods*, 8(1), 1-8.
 8. Nehal, N., Choudhary, B., Nagpure, A., & Gupta, R. K. (2021). DNA barcoding: A modern age tool for detection of adulteration in food. *Critical reviews in biotechnology*, 41(5), 767-791.
 9. Palanivelu, V. R., & Apdhulkathar, A. (2016). The Food Processing Industry in India Challenges and Opportunities. *Inercontinental Journal of Finance Reserach Review*, 4 (9), 34, 40.
 10. Paul, J., Parthasarathy, S., & Gupta, P. (2017). Exporting challenges of SMEs: A review and future research agenda. *Journal of world business*, 52(3), 327-342.
 11. Sadeghi, V. J., & Biancone, P. P. (2018). How micro, small and medium-sized enterprises are driven outward the superior international trade performance? A multidimensional study on Italian food sector. *Research in International Business and Finance*, 45, 597-606.
 12. Sharangi, A. B., & Acharya, S. K. (2018). Spices in India and beyond: the origin, history, tradition and culture. In *Indian Spices* (pp. 1-11). Springer, Cham.
 13. Shukla, A., Sharma, V., & Bhide, H. (2015). *Agro and Food Processing Industry in India: Status, Opportunities & Challenges*. Opportunities & Challenges (June 15, 2015).
 14. Sugasini, D., Yalagala, P. C., Kavitha, B., Kasthuri, T., Vijayalakshmi, Y., Kumar, P. K., & Kumar, S. (2018). Indian culinary ethnic spices uses in foods are palate of paradise. *Acta Scientific Nutritional Health*, 2(8), 22-28.
 15. Thomas, L., & Sanil, P. C. (2019). Competitiveness in spice export trade from India: A review. *Journal of Spices & Aromatic Crops*, 28(1).
 16. Ummiyah, H. M., Narayan, S., Kumar, P., Nabi, A., Ajaz, M., & Magray, M. (2017). Export of organic products: Opportunities and challenges. *Journal of Pharmacognosy and Phytochemistry*, 6(6), 1084-1088.
 17. Wani, S. A., Wani, M. A., Mehraj, S., Padder, B. A., & Chand, S. (2017). Organic farming: Present status, scope and prospects in northern India. *Journal of Applied and Natural Science*, 9(4), 2272-2279.

Analysis of Marketing Approach of Praedico Global Research Pvt. Ltd

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ABSTRACT

The world is dynamic in nature, and everyone needs to keep themselves updated. This research work is based on the analysis of marketing approach of Praedico global research private Limited. Wherein the problem identified in the organization was low customer base, which was due to the two reasons. The first being the low level of financial literacy and the high prices of the product that organization was offering. The second reason was that people are unaware of the products offered by Praedico global research private Limited. Due to inefficient advertisement levels. The research is based on both primary and secondary data that reflects the reluctant behavior of people to invest in stock market. The result shows the squeamish approach of people towards the stock market. This study emphasizes the need to consider the increased advertisement levels for their products and services offered.

Keywords- Financial Literacy, Price, Inefficient Marketing

Introduction

This study of is based on the title of “Analysis of Marketing Approach of Praedico Global Research Pvt. Ltd’ which highlights the importance of advertisements in this global era to connect with the target audience. Merely creating the goods and services is not enough for a business organization to connect with their potential customers. They need to devise appropriate strategies to improve customer retention and profit figures. Marketing is an effective way to educate the potential customers about he products and services. And when they are well informed the sales figures increases automatically. Marketing creates revenue options by reducing the product cost thereby increasing the customer base and profits.

Engaging the potential customers positively impacts the overall business objectives in several ways by increasing the revenue, employee retention, goodwill etc. Many organizations have to face huge losses due to their ineffective marketing approach and sometimes they have to leave the market as well. Through marketing an organization can tap the potential customers which help them to decide what lines and details they will be creating in order to convince people to buy their products and services.

Praedico global research private limited was dealing with low customer base which falls under BFSI (Banking Financial Services and Insurance) industry. BFSI represents a major portion of the Indian economy consisting all

Banking, Insurance, and Non-Banking Financial Institutions.

The Financial Services Industry has seen major achievements in the recent past:

- In May 2022, Unified Payments Interface (UPI) recorded 5.95 billion transactions worth Rs. 1,041,520.07 (US\$ 132.86 billion).
- In May 2022, the number of transactions through immediate payment service (IMPS) reached 471.62 million (by volume) and amounted to Rs. 4.44 trillion (US\$ 55.72 billion).
- In 2021, Prosus acquired Indian payments giant Bill Desk for US\$ 4.7 billion.
- In September 2021, eight Indian banks announced that they are rolling out—or about to roll out—a system called „Account Aggregator? to enable consumers to consolidate all their financial data in one place.
- In September 2021, Piramal Group concluded a payment of Rs. 34,250 crore (US\$ 4.7 billion) to acquire Dewan Housing Finance Corporation (DHFL).

India is one of the most vibrant global economies on the back of robust banking and insurance sectors. The relaxation of foreign investment rules has received a positive response from the insurance sector, with many companies announcing plans to increase their stakes in joint ventures with Indian companies. Over the coming quarters, there could be a series of joint venture deals between global insurance giants and local players.

Objective of the study

- To help people understand about the importance of stock market
- To know how to establish connection with

customers

- To know the satisfaction level of the customer regarding the services.
- To know the marketing strategy, used by the companies
- To know the problems of the customers and to know their suggestions to enhance the quality of the service

Literature Review

Kamal Gupta in his study concluded that majority of respondents preferred to keep their investments in form of bank deposits and Fixed deposits rather than in form of financial instruments. The low level financial skills reflected in less usage and awareness about the financial products, irregular saving habits, ineffective cash management and deficient record keeping. The research suggested to create more awareness and financial alternatives. Lavanya Rekha Bahadur (2015), analyzed two pillars of the economy: The first being the financial literacy and second the financial inclusion and its current scenario as well as common people perspective about financial instruments. She concluded that the financial literacy level was very low and recommended to enhance financial literacy levels right from the grassroot level through the awareness and national level programs. K N Narendra (2014), emphasized on the role of Financial Planner in the era of overloaded information. He suggested that the persistent and prolonged efforts are required on behalf of all stake holders in order to educate and bring positive impact in India. Ratna Achuta Paluri (2016), According to the data, only one third of the respondents preferred to buy the financial products whereas others found it more safe and secure in fixed deposit and insurance. Harsha V Jariwala (2014)

assessed the financial literacy level of individual investors in Gujarat state. She concluded that 39.2% of 285 respondents had very high level of financial literacy and their financial literacy level did not have any effect on investment decisions. Priyanka Agarwal (2015), accentuated the importance of financial literacy in managing the finances and investment pattern of individuals. She concluded that majority of the investors preferred to keep their savings in banks and fixed deposit in post offices.

Statement of the problem

The world is ever-changing and everyone needs to keep themselves updated. The problem that the organization was dealing with was low customer base, which was due to the two reasons, The first being the low level of financial literacy and the high prices of the product that organization was offering. The second reason is that people are unaware of the products offered by Praedico Global Research Pvt. Ltd. due to inefficient advertisement levels

Background of the Company

Praedico Global Research Private Limited is offering various products and services. Products and services of Praedico Global Research Private Limited are

The products offered are:

- 1) Praedico Stock Trading Stimulator
- 2) Praedico Portfolio Manager
- 3) Praedico Investor Module
- 4) Praedico Newsletter
- 5) Praedico FastTrack Certification

The company provides various services like:

1. Analysis
2. Performance
3. Portfolio
4. Servicing

SWOT Analysis

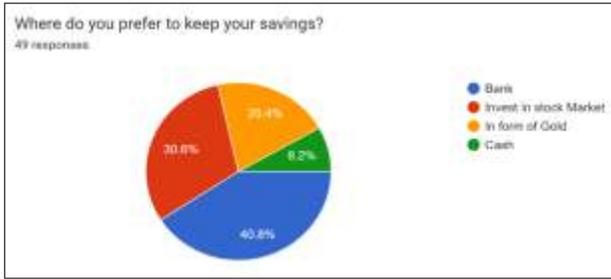
SWOT ANALYSIS	
<p>STRENGTHS</p> <ul style="list-style-type: none"> • Variety of products and services • Errors are minimized through the use of Artificial intelligence • Provides high level of accuracy • Ease of use as the products are designed for laptops, desktops, tabs and mobile phones. • The quality research establishes a trust pattern 	<p>Weakness</p> <ul style="list-style-type: none"> • Low level of marketing level • Less branch bases • Lack of awareness about the products and services
<p>Opportunities</p> <ul style="list-style-type: none"> • Can tap untapped areas • Products and services are designed to cater to niche market along with middle-and upper-class level. • Encouraging youth interest towards stock market. 	<p>Threats</p> <ul style="list-style-type: none"> • Competition in the market • Unpredictable changes in government policies

Research Methodology

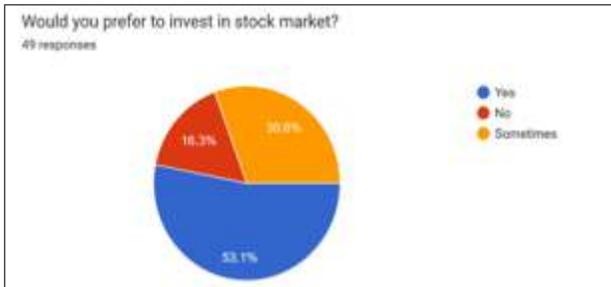
For the purpose of research primary as well as secondary data is collected. Primary data is collected by formulating questionnaire and secondary data is collected from websites, books and research articles. Secondary data revolves around the low level of financial literacy levels of individuals conducted in various areas and how their investment decisions are influenced by the same. Primary data is collected by making structured questionnaire. 49 respondents data is considered for research purpose.

Data analysis and Interpretation-

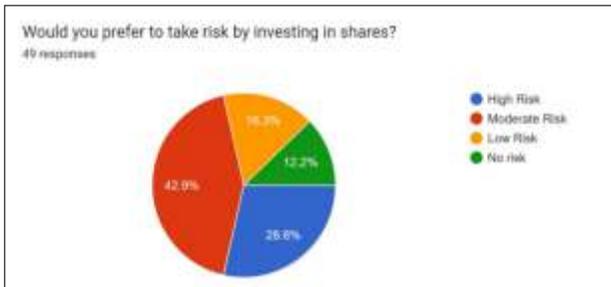
Primary data collected is analysed and their analysis and interpretation is written below-



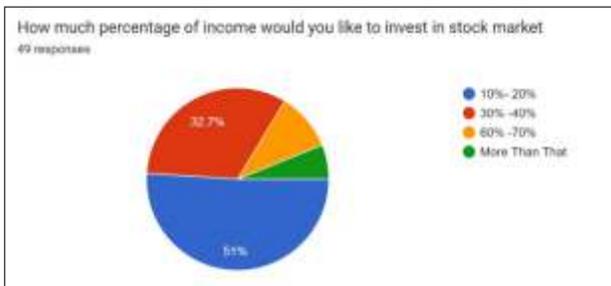
As seen in the above figure people prefer to keep their savings in form of deposits in bank and in form of gold because of the safe returns. 30.6% would like to take risk by investing in stock market.



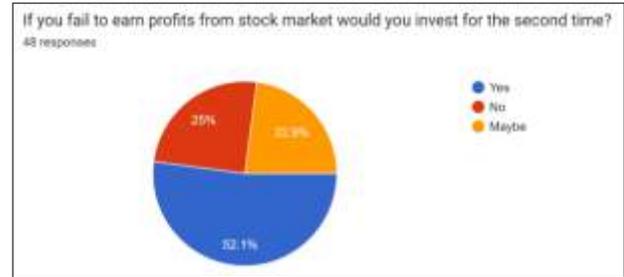
Only 30.6% would like to invest in stock market on regular basis whereas 53.1% would invest in stock market depending upon the situation.



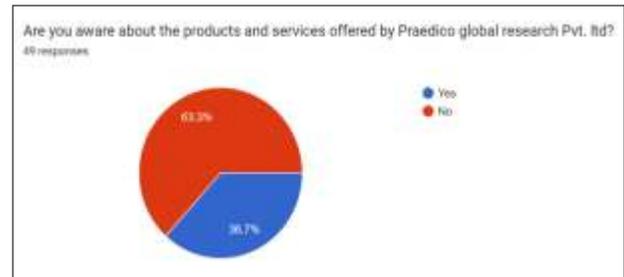
As the level of risk determines the returns, 42.9% would like to go for moderate risk and 28.6% would go for high risk and 12.2% would like to take no risk.



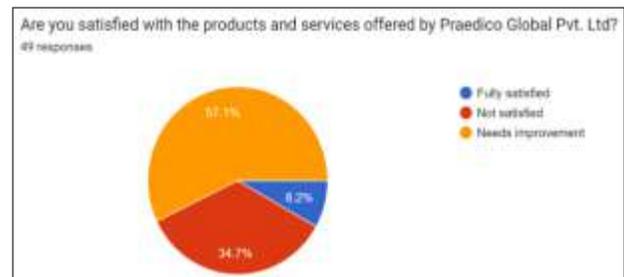
As seen in the above figure 51% would like to invest a small proportion of their income in stock market whereas 32.7% would like to invest 30%-40% of their income.



As seen in the above figure 52.1% would reinvest if they fail to earn profits for the first time whereas 25% would never reinvest.



As seen in the above figure 63.3% of the people are not aware about the products and services offered by Praedico Global research Pvt. Ltd. Only 36.7% of the people are aware about it.



As seen in the above figure 34.7% are not satisfied with the products and services offered by Praedico Global Pvt. Ltd. Whereas 57.1% demands improvement.

Major Findings

- 1) Most of the consumers were not satisfied with the products and services offered by them as after purchasing the products consumers were not given any guidance.
- 2) The sales figure was very low which reduced the profit margins for which they offered the discounted products to grab the attention of potential customers.
- 3) Through interns they focused on business development part through which they could enhance their sales figure, but the interns found it very difficult to approach consumers.
- 4) They did not have a proper marketing approach which made it difficult for them to connect with their target audience.

Suggestions

- 1) Introduce more interesting and new courses which help to target audience
- 2) Need to offer discounts to target audience
- 3) Make strategy to target audience
- 4) Tie up with e- educational platforms through which they can guide students
- 5) They should offer after sale services to their existing customers
- 6) Business development aspect can be broadened by making aware about the company and its diverse products so that it creates a buzz in the market.
- 7) Customers can be made aware through conducting seminars, Ads, social media platforms, quiz competitions etc.

Conclusion

It can be safely concluded that respondents were reluctant to invest in financial products and services as they have the fear of losing their money. To bring a change in their attitude it is very important to guide and educate them about the benefits of financial products and services. This can be brought about by promoting its products and services and making people more aware of the benefits. Marketing strategy plays very important role in promoting and making people aware about the financial goods and services. They can make use of various strategies to connect with the youth and tie up with e-educational platforms for wider reach.

References

Websites

- <https://www.ibef.org/industry/financial-services-india>
- <https://www.praedicoglobalresearch.com/>
- <http://www.ijrbsm.org/papers/v4-i6/4.pdf>

Articles

- Kamal Gupta and Jatinder Kaur, A study of Financial Literacy among Micro Entrepreneurs in District Kangra
- Lavanya Rekha Bahadur, Financial Literacy: The Indian Story, World Journal of Social Sciences
- K N Narendra, Financial Literacy: A revolution waiting to happen, Proceeding of COFP Convention 2014.
- Sumit Agarwal, Gene Amromin, Douglas D Evan off, Financial Literacy and Financial Planning: Evidence from India, SSRN Electronic Journal • December 2010.

Study on Attrition Analysis and Talent Acquisition

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ABSTRACT

This paper is about “The Reliance Industry Ltd. on which I have prepared a brief report on the topic “Attrition analysis of NMD site and Overview of Talent Acquisition”. What is the attrition rate and why the employees are leaving the organization and for the second part is all about the Talent Acquisition, after selection of an employee how long it takes to join the company. This paper is very important for an organization because since past few years’ attrition is increasing, employees are leaving the organization because of that company has to face some problems like lack of manpower and so on. On the other hand attrition leads recruitment so both the parts are interlink with each other .In RIL employees can be recruited from internal as well as external sources so in case of internal source lots of approval is required and also in external cases offer stage to joining part takes more time .so it was observed that if any employee leave the organization so cost and effort of filling the that vacant position is more. So certain steps should be taken to retain the employees and process of hiring the employee should be highly automize so that it will not hamper the functioning of the organization. This paper has been done to find out the actual reasons why the employees are leaving the organization and also why there is lag time in talent acquisition process.

Keywords: Attrition, Employees, Talent Acquisition,

Introduction-

Due to increased competition in the job sector, businesses are spending more time, money, and effort on their talent acquisition strategies. In order to satisfy both the company's present and future demands, it is essential to hire personnel with the required skills, qualifications, and experience. People change careers because of salaries and a lack of opportunities for career progression. The main aim of every company is to earn money. However, if the business wants to generate the greatest amount of profit, it

should concentrate more on its employees and long-term retention tactics.

Due of significant attrition, going offshore has little value. For the organisations concerned, it causes knowledge loss, training expenses, an endless cycle of hiring, and project delays. Businesses' top priorities are finding and keeping people, which encourages a collaborative environment where employees may help design compensation schemes. The results of this study imply that organisations should adopt cutting-edge training

programmes and new, cutting-edge technology that will allow for their workers' professional growth in order to minimise attrition. The business may think about recruiting personnel who reside near to the sector in order to reduce attrition brought on by family-related concerns.

Objective of the study -

- To understand the process of Talent Acquisition
- To find out time taken from selection to joining of the candidates
- To understand and calculate attrition rate at NMD site
- To identify trigger points
- To analyse the feedback of employees and provide suggestion for reducing attrition

Introduction to industry-

Manufacturing has emerged as one of the high growth sectors in India. Manufacturing involves a highly systematic division of labour and assembly lines for the fabrication of products and is usually done on a large scale. Prime Minister of India, Mr. Narendra Modi, had launched the 'Make in India' program to place India on the world map as a manufacturing hub and give global recognition to the Indian economy. Government aims to create 100 million new jobs in the sector by 2022. The manufacturing industry in India contributes about 15 percent of the country's GDP. India's gross domestic product (GDP) at current prices stood at Rs. 51.23 lakh crore (US\$ 694.93 billion) in the first quarter of FY22, as per the provisional estimates of gross domestic product for the first quarter of 2021-22. The manufacturing GVA at current prices was estimated at US\$ 77.47 billion in the third quarter of FY22. India has potential to become a global manufacturing hub and by 2030, it can add more than US\$ 500 billion

annually to the global economy. As per the survey conducted by the Federation of Indian Chambers of Commerce and Industry (FICCI), capacity utilisation in India's manufacturing sector stood at 72.0% in the second quarter of FY22, indicating significant recovery in the sector. With the help of Make in India drive, India is on the path of becoming the hub for hi-tech manufacturing as global giants such as GE, Siemens, HTC, Toshiba, and Boeing have either set up or are in process of setting up manufacturing plants in India, attracted by India's market of more than a billion consumers and increasing purchasing power. Cumulative Foreign Direct Investment (FDI) in India's manufacturing sector reached US\$ 76.82 billion during April 2000-June 2018. India has become one of the most attractive destinations for investments in the manufacturing sector. Some of the major investments and developments in this sector in the recent past are :-

- According to Department for Promotion of Industry and Internal Trade (DPIIT), India received a total foreign direct investment (FDI) inflow of US\$ 58.77 billion in FY 2021-22.
- Between April 2000-March 2022:
 - o The automobile sector received FDI inflows of US\$ 32.84 billion.
 - o The chemical manufacturing sector (excluding fertilisers) received FDI inflows worth US\$ 19.45 billion.
 - o The drug and pharmaceutical manufacturing sector received FDI inflows worth US\$ 19.41 billion.
- In April 2022, the combined index of eight core industries stood at 143.2 driven by production of coal, electricity, refinery products, fertilizers, cement and natural gas

- In April 2022, the Manufacturing Purchasing Managers' Index (PMI) in India stood at 54.7 from 54 in March 2022.
- In May 2022, export of top 10 major commodities (Engineering goods, Petroleum products, Gems and Jewellery, Organic and Inorganic chemicals, Drugs and Pharmaceuticals, RMG of all Textiles, Electronic goods, Cotton Yarn/Fabs./Madeups, Rice, Plastic and Linoleum) stood at US\$ 37.29 billion.
- In October 2021, information technology major Zoho, announced that it will invest Rs. 50–100 crore (US\$ 6.7–13.4 million) and form a new company, that will focus on research and development (R&D) in the manufacturing sector.
- First Solar, an American solar panel company, plans to invest Rs. 4,800 crore (US\$ 645.7 million) in its new 3.3-gigawatt (GW) manufacturing facility in Tamil Nadu.
- In April 2021, Samsung started manufacturing mobile display panels at its Noida plant and plans to ramp up manufacturing IT display panels soon.
- Samsung Display Noida, which has invested Rs. 4,825 crore (US\$ 650.42 million) to move its mobile and IT display manufacturing plant from China to Uttar Pradesh, has received special incentives from the state government.
- In April 2021, Godrej Appliances launched a range of Made-in-India air conditioners (AC). The company plans to invest Rs. 100 crore (US\$ 13.48 million) in its manufacturing units (located in Shirwal and Mohali) to increase its AC production capacity to 8 lakh units by 2025.

Government Initiatives-

The Indian government has launched a number of measures to provide a favourable environment for the development of the manufacturing sector in the nation. The following are a few noteworthy projects and developments:

- With the aim of making India one of the world's main manufacturers of this essential component, the PLI for semiconductor technology has been fixed at Rs. 760 billion (US\$ 9.71 billion).
- A PLI programme for 16 factories producing key starting materials (KSMs), medication intermediates, and pharmaceutical active ingredients was approved by the government (APIs). A total of Rs. 348.70 crores (US\$ 47.01 million) would be invested in the construction of these 16 facilities, which would also lead to the creation of about 3,042 jobs. By April 2023, portfolio investment of all these plants is anticipated to start.
- With an estimated cost of Rs. 10,683 crores (US\$ 1.45 billion), Prime Minister Mr. Narendra Modi authorized new production-linked incentive (PLI) plan in the textile industry in September 2021 for man-made fibre (MMF) garments, MMF fabrics, and 10 sections of technical textiles.
- In August 2021, India presents a strategy for achieving its target of 1 trillion dollars in manufacturing goods exports.
- The Commerce and Industry Ministry announced in July 2021 that 104 start-ups from industries including food technology, renewable technology, defence, education technology, and health

technology had joined "Start-up India Showcase," an online platform that allows for numerous digital and social media connect opportunities for the nation's most promising start-ups.

Role of manufacturing in the Indian economy-

The manufacturing industry makes up a major portion of the Indian economy. The pandemic has had a major impact on this labor-intensive business. During the past ten years, manufacturing has expanded on average between 7-9% per year. A growth rate of 12% during the subsequent ten years is desired. Out of a total of 28% for the industry during the past 20 years, which also includes 10% for mining, quarrying, power, and gas, manufacturing's proportion of GDP has stayed consistent at 28% of GDP. Compared to several East Asian economies, this is far less than their rates of 30% to 35%.

By generating jobs in the secondary and tertiary sectors, manufacturing sectors not only help to modernize agriculture, which is the foundation of the national economy but also help to reduce people's strong dependence on agricultural revenue. A transformation in the sector's makeup, from one dominated by the public sector to one increasingly driven by private companies with global ambitions, has come along with strong growth. In actuality, the UNIDO reports that India is currently the world's world leader in the production of textiles, chemical goods, medicines, basic metals, general industrial machinery, and machinery and equipment (apart from China). As a result of a mix of supply-side benefits, structural reforms, and private sector initiatives that have put India on the path to becoming a global manufacturing hub, the sector's significance to both the domestic and

international economic systems is expected to rise even further in the upcoming year.

About the company -

On all significant financial metrics, Reliance Industries Limited (RIL) has been India's largest private-sector corporation for a number of years. Oil and gas exploration, production, petrochemicals (polyester, fiber intermediaries, plastics, and chemicals), textile manufacture, retailing, and special economic zones are all part of the RIL group's activities (SEZs). The business has been included on the list of "World's Largest Corporations" for four years running and has twice placed among some of the Top 25 climbers. They are the largest private sector owner of exploration acreage in India along with their subsidiaries.

Their portfolio includes the following coals bed methane (CBM) blocks, 33 exploration blocks issued during the NELP and Pre-NELP licensing rounds, and a 30% interest in the Panna-Mukta and Tapti (PMT) resources. Their foreign enterprises include exploration ventures in Colombia, Australia, Colombian Kurdistan, East Timor, Yemen, Oman, and Kurdistan (Iraq). At any one time, they run the third-largest oil refinery in the world. Additionally, they are building an export-focused refinery in Gujarat via their affiliate Reliance Petroleum Ltd, making that city the sole location of all refinery assets. They have preserved our country's dominance in the domestic polymer market, which includes Polyethylene (PP), Polypropylene, and Poly Vinyl Chloride. They are fully integrated makers of polyester, producing their own purified terephthalic acid (PTA), mono ethylene glycol (MEG), and paraxylene (PX) from crude oil. They are also the top 4 manufacturers of PX & PTA. This business is the biggest producer of MEG in both India and

the entire world. They are the top 7 PP producers in the world. One of India's biggest and most advanced textile complexes is located in its textile division in Naroda, Ahmedabad. One of the most well-known and respected brands of high-end textiles in the nation is their flagship brand, VIMAL. It also complies with the standards for clothes and textiles used in automobiles.

Problem Statement -

- While working, it was discovered that NMD had a very high employee attrition rate, and there was no obvious cause for this.
- Another issue was that hiring new employees took longer than usual.

Background-

Attrition is a serious problem that is prevalent in the sector nowadays. It is the main issue that stands out in any organization. Despite the term being widely used, many people are unable to articulate what it actually is. Attrition is defined as the progressive loss of workers due to retirement, resignation, or death. An experienced and well-adapted employee leaving the firm leaves a void, which is often referred to as employee turnover or employee defection. As a result, the company loses crucial knowledge, contacts, and abilities. Modern managers and people administrators are very interested in decreasing attrition in the company in a way that will support the organization's growth, success, and optimum performance.

Employee retention is a crucial and constant activity. Having managers who understand that it is their duty to establish and maintain an atmosphere that promotes retention presents

one of the largest hurdles. To develop and remain happy in their jobs, staff need encouragement, guidance, and acknowledgment. Managers must be aware of this and comprehend that developing such principles reflects their goals to protect the environment and inspire their workforce.

Our mentor has given us two projects to complete for our assignment, both of which fall under the heading of HR analytics. One of the projects will focus heavily on attrition analysis of NMD and RIL, while the other will provide a snapshot of the talent acquisition process.

As part of our study, we calculated the NMD attrition rate between 2018 to the present and offered a solution to lower attrition. The second section of the study focuses on analyzing the talent acquisition process, determining the lag time, and offering a remedy for it. In order to corroborate the data, interviews with former employees were done, and some trigger points emerged. There were certain basic reasons for attrition, such as salary, management quality, higher education, and so on. Due to a lack of data, the study's scope was highly limited for the talent acquisition process. After evaluating the attrition component, it was discovered that pre-Covid attrition was higher and that, after Covid, it started to rise once more as a result of the expanding number of positions on the market.

Attrition was high, as was evident in both sections, and the hiring process took longer than it should have. Therefore, the company needs to upgrade its facilities, examine its compensation plan to encourage employees to stay for longer, atomize its talent acquisition process, and enforce a stringent 90-day hiring rule for internal candidates to cut down on lag time. We can therefore conclude both attrition and talent acquisition are mutually dependent because attrition results in the hiring of new personnel.

Research methodology-

Research methodology is essentially the how a certain piece of research is conducted in reality. More specifically, it deals with the methodical methods a researcher employs when designing a study to guarantee accurate outcomes that meet the goals and objectives of the investigation.

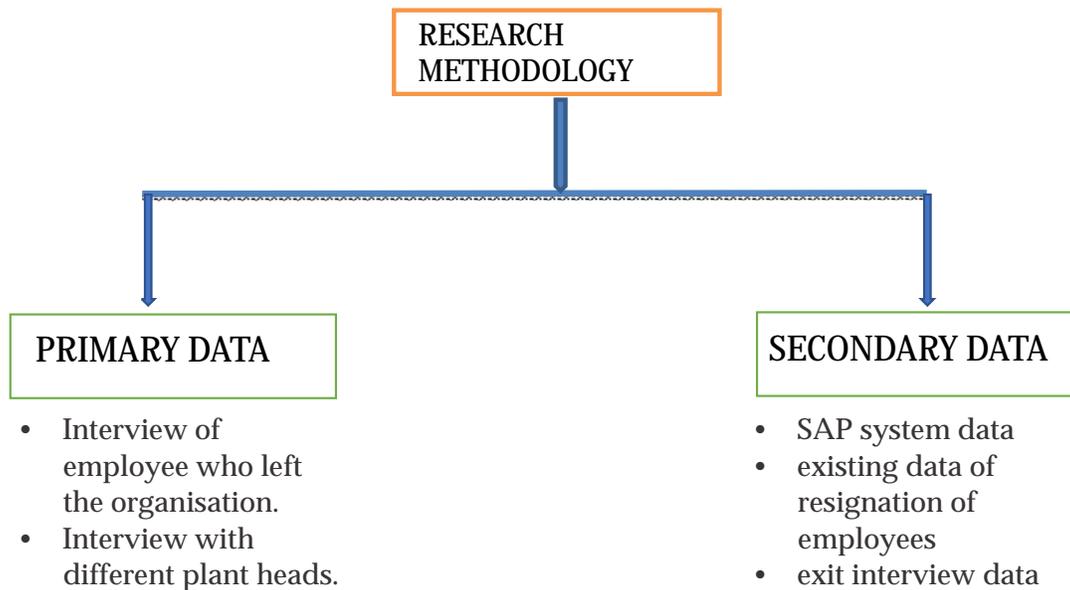
For purpose of research primary as well as secondary sources data has been considered. Secondary data is collected from websites, books chapters and companies websites. Primary data is collected from structure questionnaire.

Primary data-

Primary data refers to the type of information that is gathered by researchers straight from primary sources using methods including tests, questionnaires, and interviews. The greatest type of data for study is primary data, which is typically gathered out from source—where the data initially originates from.

Secondary data-

Data that has previously been gathered from primary sources & rendered easily accessible for academics to utilize for their own research is known as secondary data. It is a category of information that has previously been gathered.



Theoretical Background-

HR analytics-

HR analytics, commonly referred to as people analytics, aims to offer insight into the most effective ways to manage personnel and accomplish company objectives.

Attrition analysis at NMD Site-

Attrition – Employee attrition is the process through which workers leave a company for whatever cause (voluntarily or involuntarily), such as retirement, termination, death, or resignation.

Types of attrition –

1) Voluntary attrition

Employees who choose to voluntarily leave their positions represent the most prevalent kind of attrition. Voluntary attrition can occur for a variety of reasons (more on that later), most of which are under your control, such as resignation and other actions.

2) Involuntary attrition

In this case, the firm, not the employee, is the one that starts the leave process. For instance, the worker may have engaged in workplace misconduct, which is a

common cause of involuntary attrition. Attrition could also result from structural issues. A wave of involuntary attrition frequently follows mergers and acquisitions.

Formula:-

Attrition rate = (number of separations / average number of employees) x 100

*Under this project only voluntary Attrition (resignation) taken into consideration.

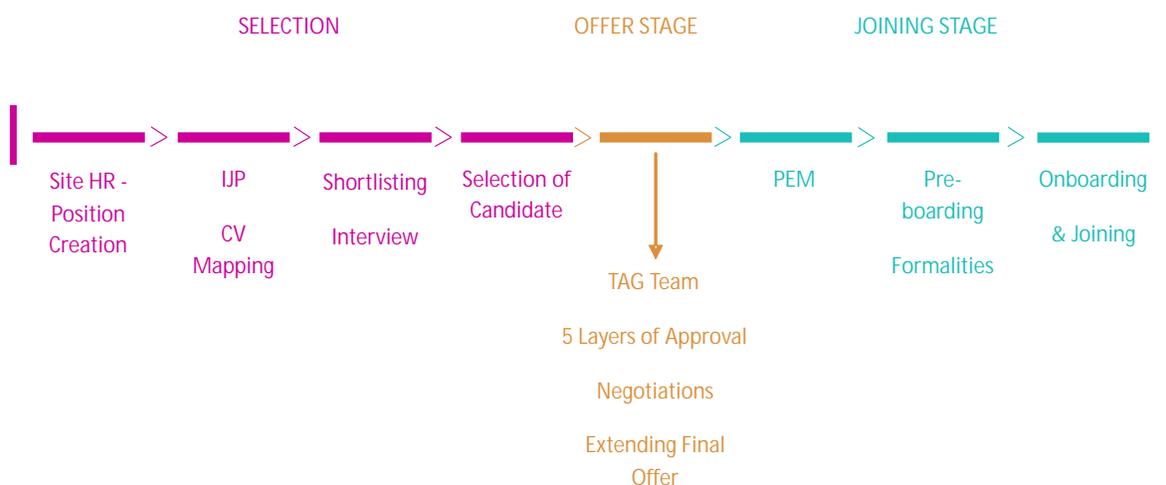
Overview of Talent Acquisition process

Talent Acquisition

The strategies, techniques, and procedures for finding, attracting, and keeping the people resources a firm needs fall under the umbrella of talent acquisition.

- Talent Acquisition can be done in two ways:
 - o Internally- Internal job postings are used within an organisation to recruit new personnel.
 - o Externally- When the company looks outside of the company for any qualified candidates to fill the position.

TALENT ACQUISITION PROCESS FLOW CHART



Data analysis-

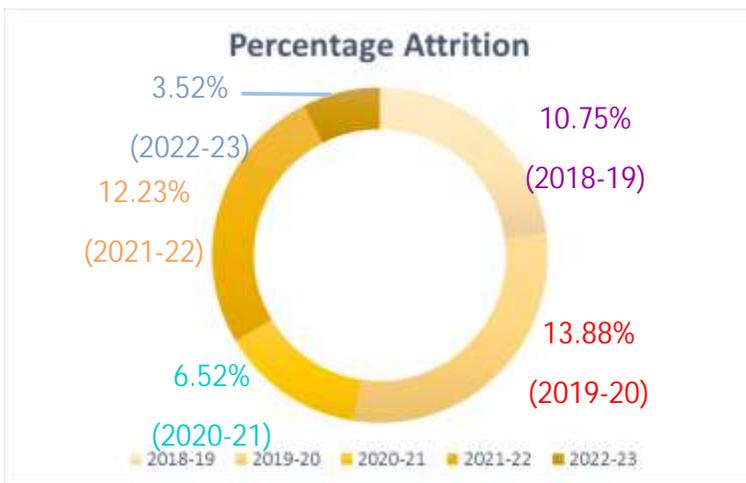
- Regarding the first goal of the NMD's 4.5-year attrition calculation.
- Overall retention/attrition percentage of NMD for Ops/Ream is depicted in Chart 1 while omitting others (HR, IR, and Health & Safety It).
- Only resignations are considered.

NOTE

Due to COVID being such an exceptional year, sample size might be affected.

- An employee who has already left an organisation was the subject of an interview.

NMD Attrition Rate of Ops/REAM for FY from 2018-2023

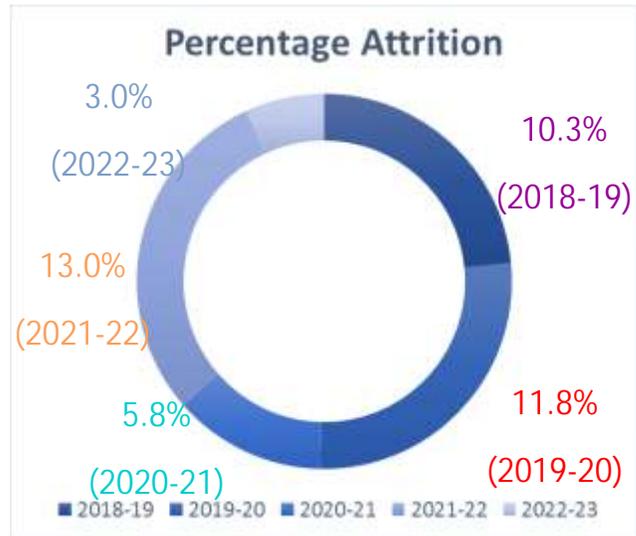


As per Chart 1 –

- As per chart 1 highest attrition can be seen in the year 2019-2020 which is 13.88%
- Covid era 2020-2021 attrition was 6.5 %
- Then again after covid it started increasing, in 2021-2022 attrition rate was 12.23%

- Attrition on the rise post covid, since economy is in recovery phase

NMD Overall Attrition Rate for FY from 2018-2023

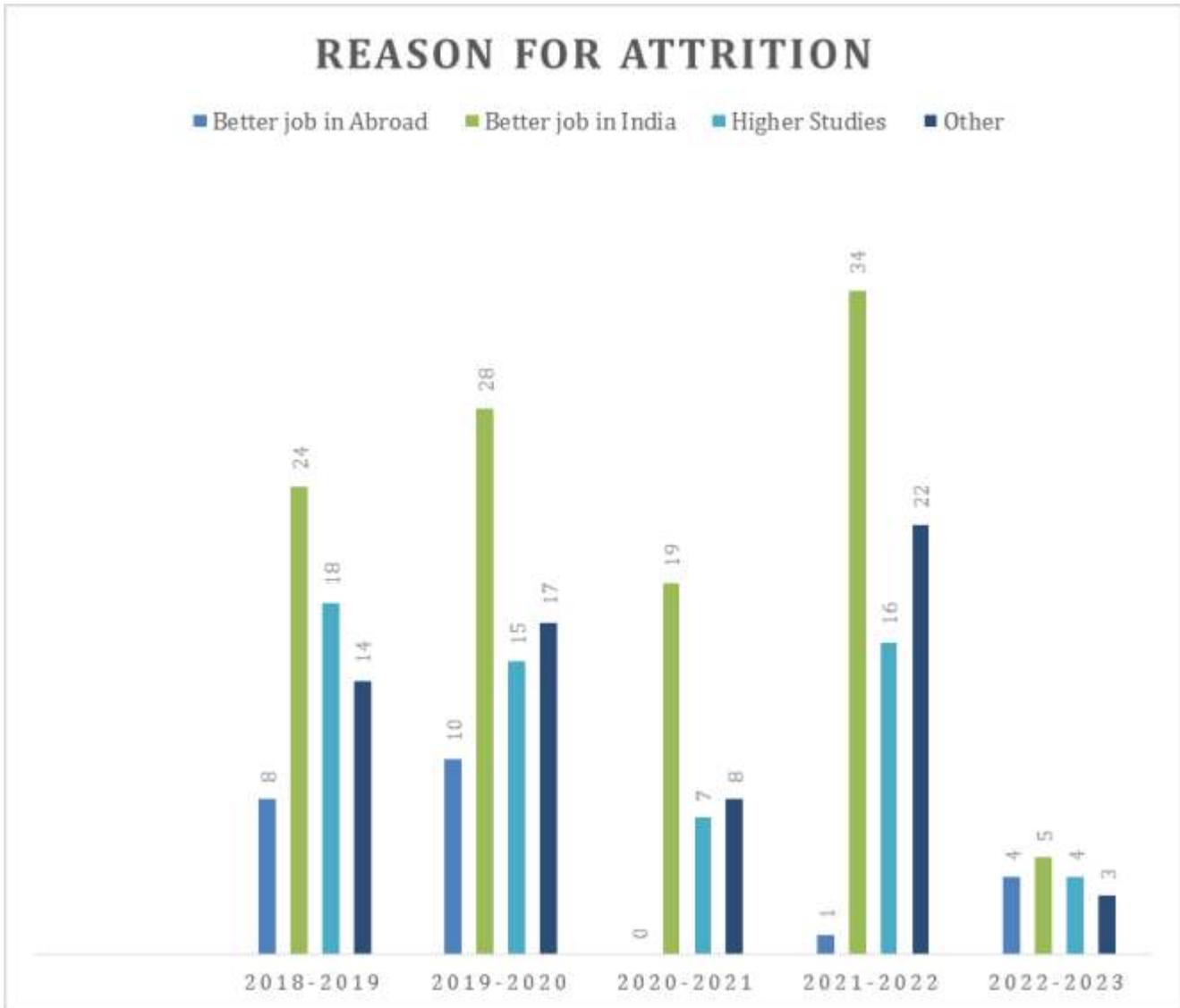


(Chart 2)

As per chart 2 –

- Highest attrition can be seen in the year 2021-2022 (post covid) because many of the medical staff were resigned after covid
- Pre covid attrition for the year 2018-2019 was 10.3%
- And for the year 2019-2020 attrition was 11.8%
- It can be seen from the graph that attrition was increasing every year
- Only covid year it was 5.8%

Reason for Attrition as per SAP Data



As per chart 3 –

- Better job in India and Abroad, higher studies and other reasons are the standard reason for the attrition at NMD RIL.
- Most common reason was better job in India, then higher studies then other and then better job in abroad for the attrition
- Other reason may include personal reason, location, family issues, health issues and so on

Interview with Ex- employees

Sample Size – 27 (Jan '22 – 15 Jun '22).

- Purpose for conducting the interview was to know the Triggers of Attrition which led to it.
- Certain questions were asked, and employees have given rating out of 5.
- Basic reasons were compensation less than market rate, work life balance, lack of growth opportunity, employees have to wait for the longer period of time just to get promotion and growth

- Apart from the basic reasons certain trigger points comes out which led employees to leave the organization.
- Table and chart represent the ratings of 27 resigned employees to the given questions
- It shows employee have given good ratings to the organization, work culture, training and development activities and so on.

Question	1	2	3	4	5
How did you find the organisation?	1	3	5	8	10
How did you find the work culture?	3	5	6	11	2
Do you think that you were fairly paid here?	4	9	8	4	2
Are you satisfied with other allowance?	1	4	7	12	3
Are you satisfied with your work?	2	6	9	8	2
Do you think while working here you got good opportunity to grow?	9	8	7	2	1
Have you got sufficient training related to your work?	3	4	8	5	7
Are you satisfied with your manager	2	1	10	7	7
Work life balance	6	11	7	2	1

RATING SCALE



Rating scale

Above chart shows the number of employees rating (1-5) on the given questions

Work life balance – 6 employees gave 1 star rating, 11 gave 2 star rating, 7 gave 3 star, 2 gave 4 star rating, and only one employee gave 5 star rating.

Satisfied with manager – 2 employees gave 1 star rating, 1 gave 2 star rating, 10 gave 3 star rating, 7 gave 4 star rating, and 7 employees gave 5 star rating.

Are you satisfied with your work – 2 employees gave 1 star rating, 6 gave 2 star rating, 9 gave 3 star rating, 8 gave 4 star rating, and 2 employees gave 5 star rating.

How did you find work culture – 3 employees gave 1 star rating, 5 gave 2 star rating, 6 gave 3 star rating, 11 gave 4 star rating, and 2 employees gave 5 star rating.

How did you find the organization – 1 employee gave 1 star rating, 3 gave 2 star rating, 5 gave 3 star rating, 8 gave 4 star rating, and 10 employees gave 5 star rating and so on.

PART-2

Talent Acquisition

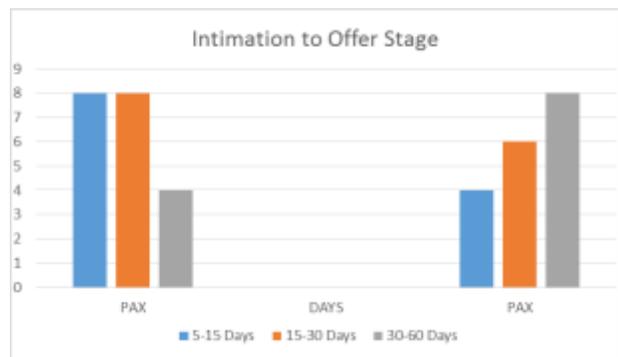
Chart and Table shows time required for-

- 1.) Selection to offer stage (intimation stage)
- 2.) Offer to joining stage

Internal -in internal case sample size was 20

External case -in external case sample size was 18

TIME LAG (IN DAYS)			
INTERNAL		EXTERNAL	
Selection to Offer Stage			
DAYS	PAX	DAYS	PAX
5-15 Days	8	5-15 Days	4
15-30 Days	8	15-30 Days	6
30-60 Days	4	30-60 Days	8
TOTAL	20	TOTAL	18



(Table 4)

(Table 4) shows time required for intimation stage –

- Internal case- As per data 8 candidate get the offer withing 15 days, 8 candidate get the offer within 30days and 4 candidate get the offer in more than 30 days
- External case- 4 candidate get the offer within 15 days, 6 get the offer within 6 days and 8 candidate get the offer in more than 30 days

As per table more time required for intimation stage in external hiring.

TIME LAG (IN DAYS)			
INTERNAL		EXTERNAL	
Offer Stage to Joining			
DAYS	PAX	DAYS	PAX
Below 90 Days	12	Below 90 Days	16
Above 90 Days	8	Above 90 Days	2
TOTAL	20	TOTAL	18



(Table 5)

Table 5 shows time required for offer stage to joining

- Internal case- 12 candidate joined organization within 90 days,
- 8 candidate takes more than 90 days to join the organization
- External case – 16 candidate joined organization within 90 days, and only 2 candidate takes more than 90 days.

As per table ore time required for joining of the candidate in case of in internal case

Scope of the study -

- For the attrition project, we have taken into account any employees who have left the company in the last 4.5 years.
- From January 2022 to June 2022, personnel are taken into account for talent acquisition.

Limitation of the study –

- Due to the short time frame, the scope of my study was highly constrained. We only focused on the last 4.5 years.
- Because non-voluntary attrition is outside of our sphere of influence, we have solely examined resignation.
- Due to a lack of data availability, we could only evaluate data from the current year while acquiring talent.
- There are other departments on that site, but we only examined OPS and REAM because the central staff oversees the other departments.

Findings –

Related Attrition

Positive points;

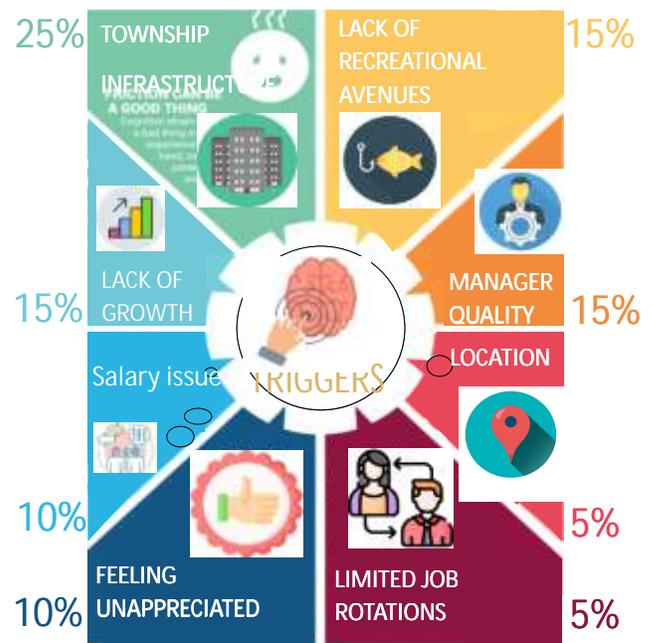
- Contribution Valued
Employee thought that organization valued their contribution.
- Good place to Work
As per employee’s organization is good place to work they will consider returning in future.
- Opinions Valued
According to employees their opinion valued for the organization.

- Intuitive Evaluation
- Job Satisfaction
Employees were satisfied with their job.
- Willing to return in Future
Employees will consider returning in future if some of their expectations will be fulfilled
- Advanced Training & Learning
As per employees they got enough training related to their work

Areas of improvement –

- Salary issue
Salary and compensation should be reviewed.
- Work Life Balance
Due to overtime, they are not able to manage their work life balance.
- Better Amenities
Better amenities like food court, transport facility, Movie Theater and so on will be there for entertainment of employees in their weekends.
- Manager Quality
Some employees stay in organization just because of their manager and some leave because they were not happy with their manager.
- Growth Opportunities
In order to get promotion employees, have to wait for the longer time because it is very lengthy process.
- Township Infrastructure
Township infrastructure is very old, employees have to face problem because of that it should be reviewed.

Picture shows the trigger points that were found out at the time of interview



Talent Acquisition-

Lack of Data Availability

- Change/Replacement of SPOC.
- Inconsistency in Data Collation/ Sharing.

Absence of Automated Dashboard

- Data has to maintain manually.
- Existing Dashboard fetches Incorrect Data.

Sourcing & Negotiation Issues

- Low Quality/ Incompatible CVs.
- Loss of Time & Candidate between Draft & Final Offers being extended.

Lag Time in TA Process

- Cumbersome & Lengthy Process.
- Multiple Approval Process.
- Delay in Extending Off.

Suggestions-

Attrition-

- Structured Career Planning
To implement structured Growth Plan for employees
- Work Life Balance
Ensuring optimizing Work Life Balance by creating effective work hrs.
- Improving Amenities
Better connectivity and avenues for entertainment of employees.
- Rewards & Recognition
Reward Scheme for Employees and ensuring Recognition
- Enhanced Communication
Targeted communication and interaction
- Satisfaction Survey
To conduct Employee Satisfaction Survey, Suggestion Box
- Compensation & Benefits
To review the C&B structure as many of employees are not happy with their salary
- Job Rotation
To implement Job Rotation / Job Enhancement

Talent Acquisition

- Atomization
Approvals should be Automized.
- Expectation
Align Candidate expectation in advance.

Implement 90 Day IJP Limit

- Implementation of a strict 90 days policy for release of internal candidate

Dashboard

- Develop Automated Dashboard
- Allying dashboard with SLA, Timeline should be followed

CV Shortlisting

- Aligning KSAs with KPIs of Job Role

On Time Communication

- Timely communication from recruiter about candidate drop/selection at another site

Conclusion-

Although the subject of our study is quite broad, our external advisor restricted the scope of the study because of the short time frame. For the timeline of 4.5 years, we focused solely on employee resignations.

Any organization's primary goal is to make money. However, the company should focus more on its personnel and strategies for keeping them over the long term if it wants to make the most profit possible. According to the report, salaries and a lack of career advancement chances are what drive individuals to switch professions. This study's findings suggest that, in order to lower attrition, businesses should use cutting-edge training programs and new innovative technologies that will allow for their employees' professional development. In order to prevent attrition due to family-related issues, the company might consider hiring workers who live close to the industry.

After reviewing all the available data, it was discovered that while employee attrition was nearly nonexistent in 2020, it began to rise again the next year due to an increase in medical resignations.

The value of moving offshore is destroyed by high attrition. It results in knowledge loss,

training costs, a never-ending cycle of recruiting, and project delays for the organizations involved. Employee recruitment and retention are major concerns for businesses, thus fostering a work atmosphere in which employees participate in the establishment of rewards programs.

Organizations are investing greater time, effort, and money into creating their strategy for talent acquisition as a result of the employment industry's rising competition. It is crucial to hire employees with the necessary abilities,

credentials, and experience in order to meet both the company's current and future needs.

We discovered during our investigation that the organization can find talent from both internal and external sources.

It was discovered that the typical period for internal hiring is 90 days, but because the current site lacked an automated process and sufficient staff, it took longer than usual to find the candidate. The hiring stage requires additional time when an external hire is approved.

References-

- Reliance official website(www.ril.com)
- Wikipedia of talent acquisition process
- Wikipedia of attrition analysis
- Wikipedia knowledge about reliance industry
- Research paper; A study on attrition in manufacturing industry
- Various Articles related to the study
- Attrition -meaning, and its calculation from Investopedia
- Talent acquisition -meaning and description from www.techtarget.com
- <https://www.techtarget.com/searchhrsoftware/definition/talent-acquisition>
- <https://www.callcentrehelper.com/attrition-89611.htm>
- <https://www.peoplehum.com/glossary/attrition-rate>
- <https://www.goodreturns.in/company/reliance-industries/management-team.html>
- https://en.wikipedia.org/wiki/Reliance_Industries#:~:text=It%20has%20diverse%20businesses%20including,India%20as%20measured%20by%20revenue.
- <https://www.ril.com/TheRelianceStory.aspx>
- <https://researchguides.ben.edu/c.php?g=282050&p=4036581>
- <https://www.informit.com/articles/article.aspx?p=390818&seqNum=10>

Books –

- Managing Employee Turnover by David G. Allen
- The Employee Experience: How to Attract Talent, Retain Top Performers, and Drive Results By Tracy Maylett and Matthew Wride

Analysis of Pet Food Industry in India for budding Entrepreneurs to enter the Industry

Mr. Vinayak Patil,
Software Consultant at PTC
Ms. Harshada Lalitkumar Wadekar

ABSTRACT

Animals have been domesticated over ages. With their evolution, the evolution of the food provided to them has also taken place. Starting from feeding them on left-overs to now feeding them with different treats, dry and wet foods. India's Pet Nourishment Market is anticipated to enlist a CAGR of 13.7% within the figure period from 2021-2026. USD 110.53 billion was the value of global pet food market size in 2021 and is expected to rise up to USD 163.70 billion by 2029, showing a CAGR of 5.11% during the forecast period of 2022-2029.

Understanding the gap in the animal food industry in 2022-23 and taking the right steps to fill this gap as an entrepreneur is important, this is possible through this research report as it provides necessary information about this sector and industry as a whole.

This research project can be of interest to those looking for new business opportunities in today's market in relation to the Animal Grooming and Nourishment sector.

Key words- CAGR, food, entrepreneurship, market, pet food industry

CAGR – Compound Annual Growth Rate

It is the average rate at which some value (investment) grows over a certain period of time assuming the value has been compounding over that time period.

Introduction

“There's a saying. If you want someone to love you forever, buy a dog, feed it and keep it around.” Richard Anthony Monsour, American Musician.

Animals from different species have been domesticated over ages. Dog is said to be the first animal to undergo the process of domestication (around 1400 BC). Dogs were domesticated to help in hunting. Today, they are excellent hunters, but most of them are pets. Cats have been domesticated since 8500 BC. Mostly the domestication process included the

domestication of mammals, but also birds, certain fish and invertebrates.

Some consideration was given to providing food to the domesticated animals, such as bone knuckles, cabbage, potatoes, onions and crusts of bread, etc. in the middle ages and the mid – 19th century. In 1860's a businessman, James Spratt, defined the primary puppy food which was a blend of wheat suppers, vegetables, beetroot and meat blood. More companies started entering this market, canned food like “Ken-L Ration,” was introduced in 1922, having a major ingredient as horse meat.

Today's dynamic and globalised world has changed the image of dog food. Pets are now been given special food with specific nutritional values that is tested by doctors. Many new market players have started coming in the Indian Markets. The market for pet food in India is anticipated to grow at a CAGR of 13.7% between 2021 and 2026. USD 110.53 billion was the value of global pet food market size in 2021 and is expected to rise up to USD 163.70 billion by 2029, showing a CAGR of 5.11% during the forecast period of 2022-2029.

Covid-19 has had an astonishing global impact, witnessing better than envisaged demand for pet food across all regions compared to levels before pandemic.

Witnessing a rise of 4.75% in 2020 in the global market compared to 2019. The global pet food industry is enlarging rapidly with the rising empathy towards pets leading to their increased adoption. Individuals having pets endure less from issues, such as depression and sadness, since of the companionship, concurring to different studies.

During the primary few months of 2020, breeders and protect centers detailed more enquiries from individuals searching for pets. According to reports published by Mars Petcare, the combined sales of cat and dog food grew by 6.5% in 12 weeks from February and May 2020. This signifies that growth of the pet food market is expected to continue even after pandemic.

Objectives of Study

The objectives of the study are as follows: -

To study the buyer's perspective for buying pet food.

To get aware about the existing competition in the market.

To understand the financial and overall growth of Pet Food industry with special reference to the 2nd market leader in the industry.

To understand the challenges included in entering this dynamic pet food category.

To check whether people would prefer buying from newer brands.

Research Hypotheses

The research hypotheses are as follows: -

H0: There is a positive scope for new entrants in pet food markets of India

H1: There is no scope for new entrants in pet food markets of India

Scope of the Study

This investigation is carried out to understand the Indian Pet Food Market in a better way, which can help entrepreneurs by providing an entire scope in this field/ industry. For carrying out this research both primary and secondary data were utilized to get a better perspective about this industry. Primary data was collected through a questionnaire created via Google Forms. For closer examination, the secondary data was gathered from many websites, newspapers, and journals.

The primary data was collected over a period of 8 days and considered important questions like which brands food is preferred by pet owners to feed their pets, on what basis they buy pet food for their pets, would they prefer buying pet food from newer brands and many more. The secondary data considered for this research is the financial data of Drools India Pvt. Ltd. and the general information available about the company. Special attention has been given to the recent interview of the CEO of Drools India Pvt. Ltd. - Dr. Shashank Sinha.

The research "India Pet Care Market Outlook, 2026" by the publisher Research and Markets provides a detailed analysis of market share by animal type, food type, and pet healthcare. The study used for the literature review analyses the Indian market for pet food, pet accessories, pet grooming, and pet healthcare by region, by cities, and by important players.

Limitations of the Study

This study takes into account pet food brands producing cat and dog food majorly and not other pets food brands.

The responses have been collected through online means of Google Forms. Limited resources and government restrictions were the reasons behind collecting the responses online. A major chunk of responses were not collected due to technological restrictions in many parts of the region and technological illiteracy.

The study is limited to a particular region due to lack of human resources and financial resources.

Only Drools India Pvt. Ltd. data has been considered as case study because other companies are multinational brands, having no public data available in India for study.

The study's generalizability is constrained because of the study's exceedingly small data sample.

The study objectives have been condensed to just provide data on what must be investigated in light of the objectives in order to increase focus.

Responses were gathered over the course of eight days, from April 9 to April 16, 2022.

The questionnaire had fixed choices of answers to some questions in order to attain specific answers.

Research Methodology

The research is conducted with an Inductive research approach to understand whether there is scope for entrepreneurs to enter the pet food markets of India or not. The research has been conducted through online means of Google Forms.

The aim of this research is to understand whether new pet food brands have a scope to sustain in the markets or not. The study takes into account primary as well as secondary data, including newspaper articles, case studies and online surveys that have been conducted.

The research will give insights about the existing market competitors and their marketing strategies, the challenges included for launching a product in this dynamic category by a new entrant. The case study of Drool Pet Food Pvt. Ltd. has also been involved to see the way they operate and plans for expansion.

Research design

The research has been designed keeping in mind the Research Objectives and Hypotheses. The research has been conducted with an Inductive research approach which tests the validity of the hypotheses presented in this research study. The generalisation is done from the general to specific and the data has been collected through primary sources to verify the hypotheses of the research study.

Both Primary data and Secondary data have been used for the verification of this research study's hypotheses. Primary data has been utilised to analyse the actual situation whereas

secondary data has been utilised to study the competitors and faced by new entrants in the pet food market.

Quantitative research design is used to receive more fixed data with least variables. The data is represented with the help of pie-charts and bar-graphs for easy and better understanding of the research. The percentage method has been utilised in most parts of the study.

Data Collection Method

The data has been collected with the help of online surveys posted through social media such as Instagram and WhatsApp. The online survey was carried out with the help of Google Forms.

Primary data has been collected to verify the hypotheses. A total of 153 responses were collected. Convenience sampling technique has been used in this research. The period of study was 8 days starting from 9th April, 2022 to 16th April, 2022.

The questionnaire was research specific and included the following as key questions for the research: -

What kind of food do the respondents give to their pets?

If the respondents feed the stray dogs and what kind of food do they feed them.

Which brand of pet food is preferred by the respondent to feed his/her pet.

Basis for buying pet food.

If the respondent is willing to buy pet food from a new brand.

What are the expectations of the respondent from pet food?

Most of the secondary data is collected through newspaper articles published on websites of

esteemed newspapers like The Social Samosa, Marketing Society, Business Standard, The Financial Express, etc. The key points of the newspaper articles have been taken into consideration.

The complete details of these articles are mentioned below in the webliography and bibliography section. The secondary data accounts to almost one-fourth of the study.

Secondary Data

Research and Markets' "India Pet Care Market Outlook, 2026" study offers an in-depth examination of the pet care market in India for the sectors of pet food, pet accessories, pet grooming, and pet healthcare, as well as a detailed analysis of market share by animal type, food type, accessory, and grooming product, by sales channel, by region, by city, and by major companies.

The major features that the research highlights are: -

Increase in the number of adoptions of pet animals due to changing lifestyle in developing countries like India.

By the end of the decade 2025–2026, the Indian pet care market as a whole is anticipated to surpass INR 7,500 crores.. Increase in disposable income and everyday changing global trends are responsible for the same.

The dog sector dominates the market, accounting for more than half of the market share, while the rabbit segment is predicted to rise at a rate exceeding 26% CAGR.

Rural residents may not spend much on prepared foods, pet grooming, or accessory costs, but they usually keep pets for their companionship.

In the Asia-Pacific region, an emerging economy for the pet care market is India, having a lot of potential in the upcoming years. The segment is growing with an anticipated CAGR of more than 30% with global trends of stylish and cute pets in the market urging for more pet grooming products.

Trending pet healthcare products in the market are Multivitamin, supplements, Eye and ear care products, Dental care/oral care products, diapers, etc.

The market has a high dominance of the southern region, which accounted for more than 35% of the market share in 2019-10. The region's high literacy rate and discretionary income among nuclear families are the main market drivers.

Families are more closely entwined with farming and other traditional businesses in the northern and eastern regions. Thus, the adoption rate of domestic cattle is higher than for fulfilling their agricultural and daily requirements.

The India Pet Care Market is anticipating a higher growth rate with the systematic sales channel and growing demand. The online store segment holds the least market share but is expected to be growing with the highest anticipated CAGR of 32.11% in the forecasted period.

The nation's top supplier and manufacturer of pet food goods is Mars International.

The business sells its inexpensive goods under the Pedigree and Whiskas brands. With a value share of more than 20% in 2019-20, Mars International India Private Limited's Pedigree brand maintained its position as the market leader.

Due to pet owners' growing awareness of the benefits of purchasing branded products, the pet care industry in India will likely continue to experience favourable growth. People are focusing their spending on additional pet products, including toys and grooming items, as a result of the adoption of pricey and exotic breeds.

New developments/news about the Industry

India Pet Care Market to reach 210,000 Crores by 2032; a 19.2% CAGR Growth: Says Market Decipher

The "India Pet and Pet Care Market" Size, Statistics, Growth Trend Analysis and Forecast Report, 2022 - 2032" report by Market Decipher is currently available. According to the report, the pet care market is expected to be worth INR 74,000 crores in 2022 and INR 210,000 crores by 2032, rising at a CAGR of 19.2% from 2022 to 2032. Pet food, which accounts for two thirds of market revenue, is one of the industries with the fastest rising market share, followed by pet accessories, grooming, and healthcare.

20 Best Dog Food Brands Recommended by Vets in 2022 published by Outlook India.

Orijen is the only pet food brand available in India that makes it to this list. This is one of the brands that is imported from Canada and a bit pricey to the pet owners.

The Worldwide Pet Food Packaging Industry is Expected to Reach \$16 Billion by 2030 published by Yahoo Finance

The pet food packaging market size was valued at \$9,435.2 million in 2020, and is

projected to reach \$16,579.3 million by 2030, registering a CAGR of 5.7% from 2021 to 2030.

USD 594 million of Veterinary Software Market 2022 Scenario, Strategies, Growth Factors and Forecast to 2031 published by Pharmiweb.com

At a Compound Annual Growth Rate (CAGR) of 6.1%, the market for veterinary software is anticipated to increase from USD 442 million in 2017 to USD 594 million by 2022, over the forecast period. Due to expanding pet ownership and rising animal health expenditures, the market for veterinary software is anticipated to expand. The market is being constrained by a lack of government incentives, veterinary professionals' reluctance to accept new technology, and a lack of awareness of veterinary software.

About Drools Pet Food Pvt. Ltd.

Drools Pet Food Private Limited is a privately held company incorporated on September 10, 2018. It is classified as a limited liability company and is based in Rajnandgaon, Chhattisgarh. The authorised share capital is INR 2.00 cr and the total paid-up capital is INR 12.44 lac. It is also involved in agricultural and animal services, excluding veterinary activities.

Directors of Drools Pet Food Private Limited are Anjum Alvi, Fahim Sultan Ali and Sultan Ali. The current CEO of the company is Dr. Sashank Sinha who is the first veterinarian to become a CEO in the industry.

Drools is manufactured under the umbrella of IB Group, a leading Central India conglomerate with an ISO certified protein company. Drools is a 500-1000 employee company.

Drools claim to provide the right balance of nutrients, the entire process, from raw material

evaluation to Drools processing, is done in-house, resulting in a hygienic and consistent product highly recommended by veterinarians. These products undergo strict quality control to ensure the highest quality food is delivered to a pet's bowl.

They are currently manufacturing products with a major focus on dog and cat food. It is a non-government and unlisted company. It comes under the Agriculture and Allied Activities Industry.

Future expansion plan of Drools Pet Food Pvt. Ltd.

The company is a part of the IB group which is a family-owned group. The CEO of Drools Pet Food Pvt. Ltd. Dr. Shashank Sinha said in his recent conversation with Creature Companion Magazine that the company and the brand Drools has become known in the industry and world-wide. He says in his conversation that pet food in India is a very western concept. Around 80% of the pet food brands in India are imported. Drools coming as an Indian brand has its own challenges, one of which being fighting the industry giants. The company's main agenda was being local and becoming global, becoming a multinational pet food company from India.

The journey hasn't been easy, the company has roped in a lot of celebrities as brand ambassadors. The company's motivation was to become a category leader or being in the top two category leaders. The brand was known to many pet parents, but the company also focused on reaching/ to make the brand known to non-pet parents to make it a household brand.

The company has gone global and expanded in the Middle Eastern countries, Indian subcontinent and now planning to expand in South-East Asian Nations. Drools has become a

known brand in countries like Singapore, Thailand, etc. as an Indian brand. The company not only concentrates on food but also non-food products like feeding bowls, cat litters, etc. which has helped to create brand awareness and tap smaller markets like North India, etc. The brand is now available into 3 continents and 18 countries. The brand is now expanding into the Australian markets, being the first to enter this market.

The major points of advantage to the company have been understanding the consumer, pricepoint, availability. The business is the sole one in India with two manufacturing units in India. The company now focuses to retain customers not giving packet food to their pets once it attains adulthood.

The company has recently launched the super-premium category in Cat Food as Kitty-Yums. The company is planning to launch more categories of cat food and gravy food for cats and for dogs the company is moving towards breed health specific diets.

The company plans to expand their suppliers as a responsible company. Being category leaders, the company is changing and shaping and giving direction to the industry. The company expects to reach the 5000 tons capacity per month and export markets this year.

Major competitors in market

MARS INCORPORATED INDIA LTD.

It is an American multinational manufacturer of confectionery foods, pet foods and other products headquartered in McLean, Virginia, United States. In India Mars Incorporated Ltd. has a manufacturing unit in Hyderabad, Telangana. It is the home of major brands like Pedigree, Royal Canin, IAMs and Whiskas

IB GROUP

IB Group has developed into a diversified industry giant with a presence in the Poultry, FMCG, Solvent, Livestock feed, Specialized Pet Food and Hospitality segments. Headquartered at Rajnandgaon in the state of Chhattisgarh. It is home to major brands like Pure-Pets Pet Food, Drools, etc.

PERFECT COMPANION GROUP

Me-O Cat Food is manufactured by a Thai company called Perfect Companion Group, having different variants of cat food like wet and dry foods.

CHAMPION PET FOODS

Orijen was started by Champion Pet Foods, Canada having a legacy of more than 30 years. The brand is particular about the food packaged. All food from the brand is made abroad in their kitchens and imported in India.

BIRD FOOD INDUSTRY

The bird food industry in India is not that developed as compared to the range of dog and cat pet food. In India people prefer to give grains to the bird instead of buying specific bird food for them.

FISH FOOD INDUSTRY

The fish food industry in India is developed but not renowned as much as the companies producing dog and cat food in the industry. The companies like Advance Aqua Biotechnologies India Private Limited (AABT), Proveg Engineering & Food Processing Private Limited and other companies are doing a commendable job, but are not well recognized.

Data analysis and Interpretation

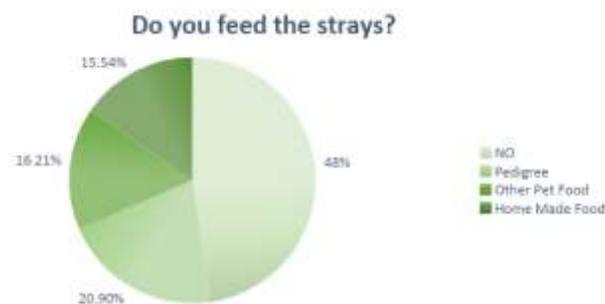
Background

The following section presents the analysis made on the data collected from the online research that was conducted over a period of 8 days from 9th April, 2022 to 16th April, 2022. The questionnaire included 15 questions for those having a pet and 6 questions for those who didn't. This was possible only because of advanced options available in Google Forms allowing the researcher to carry out the survey smoothly.

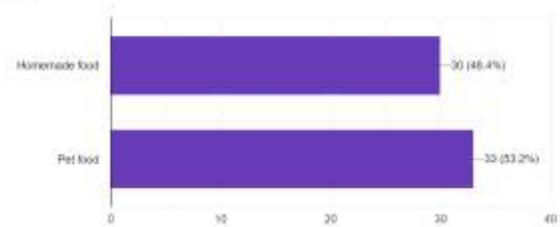
A total of 153 responses were recorded and therefore the total percentage of responses is considered to be 100 percent, but in the later stage of the research certain questions were answered by specific audience that own pets so their aggregate is considered to be 100 percent. However selective data has been represented below for better understanding.

Feeding the strays

Out of 153 respondents 48% people don't feed the strays but rest 62% people do. Even while feeding the strays Pedigree is dominating this sector with 20.90% people feeding the brands food to the dogs. 15.54% people prefer giving the strays home made food and 16.21% people prefer giving another brands food to stray dogs. This implies that 36% of the total sample size is still a consumer with or without owning a pet.



Do you feed your pet homemade food or special pet food?
62 responses

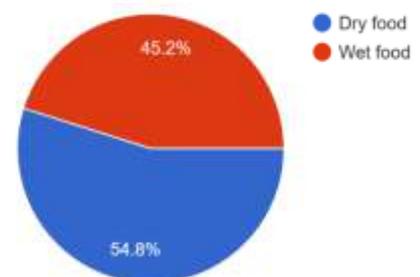


Feeding the pets

53.2% people prefer feeding pet food to their pets and the rest 48.4% people give their pets home-made food.

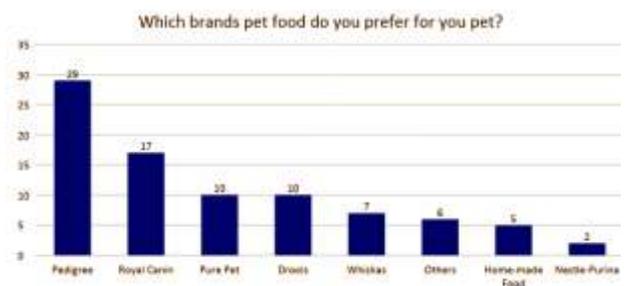
Dry food or wet food

What kind of food do you prefer for your pet?
62 responses



54.8% people feed their pets with dry food and the rest 45.2% feed them with wet food.

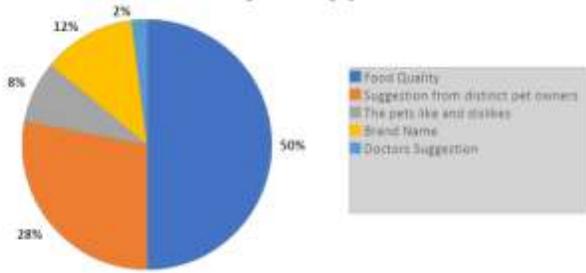
Branded pet food for the respondents pet



The market is dominated by Mars Incorporation India Ltd. brands Pedigree, Royal Canin and Whiskas.

Basis for buying Pet Food

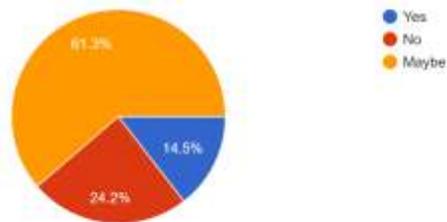
On what basis do you buy pet food?



50% people judge and buy the brands food based on its food quality, 12% based on brand name, 28% on suggestion from distinct owners, 8% on pets likes and dislikes and 2% on doctor's suggestions.

Buying Pet Food from New Brands

Would you prefer to buy pet food from any new brand?
62 responses



24.2% are against using a new brand and 61.3% of people in a dilemma whether to try or not.

This also implies that there are 75% people who are potential customers to a new brand.

Expectations from Pet Food Brands

The most common answers to this question were quality food and at reasonable prices with good quantity, high protein with no side effects, with proper preservatives, created from natural ingredients, no artificial preservatives, should contain nutrients required to promote growth and maintain good health, healthy and easily digestible with minimum / no risk of any allergies and adverse effects.

Outcomes of the study - major challenges faced while entering the market

The major challenges faced by new entrants while entering the pet food markets are as follows:

Registration Process and Licensing

The registration process is quite time consuming and requires a lot of attention. Numerous licenses such as FSSAI license, etc. are required for this business.

Testing of Pet food

Testing of the pet food formula and a positive response from the authorities is required which includes a lot of research and development, increasing cost.

Affordable Pricing

Major expectations of pet food buyers are low costs, better quality and more quantity attaining both at affordable pricing is a challenge.

Brand Image

Creating a brand image is going to be difficult with existing competition from top brands that are also global. The spend heavily on customer acquisition which is difficult for newer businesses.

Export and Transportation

During the pandemic the adoption of pets has increased and pet food is demanded across India. It was difficult during the pandemic to transport these pet foods. Exporting pet food requires various different licences according to the importing countries legislation.

Changing Customer Perception

Changing the customer perception to attract more consumers towards your brand is important. It is going to be

difficult as major brands have already created a positive perception towards their brand.

Huge Investments

Huge investments are required for setting up the business, advertising, customer acquisition, etc.

Supply Chain

Finding the correct supply chain based on the shelf life of the product is important.

Increasing Product Categories

The pet industry is ever growing and the product categories have also increased. Increasing the product categories of the company will help them to expand drastically.

Preference to Natural Products

Natural products are now the priority of the pet owners as health of the pet is important and opt for having no 0 to none preservatives. This reduces the shelf life of the product making it difficult for export and transport.

Findings of the study

- U Major players in the Indian market are Mars Incorporated, IB Group, Champion Pet Foods and Perfect Companion Group.
- U Even though people don't own pets 62% people are potential customers as they feed the stray dogs.
- U 53.2% of people prefer feeding pet food to their pets.
- U Demand for dry food is higher than demand for wet food.
- U Maximum responses are from the age group of 20 to 50 years, indicating

increased adoption of pets and companionship during pandemic.

- U 54.8% people feed their pets with dry food and the rest 45.2% feed the with wet food.
- U The market is dominated by Mars Incorporation India Ltd. brands Pedigree, Royal Canin and Whiskas.
- U 50% people judge and buy the brand's food based on its food quality, 12% based on brand name, 28% on suggestions from distinct owners, 8% on pets likes and dislikes and 2% on doctor's suggestions.
- U 14.5% of people are willing to try newer brands, 24.2% are against using a new brand and 61.3% of people are in a dilemma whether to try or not.
- U It is implied from the study that there are 75% people who are potential customers to a new brand.
- U Animal Welfare Board of India (AWBI) Chairman O P Chaudhary, said the industry players can avail credit facility given under the Animal Husbandry Infrastructure Development Scheme (AHIDS) for setting up animal feed manufacturing facilities.
- U As India is facing a gap between demand and supply of pet food, it is a good opportunity for new companies to enter this market.

Conclusion

Today's dynamic and globalised world has changed the image of dog food. Pets are now given special food with specific nutritional values that is tested by doctors. Many new market players have started coming in the Indian Markets. India Pet Food Market is projected to register a CAGR of 13.7% in the

forecast period from 2021-2026. USD 110.53 billion was the value of global pet food market size in 2021 and is expected to rise up to USD 163.70 billion by 2029, showing a CAGR of 5.11% during the forecast period of 2022-2029.

Covid-19 has had an astonishing global impact, witnessing better than envisaged demand for pet food across all regions compared to levels before pandemic. During the first few months of 2020, breeders and rescue centres reported more enquiries from people looking for pets.

According to reports published by Mars Petcare, the combined sales of cat and dog food grew by 6.5% in 12 weeks from February and May 2020. This signifies that growth of the pet food market is expected to continue even after pandemic.

It has been concluded through this study that the alternate hypothesis stating that, there is a positive scope for new entrants in pet food markets of India is true, wherein more than 50% of the respondents are potential customers for the newer brands.

BIBLIOGRAPHY & WEBLIOGRAPHY

Research Papers referred to: -

- 1) <https://www.researchandmarkets.com/reports/5403192/india-pet-care-market-outlook2026?w=5>

News Articles and Online Information referred to: -

- 1) <https://ukwildlife.wordpress.com/2012/03/11/a-history-of-animal-domestication3/#:~:text=A%20History%20of%20Animal%20Domestication%20%20%20Animal,8%20000%20BC%20%2011%20more%20rows%20>
- 2) <https://storymaps.arcgis.com/stories/893c422c13424a089b781564e9f69735>
- 3) <https://www.petfoodinstitute.org/about-pet-food/nutrition/history-of-pet-food/>
- 4) https://www.business-standard.com/article/economy-policy/india-facing-pet-foodshortages-govt-urges-industry-to-boost-production-121041500838_1.html
- 5) <https://www.petfoodindustry.com/articles/10493-legal-logistical-challenges-to-pet-foodin-2021?v=preview>
- 6) <https://explodingtopics.com/blog/pet-industry-trends>
- 7) <https://parade.com/867535/leahingram/51-awesome-adorable-and-inspirational-quotesabout-pets-for-national-pet-day-2019/>
- 8) <https://www.mordorintelligence.com/industry-reports/india-pet-food-market>
- 9) <https://www.youtube.com/watch?v=EK0lqKyK2HI>
- 10) <https://www.prnewswire.com/news-releases/india-pet-care-market-to-reach-210-000-crores-by-2032-a-19-2-cagr-growth-says-market-decipher-301626938.html>
- 11) <https://www.pharmiweb.com/press-release/2022-09-21/usd-594-million-of-veterinarysoftware-market-2022-scenario-strategies-growth-factors-and-forecast>
- 12) <https://finance.yahoo.com/news/worldwide-pet-food-packaging-industry081800910.html>
- 13) <https://www.outlookindia.com/outlook-spotlight/20-best-dog-food-brandsrecommended-by-vets-in-2022-news-223773>
- 14) <https://www.zaubacorp.com/company/DROOLS-PET-FOOD-PRIVATELIMITED/U01409CT2018PTC008756>
- 15) <https://www.tofler.in/drools-pet-food-privatelimited/company/U01409CT2018PTC008756>
- 16) <https://in.linkedin.com/company/drools-pet-food>

Human Resource Management System (HRMS) Software Is A Boon For Any Company - A Study

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ABSTRACT

Human Resources Management System (HRMS) software is new-age HR technology. In India, the productivity and efficiency of a business through Human Resources Management System (HRMS) software is a major boon for any company. For a good understanding of the concept, objectives, need, importance, benefits, and principal steps to getting started, the challenges of integrating the attempted to provide information about HRMS software and the researcher concluded that the efficient administration of the employee can be easily possible with the help of HRMS software.

Keywords: Human Resource Management System (HRMS) software

Introduction –

Every company requires the productivity and efficiency of a business. With the help of Human Resources Management System (HRMS) software the productivity and efficiency of a business can be easily possible through efficient management of HR processes. Nowadays HRMS software is available as per our requirement. With the help of HRMS software, we can easily process employee information on the system without wasting much time doing the paperwork.

In the present study, we can get information about Human resource management systems (HRMS) software which includes the concept, objectives, need, importance, benefits, and important steps to getting started, and the challenges of integrating.

For a good understanding of the concept,

objectives, need, importance, benefits, and principal steps to getting started and the challenges of integrating the HRMS software attempted to provide information about HRMS software.

Literature Review –

There is a lot of research in UK and US, but research on human resource management System software is of recent origin in India.

In the recent digitization of most organizations, HRMS software's role in strategic management has become more important (Zhou et al., 2020)

Looise and van Riemsdijk (2004) suggest that work design, people, performance management, and rewards, as well as communication and participation aspects of HR, are important for innovation in an organization.

John Edwards (2008) suggested that HRMS lifts HR activities fast, in respect of streamlined processes, reduces errors, collects more data, improves budgeting, simplifies access, enhances distribution, reduces duplication, improves security, better hires, easier compliance, and enhances employee morale.

Bader Yousef Obeidat (2012) analyzed the relationship between Human Resource Information System (HRIS) functions and Human Resource Management (HRM) Functionalities and it was found that performance development, knowledge management, records and compliance as dimensions of human resources information systems has a relationship with human resources functionalities.

Concept of Human Resources Management System (HRMS) software -

Human Resources Management System refers to a suite of software that organizations use to manage internal HR functions. Also, it is an all-in-one, centralized type of HR software that enables the management of several HR functions.

The HRMS software refers to a suite of software that organizations use to manage internal HR functions. From employee data management to payroll, recruitment, benefits, training, talent management, and employee engagement, and attendance, HRMS software helps HR professionals manage the modern workforce.

Objectives of HRMS software -

The common objectives of HRMS software are to make the desired HRMS software available in the right form to the right person and at the right time, at a reasonable cost. Other objectives are to process the data by using the most efficient

methods, provide necessary security and secrecy for important and confidential information, and to keep the information up to date.

Need for the HRMS software -

The Human Resources Management System software is needed for the following purposes -

1. The need for Human Resources Management System software is to make the progress in the business.
2. HRMS software is essential for effective and hassle-free teamwork.
3. HRMS software is required to climb up the business with teamwork between employees of any company.
4. HRMS software is very useful to execute recruitment and onboarding.

The Importance of HRMS software -

The importance of HRMS software is most important to enhance the productivity and efficiency of a business.

- To improve the productivity and efficiency of a business through efficient management of HR processes.
- To facilitate the safe and efficient storage of employee data.
- The software is an efficient way to store and recall employee data as and when required.
- We can manage and protect employees' overtime, workplace safety, bonuses, arrears, and insurance reimbursement with the help of HRMS software.
- The HR representatives can easily process employee information on the system

without wasting much time doing the paperwork.

The Benefits of HRMS software -

- The efficient administration of the employee can be easily possible with the help of HRMS software.
- We can improve efficiency which is advantageous in the core process.
- We can protect the rights and benefits of the employee.
- HRMS software is very useful to eliminate repetitive tasks.
- Employees can do self-service through HRMS software.
- Human resource management system (HRMS) software is broadly useful in the case of features like employee office timings, employee attendance, employee management, multiple workspaces, performance reviews, etc.
- Employee can check their available time off, attendance and performance, or ability to work remotely without needing HR directly.
- Employees can generate reports fast and can easily get access whenever they need them.
- Employee data held by any company is sensitive and most important.
- An HRMS solution provides an innovative level of security for all employee data.
- Whenever a company grows and employees increase, HRMS software is extremely beneficial to review and store data.
- The centralization of data is also extremely beneficial.

- Related to new employees there is a minimum risk of losing sight of information.
- Compliance with labor laws, HRMS software solutions typically keep track of changing regulations, notify managers to make sure they are complying with the latest regulations, and update the system to reflect these changes.

Principal steps to getting started -

The principal steps to getting started with HRMS software are-

1. Involve key stakeholders from the get-go.
2. For a successful implementation, getting key stakeholders onboard is very necessary.
3. To check the effectiveness of the HRMS software, leadership will get involved in ensuring a clear return on their investment with reports and analytics.
4. Appointing a specialist HRMS software consultant can be an excellent strategy if your HRMS software integration is going to be complex or your company is lacking the appropriate expertise.
5. It is not always mandatory to get a consultant for the better working of the system.
6. A rapid cost-benefit analysis can be useful to figure out if it's the right choice for the company.
7. The process of transferring the data can be intricate, and sensitive. In some cases, a certain degree of expertise is required to transfer the data.
8. Conduct thorough testing to ensure all modules are working properly before

implementing the software across the whole organization.

9. It is important to ask users to verify their own details personally, as well. This gives the chance to involve employees in a self-service component while keeping track to preserve data integration.
10. Initiating user training- Once the system is set properly and all things are running smoothly, then the next step is to educate users. They should feel that the software is easy to use. The training should have a personalized component and a team component.
11. There should be some meetings arranged during a few weeks to demonstrate the utilization of the software for employees, managers, and executives.

Challenges of integrating HRMS software –

- There was a number of HRMS software. Before choosing HRMS software, HR managers need to accomplish, for what purpose HRMS software is to be used.
- In order to choose the right HRMS software for your company, outline exactly what outputs you want to get out of the software. It is very crucial to choose the HRMS software that fit the needs of the company.
- Then you can work with the vendor to optimize the software for your purpose.
- Most vendors offer different packages with varying prices with an advanced level of customization. It's up to the company to choose the best fit for themselves.

Conclusion –

Using Human resource management system (HRMS) software will increase accountability and enable HR managers to do their jobs more effectively. The efficient administration of the employee can be easily possible with the help of HRMS software. With the help of HRMS software, the productivity and efficiency of a business can be easily possible through efficient management of HR processes facing many challenges.

Reference;

Aswathappa K. (5th edition.), Human Resources Management text and cases, Chennai: Mc Graw Hill Education pvt. Ltd

Best J.W. (9th edition.2006), Research in Education. New Delhi: Prentice. Hall of India pvt.

Mamoria C.B. and Gankar S.V. (10th edition 2017), A Text book of Human Resources Management, Mumbai: Himalaya Publishing House pvt. ltd.

Reddy N. (5th edition. 2012), Effective Human Resource Training And Development Strategy Mumbai: Himalaya Publishing House pvt. ltd.

Shane, S. & Venkataraman S. (Jan, 2000), the promise of entrepreneurship as a field of research. : The Academy of Management Publication.

Subba Rao P. (7th edition. 2007), Personnel and Human Resources Management Mumbai: Himalaya Publishing House pvt. ltd.

https://www.researchgate.net/publication/271132418_Resource_information_Systems_A_Review

Business Analytics using B.I. tools for Retail Garment Firm

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ABSTRACT

Understanding your business from an analytical perspective is a powerful business asset, especially in a much unorganized sector like retail garments. To put it mildly, there is fierce competition in the retail garment industry. With the traditional knowledge small scale retail owners are finding it hard to keep up with the changing demands of the market. It's only when the business numbers tell a story which makes perfect sense that a businessman can feel empowered to pivot and expand for growth. This study was especially undertaken to give the company's management information on the performance over the previous 5 years as well as the best and worst-performing sales divisions. Ms Excel software has been used for data cleaning and Tableau for data analysis as well as visualization. Analytical tools such as FMR analysis, Top N, CAGR, Sales forecasting and trend charts have been used. Analysis has been focused to obtain sales insights. The data has been taken for the past 5 years. A dashboard was created for visualisation purposes. Results revealed calculation of CAGR, most performing division and the impact of covid-19 on the business. B.I. tools and analytics have successfully resembled the practical situations and conditions. The most sensible, data-supported solution is to expand the corporate division given the present space constraints on the organization's selling counters. Instead of taking "blind chances" to accelerate business growth, such data-driven judgments would lead to measured risks.

Keywords: B.I., Data Analytics, Tableau, Retail Garments, CAGR, FMR, Visualization, Dashboard

Introduction

India ranks second in producing textiles and garments. It ranks seventh in the world for textile exports that include clothes, household goods, and technological products. 2.3% of the country's GDP, 13% of industrial production, and 12% of exports come from the textile and garment industry. The textile sector employs 45 million people worldwide, including 3.5 million handloom workers. A total of 45 million people

work in the textile industry, including 3.5 million handloom workers. The Indian textile and apparel industry is anticipated to reach US\$190 billion by 2025–2026, growing at a 10% CAGR. With the advent of government's PLI scheme, the textile sector is likely to benefit significantly from Rs. 10,683 crore (\$1.44 billion). The initiative intends to promote 10 categories of technology textiles products as well as MMF (man-made fibre) garments and fabrics.

The government authorised the Mega Integrated Textile Region and Apparel (MITRA) Park initiative, which would spend Rs. 4,445 crore (US\$ 594.26 million) over a three-year period to construct seven integrated mega textile parks with state-of-the-art infrastructure, common utilities, and R&D laboratories. The National Handloom Development Program's (NHDP) Handloom Export Promotion Council (HEPC) collaborates with handloom exporters and weavers to offer their handloom items in various international fairs and events for global export (NHDP).

The COVID-19 epidemic has had a significant impact on the consumer products industry and the expansion of the school uniform market. The situation has worsened as a result of the execution of measures to stop the virus's spread. The pandemic's ongoing school closings have generated an unheard-of upheaval in the world market for school uniforms. Uniform retailers and producers have been among the worst affected by the fact that schools have been largely closed for almost two years. There is a severe lack of money for many makers and retailers of uniforms. The manufacture of cloth for school uniforms has also been hampered by the COVID-19 outbreak. Furthermore, the demand for school uniforms was impacted by online classes becoming the new norm. The need for school uniforms is anticipated to grow globally as the nations have now reopened the schools.

The number of students attending schools around the world is expanding as a result of the current increase in the global population, of which about 26% were under the age of 15. This is then anticipated to assist the global school uniforms market grow significantly in the long run. Due to rising primary enrolment rates over the past 20 years, literacy rates have steadily increased across all nations. Along with basic

education, secondary and higher education have experienced significant development, with the average number of school years worldwide reaching an all-time high. Growing disposable money, widespread urbanisation, and rising consumer awareness of the value of education, particularly in low-income areas, are all contributing factors to the increase in basic school availability in developing nations. Favourable government initiatives, resulting in increased enrolments of children, which will foster the demand for school uniforms as well as other accessories required during curriculum.

The value of big data is determined by how a firm uses the data it collects, not by how much data it has. Every business utilises data in a unique way, and the more effectively a business uses its data, the more potential for growth it has. The business may gather information from any source and analyse it to produce results that will allow:

- 1) **Saving costs:** When storing massive volumes of data, some Big Data solutions, such as Hadoop and Cloud-Based Analytics, can save businesses money. These tools also assist in discovering more effective business processes.
- 2) **Time Savings:** Businesses may analyse data instantly and take prompt choices based on their findings thanks to the fast speed of technologies like Hadoop and in-memory analytics.
- 3) **Service/Product Development:** By using analytics to understand the trends in consumer demands and satisfaction, you may develop goods that satisfy the needs of your target market.
- 4) **Comprehend the market environment:** Big data analysis may help you better comprehend the state of the market. For

instance, a business may identify the most popular items and develop more products in line with this trend by studying client purchase patterns. It can beat out rivals by doing this.

- 5) Manage online reputation: Big data techniques can do sentiment analysis. As a result, you may learn who is saying what about your business. Big data technologies can support you in all of this if you want to track and enhance your company's internet exposure.

Thus, "textile data" refers to all information related to a textile product. This information may be utilised for forecasting, consumer behaviour analysis, trend analysis, etc. The textile business produces and creates a variety of data sources. These data come in a variety of formats, including text, photos, and more. Since we live in the fast-moving textile era, data is expanding and changing very quickly. Because it exhibits all the characteristics of big data, this data might be referred to as fabric big data. The textile statistics are categorised broadly in the section below.

For the examination of the enormous and complicated data, big data technologies are utilised. In recent years, a lot of businesses have adopted Big Data as a new method for enhancing operations rather than merely a trendy term. Data that is mixed-structured, semi-structured, or unstructured must be analysed by organisations. This is for those looking for insightful and practical business and market knowledge. For the benefit of the companies, big data analytics helps arrange this data. Data that is mixed-structured, semi-structured, or unstructured must be analysed by organisations. This is for those looking for insightful and practical business and market knowledge. For the benefit of the companies, big data analytics helps arrange this data.

Objectives

1. To have an overview of sales data of Pristine Company (Name of the company has been changed as per privacy policy of the organisation).
2. To understand and analyse sales, top and least performing variables.
3. To implement business intelligence tools for data visualisation.
4. To develop dashboard displaying all visualizations.

Research Methodology

Primary Data

Primary Data was collected by interaction with the company employees and Higher authorities of the organisation. A questionnaire consisting of 5 questions was utilised for the purpose of gaining insights into the company's performance.

Secondary Data

The retail data has been taken from Pristine's database. ("Pristine" is a imaginary name and is used to protect the companies Privacy Policy)

12 files were taken from the database.

1. Customer Master
2. Product Master
3. Sales Register 18-19
4. Sales Register 19-20
5. Sales Register 20-21
6. Sales Register 21-22
7. Sales Register 22-23
8. Sales Detail 18-19
9. Sales Detail 19-20

10. Sales Detail 20-21

11. Sales Detail 21-22

12. Sales Detail 22-23

Sales Registers were combined into 4 files after cleaning data.

Tools used for processing data:

- Data Collection: Retailware Software
- Data Storage: SQL DBMS
- Data Cleaning: MS Excel
- Data Modelling: Tableau Public
- Data Processing: Tableau Public
- Data Visualization: Tableau Public

The project focuses on Marketing Analytics covering RFM Analysis, Top and Bottom N products, Sales Projection and CAGR Calculations. Conversion analytics, leads assessment are out of the scope of this project. Sales as a branch of marketing analytics has been explored.

Background-

'Using big data analytics to improve decision-making in apparel supply chains' tells us how fashion consumer demand forecasting is a difficult task that has traditionally been left to elitist organisations and on-trend designers who back established businesses. Big data will assist in predicting consumer behaviour to guide design businesses in the proper path, but without discounting the element of surprise, periodic retro trends, or replacing design's originality. Big data on clouds will also help with supply chain optimization and the creation of customised clothes (Banica, L., & Hagi, A., 2016)

In 'Recommendations to improve dead stock management in garment industry using data

analytics' we come across the fact that management of dead stock is more impacted by the data analytics paradigm. Dresses with the potential to become dead stock can be cleared by using consumer purchase patterns to inform decisions about how to move them. The system in the article is functional. A hybrid algorithm that effectively classifies and predicts dead stock may achieve an accuracy level of 98% by combining the ID3 and AdaBoost methods. The optimal bundle proposal may be found using the analytics over profit optimization with linear programming and bandit learning of upper confidence bound with Chernoff-Hoeffding Inequality. By effectively managing dead stock, this may increase the turnover of all small-, medium-, and large-scale clothing businesses (Sugumaran, P., & Sukumaran, V., 2019).

Another publication titled 'Data Analytics and Applications in the Fashion Industry: Six Innovative Cases' enlightens on data analytics helping businesses to provide useful insights to enhance fact-based decision-making and take measures to boost corporate success. However, there aren't many papers that demonstrate how data analytics are specifically used in the fashion sector in real life. With an emphasis on their data analysis and applications, the six instances discussed in this article will serve as an introduction to the innovative efforts of fashion enterprises (Du, Y., 2019)

High-end clothing businesses in developed nations are more likely to employ Industry 4.0 technology. In spite of possessing a full value chain of textiles and clothing with significant investments and a sizable workforce, they are enjoying market leadership with fewer people and investments than those businesses from emerging nations. All businesses included cutting-edge, in-house BI programmes, including Tableau BI programmes, BOBJ on SAP, Oracle BI programmes, MicroStrategy BI

programmes based on SAP HANNA, Birst BI programmes, Informatica Powercenter, Cognos, SAS, Oracle, and SAP BI programmes. The retail industry has significantly improved thanks to quick insights and well-informed choices (Ahmad, S., Miskon, S., Alabdan, R., & Tlili, I., 2020).

Results & Analysis

The following figure gives us the overview of dashboard. 'Select Year' dropdown is a year filter. By clicking on the respective years, data changes with respect to the selected year. Thus, the dashboard elements are dynamic in nature. Also, by clicking on a particular category, graphs concerning the selected category will highlight themselves and others will appear

faded in the background. Following analytical insights have been displayed in the dashboard:

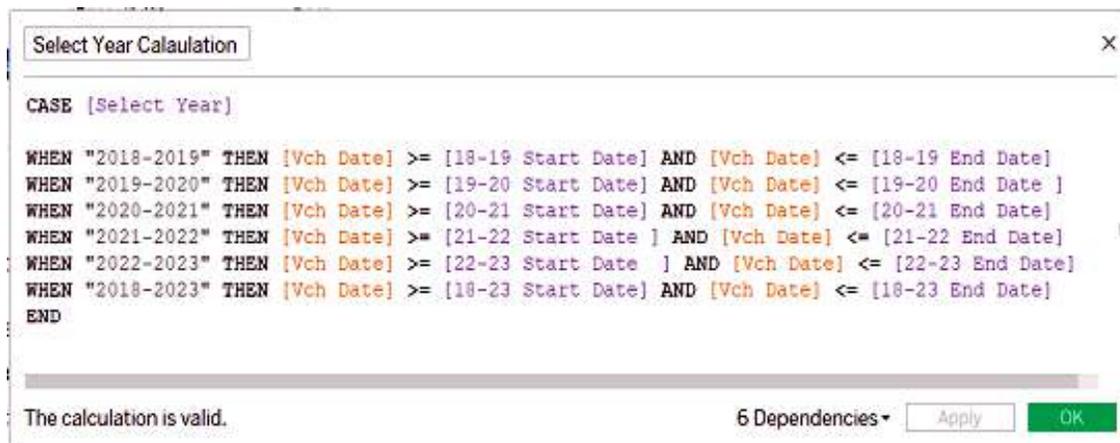
1. Top 10 Products by Sales (Dynamic)
2. Sales by Division (Dynamic)
3. School wise Revenue by Years (Dynamic)
4. Sales Forecast
5. Average Sales vs. Average Quantity
6. Compound Growth rate
7. Category Growth Rate
8. Total Customers Card
9. Average Voucher Value Card (Dynamic)
10. Average Voucher Quantity Card (Dynamic)



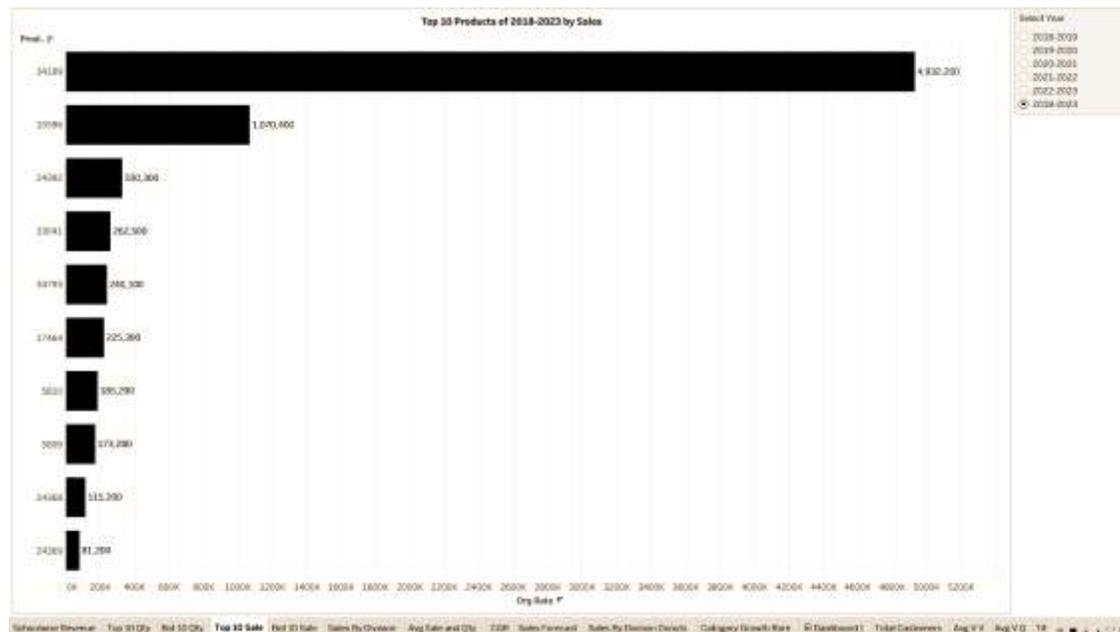
Dashboard



Year Selection



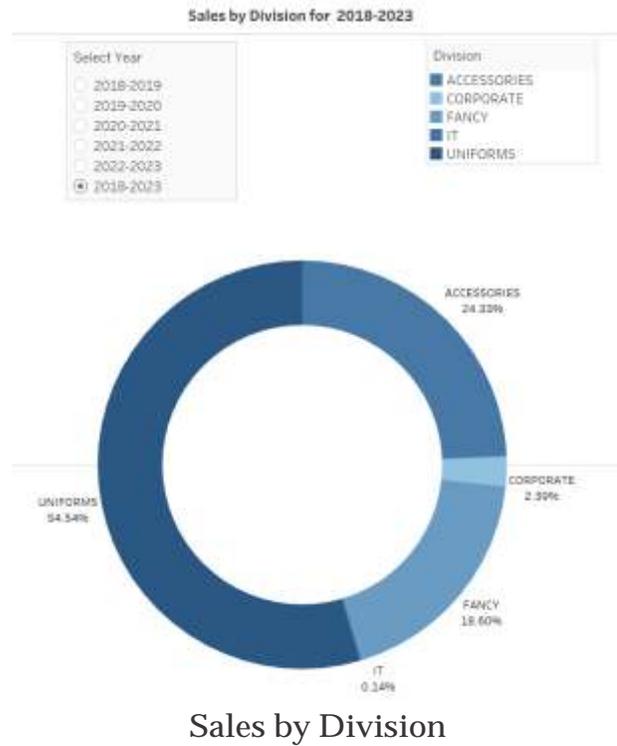
Formula for Year Calculation



Top 10 Products by Sales

For analysing the top 10 products, a simple bar graph was plotted to give a simple, straightforward, and clear understanding. Product IDs were compared to their sales and top 10 values were filtered.

From the visualisation, it can be inferred that Product ID 34189, 10596 have consistent growth except for the year 2020-2021. Covid 19 effect can be observed to have an effect over these products. Product ID 33041 has a consistent drop from the top 10 list over the 5 years. Product ID 24392 has consistently held the 3rd position in top 10 for the maximum times.

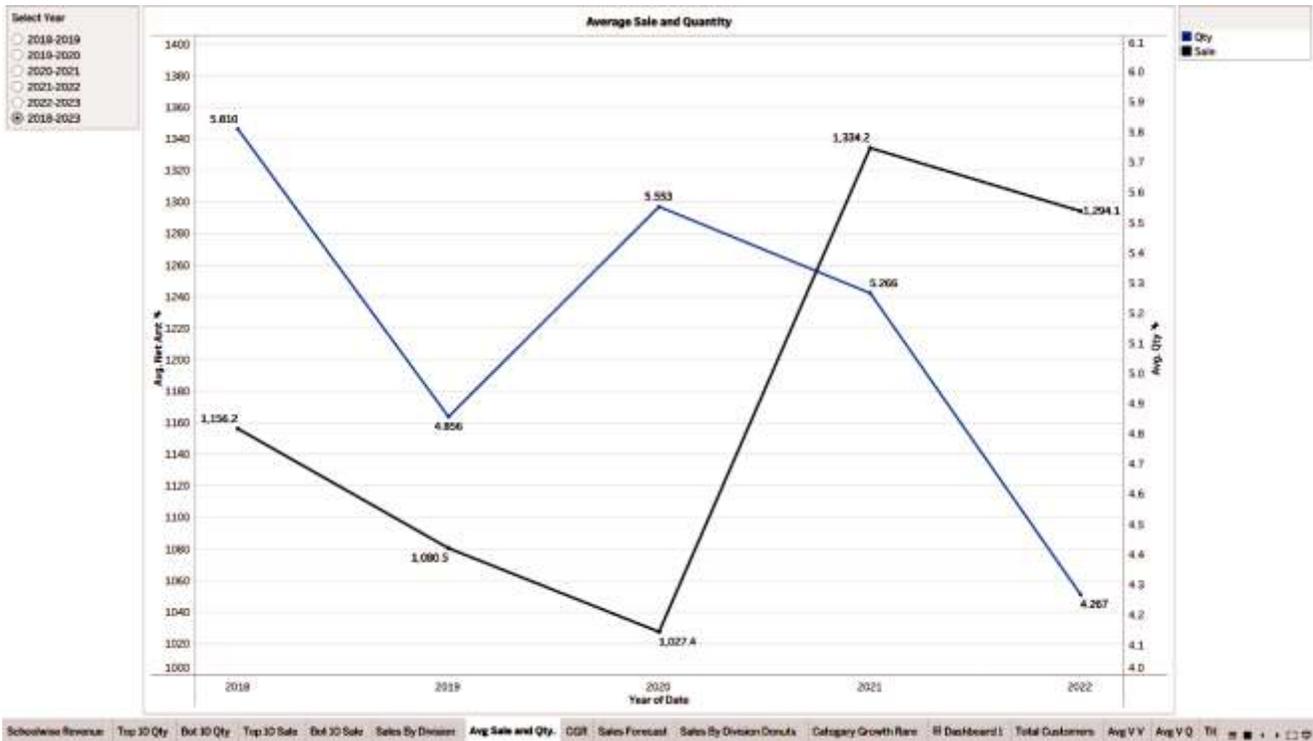


Doughnut Chart Data

	ACCESSORIES	CORPORATE	FANCY	IT	UNIFORMS
18-19	28.33	0	24.02	0	47.65
19-20	30.09	0.26	17.05	0	52.60
20-21	20.27	10.92	51.73	0	17.08
21-22	18.88	10.15	22.79	0.95	47.23
22-23	19.18	0.82	7.50	0	72.50
18-23	24.33	2.39	18.60	0.14	54.54

Uniforms division has been without any debate the top grosser for sales. The Donut chart eloquently portrays contribution of different sales divisions namely Accessories, Corporate, Fancy, IT and Uniforms. Uniforms are followed by Accessories, Fancy, Corporate and IT subsequently.

However, we see a different pattern especially in the year 2020-2021. Covid 19 effect can be clearly seen as the schools were closed. Fancy has been the top contributor for this particular year.



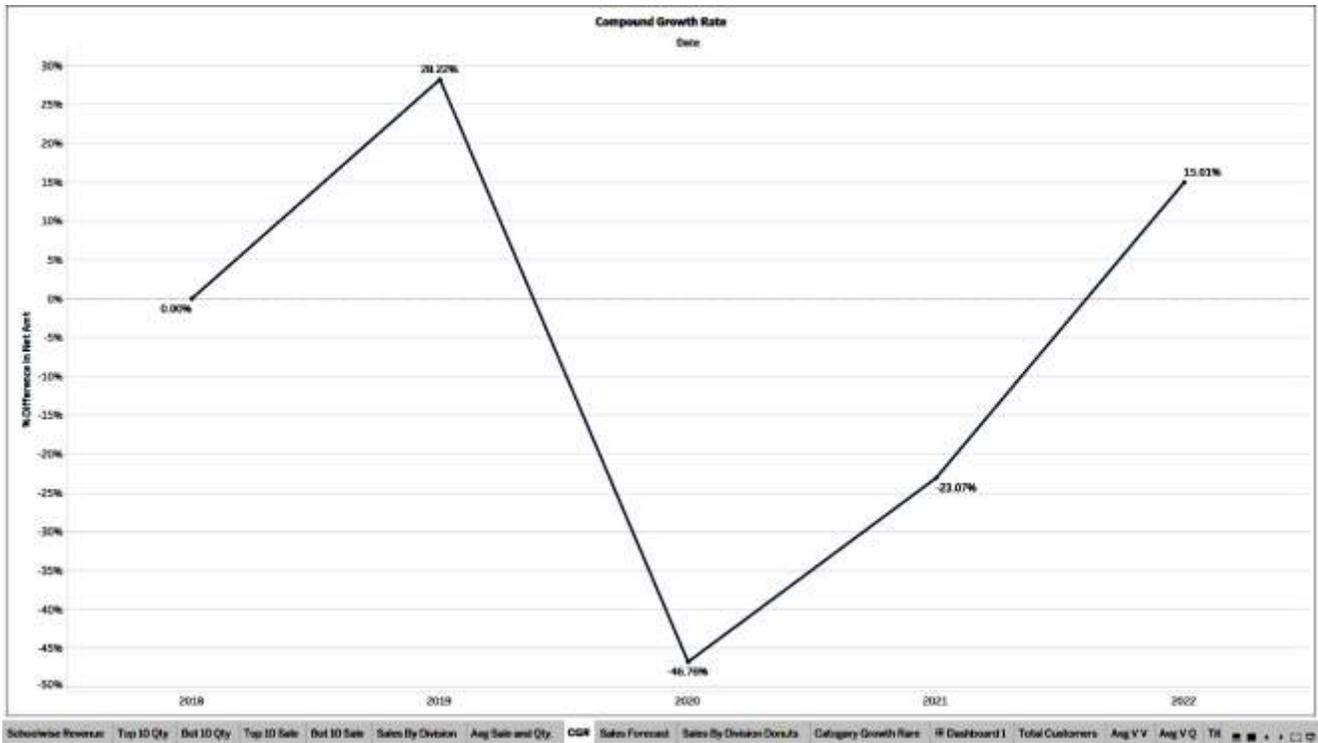
Average Sales vs Quantity

Line Chart Data

	2018	2019	2020	2021	2022	Avg.
Avg. Amt.	1158.1	1082.6	1034.7	1349.2	1294.1	1183.74
Avg. Qty.	5.8	4.9	5.6	5.3	4.3	5.18

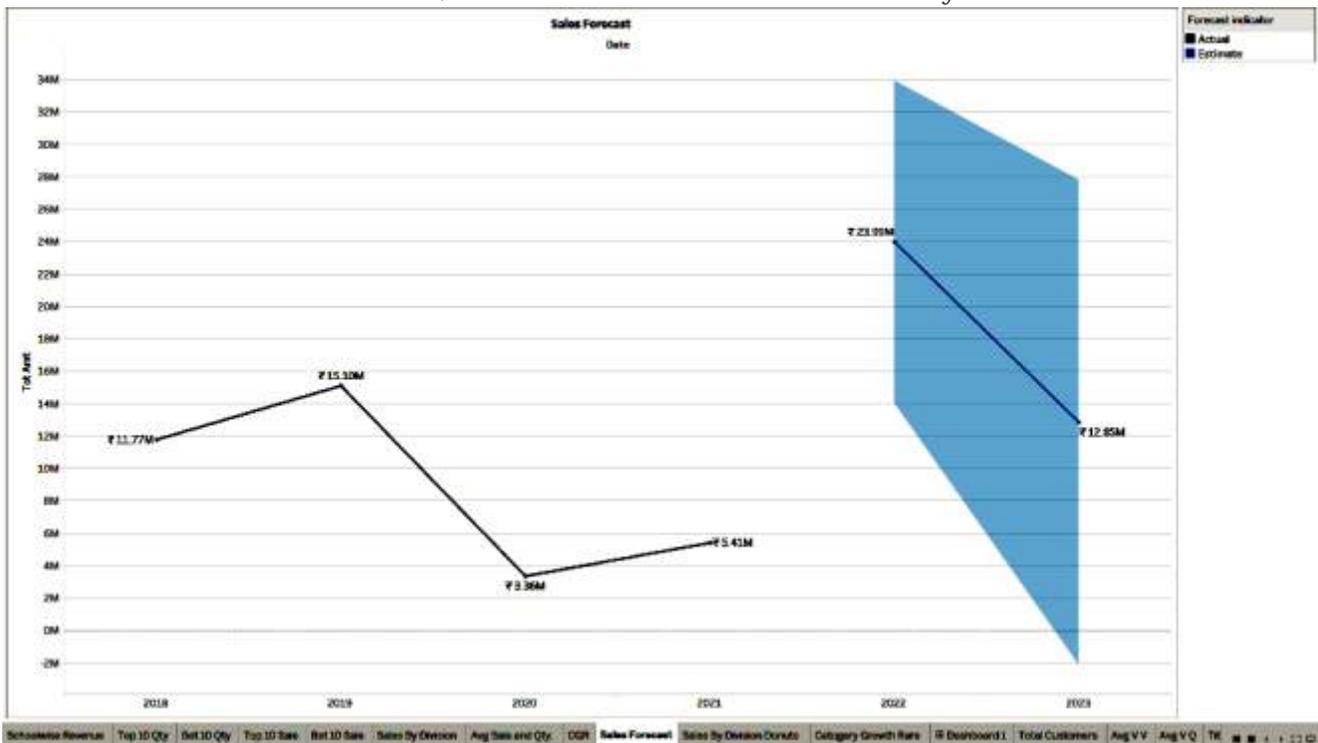
A line graph has been plotted for the purpose of finding the trend of average sales and quantity value per voucher generated. 2018 and 2019 show directly proportionality between quantity of products and its sales however inverse proportionality has been observed in 2020. This

can be explained by the schools being online during the year (Covid-19 lockdown) and customers base being that of fancy items largely. The inverse trend continues to stay in fashion for the years 2021 and 2022.



Compound Growth Rate

Due to the COVID 19 shutdown, there was a sharp decline section. The next year saw increase of 23%. A



Sales Forecast

Sales increased gradually and steadily from 11.77 million to 15.10 million in 2018 and 2019, respectively. Sales fell by a significant amount in 2020, falling to 3.36 million. In 2021, there was a modest improvement up to 5.41 million. Sales increased five times in 2022, and 12.85 million are expected in 2023.

RFM Top

Cust Id	Frequency Score	Recency Score	Monetary Score	RFM Score
1152	9	10	9	28
10331	9	10	9	28
10451	9	10	9	28
10467	9	10	9	28
10475	9	10	9	28
10780	9	10	9	28
10793	9	10	9	28
10820	9	10	9	28
10844	9	10	9	28
10938	9	10	9	28

RFM Low

Cust Id	Frequency Score	Recency Score	Monetary Score	RFM Score
1012972	0	1	0	1
1012982	0	1	0	1
1012997	0	1	0	1
1012999	0	1	0	1
1013001	0	1	0	1
1013004	0	1	0	1
1013014	0	1	0	1
1013027	0	1	0	1
1013050	0	1	0	1
1013073	0	1	0	1

RFM stands for recency, frequency, and monetary value in RFM analysis. RFM analysis is a technique for using data on past customer behaviour to forecast future behaviour from potential new customers. In RFM Top, customer IDs of customer with the maximum RFM score have been charted. In RFM Low, customer IDs of customers with minimum RFM score have been charted. This analysis can be used to set up a loyalty program wherein the customers with higher RFM can be given loyalty points which they can redeem later on during their purchase giving them discount benefits. The same technique can be applied to customers with low RFM to increase their RFM scores.

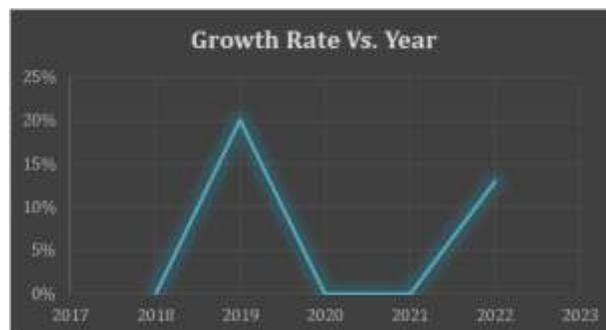
Primary Data Analysis

Based on the questions asked to organisation employees in both the management and floor following interpretations have been made:

1. Did Covid-19 Make any Impact on Business?

The secondary data analysis coincides with the factual and real situation. Covid-19 did have a significant impact on the business, and this is portrayed in almost all the graphs of visualisation dashboard.

2. What is the compound growth rate of organization in last 5 Years?



Primary Growth Rate

Growth rate has been 20% every year pre covid. However, Covid-19 has left the business with hardly any sales for the 2 years of lockdown. Current growth rate is difficult to predict. If the season goes well, we are looking at reviving close to the pre covid rate which should be around 13%. The above answers

clearly match with the secondary data graph of the compound growth rate to a large extent.

3. Which Division contributes the most in the organization?

Uniform divisions without any doubt are the most contributing in the organisation. Followed by Accessories, Fancy and Corporate division lastly. This is evident both in primary and secondary data representation.

4. Is this a seasonal business?

Yes, the prime division being a uniform one, this is certainly a seasonal business. April, May, and June are the month witnessing the highest sales of the year. This statement from the primary data collection interview agrees significantly with the secondary data findings. First and second quarter of the year show the maximum sales record.

5. Which division has scope for expansion?

We are looking to expand in the corporate segment, and it appears promising due to the customisation it offers. Also, space constraints limit our uniform division growth so, corporate is definite means of expansion. The statement is in clear agreement with the SWOT analysis. Space constraints limit the increase in sales for the uniforms and accessories business. Corporate division does not require any major space and can be easily expanded manifold with the current available infrastructure.

6. Which are the top performing schools?

AV and BVB should be the top performing schools. They are followed by THHS and DEMS. This statement from the interview is in somewhat correct. Upon secondary data analysis, the schools rank in terms of performance are AV, THHS, DEMS and then BVB.

Scope

The data for this project is sourced from a retail business. Ms Excel software is used for data cleaning and Tableau is used for data analysis and

visualization. Analytical tools such as FMR analysis, Top N, CAGR, Sales forecasting and trend charts have been used. Analysis has been focused to obtain sales insights. The data has been taken for the past 5 years. Graph types such as pie chart, bar graph, line chart and doughnut chart have been used to elucidate data.

Conclusion

The most astounding result of one of the schools not performing in the last five years was shown by the line graphs of categories vs. their growth rate. Due to its favourable growth since incorporation, the organization's divisional distribution of sales demonstrates to provide a pivotal direction in the advancement of company into the corporate division. The organization's primary categories were discovered to be schools and accessories, which mostly come within the area of uniforms.

Further research revealed that the top 10 product IDs, as shown by their sales on the dashboard, belonged to the accessories category. The organization's growth rate was revealed by CAGR analysis to be 28% pre-covid and 15% post-covid.

The analysis largely agrees with primary data collected upon interviewing the organisation stake holders. A strong agreement was found between the CAGR, most performing division and the impact of covid-19 on the business. B.I. tools and analytics have successfully resembled the practical situations and conditions thus, empowering businesses to make data driven decisions and calculated risks.

A suggestion has been made to close the lowest-performing school after additional investigation of the school's specifics found an extremely low student strength. Because the corporate component doesn't need a selling counter, it may be advertised more widely. Following the placement of the order, the products may be delivered straight to the consumer. The most sensible, data-supported solution is to expand the corporate division given the present space constraints on the organization's selling counters.

References

- Banica, L., & Hagi, A. (2016). Using big data analytics to improve decision-making in apparel supply chains. In *Information Systems for the Fashion and Apparel Industry* (pp. 63-95). Woodhead Publishing.
- Sugumaran, P., & Sukumaran, V. (2019). Recommendations to improve dead stock management in garment industry using data analytics. *Mathematical Biosciences and Engineering*, 16(6), 8121-8133.
- Du, Y. (2019). *Data Analytics and Applications in the Fashion Industry: Six Innovative Cases*
- Ahmad, S., Miskon, S., Alabdan, R., & Tlili, I. (2020). Towards sustainable textile and apparel industry: Exploring the role of business intelligence systems in the era of industry 4.0. *Sustainability*, 12(7), 2632.
- <https://textilevaluechain.in/in-depth-analysis/articles/textile-articles/applications-of-big-data-in-textile-industry/>
- <https://textilelearner.net/application-of-data-science-in-textile-industry/>
- <https://www.tableau.com/learn/articles/business-intelligence>
- <https://azure.microsoft.com/en-in/overview/what-are-business-intelligence-tools/>
- <https://www.inventiva.co.in/trends/top-10-best-apparel-brands-in-india-2023/>

Fundamental and Technical Analysis of HDFC and ICICI Bank

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Mr. Nishant Thakur

ABSTRACT

Fundamental and technical analysis is said to be very important tools for stock investment decisions. Researchers in this research work attempts to study the fundamental and technical analysis of HDFC and ICICI Bank. HDFC Bank and ICICI Bank are India's leading banks, fundamental analysis shows that both companies are profitable and future-oriented, after doing technical analysis, both companies are stable in the market and prices will rise. HDFC Bank and ICICI Bank have stable shareholders with a high proportion of foreign institutional investors. Between both stocks, HDFC Bank shares are stable compared to his ICICI Bank, but ICICI Bank has more options than his HDFC Bank.

Keywords- prolific growth, competitive advantage, marketing strategies, loyal customer group, Technical and Fundamental Analysis.

Introduction

There are 57 insurers in the Indian insurance market. 24 life insurance companies, 34 non-life insurance companies. Life Insurance Corporation (LIC) is the only public agency that provides life insurance. There are six public law insurance companies in the property and casualty insurance business. In addition, General Insurance Corporation of India is the sole state-owned reinsurance company (GIC Re). Agents (individuals and businesses), brokers, adjusters and third-party administrators who process health insurance claims are other market players in India. There are lots of players even in banking sector. Banking is always said to be the backbone of the economy. When it comes to evaluating the banking sector Fundamental and technical analysis can be done.

Objectives of study

1. To study and compare the performance of the HDFC and ICICI banks in the banking sector.
2. To help the investors for choosing to make their investment in banking sector.
3. To calculate the risk-return stock of banking sector.
4. To understand the concept of investing in equity market.

Research Methodology-

For the purpose of research secondary data is collected from websites, books and existing research articles.

The methodology of study consists of –

1. Source of data collection.
2. Statistical tools and techniques.

Sources of data collection –

The data has been collected through primary and secondary source.

1. Primary data –
 - I. Discussion with company mentor.
 - II. Live trading in market.
2. Secondary data –
 - I. Books related to financial management.
 - II. Web Sites used as vital information source.

Statistical Tool and Techniques –

The collected data needed for the analysis are –

1. Comparative Analysis of Balance Sheets
2. Financial Ratio's
3. The data has been analysed through different graphs for selected banks.

Scope of the study

The scope of the project is limited to understanding the basics of fundamental and technical analysis and making investment decisions in the banking sector.

The scope of this project is limited to the banking sector only. This project does not apply to other business sectors.

Limitations of the study

1. The study is based on the data is given by the investors and the employee which may not be 100% correct.
2. Moreover, very few investors and agents have a detail knowledge of the study.
3. The study is confined to only one sector.
4. The project has been limited to investment analysis of banking sector only.

Review of literature

Customer service is a very important and important aspect in banking industry. Customer expectations and requirements in the area of customer service. They tend to rise much faster than banks are ready to

process them with the years. Banks add services to their customers. Indian banking industry is dying. Through customer market stages. Customers have more options to choose from their bank. Competition has been established within the banks operating in India. A lot of research has been done in India and abroad on different aspects. Banks, especially retail banking. Some worthwhile research on banking. Sectors are checked here.

Bhattacharya (1997) He examined the impact of the limited liberalization that preceded deregulation in the 1990s on the performance of various categories of banks. His survey, from 1986 to his 1991 he covered 70 banks. He built a large frontier over the entire period, measuring technological efficiency in three categories, with foreign and private banks showing much lower efficiencies. The main findings are consistent with the general perception that public sector banks have successfully achieved their important objectives of expanding deposits and credit in the era of nationalization. Gaganjot Singh (1998) In his study "New Innovations in the Banking Industry - A Study on New Private Sector Banks", he believes that India's new private sector banks are using better technology and serving their customers better. increase. The new Private His Bank has emerged as a role model for the banking industry in terms of its level of service, atmosphere and technology. Public sector banks have already built huge customer bases, so they are complacent and slowly becoming customer friendly. Nor is it revolutionary in its use of technology-enabled customer service. Amit Shankar, Charles Jebarajakirthy (2019) Opined in their survey that providing quality e-banking services is seen as a fundamental strategy for attracting and retaining customers on e-banking platforms. The purpose of this white paper is to empirically investigate comprehensive coordinated intermediation mechanisms for increasing customer loyalty to e-banking platforms through e-banking service quality (EBSQ) practices. Reliability, website design, data protection and security, and customer service and support are his EBSQ hallmarks.

Fundamental Analysis

Fundamental analysis refers to the study of the underlying core factors that influence the economy of a particular company. It is a research method that attempts to predict price movements and market trends by analyzing economic indicators, government policies, and social factors within the framework of business cycles. The fundamental analysis of a company involves the following parameters –

1. Macro-economic Analysis
2. Industry Analysis
3. Company analysis.

How do investors determine if a stock is undervalued, overvalued, or traded at fair market value? In fundamental analysis, this applies the concept of intrinsic value. can be done by All information about the company's expected future growth, sales, operating costs, industry structure, etc. is available and the resulting analysis, if researched, is said to provide the intrinsic value of the stock. . For fundamentalists, the market price of stocks tends to move towards their intrinsic value. If the intrinsic value of a stock is above the current market price, the investor may buy the stock below

the market price of that stock, sell the stock from the portfolio, or take a short position on the stock.

Technical Analysis

Technical analysis is a method of valuing securities by analyzing statistics generated by market activity such as: B. Previous Price and Volume. Rather than trying to measure the intrinsic value of a security, technical analysis uses charts and other tools to identify patterns that may indicate future activity.

- Technical analysis attempts to predict future price movements, providing traders with the information needed to make a profit.
- Traders apply technical analysis tools to charts in order to identify entry and exit points for potential trades.
- An underlying assumption of technical analysis is that the market has processed all available information and that it is reflected in the price chart.

Data Analysis and Interpretation

Banking Stocks Selected –HDFC and ICICI–

Sr. no	Name	CMP Rs.	P/E	Div Yid %	Mar Cap Rs.Cr.	NPV Qtr. Rs.Cr.	Qtr. Profit Var %	Sales Qtr. Rs.Cr.	Qtr. Sales Var %	ROCE %
1.	HDFC Bank	155.70	21.13	841396.02	1.04	9616.67	20.92	37273.81	15.56	5.83
2.	ICICI Bank	906.40	22.72	631200.99	0.54	7698.19	55.05	26158.60	15.67	5.59

I) HDFC Bank Ltd.

The Housing Development Finance Corporation (HDFC) was one of the first companies to be approved in principle by the Reserve Bank of India (RBI) to establish a private bank. HDFC Bank is a listed banking company, incorporated in August 1994 under the name 'HDFC Bank Limited', with its registered office in Mumbai, India. We offer a wide range of banking and financial services including retail banking, wholesale banking and treasury

banking. Manufactured by HDFC. As of September 30, 2020, it holds 19.32% of the shares. HDFC Bank Ltd. is currently (HBL) India's largest private bank. As of 31 March 2020, the Bank's total assets were Rs. 15,30,511 Cr.

Pros –

- Company has delivered good profit growth of 20.0% CAGR over last 5 years.

Cons –

- Stock is trading at 3.37 times its book value.
- Company has low interest coverage ratio.
- Contingent liabilities of Rs.1, 457,166 Cr.
- Company might be capitalizing the interest cost.

A) Fundamental Analysis of HDFC bank –

Particulars	52 Week high	24-Sep-2022	Difference from 52 week high
Nifty 50	18,604.45	17,291.65	-1,312.8
Bank Nifty	41,840.15	39,412.70	- 2,427.45
HDFC Bank	1,725.00	1,475.00	-250

Using Money Control's website, we found that Nifty's 52-week high was 18,604.45 and the September 24, 2022 price level was 17,291.65. The difference between week 52 and its position on

September 24, 2022 is now only 1,312.8 points away from week 52.

But if you look at Bank Nifty, Bank Nifty's 52-week high was 41,840.15, and on September 24, 2022 it was around 39,412.70, so the gap here is almost -2,427.45 points. If banks return to their 52-week peak, there may be one that really helps them reach their goals. That is HDFC Bank.



2) Bank Presence and Business of the bank –

Business Segment	% Share in PBT	Target Customer Base	Service provided
Wholesale Banking	33%	<ol style="list-style-type: none"> 1. Large corporates 2. MNCs 3. Government Bodies 4. SME's 	<ol style="list-style-type: none"> 1. Working Capital Facilities 2. Project Finance 3. Mergers and Acquisitions 4. Supply chain financing 5. Cash management service 6. Wholesale Deposits
Retail Banking	25%	<ol style="list-style-type: none"> 1. Individual borrowers 2. Salaried & professional borrowers 3. Micro & medium size borrowers 	<ol style="list-style-type: none"> 1. Auto loans 2. Personal loan 3. Home loan 4. Healthcare finance 5. Current account

Treasury	18%	<ol style="list-style-type: none"> 1. Custodian of the bank's cash 2. Liquid assets and manages its investment in securities 	<ol style="list-style-type: none"> 1. Foreign exchange 2. Derivatives 3. Debt capital
Other Banking Operations	24%		<ol style="list-style-type: none"> 1. Para-banking activities such as credit card 2. Debit card 3. Third party product distribution

- 3) Strengths
- The bank has been maintaining a healthy ROA of 1.91% since last 3 years.
 - Company has a good Return on Equity (ROE) track record: 3 Years ROE 16.56%.
 - The Bank is prominently managing its Non-Performing Assets, Average NET NPA of last 3 years is 0.36%.
 - CASA stands at 48.17% of total deposits.
 - Cost to Income ratio stands at 36.88%
 - The company has delivered good Profit growth of 20.59% over the past 3 years.

4) Financials

Narration	Mar-19	Mar-20	Mar-21	Mar-22
Sales	1,05,160.74	1,22,189.29	1,28,552.40	1,35,936.41
Expenses	34,856.27	45,459.21	52,456.53	56,556.96
Interest	53,712.69	62,137.42	59,247.59	58,584.33
Profit before tax	34,318.16	38,194.86	42,796.15	50,873.38
Tax	11,872.55	10,898.59	10,939.38	12,722.48
Net profit	22,332.43	27,253.95	31,833.21	38,052.75
ROE%	17%	16%	16%	17%
NPA	0.38	0.36	0.34	0.32

- HDFC Bank is one of the growing banks in India base on their financial statement the have very good amount sales in 2021 and 2022 year they are growing year by year.
- Their Profit after tax is 12,722.48 Cr in Mar-2022 it will show the HDFC bank is generating profit in their business.
- Coming to share they have very good return on equity ratio they are giving 17% return to their shareholders.
- HDFC bank have very less non-performing assets they are below 1% they have only 0.32% non-performing assets.
- Based on their financial statement the bank is

B) Technical Analysis

1) Chart 2019-2022



The chart shows that HDFC Bank's share price was around RS1,100 in March 2019 and RS1,446.15 on 24th September 2022, showing that the share price from 2019 to 2022 showing growth.

The stock was also down during his COVID-19 pandemic in 2022. The stock is trading at a very low price of 802 RS but during the pandemic everyone used online banking so the company started to make money and as the company grew everyone bought this stock and At the end of 2020, stock prices began to rise.

2) Support Level

1. The below chart shows the support level of the HDFC bank share the first support name as A1

and A2 and second support level name as B1 and B2.

2. This support shows the buyers and sellers purchasing and selling pattern.
3. This support level help to investor in inverts or not to invests at the time.
4. HDFC bank has very good level of support the first support is based on share value 1,100 Rs. And second support is based on share price around 1,300 Rs it is showing the investor are not selling their shares and this is showing the company is stable and have good investor. This help to company for growing in future and shareholder they can get profit buy holding HDFC and shares.



3) Growth of Shares



4) Moving Average Convergence Divergence (MACD)

The chart above shows the current position of the stock, priced at Rs 1446.15. However, it is possible to find the future position of the stock with the help of technical analysis.

A1 and B2 are two lines showing the future growth of this HDFC Bank stock. There are two possibilities. The stock could rise to Rs 1596 or Rs 1480 in the coming days or months.

Investor Total is an existing market where an investor invests between his Rs 1200 to Rs 1300 to profit and exists to profit from price increases.



The MACD indicator is a very good indicator for new investors. Indicates when to buy or sell stocks. This indicator has his two lines, a blue line and a reading line.

When the blue line crosses the red line from above, it gives a sell signal for that stock, and when the blue line crosses the red line from below, it gives the investor a buy or buy signal.

Now, for HDFC Bank, this indicator shows a buy.

III. ICICIBANK

ICICI Bank is India's leading private bank offering a diversified portfolio of financial products and services to individuals, SMEs and corporate clients. Banks have an extensive network of branches, ATMs, and other touchpoints. Currently, the bank operates a network of 5,300 branches and 15,200 ATMs across India. 30% of branches are located in metropolitan areas.

PROS

- Company has delivered good profit growth of 19.8% CAGR over last 5 years.

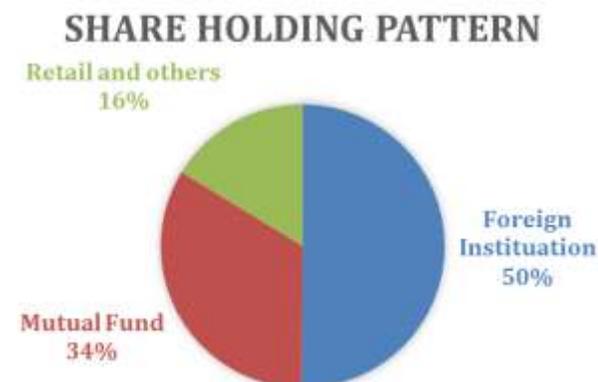
CONS

- Stock is trading at 3.37 times its book value.
- Company has low interest coverage ratio.
- The company has delivered a poor sales growth of 9.38% over past five years.
- Company has a low return on equity of 12.4% for last 3 years.
- Contingent liabilities of Rs.4,627,574 Cr.

A) Fundamental Analysis of ICICI bank

ICICI Bank was a pioneer in offering technology-enabled products to its customers. It is the first bank in India to launch internet banking and use blockchain technology. ICICI says it was a Nifty Next 50 in 2002 and has since transitioned from the Nifty Next 50 to the Nifty 50 Index.

1) Share Holding Pattern –



2) Bank Presence and Business of the bank –

I. Wholesale Banking

The Wholesale Banking Group has a broad client franchise that includes major private companies, large private companies, financial institutions, banks, public companies and government agencies. In recent years, the team has built very strong franchises for multinationals and new age service companies. The team has also built a financial sponsorship franchise specifically focused on private his equity funds and their investee companies.

The bank has a strong presence across the country and can easily and quickly serve corporate customers. Over 100 dedicated transaction banking branches have been identified to expedite the processing of corporate transactions. To meet its foreign exchange and derivatives requirements, the Wholesale Banking Group is backed by one of the country's largest treasury departments. Our cutting-edge product portfolio is comprehensive and technologically advanced, with credit products for working capital and investment needs, as well as clients' needs in trading, treasury, fixed income, commercial paper, channel finance and supply chain. Other products are included. solutions and various other activities.

II. Retail Banking

A customer-centric approach focused on maximizing the lifecycle value of customer relationships has become a key strategy for retailers. This includes creating digital journeys and offering a range of savings, investment, protection and retirement products, convenient payment and transaction banking services. Exploring the enterprise ecosystem for retail business opportunities was another key strategy to enable fine-grained business growth.

III. Government Banking

Banks see governments as essential partners, enabling large-scale investments in the economy and needing comprehensive support for services and banking solutions. The bank cooperates with various levels of central, state, district and local government agencies and agencies, including municipalities and Gram Panchayat. The products and services offered are not only financially oriented, but also enable solutions to improve e-government

through IT solutions that facilitate participation in pilot projects, integrated collection and payment solutions. These efforts also lead to bank balances. The Bank has also worked with governments and local governments during disasters and crises.

3) Strengths

- According to financial analysts, one of the major strengths of ICICI bank is its solid and consistent balance sheet and financial statements.
- In many banking and financial services, ICICI bank has first-mover advantage. ICICI Bank is India's first bank to launch full mobile banking and jewellery card solutions.
- India's Second Largest Bank and First Largest Private Sector Bank.
- ICICI Bank is the second-biggest bank in terms of overall assets and market share.
- ICICI Bank is maintaining good Customer Relations.

4) Financials

Narration	Mar-19	Mar-20	Mar-21	Mar-22
Sales	71,981.65	84,835.77	89,162.66	95,406.87
Expenses	83,774.86	85,360.75	91,308.98	80,798.37
Interest	39,177.54	44,665.52	42,659.09	41,166.67
Profit before tax	7,408.26	18,588.61	25,884.05	34,241.27
Tax	1,719.10	7,363.14	5,664.37	8,457.44
Net profit	4,254.24	9,566.31	18,384.32	25,110.10
ROE%	6.78%	10.13%	12.62%	14.98%
NPA	2.06	1.41	1.14	0.76

1. ICICI Bank is second growing banks in India base on their financial statement the have very good amount sales in 2021 and 2022 year they are growing year by year.
2. Their Net profit are 25,110.10 Cr in Mar-2022 it will show the ICICI bank is generating profit in their business.
3. Coming to share they have very good return on equity ratio they are giving 14.98% return to their shareholders.
4. ICICI bank have very less non-performing assets they are below 1% they have only 0.76% non-performing assets.
5. Based on their financial statement the bank is growing and good option for investor.
6. ICICI bank is primary competitor for HDFC bank and both are good bank but ICICI bank have mover opportunities for grow the business.

B) Technical Analysis

1) Chart 2019-2022



This chart is showing the HDFC bank share price in March 2019 is around 1,100 RS and at 24-sep-2022 is 882.25 this is showing the growth of the share from 2019 to 2022.

This share was also face down fall in COVID-19 pandemic in the year 2020 the share is trading in very

low price 287 RS but in the pandemic every one using online banking so company start earning and company was growing so everyone buying that share and the ending of 2020 the share price was started increasing

2) Support Level



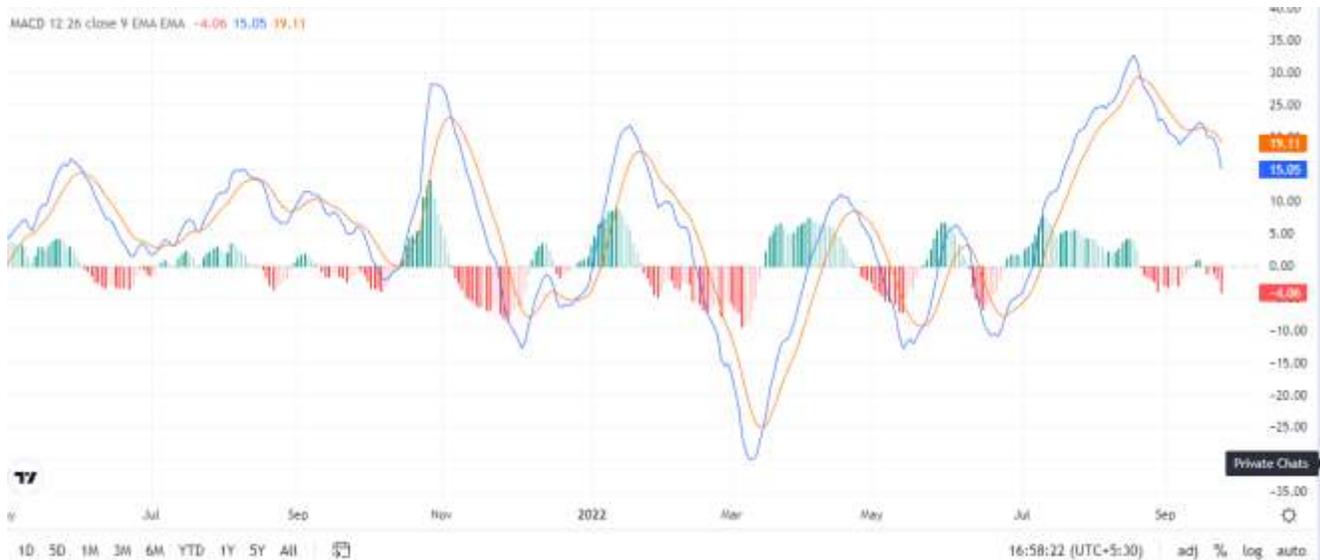
1. The above support level chart showing the ICICI bank supports levels this share had 3 level of support.
2. The first support are shows by A1 and A2 line this support level is around 310 Rs. Second supports is shows by B1 and B2 this support level is close to 550 Rs. And third support level is show by C1 and C2 this is latest support level this close to 880 Rs.
3. This support level help ICICI bank investor to hold or sell their stocks, ICICI bank have very good investor.

3) Growth of Share



1. ICICI bank have goodwill in market because they have very nice relation with their customers.

2. A1,A2 and B1,B2 and C1,C2 is showing the expected growth of ICICI Bank share the expected increasing price is close to 960 Rs in future



1. Moving Average Convergence Divergence is showing that most of investor are going to exist from market or ICICI bank shareholders are going to sell their share because share has reach 917 Rs and now is falling so investor are sell their share and generate profit.

2. MACD indicator blue line is cutting the red live from upside and blue line is going down this indicts investor sell their share and book good profit.

Findings and conclusion of the study

1. Current scenario suggests, markets are on a bullish run, especially in case of banking Industry. Analysis suggests that the chosen stock - HDFC bank and ICICI bank going perform well, with huge potential of eating for equity share
2. Target price of HDFC Bank is minimum 1480 Rs. and maximum price 1596 Rs.
3. Target price of ICICI Bank is minimum 920 Rs. and maximum price 960 Rs.
4. ICICI bank is now the trading at high price so maximum shareholders are planning to sell their share, that's directly affect on price of the share, the ICICI bank share price is go down up to 840 Rs.
5. HDFC Bank and ICICI bank is one of the growing banks in India, investing is that bank give long term profit, both banks are very good percentage of ROE (return on equity) and very less NPA (non-performing assets)

References-

A) Websites –

1. <https://in.tradingview.com/>
2. <https://www.screener.in/>
3. <https://ticker.finology.in/>
4. https://www.moneycontrol.com/promo/mc_interstitial_dfp.php?size=1280x540
5. www.icicibank.com
6. www.hdfcbank.com

A Study on the Returns of HDFC Bank Stock of Past Five Years

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ABSTRACT

The study focuses on the returns given by the HDFC stock in the past five years. It also analyzes the risk associated with it. To give a broader view regarding volatility the study also analyzes the Sharpe Ratio and the beta of the stock. The average returns of last five financial years is 15.218 percent. The Standard Deviation in company share price in last five years is 11.602. The beta of the company in the last five years is 1.017. The Sharpe Ratio is 0.668.

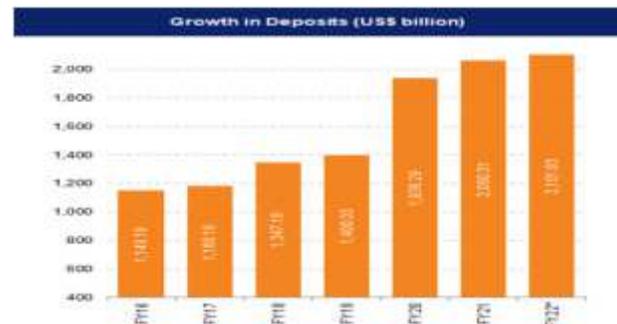
Keywords- Return, Risk, Sharpe ratio, beta, HDFC Bank

Introduction

According to the Reserve Bank of India (RBI), India's banking sector is well-capitalized and well-regulated. The country's financial and economic situation is far superior to that of any other country in the world. Credit, market and liquidity risk studies show that Indian banks are generally resilient and have weathered the global recession well.

The Indian banking industry has recently witnessed the launch of innovative banking models such as clearing banks and microfinance banks. The RBI's new measures could contribute significantly to the restructuring of the domestic banking industry. India's digital payment system is the most advanced among 25 countries and India's Instant Payments Service (IMPS) is the only system at Level 5 of the Faster Payments Innovation Index (FPII).

India's banking system consists of 12 public banks, 22 private banks, 46 foreign banks, 56 regional regional banks, 1,485 city credit unions, 96,000 rural credit unions and credit unions. gain. As of September 2021, the total number of ATMs in India is 213,145, of which 47.5% are located in rural and semi-urban areas. Banking assets increased across all sectors from



Bank deposits have reached Rs 165.74 trillion (USD 2.11 trillion) as of May 20, 2022. According to India Ratings & Research (Ind-Ra), credit growth is expected to reach 10% from 2022 to 2023, which would see him grow double digits in eight years. As of May 20, 2022, bank credit had reached Rs 120.27 crore (US\$1,537.6 billion). As of 20 May 2022, financing for non-food industries has reached Rs 119.74 crore (US\$1,530.8 billion). After referring the data researchers got interest in studying the banking sector so researchers have taken one of the key bank ,HDFC for the purpose of the study.

Objectives of the study

- To identify the volatility in the stock price of HDFC bank

- To find and analyse the beta of HDFC Bank
- To find out the risk and return of selected equity
- To assist the investors in making HDFC stocks investment decision.

Theoretical background

What is a portfolio?

The meaning of portfolio can be defined as a collection of financial assets and investment vehicles held by an individual, a financial institution, or an investment firm. Understanding its fundamentals and the factors that influence them is essential to building a profitable portfolio.

A portfolio, by definition, is a broad collection of assets held by an investor. The above collection of financial assets are also valuables such as gold, stocks, funds, derivatives, real estate, cash equivalents and bonds. Individuals put money into such assets to generate income while ensuring that the original capital of the asset or capital is not eroded. Depending on their knowledge of the investment market, individuals can manage their own portfolios or seek the assistance of professional financial advisors. According to financial experts, diversification is a key concept in portfolio management.

How to approach the study of portfolios?

- Access the Current Situation
- Establish Investment Objectives
- Determine Asset Allocation
- Select Investment Options
- Monitor, Measure and Rebalance

HDFC Bank Profile-

HDFC Bank Limited is an Indian banking and monetary offerings enterprise headquartered in Mumbai. As of April 2021, it is India's largest private bank by assets and he is the 10th largest bank in the world by market capitalization. With a market capitalization of US\$122.5 billion on the Indian Stock

Exchange, it is the third largest company. He is also the 15th largest employer in India with around 150,000 employees.

History

HDFC Bank was established in 1994 as a subsidiary of the Housing Development Finance Corporation Limited, based in Mumbai, Maharashtra, India. Sandoz House, his first corporate office and full-service branch in Worli, was inaugurated by then Federal Finance Minister Manmohan Singh. As of June 30, 2022, the Bank's sales network consists of his 6,378 branches in 3,203 cities. The company has installed 430,000 of his POS terminals, and in fiscal 2017 he issued 23.57 million debit cards and his 12 million credit cards. As of June 30, 2022, we have 1,52,511 full-time employees.

Product and Services

HDFC Bank offers a wide range of products and services including wholesale banking, retail banking, treasury, auto loans, motorcycle loans, personal loans, home loans, consumer perpetual loans, lifestyle loans and credit cards. There are also various digital products such as Payzapp and SmartBUY.

Listing and Shareholding

HDFC Bank shares are listed on the Bombay Stock Exchange and the National Stock Exchange of India. Its American Depositary Receipts are listed on the NYSE and issued by JP Morgan Chase Bank. Its Global Depositary Receipts (GDRs) were listed on the Luxembourg Stock Exchange but were canceled by the Board of Directors due to low trading volumes.

Shareholders (as of 30 September 2021)	Shareholding
Promoter group (HDFC)	25.88%
Foreign institutional investor(FII)	38.30%

Individual shareholders	13.25%
Qualified institutional buyer	4.74%
Insurance companies	2.94%
Unit Trust of India/mutual funds	14.57%
Financial institutions/banks	0.4%
Central government	0.6%

Business Focus

As at 30 September 2016, the authorized share capital of the Bank is Rs.6.5 billion. The paid-up registered capital of the bank is Rs. 509,12,67,434 (2545633717 shares of Rs. 2 each). HDFC Group owns 21.34% of the bank's shares and approximately 18.58% of the shares are held by the ADS/GDR depository (in connection with the bank's American Depositary Share (ADS) and Global Depositary Receipt (GDR) issuances). increase. Also, 32.04% of the shares are held by Foreign Institutional Investors (FII) and the bank has 4,74,443 shareholders.

HDFC Bank shares are listed on BSE Limited and National Stock Exchange of India Limited (NSE). The Bank's American Depositary Receipts (ADS) are listed on the New York Stock Exchange (NYSE) under the symbol 'HDB' and its Global Depositary Receipts (GDRs) are listed on the Luxembourg Stock Exchange under ISIN number 2. Listed on US40415F2002.

Technology

HDFC Bank operates in a highly automated environment supported by information technology and communication systems. All branches have online connections, allowing customers to transfer money quickly. Access to multiple branches is also provided to retail customers through the branch network and his ATMs (ATMs).

HDFC has made significant efforts and investments to acquire the best internationally available

technology to build a world-class banking infrastructure.

For core banking software requirements, corporate banking is supported by Flexcube and retail banking is supported by Finware. The system is open, scalable, and web-enabled.

HDFC Bank has prioritized its commitment to technology and internet as one of its main goals, and has already made great progress in introducing internet into its core business. In each business, the bank has been able to leverage its market position, expertise and technology to create a competitive advantage and increase market share.

Problem faced by the HDFC Bank

The mega-merger of the Housing Development Finance Corporation (HDFC) and HDFC Bank serves as a test case for all significant mergers. But his triple challenge of meeting regulatory requirements, mobilizing deposits and integrating technology will test the administrative bandwidth of India's largest private bank, according to industry experts.HDFC Bank faces the challenge of mobilizing its vast pool of deposits to meet regulatory requirements, including those related to Cash Reserve Ratio (CRR), Statutory Liquidity Ratio (SLR) and Senior Sector Loans (PSL) To do.

Conceptual Understanding

Researchers have explained the terms used in analysis.

- **Return**
Yield is a measure of an investment's gross interest, dividends, and capital gains expressed as monetary gains or losses over a period of time.
- **Risk**
Risk is the uncertainty about an investment that can adversely affect your financial well-being.
- **Sharpe Ratio**
The Sharpe ratio compares the go back and hazard of an investment. It is a mathematical

expression of the notion that extra returns are extra unstable and riskier through the years than prudent investments.

- Beta

Beta is a concept that measures the expected movement of a stock relative to the overall market movement. A beta greater than 1.0 indicates that the stock is more volatile than the broader market, and a beta less than 1.0 indicates that the stock is less volatile.

Types of Research and Research Design

Research methodology simply refers to the practical "method" of a particular research paper. More specifically, it concerns how researchers systematically design their studies to ensure valid and reliable results consistent with their goals and objectives.

For example, how did the researcher go about deciding?

- What type of data are we going to collect (and what data to ignore)
- Who and where do we collect it from (in research, this is called "sampling design")
- How are we going to collect it (this is called "data collection methods")
- How are we going to analyse it (this is called "data analysis methods")

Research Methodology

- Research type - Empirical
- Data type - Secondary Data
- Research tool used - Rate of Return, Standard Deviation, Sharpe Ratio

Data Collection Method

Secondary Source

- Internet.
- Company Database.
- Secondary data will be collected through

company profile, magazines, books and web site of the organization etc

Limitations of the Study

1. Alternative Investments

Portfolio analysis focuses on the products and services a company offers, thus ignoring alternative investments that may be better than investing in the current product offering. For example, a company may invest in new technology rather than devoting more resources to current products and services.

2. One Dimensional in nature

The study only talks about the portfolio returns of HDFC bank of India in the last 05 years which in my point of view in one dimensional in nature

Concepts related to Portfolio Theories

1. The Beginning of Portfolio Theory

In the 1930s, before portfolio theory, people still had 'portfolios'. But their perceptions of portfolios and how they were largely constructed were very different. In 1938, John Verr Williams wrote a book titled Theory of Investment Value that captured the thinking of the time dividend discount model. The goal of most investors has been to find quality stocks and buy them at the best prices.

Regardless of the investor's intentions, investing was betting on stocks that were considered to be the best priced. During this time, information was still coming in slowly, and the price on the ticker tape didn't tell the whole story. Although tightened by post-Great Depression accounting regulations, the market's lax practices reinforced the perception that investing was a form of gambling for those who were too wealthy and too arrogant to face it.

In this wilderness, professional managers like Benjamin Graham have made great strides by first gathering accurate information and then

properly analyzing it to make investment decisions. Successful money managers were the first to consider company fundamentals when making decisions, but their motivation was fundamentally to find a good company at a good price. No one paid attention to risk until his little-known 25-year-old student changed the world of finance.

2. Harry Markowitz and Modern Portfolio Theory (MPT)

Harry Markowitz, then an Operations Research graduate student, was looking for a topic for his PhD. A chance encounter with a stockbroker in his waiting room inspired him to write about the market. When Markowitz read John Burr Williams' book, he realized that the risks of certain investments were not considered.

This inspired him to write the article "Portfolio Choices," first published in the Journal of Finance in March 1952. Far from making waves in the financial world, this work sat dormant on a dusty library shelf for a decade before being rediscovered. One of the reasons Portfolio Selection didn't respond immediately was that only 4 of its 14 pages contained text and discussion. The rest were dominated by graphics and number doodles. Two old axioms are mathematically proven in this article. "No adventure, no gain" and "All eggs he puts in one basket".

3. The Investor and Risk Tolerance

The interpretation of this article has led me to the conclusion that risk, not the best price,

should be at the core of any portfolio. Also, once an investor's risk tolerance was established, portfolio construction was an exercise in making investments formally fit.

"Portfolio Choice" is often viewed in the same light as Newton's Philosophiæ Naturalis Principia Mathematica.

4. How Modern Portfolio Theory Works

Markowitz's research formalized investor trade-offs. At one end of the investment swing are investment vehicles, such as stocks, that offer high returns at high risk. On the other hand, there are bonds such as short-term government bonds, which are low-risk, low-yield investment targets. In the middle, every investor who wants to get maximum profit with minimum risk tries. Markowitz created a method to mathematically balance an investor's risk tolerance and expected return in order to create an ideal portfolio. He chose the Greek letter beta to represent the volatility of stock portfolios against broad market indices. If the portfolio beta is low, it means it moves with the market. Beta values for most passive and couch potato portfolios are low. A portfolio with high beta means it is more volatile than the market.

Despite the connotations of the word volatile, this is not necessarily a bad thing. A more volatile portfolio can be significantly profitable if the market is winning. On the other hand, if the market falls, the same volatile portfolio could suffer even more losses. This style is neither good nor bad. It tends to be more unstable.

Data Analysis

Nifty Market Index Returns(FY)

Table 01

(Calculation of Rate of Return) Rate of Return= [(Closing Price – Opening Price)/Closing Price * 100

Opening Year	Opening Price	Closing Year	Closing Price	Market Returns, x(%)
2016	7718.05	2017	9220.60	16.30
2017	9220.60	2018	10151.65	9.17
2018	10151.65	2019	11665.20	12.97
2019	11665.20	2020	8584.10	-35.89
2020	8584.10	2021	14798.40	41.99
				̂ x=44.54

$\text{Avr. } X = \sum x/n = 44.54/5 = 8.908$

HDFC Bank

Table 02

(Calculation of Rate of Return) Rate of Return = [(Closing Price – Opening Price)]/Closing Price * 100

Opening Year	Opening Price	Closing Year	Closing Price	Returns, y(%)
2016	534.40	2017	723.00	26.08
2017	723.00	2018	945.25	23.51
2018	945.25	2019	1162.63	18.70
2019	1162.63	2020	863.85	-34.59
2020	863.85	2021	1499.40	42.39
				$\sum R = 76.09$
				$\bar{y} = 15.218$

Average Return, $\bar{y} = \sum R / n$

Interpretation: Average rate of return per year for last 5 years is 15.218

Table 03

Standard Deviation calculated for HDFC Bank

Opening Year	Opening Price	Closing Year	Closing Price	Returns, y(%)	$y - \bar{y}$	$(y - \bar{y})^2$
2016	534.40	2017	723.00	26.08	10.862	117.983
2017	723.00	2018	945.25	23.51	8.292	68.757
2018	945.25	2019	1162.63	18.70	3.482	12.124
2019	1162.63	2020	863.85	-34.59	-49.808	2480.836
2020	863.85	2021	1499.40	42.39	27.172	738.317
				$\sum y = 76.09$		$\sum (R - \text{Avr. } R)^2 = 3418.017$
				Avr. R = 15.218		

Standard Deviation = $\sqrt{\sum (R - \text{Avr. } R)^2 / n} = \sqrt{\sum (y - \bar{y})^2 / n}$

Standard Deviation = 11.692

Table 04
Beta Calculation for HDFC Bank(b)

Year	Market Returns(x)	(x- \bar{x})	(x- \bar{x}) ²	Security Returns, y	y- \bar{y}	(y- \bar{y}) ²	(x- \bar{x}) (y- \bar{y})
2016 - 2017	16.30	7.392	54.641	26.08	10.862	117.983	80.291
2017 - 2018	9.17	0.262	0.0686	23.51	8.292	68.757	2.172
2018 - 2019	12.97	4.062	16.499	18.70	3.482	12.124	14.143
2019 - 2020	-35.89	-44.798	2006.86	-34.59	-49.808	2480.836	2231.298
2020 - 2021	41.99	33.082	1094.418	42.39	27.172	738.317	898.904
	$\bar{x}=44.54$		$\sum (x-\bar{x})^2=3172.4866$	$\bar{y}=76.09$		$\sum (y-\bar{y})^2=3418.017$	$\sum XY=3226.808$

$$\text{Beta(b)} = \text{Co- variance/ Variance} = \frac{\sum XY}{\sum (x-\bar{x})^2} = 1.017$$

Sharpe Ratio= $\bar{R}_p - R_f / S.D.$

Average Return=15.218

Standard Deviation=11.692

Risk free=7.4

Calculation: $S.R. = \frac{15.218 - 7.40}{11.692} = 0.668$

Interpretation: The Sharpe's Ratio is 0.668

Data Interpretation

From the above data it is quite clear that HDFC has given a good return of around 15% over the last five years. The sharp decline we are seeing in the share price in march 2020 is due to the fact that covid had just hit the modern world and there was a worldwide lockdown during that period. And a positive beta is associated with a tendency of the portfolio to move in the same direction as the market. Here the beta is positive which means that the HDFC share price moves proportionally to the share market. The stock also has a positive share ratio of .668 which means when it comes to risk adjusted return the stock is not doing good i.e. just less than good.

Major Findings

- The average returns of last five financial years is 15.218 percent
- The Standard Deviation in company share price in last five years is 11.602
- The beta of the company in the last five years is 1.017
- The Sharpe Ratio is 0.668
- It is definitely possible to construct an optimal portfolio using NIFTY 50 companies enlisted on NSE
- Companies move negatively with the market return as their average return is negative response.

Suggestions

- The volatility or the fluctuations in the stock

References

- <https://www.ibef.org/industry/banking-india>
- [inance.yahoo.com/quote/HDFCBANK.NS/?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAACxzLcLktvZOaWvi_vNmG2rrta8fkgoaH7Bj95RkaDv_RWAOanhmaHgBju1c4B9x7uCZx1M8x-kq0nlgcUeSXwxnWk_r2zAI2zjf10rYOYVVG12wp0TntweuwIyV5xGCzovNnUtH1VQfdkiYIC8zq_W5hfgaXUj0bBjvhERiKq-s](https://finance.yahoo.com/quote/HDFCBANK.NS/?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAACxzLcLktvZOaWvi_vNmG2rrta8fkgoaH7Bj95RkaDv_RWAOanhmaHgBju1c4B9x7uCZx1M8x-kq0nlgcUeSXwxnWk_r2zAI2zjf10rYOYVVG12wp0TntweuwIyV5xGCzovNnUtH1VQfdkiYIC8zq_W5hfgaXUj0bBjvhERiKq-s)
- <https://www.google.com/finance/quote/HDFC:NSE?hl=en>
- <https://www.hdfcbank.com/>
- <https://in.investing.com/equities/hdfc-bank-ltd>
- <https://www.google.com/search?q=nse+stock+exchange+of+hdfc+bank&aq=chrome..69i57j33i160l2j33i22i29i30l2.13806j0j7&sourceid=chrome&ie=UTF-8>

keep changing in the stocks along with their beta and variance. So eventually the investors have to observe constantly about the market.

- The optimal portfolio is a subject to change, because the proportion of investment changes in each security from time to time.
- Regular analysis or changes in the market has to be done as it would benefit and also minimize the consequences of incurring losses.
- Continuous evaluation of stock is necessary and the portfolio has to be updated periodically to overcome the changes.
- The awareness of the utility of securities screening the optimal portfolio construction must be made use of the investor.
- Market movements can impede decisions for investors or securities based on portfolio weighting.

Conclusions

The study risk return investigation helps the investor to pick up the securities based on his choice. The study of this kind provides information about the performance of security in the market in terms of risk and return. From the study the researcher came to know about the rate of return of HDFC stock in the last five years. On top of that the study also showed the Beta and Sharpe Ratio of the share in the last five years. In conclusion the researcher can say that by looking at the beta and current overall market trend in future one can invest in HDFC in order to get good returns.

Study on factors influencing Consumer's adoption of Wearable Technology Devices in India

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ABSTRACT

The introduction to plethora of new interconnected "things" and their establishment in our daily lives is causing technology to undergo a fundamental evolution. The one of the core adaptive technologies that may gather the rich contextual data produced by these devices and use it to produce specialised experiences is wearable technology. The primary goal of this research is to shed light on the variables that affect consumers' acceptability of wearables. The study also discusses wireless communications technologies, their applications, and market situations in addition to offering a thorough and varied taxonomy of wearables based on a number of different variables. Research also shows that there is consumer preference for the variety of wearable technologies that are actually available in market. With regards to India, research paper specifically discusses about Boat consumer electronics and other wearable brands. Questionnaire was prepared for understanding consumer behavior towards wearable devices. Finally, the study identifies significant obstacles as well as existing and potential solutions regarding the industry.

Keywords: Wearable, Wearable technology, Smart devices, Communications, consumer adoption, Localization, features.

Introduction

An expanding number of innovative services and increased customer demands are driving the rapid growth of the Information and Communications Technology (ICT) industry today. In general, the number of interconnected handheld devices has been rapidly increasing year after year, owing towards both consumer demand and widespread use of the Internet of Things. In recent years, curiosity for smart wearable devices has grown exponentially.

Wearable devices, or wearable technology are small

electronic and mobile devices or computers with wireless communications capacity that are built into gadgets, accessories, or apparel which can be worn on the human body, or even more invasive versions such as nano-chips, micro-chips, bio sensors and smart tattoos.

When compared to today's smartphones and tablets, wearables have the advantage of being able to deliver a variety of monitoring and scanning features, such as biofeedback or other sensory physiological functions such as biometry. Wearables are

convenient, seamless, portable, and can provide hands-free access to electronics.

Furthermore, the COVID-19 pandemic had a significant impact on the evolution of wearable devices, which was fueled by the adoption of various crowd-sensing and contact-tracing platforms. Wearables are predicted to expand steadily over the next few decades, with a major shift away from wristbands and sport trackers toward smarter, more feature-rich wearables. Wearable technology is having a huge impact on the ICT industry, and smart wearables are predicted to disrupt a wide range of personal and business sectors, including manufacturing, healthcare, and sports.

Despite its popularity, there are still obstacles to adoption of wearable technology. Barriers and hurdles must be identified and overcome, and benefits and values must be increased and enhanced for wearable technology to be embraced successfully. (Baber, C. 2001)

Objectives

- To provide overview on wearable technology.
- To determine the factors that affect customer decisions about the adoption of digital wearables.
- To study and analyze survey conducted regarding smart wearables and come up with findings.
- To identify open challenges, obstacles and provide a vision for future developments in smart wearables market.

Review of literature

(Donthu and Gilliland, 1996) Two factors influencing the consumers' decision-making are risk aversion and innovativeness. Risk aversion measures how much consumers need to be specific and sure of what they are purchasing. Highly risk-averse consumers need to be very certain about what they are purchasing while consumers who are at less risk-averse can tolerate some risk and uncertainty in their purchases. The second variable, innovativeness, is a global

measure that captures the degree to which consumers are willing to take chances and experiment with new ways of doing things. The shopping encouragement literature has crawled with chromatic measures of individual characteristics (e.g., innovativeness, enterprising, sophisticated, variety seeking), thus, innovativeness and risk aversion were included in this study to bring in several of these traits. Methods described by Donthu and Gilliland (1996) were used to measure risk aversion & innovativeness.

Classification of smart wearable's according to body location.



Classification based on the wearable application/functionality types (sorted alphabetically).

Type	Brief description
Communication functionality (C)	Provides the potential not to process the data locally but to exchange it with surrounding nodes and/or remote cloud.
Control/input functionality (CI)	A broad area of input devices ranging from smart buttons to sophisticated gesture recognition devices. This group's main task is to extend conventional Human-Computer Interaction (HCI) input focusing on the usability of the devices keeping a small form-factor as a rule.
Education and professional sports (ES)	Aim at improving the education and training by monitoring assistants.
Entertainment, gaming, and leisure functionality (E)	The improvement of the perception experience include, e.g., audio systems, personal entertainment displays, etc.
Heads-up, Hands-free Information (HI)	Extend the conventional ways of the data delivery to the user utilizing personal assistants, AR, XR, Remote Expert Devices, wearable cameras, etc.
Healthcare/medical functionality (HM)	Separated from conventional sensing and monitoring ones due to the need to obtain medical device status that requires significant effort in the device development and testing as well as providing a high level of the obtained data trustability and the need for additional certification, however, covering similar devices, e.g., Electrocardiogram (ECG), Electroencephalogram (EEG) monitors, relaxation devices, neural interfaces, exoskeletons, etc.
Location tracking functionality (LT)	Requires to have either some Global Navigation Satellite System (GNSS) on board or, at least, a wireless communication technology. On the one hand, the concept here corresponds to location awareness from the node's perspective and, on the other hand, to remote localization of the device if needed.
Notification functionality (N)	Ranges from simple vibration notification to complex AR extensions. Similarly to sensing functionality, almost any personal device connected to the cloud directly or via the gateway can carry this functionality.
Output functionality (O)	Various visual, audio, or haptic-enabled devices to provide the user and/or people around with prompt information from the personal ecosystem.
Safety and Security functionality (S)	Personal safety devices, emergency assistants, etc.
Monitoring functionality (M)	Extremely straightforward and cheap to implement this functionality. Generally, any device that has an accelerometer on board can already provide some level of sensing. (Fitness and preventive healthcare — Activity Trackers, ECG, EEG monitors, etc.)
Wearable devices for pets and animals (PF)	Mainly covers smart collars, bark collars, smart clothes, etc.

Summary of the main challenges related to modern wearable technology (sorted alphabetically).

Challenge	Groups	Observed existing approach
Appropriate service/DT placement and migration	A, DP	Utilization of an algorithm for replica placement An algorithm for the optimal migration strategy of services based on dynamic programming A model for resource management based on the regularization technique A framework to design optimal service migration policies based on Markov decision process
Data collection issues	DP, SW	Development and application of a unified, trusted crowdsourcing platforms
Datasets' imbalance	DP	The application of data augmentation methods for imbalanced datasets and weighting architecture
Energy overheads related to sensing	DP, HW, SW	Following of the sensing energy consumption minimization strategy
A feeling of constant surveillance	UR	A detailed explanation of the purpose of the monitoring and what is going to be done with the collected data Providing the user with privacy and security of collected data
Inefficient computing resources detection	A, N	Carefully developed access shames allowing the users to utilize nearby mobile devices' computing resources as much as possible while not wasting too much energy on other devices' discovery
Inefficient data analytics	DP, SW	Application of techniques from the field of statistics and ML
Inefficient switching among resources in hybrid/heterogeneous networks	A, N, HW	Selection and utilization of improved task offloading schemes
Insufficient computing capabilities	A, N, HW	The use of D2D communication to improve mobile cloud computing's performance
Lack of appropriate data labeling	DP	Application of semi-supervised methods
Lack of direct interoperability between A, DP eHealth devices		A system architecture based on IEEE 11073, Constraint Application Protocol (CoAP), and Universal Plug and Play (UPnP) A reference implementation based on Transmission Control Protocol/Internet Protocol (TCP/IP), CoAP
Lack of modern energy harvesting opportunities	HW	The use of micro-kinetic energy harvesting systems Powering wearables with solar energy harvesting The application of self-powering smart fabric The integration of wireless power transfer option for implantables Continuous power generation from ambient sources
Lack of network resources	A, N	The application of D2D to extend the system capacity thanks to data offloading and reuse gain The use of D2D-MEC system to improve the computation capacity of the whole system
Problems related to broadcast communications	A, N	Group communications (multicast transmission)
Limited amount of the available data	DP	Extension of the available data by applying the data augmentation techniques
Low data quality	DP	The application of post-processing techniques to improve the quality
Low data resolution	DP	The utilization of active and passive data collection approaches to increase the resolution
Low QoS indicator	A, N	Cluster-based multicast transmission methods for D2D communications
Low technical skills	UR	A detailed guidance and training including seminars and interactive lessons for every age group Friendly and responsive customer support
Non-optimized security and privacy enablers	HW, DP, SW	Content agnostic privacy and encryption protocol eliminating the need for asymmetric encryption Integration of lightweight cryptography solutions including more appropriate elliptic curve types or algorithm implementations More efficient utilization of manufacturer-provide System on Chip (SOC)s accelerated for cryptographic primitives execution Finding trade-offs between the primitive and required level of the provided security
Problems of classification, anomaly detection, forecasting problems	DP, SW	The application of ML approaches

A – Architecture; N – Networking; DP – Data Processing; HW – Hardware specific; SW – Software specific; UR – User-related.

Factors influencing in adoption of wearable technology

1. Unified Theory of Acceptance and Use of Technology

To incorporate the elements fostering innovation in information technology, UTAUT was established (Venkatesh, Morris, Davis & Davis, 2003). This Technology Acceptance Model, Rational Behaviour Theory, Planned Behaviour Theory, and the Innovation Diffusion Theory are just a few of the adoption-related models that are being integrated into the literature under the umbrella of UTAUT.

The five-core constructs posed in UTAUT are:

- 1) PE - Performance expectancy
- 2) EE - Effort expectancy
- 3) SI - Social influence
- 4) FC - Facilitating conditions.
- 5) H - Habit

Only Performance Expectancy and Habit were found to be important elements in the analysis and hence are thought to have a favourable impact on an individual's behavioural intention to adopt wearable technology for health and fitness goals. These findings imply that when people think about buying these gadgets for physical exercise, they're mostly concerned with how well they can do each activity while providing reliable user input. Due to the device's many performance features, individuals tend to be dependent on their devices for everyday usage as well as daily physical activities.

2. Fashion and technology

(Rauschnabel et al., 2016)Wearable technology adoption is based not only on technological features but also on design aesthetics. Wearable technologies are therefore termed to as "fashnology," as they are both fashion accessories and utilitarian technologies. According to Rauschnabel et al. (2016), smart glasses are considered as fashnology by most of the users (75 per cent). They dubbed these users "technologists," implying that they see and analyse smart glasses from both a fashion and a technological standpoint. While users who consider smart glasses mostly a fashion

accessory emphasis upon perceived usefulness and ease of using it, social benefits, & privacy on their decision-making, consumers who view them simply as technology focus on functional benefits. Pay attention to any compromising concerns. Others highlight important factors in hiring decisions.

3. Other researcher's findings on adoption of wearable devices

(Dvorak, 2008): Dvorak coined five key factors driving mainstream adoption of wearable technology. Portability, ease of use, attractive design, functionality and price.

(Rhodes, 1997):Rhodes has identified three key attributes of wearable devices. Portability in use, minimal manual input, and sensitivity to hold the user's attention even when not in active use.

In order to be useful in the actual world, wearable technology must meet three criteria: It should be mobile, must be augmented reality and must be situational (Billinghurst & Starner, 1999). To increase personal productivity, wearable electronics must be more integrated into daily life and combine collaboration, computing, and contextual awareness. Each one of these computing specifications/features free up mental capacity and enable an individual to devote more time to creative endeavours.

Kim and Shin (2015): An extended:A Technology Acceptance Model (TAM) that integrates key psychological determinants of smartwatch adoption. i.e., Emotional Quality, Relative Dominance, Mobility, Availability, and Subcultural Attraction - Developed by Kim and Shin (2015). Their results suggest that emotional quality and relative benefits of smartwatches are associated with perceived utility, whereas mobility and accessibility are associated with perceived ease of use. Device cost and subcultural appeal were predictors of user attitudes and intent to use.

Consumer behaviour

Marketers have always been quite interested in consumer behaviour. Understanding consumer behaviour helps marketers better to understand how

customers choose among many options, including products, brands, services and how they are impacted by their surroundings, peer groups, families, and salesmen, among other factors. Cultural, social, personal, and psychological aspects all have an impact on a consumer's purchasing behaviour. The majority of these elements are out of marketers' control and uncontrollable, yet they must be taken into account while attempting to comprehend complicated consumer behaviour. The importance of lifestyle and its effect on consumer behaviour with regard to smart wearables is highlighted in this study.

Research Methodology

Research methodology is the procedures or specific techniques used to determine, identify, select, process, and analyse information about a particular subject or topic. The basic objective of the study is to solve the problem by using available data.

Primary data was used for research purposes, various techniques were used in process of data collection.

Secondary data was also collected from articles, journals, newsletters and the internet for intensive research in the field of wearable technology.

Research design

This study used a qualitative approach to analyse rich data that were collected through surveys, working professionals, and homemakers participating in surveys and interview was conducted to get in-depth knowledge on the adoption of digital wearables.

Sampling method

The sample is the fraction of the population; sampling is a technique or a method of selection of samples. For carrying out this research most appropriate sampling techniques were used for research that is the simple convenient sampling technique & stratified sampling technique.

The questionnaire was started by collecting general information about the respondents (i.e., age, gender and user experience of a Wearable Technology device). Questions were framed in nominal, ordinal and interval scale type questions.

Data Analysis- Basic information related to survey

Demographical information

1. Gender



54% male and 46% of female were participated in survey.



<18	18-24	25-	45	46-60
8%	85%	5%	2%	0%

Most number of people who participated in survey were aged between 18-35 i.e., 85 % followed by <18 (5%), then 25-35 with 5% and 36-45 with 2%, no one from age 46-60 was participated.

3. Job/Occupation

Student	82%
Private/Govt. Service	13%
Housewife	02%
Self Employed	03%

<u>Sample size</u>	<u>84 (later converted to 100)</u>
<u>Data collected through</u>	<u>Google forms (online) & interview</u>
<u>Location of survey</u>	<u>Nagpur & Pune</u>
<u>Duration of survey</u>	<u>1 week</u>

QUESTIONNAIRE

4. DO YOU USE WEARABLE TECHNOLOGY DEVICES LIKE-

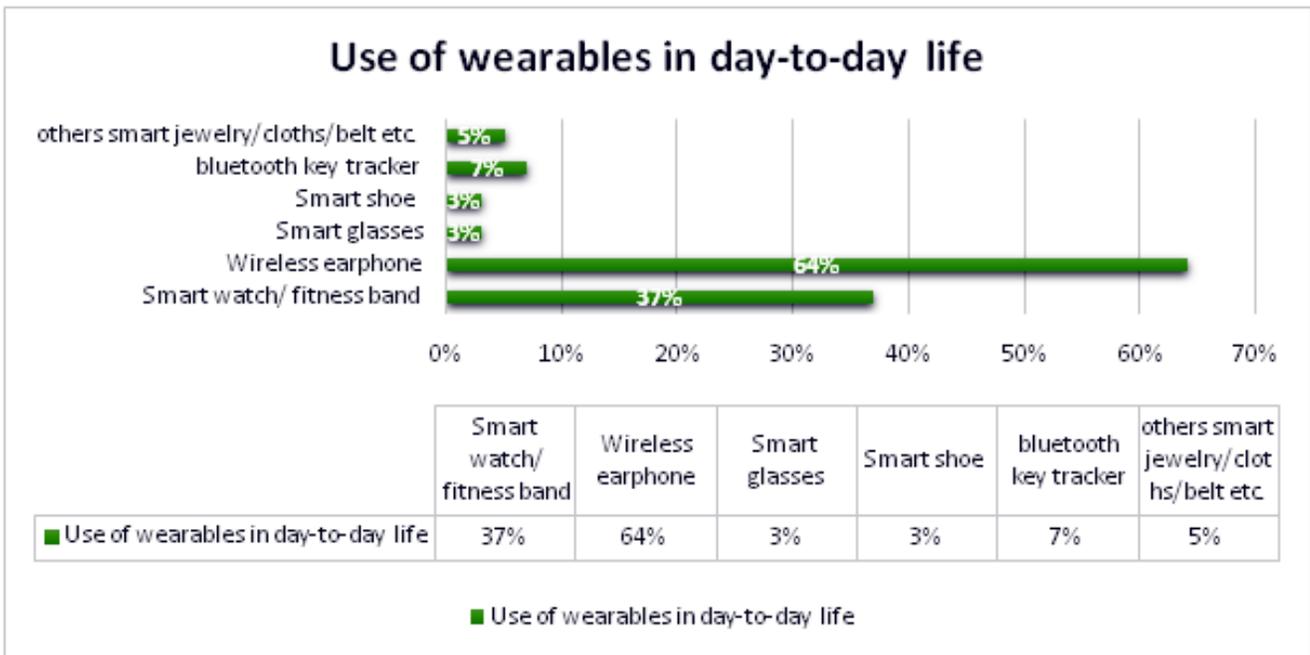
SMART WATCH, FITNESS BAND, HEARABLES, SMART CLOTHS, SMART SHOE etc.

Do you use smart wearables



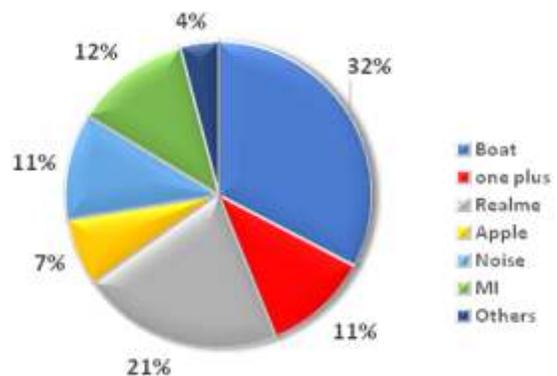
83% respondents use smart wearables while 17% respondents don't.

5. IF YES, WHAT WEARABLE TECHNOLOGY DEVICES YOU USE IN DAY-TO-DAY LIFE?



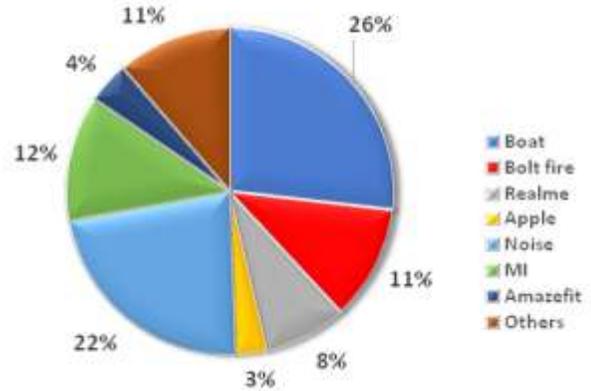
It is evident from the above bar graph that use of wearables devices in day-to-day life is as follows, 37% of people use Smart watch/ fitness band, 67% people use wireless earphone, 3% of people use smart watch & smart shoe, 7% preferred to use Bluetooth key tracker and 5% of the respondents tend to use other devices such as wearable technology devices.

6. WHAT BRAND DO YOU PREFER IN WIRELESS HEARABLE/AUDIO DEVICES?



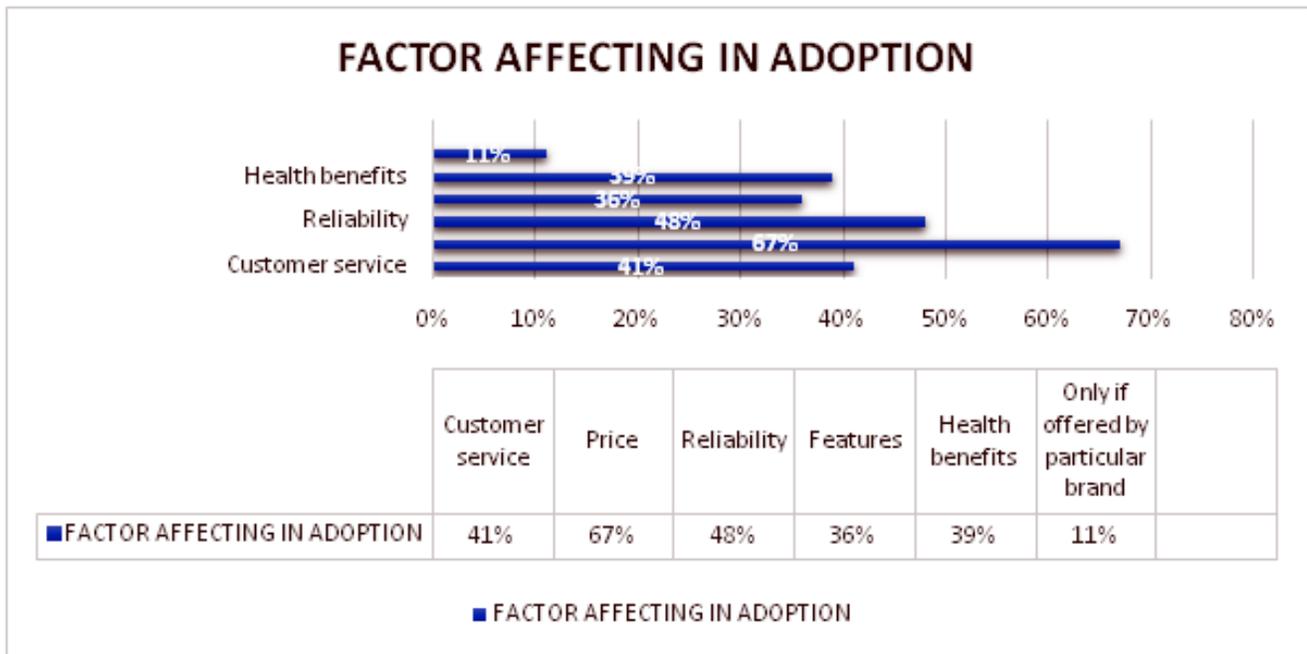
It can be seen that boat and realme holds majority percentage among respondend brands i.e 32% & 21% respectively.

7. WHAT BRAND DO YOU PREFER IN FITNESS BAND/SMART WATCH DEVICES?



It is evident that boat and noise holds majority among responded brands. e 26% and 22% respectively, followed by bolt-fire, mi, amazefit, apple and other brands.

8. ACCORDING TO YOU, WHICH FACTORS MATTER'S MOST IN SMART WEARABLES



Findings

1. Survey shows that price and reliability affect the most while selecting the wearable devices, when compared with other elements or offerings.
2. The findings revealed that the influencing factors—safety, product attributes, and perceived ease of use—have a significant impact

and are taken into account when purchasing wearable technology. Furthermore, behavioural beliefs have a significant influence on product characteristics, which in turn affects purchase decisions.

3. On analysing Unified Theory of Acceptance and Use of Technology (UTAUT) Only Performance Expectancy and Habit were found to be

important elements in the analysis, and hence are thought to have a favourable impact on an individual's behavioural intention to adopt wearable technology.

4. In the last few years, Indian consumers have shown increased interest in wearable devices like smartwatches, fitness trackers, and fitness monitors, among others. Consumers are becoming more conscious of wearable devices and software that serve to make daily living easier. Increased spending power and consumer awareness in India are propelling the development of the wearable tech industry.
5. The increased availability of 4G and Wi-Fi networks is fuelling the adoption of wearable devices across the country. India is one of the fastest growing economies that is embracing 4G networks, and this is expected to trigger the growth of wearable technology and the devices market.
6. Brands like boat lifestyle Pvt. Ltd. are creating strong grip in the smart wearable market with its unique marketing strategies, some of boat insights are as follows:
 - Boat's marketing strategy proves how a young business can develop a strong brand. Boat achieved great success in a short period of time.
 - Boat brings its products in such a manner that makes them appear to be something important that best satisfies the clients, instead of just another item to be sold in market.
 - The Boat has reported Rs 700 crore in gross sales for FY 2020, an increase of about 315 percent over FY 2019, and it intends to reach Rs 1000 crore in sales till 2024.
 - From the survey it is evident that Boat values its customer and connects with them to create better products for them.
 - Boat is continuously evolving and changing its products to perfectly match customer needs.
 - Following findings can also be extracted after the Boat company's study:
 1. Customer-first mindset

2. Positioning itself as a lifestyle brand
3. Increasing product library (catalogue)
4. Appropriate targeting

Conclusion

Study shows that the parameters that drive wearable technology adoption vary depending on the device and the user demographic, class, segment. These findings, as well as the connections to personal values, are significant contributions of this study. Notifications, which are often displayed on a panel on wearables that need access to a smartphone, are some of the elements that have been identified in the research. Fitness apps (apps that let you track your health data), internet connectivity (the capacity to access the World Wide Web), GPS (navigation, maps, and location services), GPS Precision (accuracy and dependability of GPS services), & bodyweight (using speech recognition or gestures to communicate with wearable technology without touching or tapping). Though privacy protection is an issue relating to social components in the area, form, identity, and look-and-feel are tied to accessibility in the research on wearable technology. In addition, study discovered new dynamics in the adoption of wearable technologies, as follows:

1. Survey shows that price and reliability affect the most while selecting the wearable devices, when compared with other elements or offerings.
2. Safety, Product Attributes Perceived & Ease of Use, these factors are considered while buying wearable devices.
3. Boat's marketing strategy states how even a young company can create a leading brand in a short span.

To summarize, wearable technology is an essential building block in the future information communication technology systems. It is still in its infancy, and several critical challenges from data acquiring and processing, communications, security, privacy aspects, hardware limitations, and user adoption are still to be addressed. This paper highlights those and provides the reader holistic view of wearable devices

References

- Baber, C. (2001). Wearable computers: A human factors review. *International Journal of Human-Computer Interaction*, Baber, C. (2001). Wearable computers: A human factors review.
- Baber, C. (2001). Wearable computers: A human factors review. *International Journal of Human-Computer Interaction*
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*,35(8), Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*,35(8),
- Dvorak, J. L. (2008). Moving wearables into the mainstream: Taming the borg. New York, NY: Springer.
- Donthu, N., & Gilliland, D. (1996). Observations: The infomercial shopper. *Journal of Advertising Research*, 36(2), 69–76.
- Dvorak, J. L. (2008). Moving wearables into the mainstream: Taming the borg. New York, NY: Springer.
- Hein, D. W., & Rauschnabel, P. A. (2016). Augmented reality smart glasses and knowledge management: A conceptual framework for enterprise social networks. In A. Rossmann, G. Stei, & M. Besch(eds.) *Enterprise social networks*
- Billinghurst & Starner, (1999). Wearable devices: new ways to manage information. *Computer* (Volume: 32, Issue: 1,57 - 64, Jan 1999). IEEE
- Kim, KJ & Shin, D-H 2015, 'An acceptance model for smart watches: Implications for the adoption of future wearable technology', *Internet Research*, vol. 25, no. 4, pp. 527-541.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*,27(3), 425–478
- B. Rhodes, A Brief History of Wearable Computing, MIT, 2019, [Online]
- Apurva Adapa, Fiona Fui-Hoon Nah, Richard H. Hall, Keng Siau, and Samuel N. Smith (2018), Factors Influencing use of Smart Wearable Devices, *international journal of human-computer interaction* Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*,27(3), 425–478
- Sina NordhoffTyron LouwSatu InnamaaEsko LehtonenAnja Beuster Guilhermina (2020), Using the UTAUT2 model to explain public acceptance of conditionally automated (L3) cars, *ELSEVIER journal*
- A Survey on Wearable Technology: History, State-of-the-Art and Current Challenges, *Computer networks*, Elsevier,
- <https://www.boatt-lifestyle.com/blogs/news/boat-creates-history-becomes-5th-biggest-wearable-brand-in-the-world>
- <https://www.sciencedirect.com/science/article/pii/S1389128621001651>
- <https://www.media.mit.edu/wearables/lizzy/timeline.html>
- Unique Watch Guide, Calculator watches, 2015, [Online]
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