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Bhujbal Knowledge City
MET INSTITUTE OF MANAGEMENT

MET MANAGEMENT REVIEW

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THE MET LEAGUE OF COLLEGES
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Bhujbal Knowledge City

Mahatma Jyotiba Phule
(1827-1890)

Shrimati Savitribai Phule
(1831-1897)

OUR FAITH

न चौर हार्यम् नच राज हार्यम्।
न भातृभाज्यम् नच भारकारी।।
व्यये कृते वर्धते एव नित्यम्।
विद्याधनं सर्वधन प्रधानम्।।

Knowledge can neither be stolen by a thief,
nor snatched by a king.
It is indivisible unlike ancestral property,
it never burdens the bearer,
it multiplies manifold when offered to others.
Knowledge is the supreme form of wealth.

MET INSTITUTE OF MANAGEMENT VISION

To emerge as a leading management Institute developing globally relevant, socially responsible and emotionally competent management professionals and entrepreneurs.

MET INSTITUTE OF MANAGEMENT MISSION

1. To empower management professionals with the latest applications offering conceptual and experiential learning.
2. To develop business leaders focused on principles of purpose, people, profit and planet.
3. To nurture managerial competence and a sustainable, growth mindset.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

1. To apply the domain knowledge, interdisciplinary skills & technological proficiency as entrepreneurs and corporate professionals.
2. To exhibit value-based managerial competencies in fulfilling corporate and leadership responsibilities.
3. To facilitate lifelong learning for sustainable development and professional excellence.

Content

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MET League of Colleges

Mumbai Educational Trust is a conglomerate of premiere educational institutions, driven by a single-minded focus on imparting quality education, to make students sharp. Training is imparted round-the-clock, seven days a week. Projects and assignments are given utmost importance and students learn on the job. Application-oriented knowledge, garnered in the lecture halls, is applied to industry assignments. The faculty spares no effort to make the students razor sharp, so that they make their mark in the corporate world. No effort has been spared, to create an environment that encourages students, to push the limits of their minds. All this, to help young professionals face the challenges of life. And make their mark in the corporate world.

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- Institute of Engineering
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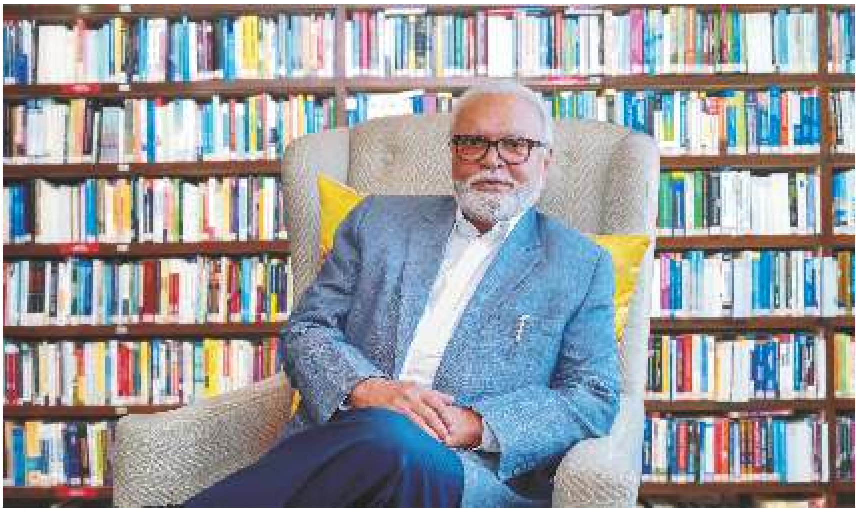
- School of Architecture and Interior Designing

At MET, over four thousands students and faculty are involved in delivering unique learning systems, through ultra modern infrastructure and academic rigour. MET Institutes are ISO certified, with affiliations to the University of Mumbai, Savitribai Phule Pune University, Directorate of Technical Education, All India Council of Technical Education, MSBTE, Pharmacy Council of India, C-DAC - Ministry of Communications and Information Technology, The Chartered Insurance Institute (CII), London.

MET also has strategic institutional collaborations with the Association of Chartered Certified Accountants (ACCA), UK, NCC Education, UK, Manhattan Institute of Management, New York, EAE Business School, Spain, Business & Hotel Management School, Switzerland, Robert Gordon University, York St. John University, SetCONNECT, USA and TCS iON.

From the Chairman's Desk



"When things get tough, the tough get going"
- Anon

It is said that when the unexpected or impossible happens, you are caught off balance. In this third decade of the millennium, Indian economy was at an inflection point but we were unexpectedly hit by a pandemic wave from the East. As the nation went in a lockdown, its impact was felt across all strata of our society. The youth had to shoulder the burden of the system collapse hurting the education sector. But unfazed by the unexpected crisis, dynamic professional institutions rose to the challenge as they set about energizing millions of young minds to fight the adversity. They rapidly retooled, redesigned and delivered a significant body of knowledge to deliver seamless digital learning engaging the youth across the country to alleviate the suffering of the young students, quenched their thirst of knowledge aided by smart tools and teachers, restoring sanity and peace in the society.
We at MET, took the challenge head-on and established seamless learning platforms across our campuses located at Bhujbal Knowledge City in Mumbai and Nashik delivering wholesome learning inputs meeting stakeholder appreciation. From kids to young professionals enlightening virtual inputs were delivered across Pharma, Engineering, IT, Mass Media and Management domains brushing past delivery hurdles. Blessed by the state of the art platforms and technologies accessed by us, our committed faculty and staff rose to the challenge. Frequent counseling to the affected, concessions and accommodation to the needy acted as balm to the stakeholder battling the adversity as they lived up to the 'knowing-doing-being' motto of professionals meeting the demands of the marketplace.

We at MET, through our Rishikul Vidyalaya are continuing to expose the school kids, blending the traditional pedagogy with the Cambridge learning systems till the A Level. We are also building links and partnerships with global players for carrying forward the dynamic learning processes at both undergraduate and postgraduate levels. We are continuing our focus on injecting the spirit of Creativity-Innovation in the pedagogy so that the students are nudged and exposed to solution oriented, problem solving dynamic learning platforms, as the gateway to incubators and start-up culture.

But, it will require coordinated efforts between the regulator and the holy trinity of students, parents and teachers combined to mitigate the crisis. One must remember that, the dynamic education sector led by the youth, are the backbone leading us through the turbulent waters. Therefore, the higher education regulators must immediately act to shore up this sector with resources and policy stimulus, to drive the dark clouds and let the bright sunshine bloom the flower of Indian youth. We must remember, as Bobby Knight says, "The key is not the will to win. Everybody has that. It is the will to prepare to win that is important".

Wishing you success in all your professional pursuits.

Chhagan Bhujbal
Hon. Founder Chairman
Mumbai Educational Trust

About MET Institute of Management

MET Institute of Management

Since its inception three decades ago MET Institute of Management, a top B-School in Mumbai has focused on developing industry ready management professionals shaped to cross industry threshold to seek their chosen place under the Sun. Academic and scholastic rigor are finely woven into application oriented skill sets which positions the MBA students to hit the ground running as they face the challenges of market place and society. The structured learning systems are blended with the latest tools and technologies offered by the digital world. Therefore, despite Pandemic, a unique online learning experience was offered to the management students.

The well-equipped libraries with 64,000 plus books and journals are e-enabled to offer robust theoretical inputs to the MBA students. The close connection and networking with industry integrated by thousands of corporate-successful alumni offers deep insights into the real business world and a vibrant industry academia platform.

Thus, despite statutory limitations students could access and benefit from our information and technology centers and learning aids supported by the latest audio visual facilities at our complex. A high-tech convention Centre, well equipped seminar halls and state of the art networked virtual classrooms provide a multidimensional exposure to the students as we offer a holistic immersion to the MBA students as they step into the global business arena. That is why MET Institute of Management is considered as one of the best MBA colleges in Mumbai. It remains a much sought after premium B-School in Maharashtra in which graduates and experienced MBA aspirants writing MAH-CET, CAT, CMAT, XAT, ATMA, MAT and other prestigious entrance exams seek to secure admission.

Director Speak

Dr. Swati Lodha
Director MET IOM

Dear Readers,

Greetings from the Research Cell of MET Institute of Management.

Business Research has been an integral part of management education globally. With the accelerated rate of change, in the post COVID era, research is undergoing a paradigm shift. We are leaning towards transformative research which challenges our current understanding of life in terms of science, engineering, education, environment and others. With disruptive digital and AI technology tools flooding the markets and global environmental challenges plummeting our growth parameters, transformative research has become relevant like never before. Our journal is an attempt to turn research achievement into productive forces full of meaningful impact.

Research allows us to expand our knowledge in a concrete and precise manner which in turn, allows for better human evolution.

This edition of MMR is a collection of marketing research papers, dwelling deep into transformative areas like neuromarketing and AI approaches in market research.

With a line up of two National and International Research Conferences at MET IOM in the year 23 & 24 (based on our five year strategic plan), we are committed to bring better research to your mindsteps.

Dr. Swati Lodha
Director
MET Institute of Management

Application of ALTMAN Z Score On Five Selected Industries

Ms. Preksha Shah, Student, IES

ABSTRACT

The research paper talks about application of Altman Z score on five selected industries. Altman Z score is a predicting tool for bankruptcy. It helps to find whether the company is in safe, grey or distress zone. The research of this tool was on five industries i.e. FMCG-Personal care, Automobile – 2 & three wheeler, Automobile – four wheeler, Airlines, and Cement. Altman score is applied on certain selected companies of the five selected. All companies in Personal care industry are in safe zone. From Airlines industry, Spice Jet and Global Vectra are in distress zone. In Automobile – 2 & three wheeler, other than Scooter's India all other companies are in safe zone. For Automobile four wheeler industry, Tata motors is in distress zone due to its past data. And Cement industry, except for India Cement and Birla Corp, all are in safe zone. Though more research in cement industry is required, Altman Z score can be applied to more industries with listed as well as unlisted companies to get more clear view about the industry.

Keywords: Distress zone, Grey zone, Safe zone, Bankruptcy, Altman Z Score

Introduction

Financial stability or financial health of an organization is of utmost importance. Based on financial health, it shows how well the firm can carry out its operations in long run as adequate funds will be required to meet its long term and short term requirements. Financial stability of the organization is of utmost importance not only to management of the organization but also to its all external stakeholders, such as employees, creditors, stockholders, managers.

Financial distress or insolvency of a company means that the company is in a situation where it has difficulty or unable to repay its debt to its creditors. Financial distress or insolvency stage is before bankruptcy where the company is unable to pay to its creditors, employees, etc.

There are different techniques to find the financial health of the company. Among those one is Altman Z score Model. Altman Z score was published in 1968 by Edward I. Altman. Altman Z score model is a tool for predicting bankruptcy. Through this score we can find if the company is heading towards bankruptcy or not in 2 years. This model is effective in predicting the financial distress of an organization by using financial statements of the organization. In this model, different weights are assigned to different financial ratios. In total there are five financial ratios in this model. This model was exclusively for public manufacturing companies at start but later was applicable to different companies also. It showed 72% accuracy when it was first published.

The formula for this Z score model is

$Z = 1.2A + 1.4B + 3.3C + 0.6D + 1E$

Where,

Z – Altman Z score

A – Working Capital/Total Assets

B – Retained Earnings/Total Assets

C – Earnings before interest and tax/Total Assets

D – Market value of Equity/Total Assets

E – Total Sales/Total Assets

Lower the Z score higher the possibility of the company going bankrupt. There is specified range to find the company is in which zone.

Lower than 1.8 Z score shows company is in distressed zone. In between 1.8 to 3 shows that company is in grey zone and higher than 3 shows that company is in safe zone.

For the research, five industry is analyzed which are, Cement industry, Automobile - 2 wheelers scooters and three wheelers industry, Automobile – Four wheeler industry, Airlines Industry, FMCG-Personal Care industry. Z score of all the companies in these industries are calculated and analyzed.

Literature Review

Financial Soundness of Cement Industry of Bangladesh: An Empirical Investigation Using Z-Score, A.N.K Mizan, Md. Mahabbat Hossain, ABC research house, November 2014, as per his study conducted for listed cement companies in Bangladesh, he finds this tool useful and suggests that this study could be used by management of the distressed companies, investors for their investment options. He concluded that 2 out of 5 companies i.e. HCL and CCL are financially sound and their core is higher than 2.99 whereas other company MCL is in grey Zone and their management needs to take strong decision on financial health and remaining two companies are financially distressed and management have to take necessary steps.

Application of Altman Z Score on Bse-Greenex Companies, Swalih M. M. Vinod M. S., Assistant Professor Department of Commerce Christ Nagar College, India, Journal of applied management and investments, volume 6 number 3 summer 2017, as per this research, investors can use this study for their investment decisions which has least impact on ecology. The author conducted research on 25 greenex companies listed on BSE-Greenex and found out that only 3 were in safe Zone other 10 were in grey Zone and remaining 12 were in distressed Zone. But still author recommends to invest in those 12 companies because they are making least negative impact on the nature and ecology. The author says that this research can be used as reference to analyze and make investment decisions of Greenex companies.

Bankruptcy Analysis of National Airlines Companies in Regional Asia After Covid-19 Pandemic, Asaduddin Abdullah, Noer AZam Achsani and Suhendi, Jurnal Aplikasi Manajemen dan Bisnis, Vol. 6 No. 3, September 2020, the author of this paper has conducted to find are the airlines company heading towards bankruptcy after covid-19 pandemic because it has caused huge losses for airline industry. The research was limited to 4 national airlines companies in regional Asia. The study showed Garuda Indonesia and Thai Airways have the possibility of going bankrupt. This research can be used by investors, corporations and Indonesian government.

Objectives

- To show the effectiveness of Altman Z Score in analysing the company
- To analyse Z score of five different industries.
- To understand financial soundness of companies in five different industries
- To understand the downside risk of the companies

Research Methodology

The research methodology used in the research is quantitative and secondary. All information regarding the same is publically available in the annual reports. Based on that information five financial ratios are calculated and multiplied with their weightages to find Z score. The research design is a mix of exploratory and descriptive.

The research consists of 5 industry i.e. Cement industry, Automobile - 2 wheelers scooters and three wheelers industry, Automobile – four wheelers industry, Airlines Industry, FMCG-Personal Care industry. Z score of all the companies in this industry are calculated.

For calculating Z score first you need to calculate five financial ratios i.e.

- Working capital/Total Assets
- Retained Earnings/Total Assets
- Earnings before interest and taxes/Total assets
- Market value of equity/Total Assets
- Total Sales/Total Assets

<u>Working capital/Total Assets</u>

Working capital is the difference between the current assets and current liabilities. Working capital determines short term financial health of the company. Positive working capital shows that company is able to meet its short term obligations and vice versa in case of negative working capital. Working capital/Total Assets shows how much are the working capital in terms of total assets of the organization.

<u>Retained Earnings/Total Assets</u>

Retained Earnings are the left over profit of the company after paying the dividend. Retained Earnings/Total Assets ratio if positive shows that company is utilizing their borrowed funds for their expenses. If this is the case then, there is high possibility of company going bankrupt and vice versa in case of negative ratio.

<u>Earnings before interest and taxes/Total assets</u>

Earnings before interest and tax; tells that how much the company is able to generate profit through its operations. This ratio shows how much operating profit the company is able to make using its total assets.

Market value of equity/Total Liabilities

Market value of equity also known as market capitalization is calculated by multiplying number of outstanding shares to current market price of the stock. Higher ratio shows that investors have confidence in the company's financial strength.

Total Sales/Total Assets

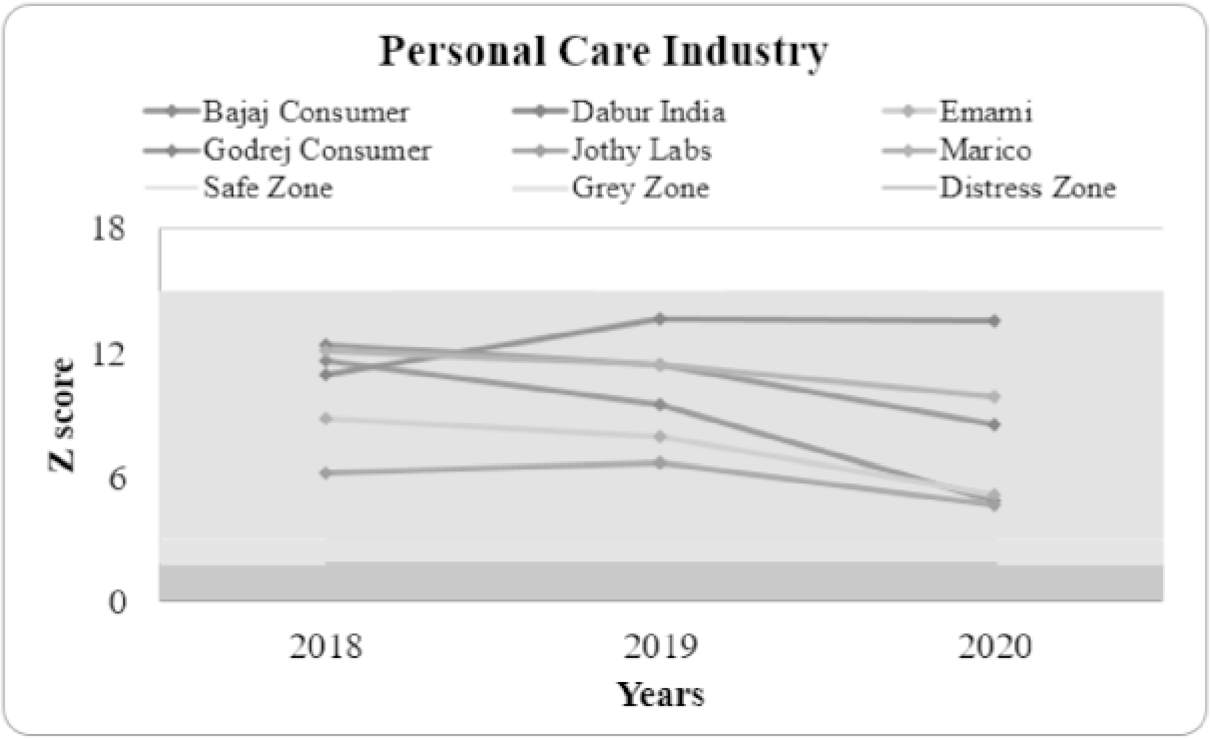
Total Sales/Total Assets ratio shows how well the management has utilized their available assets to generate sales. Higher the ratio means management requires only small amount of investment to generate sales which will lead to increase in profitability of the company and vice versa in case of lower ratio.

Data Analysis

Data was collected of 5 industries, i.e. FMCG - Personal care, Auto – 2 wheelers & three wheelers, Auto – four wheelers, Cement industry, Airlines Industry. After collection of data, Z score of each company was calculated.

Company	2018	2019	2020
Bajaj Consumer	11.62	9.5	4.89
Dabur India	10.93	13.66	13.5
Emami	8.8	7.89	5.17
Godrej Consumer	12.37	11.43	8.55
Jothy Labs	6.16	6.64	4.7
Marico	12.09	11.4	9.87

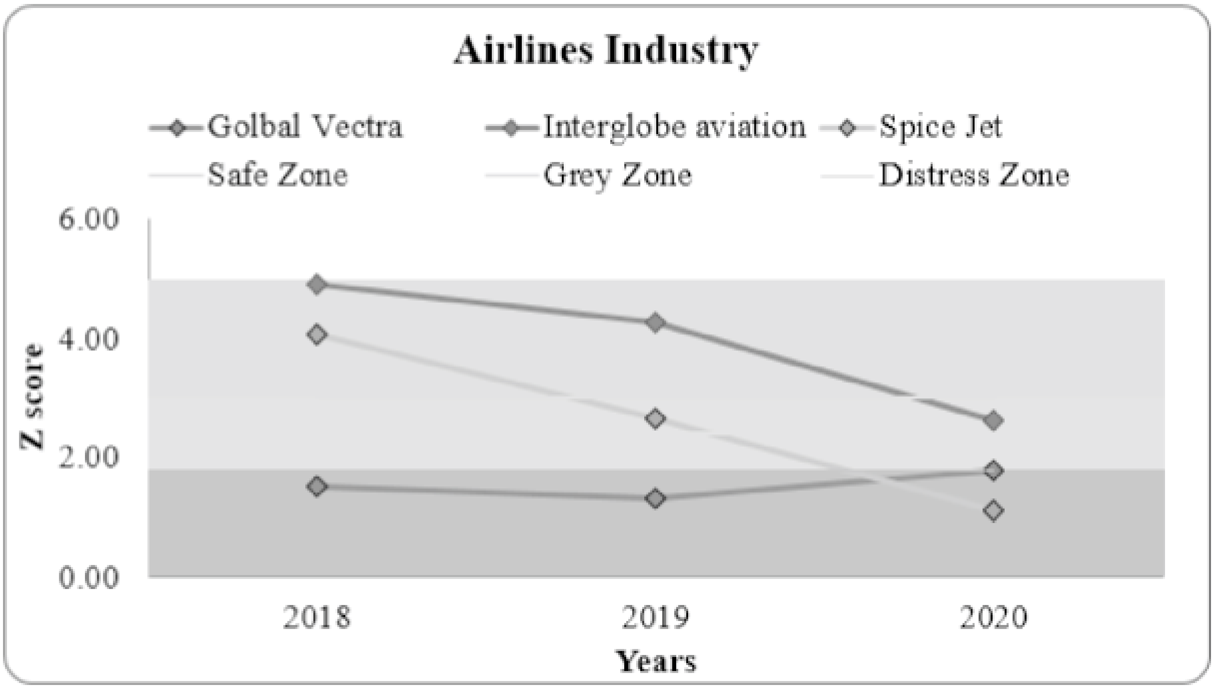
FMCG – PERSONAL CARE INDUSTRY



Comparing two companies i.e., Dabur India Ltd. and Emami Ltd., from the above chart it is clear that Dabur Ltd. is far from bankruptcy as per the data of three years as compared to Emami Ltd. Dabur Ltd.'s balance sheet is almost twice the size of Emami Ltd. Dabur India Ltd. has high amount of retained earnings as compared to other components. So they have better Z score as compared to Emami Ltd. Comparing between two companies, Dabur Ltd.'s sales is almost 4000 cr. more than Emami Ltd. and retained earnings are also 3000 cr. more than Emami Ltd. This shows not due to just big balance sheet size, but company is utilizing its assets properly to earn profits.

AIRLINES INDUSTRY

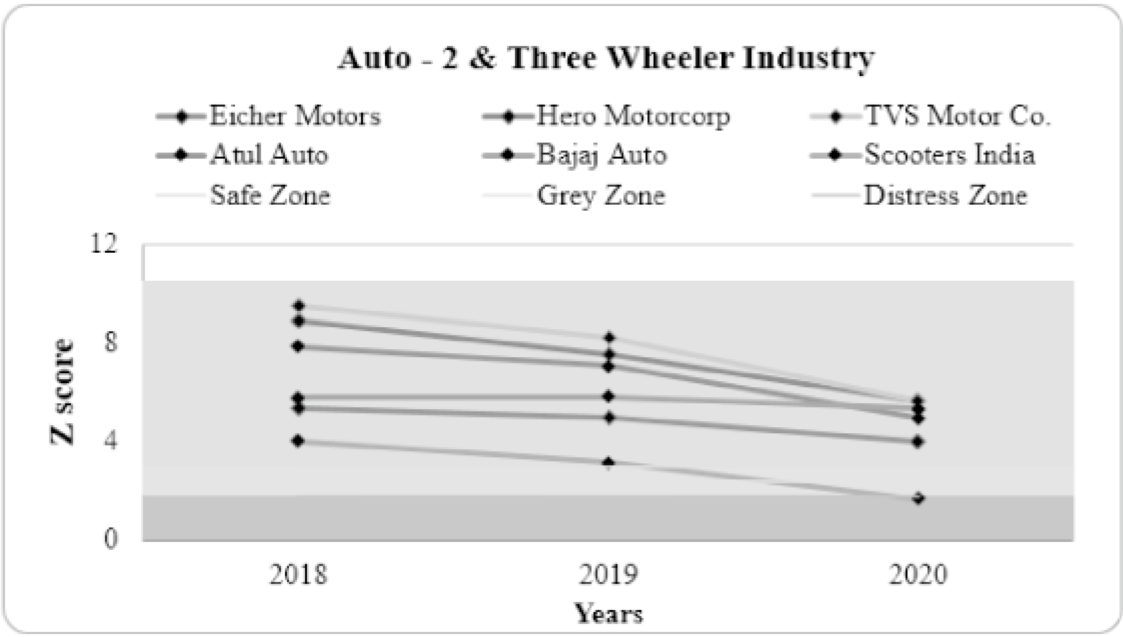
Company	2018	2019	2020
Global Vectra	1.51	1.32	1.77
Interglobe aviation	4.89	4.28	2.62
Spice Jet	4.06	2.64	1.11



From the chart it is very clear that all three companies of Airlines Industry shows a downward trend. Interglobe aviation's balance sheet is substantially larger than other two companies in same industry. Working capital and retained earnings of Spice Jet and Global Vectra are negative, which is one of the reason why they show downward trajectory. Main weightage is given to third component in calculation of Z score i.e., Earnings before interest and tax and Interglobe aviation has highest EBIT as compared to other companies so they have better Z score as compared to other two companies.

AUTO – 2 WHEELER AND THREE WHEELER INDUSTRY

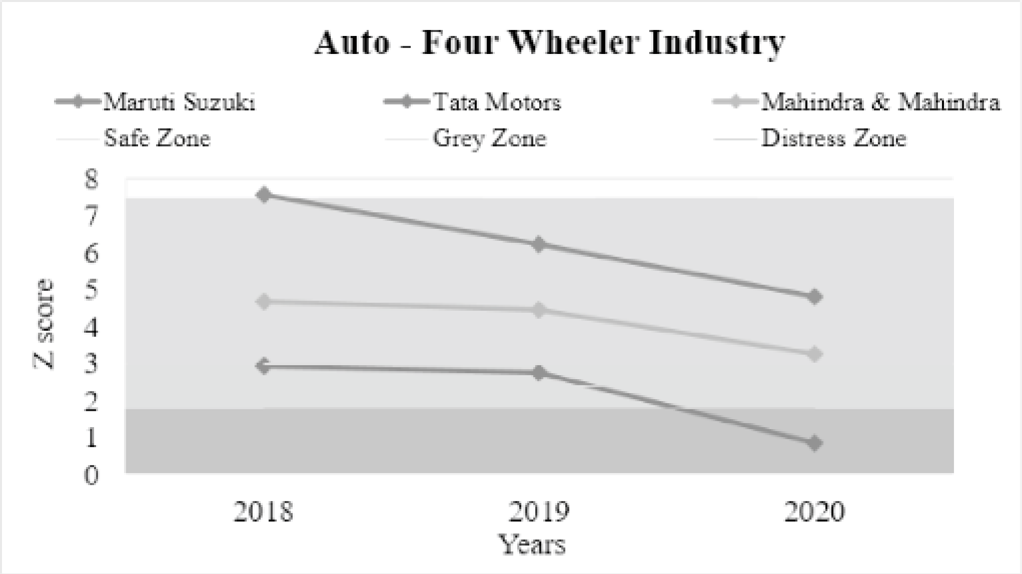
Company	2018	2019	2020
Eicher Motors	5.35	4.95	3.96
Hero Motorcorp	8.86	7.55	5.65
TVS Motor Co.	9.51	8.21	5.67
Atul Auto	7.86	7.05	4.95
Bajaj Auto	5.79	5.81	5.34
Scooters India	4.02	3.15	1.69



From the above chart, we can say that TVS Motor has best Z score as compared to others. This is because of the components. Balance sheet size of TVS Motors is not largest among all but they have good sales figures, operating profits and retained earnings. Though all the numbers are not the best among all companies but consistent as compared to others; whereas for Scooters India, balance sheet size is the smallest. They have negative operating profits and retained earnings. Operating profits has the largest weightage and having negative operating profits has led to lower Z score.

AUTO – FOUR WHEELER

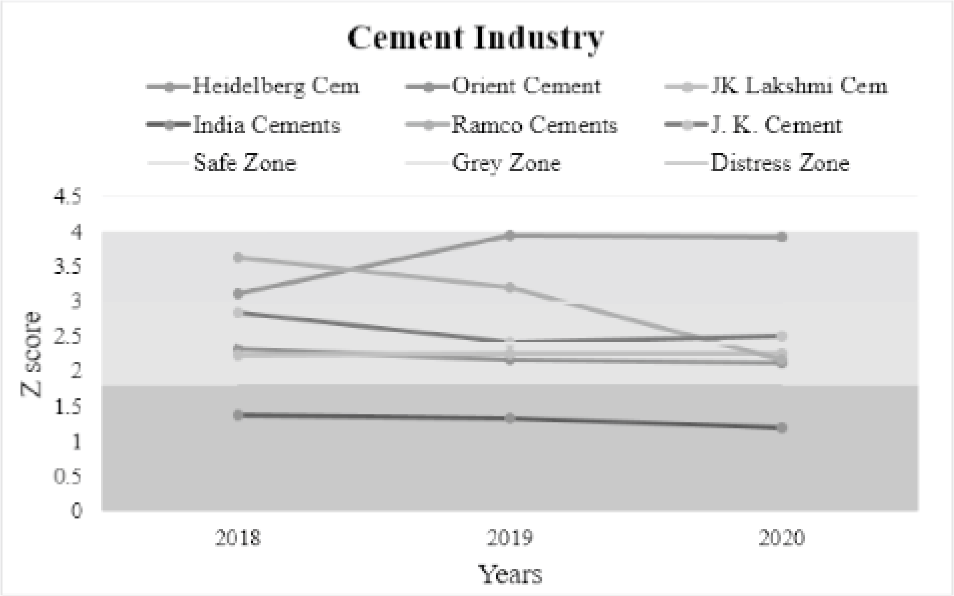
Company	2018	2019	2020
Maruti Suzuki	7.57	6.25	4.82
Tata Motors	2.96	2.77	0.83
Mahindra & Mahindra	4.68	4.46	3.27



From the above table, it is clear that Z score of Maruti Suzuki is highest among the three companies. Balance Sheet size of all the three companies is almost same. The major difference is due to operating profits i.e. third component which has highest weightage. Maruti Suzuki has the highest operating profit followed by Mahindra & Mahindra, and Tata motors have the negative operating profit. The other component which is making the significant difference is retained earnings. Maruti Suzuki has highest retained earnings followed by Mahindra & Mahindra, and Tata Motors has negative retained earnings. Though Maruti Suzuki has negative working capital but other components are better which is balancing the negative working capital. Whereas, Tata motors have negative working capital, retained earnings and operating profits which leads lower Z score.

CEMENT INDUSTRY

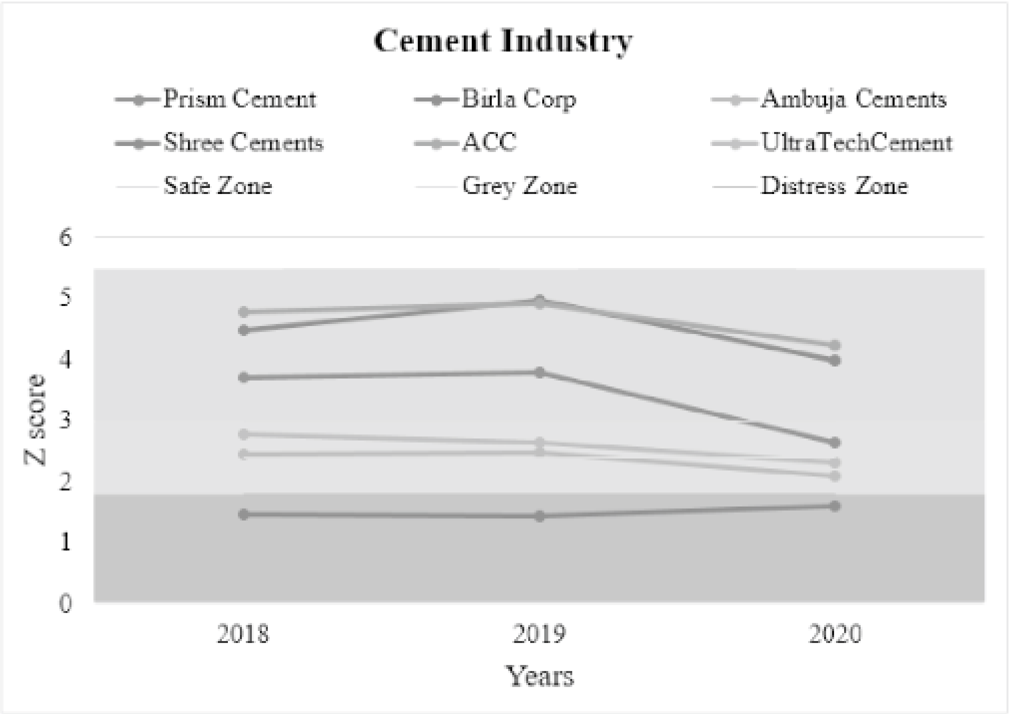
Companies	2018	2019	2020
Heidelberg Cement	3.13	3.95	3.93
Orient Cement	2.32	2.16	2.13
JK Lakshmi Cement	2.23	2.25	2.27
India Cements	1.38	1.33	1.19
Ramco Cements	3.64	3.21	2.16
J. K. Cement	2.84	2.42	2.51



Above chart consists of six companies of Cement Industry. Balance sheet size of all the six companies varies too much. But net sales are almost in same range. Comparing Heidelberg Cement and J.K. Cement, all components of J.K. Cement are more than Heidelberg Cement still Z score of Heidelberg is higher than J.K. Cement. That is because when all components compared to their respective companies assets, Heidelberg Cement shows better performance than J.K. Cement. This shows that Heidelberg Cement is better at utilizing their assets as compared to J.K. Cement.

Companies	2018	2019	2020
Prism Cement	3.69	3.78	2.64
Birla Corp	1.45	1.43	1.59
Ambuja Cements	2.45	2.47	2.08
Shree Cements	4.46	4.97	3.98
ACC	4.78	4.91	4.22
UltraTechCement	2.77	2.64	2.30

Ramco Cement is showing a downward trajectory, their assets are increasing over the period but their total sales dropped significantly in 2020. Their operating profits were also decreasing over the period. That's why we see Z score of Ramco Cements falling.



In the chart above, there are more six companies of cement industry. ACC has highest Z score as compared to others. Comparing Shree Cement and Ambuja Cement, balance sheet size and total sales are almost same yet, Z score of Shree cement is more than Ambuja cement. This is because other components like EBIT, working capital and retained earnings of Shree Cement are more in terms of ratio to their assets as compared to Ambuja Cement. That's why Ambuja Cement has low score than Shree Cement inspite of having almost same balance sheet size. This shows that Shree Cement is better in utilizing its assets.

Conclusion

Altman Z score model earlier was just for manufacturing companies but now it is used for companies in different industry too and it is quite reliable too. This model is used in industry too. This paper talks about five Industries, and companies which are listed on NSE from this industry are considered for analysis.

First is FMCG – Personal Care Industry, we can safely conclude that FMCG – Personal Care Industry is consumer facing industry and is doing quite well. It was not affected in pandemic period because of its nature of consumer facing and falls under essential category. Total 6 companies fall under this industry and all are in safe zone for past 3 years. So we can conclude industry as a whole is doing well and need not fear bankruptcy in medium to long term period.

Second industry in this paper is Airlines Industry, total three companies are listed on NSE. Airlines industry was majorly hampered due to COVID-19. Interglobe Aviation is the safest among the three. But it is heading towards distress Zone due to lockdown. Spice jet was also safe but moving towards distress Zone and lastly Global Vectra which was already distressed suffered more problems due to lockdown.

Third industry is Automobile – 2 & three wheeler Industry in which six companies are listed on NSE. All six companies were in safe zone except Scooter's India which slipped down on the edge of distress zone due to pandemic. All other companies were too hampered but they managed to be in safe zone i.e. Z score more than 3.

Fourth industry is Automobile – four wheeler Industry in which three companies are selected which are listed on NSE. Maruti Suzuki and Mahindra & Mahindra are doing well. Though they were hampered by lockdown but still managed to be in safe Zone i.e., Z score above 3. Whereas Tata Motors, which was already in Grey Zone and due to lockdown it slipped in distress Zone substantially.

Fifth and last industry taken for analysis is cement industry. Total of twelve companies based on net sales and were divided into two groups of six companies each for better presentation and analysis. Of these twelve only two are in distress Zone and others are in better position. Heidelberg is best as per the Z score. Companies which are in distress Zone are India Cement and Birla Corp. It's not that they have any component negative but they can utilize their available resources in a better way. For Cement industry, it requires more research and can be taken forward from here.

While analyzing companies we usually look into financial statements alone, financial ratios, and valuation ratios. All this parameter will help us to find the current financial status of the company which helps in short term decision making. Along with these parameters if we use Altman Z Score, it will help in predicting near term financial distress and bankruptcy. Because it is of utmost importance to measure the downside risk also due to uncertainties, unpredicted situations such as pandemic, natural calamities, etc. Though we face challenges while calculating Z score because every sector listed companies and an unlisted company has different equation.

There exists an application to directly find the Z score. It was created by Sribatsa Das in New Jersey, United States. But this application does not consider Indian Companies. So it's an opportunity to develop an application for Indian companies too which will help all the stakeholders of that particular company as well as the investors who are looking for investment in those companies.

The paper talks about application of Altman Z score to five industries; this can be used as base for further research in different industry with more number of companies. While analyzing further, unlisted companies can also be considered to get more clearly picture of the industry as whole.

References

Abdullah, A., Achsani, N. A., & Suhendi, S. (2020). BANKRUPTCY ANALYSIS OF NATIONAL AIRLINES COMPANIES IN REGIONAL ASIA AFTER COVID-19 PANDEMIC. *Jurnal Aplikasi Bisnis Dan Manajemen*, *6*(3), 691. https://jurnal.ipb.ac.id/index.php/jabm/article/view/33219

Business Compass LLC. (2021). *Altman Z-Score+ Mobile App | Bond Rating Equivalent | PD | Credit Rating Web App*. Business Compass LLC 2007–2021. http://altmanzscoreplus.com/login

Corporate Finance Institute. (2021). *Altman's Z-Score Model*. https://corporatefinanceinstitute.com/resources/knowledge/credit/altmans-z-score-model/

Mizan, A. N. K., & Hossain, M. (2014). Financial Soundness of Cement Industry of Bangladesh: An Empirical Investigation Using Z-score. *American Journal of Trade and Policy*, *1*(1), 16–22. https://publicationslist.org/data/ajtp/ref-2/AJTP_1.2.pdf

Swalih, M. M., & Vinod, M. S. (2017). Application Of Altman Z Score On Bse-Greenex Companies. *Journal of Applied Management and Investments*, *6*(3), 205–215. http://www.jami.org.ua/Papers/JAMI_6_3_205-215.pdf

The Study of Factors that Contribute to the Acceptability of Digital Transactions in the City of Mumbai

Ms. Dnyanda Sanjeev Walke, MMS Student, MET Institute of Management
Ms. Sangeeta Ghatekari, Assistant Professor, MET Institute of Management
Dr. Nitin S. Kulkarni, Associate Professor, MET Institute of Management

ABSTRACT

Long years ago, transactions were made by the help of Barter system, where goods and services were exchanged by goods and services. Later on, with the evolution of mankind Barter system is replaced by Token currency where the goods and services were exchanged for coins and notes. But in the recent time there was the evolution of digital payment system. Digital transactions include transactions through credit cards, debit cards and other digital wallet platforms. The different modes of digital payments saw a drastic change in usage in the last 4 years. After demonetization on November 8th, 2016, India saw an increased use of different internet payment systems for money transfer through various devices. Govt. of India also encouraged Digital transaction through its various initiatives such as Digital India. NPCI (National Payments Corporation India) launched Bharat interface for Money (BHIM) an application run on UPI (Unified Payment Interface) in December 2016 to cater the growing online payment needs. But the acceptability among the masses is still a big concern. Many Indians shows hostile attitude toward digital mode of transactions. So, this paper will study the various factors that contribute the acceptability of Digital transaction. The research paper is based on 201 individuals who will demonstrate the demographic factors like age, gender, income group, education etc. which influence the acceptability of the digital mode of transactions. The study will greatly help the GOI as well as Banking sector in order to achieve Digital & Financial literacy.

Keywords: Digital transactions, BHIM, UPI

Introduction

Be it travelling, shopping, booking movie tickets, reserving seats at your favourite dine-in facility, lending, borrowing or any other activity — cashless payments have gained prominence. Thanks to the robust fintech ecosystem, the world has become our oyster and at every step, digital transactions are helping us save both time and money. When Point of Sale (POS) terminals made their way into the Indian financial ecosystem in a full-fledged manner in 2016, there were challenges that simultaneously struck the nation in terms of their full acceptance. Nearly a decade ago, people in India hesitated to even indulge in online transactions as they found cash to be the only trustworthy and secure way to make payments. But in recent, India recorded 1.3 billion UPI transactions in June of 2020, which stands testament to India's rapidly growing digital payments space. Despite increasing number of digital payments in India, not all the section of the society has accepted the new digital form of transactions. Many factors such as gender, education and age do have influence on the acceptability of digital transactions. The current study is based on 201 random responses and tries to find the factors which influence the acceptability of digital payments.

<u>Review of literature</u>

Some literature available on the subject suggested that there is a significant correlation between Age, Gender, Education & Income group etc. and Digital Transaction. Males are more likely to use digital modes of transaction as compared to their female counterparts for both purely digital or a combination of cash and digital instruments. with respect to age, there is pressing evidence in the case of online shopping that older individuals are less likely to pay digitally. Education is also seen to have an enabling effect on people when it comes to going digital. Income levels have a statistically significant, positive impact when it comes to online shopping and gold purchases through the exclusively digital payment route. Lower income groups may prefer paying using cash on delivery (*Sudiksha Shree, Bhanu Pratap, Rajas Saroy & Sarat Dhal 2021*). Though some literature highlights that an extremely small correlation exists between cashless payments and education level as well as between cashless payments and income earned. It also revealed that a very high positive correlation exists between the people who collect the payments in their bank accounts and of those who are engaged in cashless payments. Prepaid cards and mobile payments showed maximum growth (*Bappaditya Mukhopadhya Y 2016*). The factor of awareness also plays crucial role in the Digital Payment acceptability. But some studies also states that there is no significant difference between level of awareness towards digital payment systems between male and female. Also, no relationship existed between education of the respondents and their level of awareness towards digital payment systems (*Dr. M Sumathy and Vipin KP 2017*). From the above available literature, it is clear that, there is no uniformity on the study and the factor like Age, Gender, Education etc may or may not affect the acceptability of an individual regarding digital payments. Therefore, it is essential to do further examination to get better clarity on the subject.

Objective

A. To find (if) there is any relationship of the age and the acceptability of digital transactions.
B. To find (if) there is any relationship of the gender and the acceptability of digital transactions.
C. To find (if) there is any relationship of the level of education and the acceptability of digital transactions.
D. To find (if) there is any relationship of the level of income and the acceptability of digital transactions.
E. To find (if) there is any relationship of the Occupation and the acceptability of digital transactions.
F. To find the role of Awareness in the acceptability of digital transactions.

Research Methodology

1. Research Design:
The study was exploratory. It was conducted to find Factors that Influence the acceptability of Digital Transaction.
2. Hypothesis:
The hypothesis for the study was suggested as follows:
A. Ho: There is no significant relationship between age and the acceptability of digital transactions.
H1: There is significant relationship between age and the acceptability of digital transactions.
B. Ho: There is no significant relationship between gender and the acceptability of digital transactions.
H1: There is significant relationship between gender and the acceptability of digital transactions.
C. Ho: There is no significant relationship between the level of Education and the acceptability of digital transactions.
H1: There is significant relationship between the level of Education and the acceptability of digital transactions.
D. Ho: There is no significant relationship between the level of Income and the acceptability of digital transactions.
H1: There is significant relationship between the level of Income and the acceptability of digital transactions.
E. Ho: There is no significant relationship between the Occupation and the acceptability of digital transactions.
H1: There is significant relationship between the Occupation and the acceptability of digital transactions.
F. Ho: There is no significant relationship between the Role of Awareness and the acceptability of digital transactions.
H1: There is significant relationship between the Role of Awareness and the acceptability of digital transactions.

3. Source of Information:
The primary data was collected by interviewing 201 respondents through questionnaire method and the secondary data was collected from periodicals, websites and journals.

4. Source of Information:
The primary data was collected by interviewing 201 respondents through questionnaire method and the secondary data was collected from periodicals, websites and journals.

Research Findings

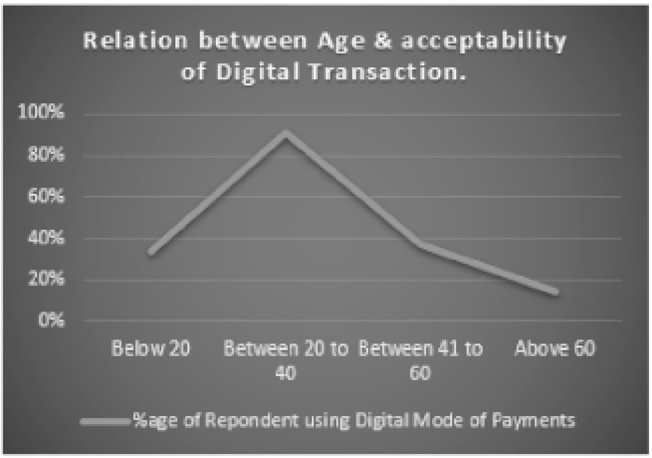
Out of total 201 respondents it is come to know that 134 which is 66.667% are using Digital Mode of Payments and 67 respondents which is 33.34% are still not using digital mode of payments. Following Factors are taken for the examination of the acceptability of digital Transactions.

NOTE:
***Yes**, represents that Respondents are doing Digital Transactions.*
***No**, represents that Respondents are Not doing Digital*

Transactions.

TABLE 1: AGE GROUP

Source: Primary Data

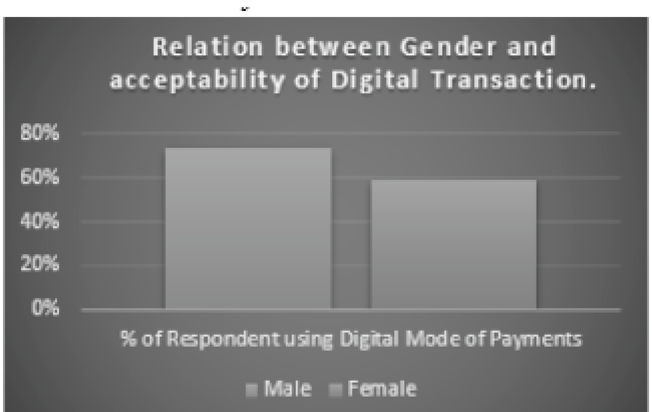


Age Group	Total	Yes	No
Below 20	6	2	4
Between 20 to 40	120	109	11
Between 41 to 60	54	20	34
Above 60	21	3	18
Grand Total	**201**	**134**	**67**

From the above data it is clear that there is significant relation between Age group & Acceptability of Digital transaction. 91% of the respondent belong to the age group between 20 to 40 are using Digital mode of Transactions. And at the same time only 14% of the respondent belong to the age group above 60 are using Digital mode of Transactions.

TABLE 2: GENDER

Source: Primary Data

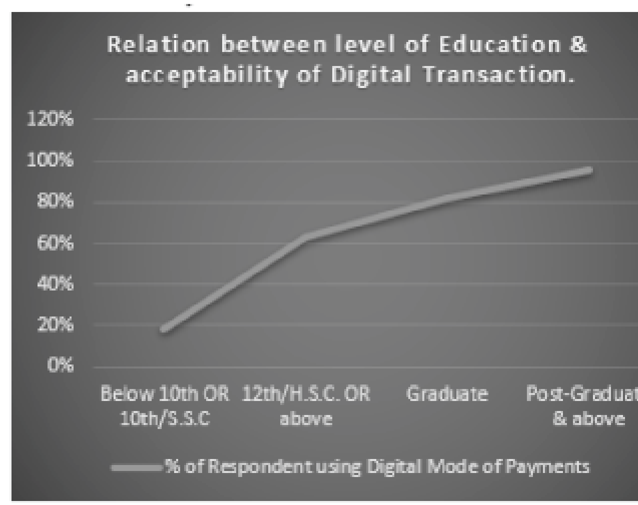


Gender	Total	Yes	No
Male	107	79	28
Female	94	55	39
Grand Total	**201**	**134**	**67**

The above data highlights that 74% male are doing Digital Transactions at the same time only 59% females are indulged in Digital Transactions. Males are more open towards Digital Transactions then their Female counterparts

TABLE 3: LEVEL OF EDUCATION

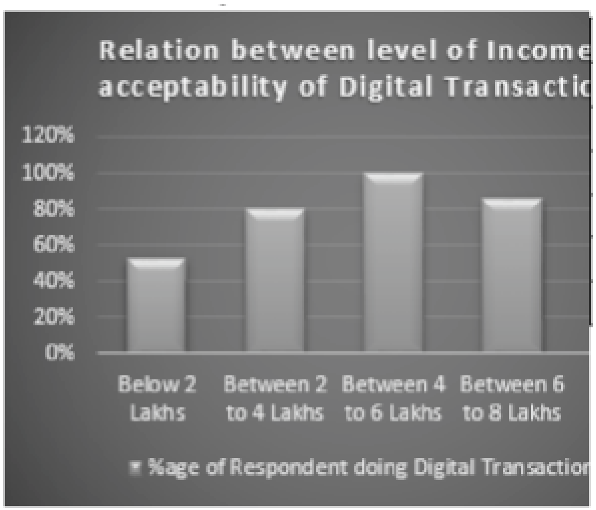
Education	Total	Yes	No
Below 10th OR 10th/S.S.C	51	9	42
12th/H.S.C. OR above	30	19	11
Graduate	67	55	12
Post-Graduate & above	53	51	2
Grand Total	**201**	**134**	**67**



From above data it is clear that there is significant relationship between the level of Education & the acceptability of Digital transactions. The respondents whose education level is Below 10th OR10th are less likely to do digital transactions. Only 18% who belongs to the group are doing digital transactions. On the other hand, who highly educated such as graduate or post graduate shows high acceptability towards digital transactions. 96% post graduates are doing digital transactions.

TABLE 4: LEVEL OF INCOME

Source: Primary Data

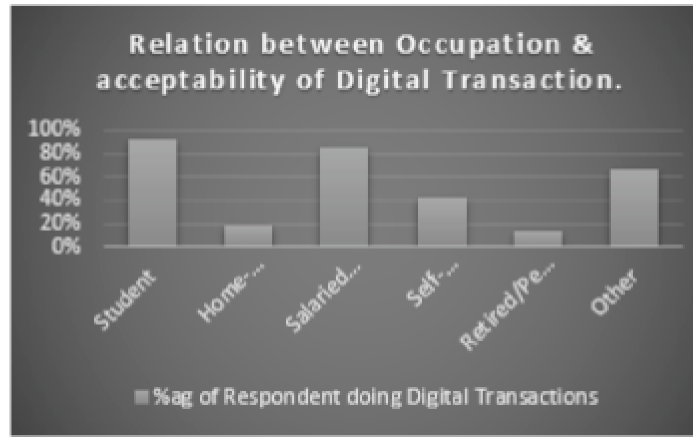


Annual Income	Total	Yes	No
Below 2 Lakhs	120	63	57
Between 2 to 4 Lakhs	46	37	9
Between 4 to 6 Lakhs	11	11	0
Between 6 to 8 Lakhs	7	6	1
Above 8 Lakhs	17	17	0
Grand Total	**201**	**134**	**67**

From the above data we can say that those who are belongs to the low-Income group shows more resistance towards Digital Payments. Only 53% who earns below 2 Lakhs annually are doing Digital Transaction. Whereas, 92% who earns more than 2 Lakhs annually are open towards Digital Transactions. This shows there is significant relationship between level of Income and acceptability of digital transactions.

TABLE 5: OCCUPATION

Occupation	Total	Yes	No
Student	57	53	4
Home-Maker	26	5	21
Salaried Person/Service	71	60	11
Self-Employed/Business Person/Entrepreneur	28	12	16
Retired/Pensioner	16	2	14
Other	3	2	1
Grand Total	**201**	**134**	**67**

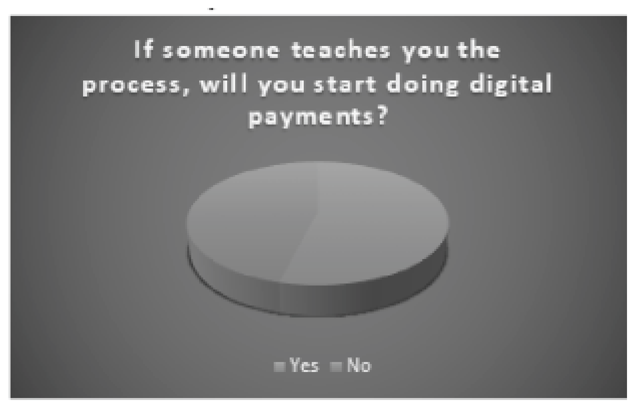


From the above data, we can say that occupation such as salaried person/ service and students shows high acceptability towards digital transactions. On the other hand, Home makers and Retired person shows high resistance towards digital transactions, whereas Self-employed person shows moderate interest towards digital payments.

TABLE 6: ROLE OF AWARENESS

To analyse the role of awareness, one additional question was asked to the respondents who are not doing digital transaction, that "if someone teaches you the digital transactions, will you start doing it?". Then, out of 67 persons 36 shows the positive approach while 31 persons shows resistance towards digital transactions even after providing adequate level of awareness to them.

Source: Primary Data



Total	Will start doing it	Still prefer Cash Transactions
67	36	31

From the above data it is clear that, there is no significant co relation between the awareness and acceptability of digital transactions.

Conclusion

- There is inverse relationship between the age and level of acceptability of digital transaction. Young population are more open toward the digital transaction but as age group goes on increasing the level of resistance towards the digital transaction also goes on increasing.

- There is a significant relationship between gender and the openness towards digital transaction. From the study it is reviled that male are more indulged in digital transaction than their female counterparts.

- Level of education plays a crucial role when it comes to the acceptability of digital transactions. Those who belong to lower education group are showing more resistance towards digital mode of payment and as the level of education increases the acceptability towards digital mode of payment also increases.

- The low-income group are more indulged in cash transactions. At the same time those who are earning more than 2 lakhs annually are more likely to perform digital mode of payments.

- Some occupations have shown high acceptability towards digital transactions such as Salaried personal and students and on the other hand some have shown high resistance towards it such as home makers and retired personals. Whereas some professions such as self-employed/Business personals have shown moderate openness towards digital mode of payments.

- From study it is clear that awareness does not play a significant role towards the acceptability of digital transactions.

Reference

Kavitha, D. M., & Sampath Kumar, D. K. (2018). A Study on Digital Payments System with Perspective of Customer's Adoption. *Eurasian Journal of Analytical Chemistry*, 189–200. https://eurasianjournals.com/abstract.php?id=921

Mukhopadhyay, B. (2016). Understanding cashless payments in India. *Financial Innovation 2.1*, *2*(1), 1–26. https://jfin-swufe.springeropen.com/articles/10.1186/s40854-016-0047-4

Özkan, S., Bindusara, G., & Hackney, R. (2010). Facilitating the adoption of e-payment systems: theoretical constructs and empirical analysis. *Journal of Enterprise Information Management*, *23*(3), 305–325. https://www.emerald.com/insight/content/doi/10.1108/17410391011036085/full/html

Swain, B., Kumar, A., Dhir, S. S., Devadutta, K., & Dash, T. R. (2020). A Comparative Study between Digital Transactions and Cash Transactions: An Analytical Study. *International Journal of Advanced Science and Technology*, *29*(11), 2257–2262. http://sersc.org/journals/index.php/IJAST/article/

Neuromarketing: Mind Your Business

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ABSTRACT

Marketing has been evolving in all its forms. In its present scope, it has metamorphosed from barter system, to production concept, to product concept & so on. Neuromarketing can be considered as another milestone, which is still an evolving process. It can be a powerful tool in market research; where advertising is becoming more scientifically advanced. Todays consumers don't see your advertisement, they FEEL your advertisement.

Keywords: Advertising, Sensory perceptions, Neuromarketing, Market Research, Consumer behaviour

Objective:

Neuromarketing is a dynamic package of medical knowledge, technology & marketing. It is an emerging branch of neuroscience in which researchers use medical technology to determine consumer reactions to particular brands, slogans & advertisements. Researchers can now predict whether you prefer Surf or Rin; Coke or Pepsi etc. Covering everything from product development to packaging to point-of-sale marketing neuromarketing is the guide to access today's newest business frontier: **human brain.**

Methodology:

The paper attempts to throw light on growing perspective of Neuromarketing in & around. It will involve study of various applications of the concept of Neuromarketing through live case studies of the organizations. It will also analyse the limitations of the concept whether advertisers should probe human minds as means of boosting product sales? In this paper attempt will be made to study whether Neuromarketing will ever be used as a mainstream research method.

The paper attempts to understand how even the highest priced or lowest quality products sometimes outsell their competitors, it will look at how some brands that have a devoted cult-like following while others have a zero loyalty, the paper will consider why & how prospects buy products or services even if their choices seem irrational or impractical.

Findings & conclusion will depend upon the case study or example under review

Introduction:

Did we ever wonder why some brands have a devoted cult-like following while others have a zero loyalty? Why even the highest priced or lowest quality products sometimes outsell their competitors. Why & how prospects buy the products or services they do even if their choices seem irrational or impractical.

Objective of all marketing communication is to induce or enhance purchase. Advertising is one of the major components of promotional mix and that of marketing communications.

"Marketers are not concerned with how the consumers process the information and how they perceive the same. The marketers and advertisers communicate what they think is right. They are not concerned about communicating right things in the right manner."

- William M. Weilbacher (2003)

Marketing researchers have started questioning the premise that a target consumer would reflect 'what he/she really thinks' in response to a question in a questionnaire. If the consumer does not reflect his/her actual feelings to a marketing researcher, how can we assume that the results arrived at after such a research would be reliable?

Remember the pre-poll survey where the results declared that some political party would come to power at centre and actually the opposite happened. The survey was conducted by one of the best research organizations. Sometimes the consumers themselves do not know their real feelings about a given situation. They would act in a particular manner at the spur of the moment. It may also happen that, they know their actual feelings but do not intend the marketing researcher to know the same.

We depend on the principle of marketing research to find out consumer preferences, attitudes, likes and dislikes. We analyze consumer responses and reach certain conclusions. On this basis, marketing and promotional mix is decided. However research has revealed that consumers do not necessarily provide the real answer to researcher. At times they do not even know as to what is that they really think about a given question.

Hence there is some thing over and above all the principles of marketing and advertising which underlie consumer behavior. Gerald Zaltman, the learned Professor at Harvard University has also shown keen interest in the similar area and has authored a book titled: “How customers think: Essential insights in to the mind of the market.” Researchers all over the world are trying to find answers to questions on the unfathomable behavior of the target consumers in the fields other than those of consumer behavior, marketing and advertising.

This brings us to neuro-marketing the field has unprecedented potential of showing the path to those managing brands, marketing communication.

What is Neuromarketing-where brain science and marketing meet?

In very simple terms, Neuromarketing is a combination of medical knowledge, technology and marketing. Neuromarketing is a new field of marketing that studies the consumer's response to marketing stimuli. Neuromarketing is the application of neuroscience to marketing. Neuromarketing includes the direct use of brain imaging, scanning, or other brain activity measurement technology to measure a subject's response to specific products, packaging, advertising, or other marketing elements. In some cases, the brain responses measured by these techniques may not be consciously perceived by the subject; hence, this data may be more revealing than self-reporting on surveys, in focus groups, etc.

This concept was developed by psychologists at Harvard University in 1990.The word Neuromarketing was coined by Ale Smidts in 2002.It is an emerging branch of neuro science in which researchers use medical technology to determine consumer reactions to particular brands, slogans and advertisements. The first ever Neuromarketing conference was held in 2004 at Baylor College of Medicine in Houston.The base of Neuromarketing is “meme”. Meme is a unit of information stored in the brain. These units are effective influencing human who is making choices and decisions within 2.6 seconds. If mem is chosen properly we remember the good, joke or song and would share it. Memes stay in our memory and are affected by marketers. Examples of memes-aroma of fresh bread, biscuits, sweets, characters in fairy tales, stories of grandmother.

Thus, Neuromarketing is a promising and emerging field with tremendous potential for application in the functional areas of marketing, brand management and advertising. It has emerged after bringing together applicable concepts from the field of neural-science, psychology, human neuro-physiology and even neuro-chemistry.

Introduction of the Buying Brain:

“*Understanding the human mind in biological terms has emerged as the central challenge of science in the twenty-first century.”*

-By Dr. Eric Kandel, Neuroscientist and winner of the Nobel Prize for Physiology or Medicine

Millions of people in our global economy have jobs that depend on communicating with and persuading the human brain. So it is vital for us to understand how the human brain really works, what is attractive to it, how it decides what it likes or dislikes or how they decide to buy or not buy the infinite variety of products and services.

The basic lesson is that human brains process much of their sensory input subconsciously. Most of the works our brains are doing day and night are below our personal consciousness. Our senses are taking in about 11 million bits of information every second. Most of that comes through our eyes but all other senses are contributing-hearing, touch, smell, taste. Research has shown that our conscious brain can process at best 40 bits of information per second. All the other is processed subconsciously. That is why our brain appears to be a mystery.

This has really widened the scope of Neuromarketing. The concepts of Neuromarketing provide a real competitive advantage in a crowded and cluttered market. The languages of consumers change from country to country and culture to culture, however the language of human brain is the same i.e. universal. Thus, Neuromarketing has greatly affected products, brands, packaging, and advertising as well.

Structure of Human Brain:

Human brain is made up of billions of cells. These cells are called neurons. The neurons can communicate with one another through small junctions. These junctions are called synapses. When a neuron is active, it sends an electrical impulse to its own terminal or end. The impulse generates a sequence of physic-chemical events leading to the release of a chemical molecule. This chemical molecule is called a neurotransmitter and serves as a messenger. This neurotransmitter forms a bridge between the two neurons and the impulse gets transferred. Once a neuron is activated it is described as *'a neuron has fired'*. A single neuron connects with 600 to 1500 other neurons. Neurons form circuits, circuits form networks, networks form systems, systems form super systems and the super systems are equivalent to galaxies.

"Neurons are the basic working units of the brain and the central nervous system, designed to transmit information to other nerve, muscle or gland cells."
By Dr. A.K. Pradeep Founder and CEO, Neurofocus Inc.

Our brain is a part of central nervous system which has following parts:

Area of Brain	Function	Importance
Spinal cord	Sending message from nerves to different parts of the body	0
Medulla oblongata	Respiration, controls blood pressure, senses of taste and hearing	1
Pons	Controls movement, respiration and sleep	0.5
Cerebellum	Maintains postures, controls head and eye movements, muscle movements, language as well as cognitive functions	1.5
Midbrain	Co-ordination of visual and auditory reflexes	0.5
Thalamus	Taste, smell, touch	2
Hypothalamus	Eating, drinking, growth, motivation	3
VMFL	Decision-making	4

Value range 0 to 5
(Source: Neuromarketing a Peep into Customer`s minds by J.K. Sharma, Deepali Singh, K.K.Deepak, D.P.Agarwal)

Brain Laterality:
Human brain can be divided into two hemispheres: Right and left. The left one is supposed to be logical while the right one is creative. It is very interesting to note that the left hemisphere receives inputs better from the right side and vice-versa. This can be a very vital input to print advertisers, OOH (out of home) media and banners on the internet. The visual matter should be placed towards the left while the text on the right. Similar application to packaging which acts like a silent salesman for the product which is on the shelf.

Modern techniques for examining the effect of communication on human brain:
· EEG
· fMRI
· GSR

EEG:
EEG stands for electroencephalography in which activity in the brain tissue is recorded. This is a passive technology in which sensors are used to capture minute electrical signals that brainwave activity produces. The output is generated in the form of waves which are of four types:

· Beta waves-these are the fastest of all with low amplitude. Beta waves are generated when brain is actively engaged in some mental process. Example: delivering a lecture, in meeting

· Alpha waves-these are generated when our brain is at rest. Their frequency is lower than that of beta waves. Example: person taking rest after completion of any job

· Theta waves-The amplitude of these waves is greater while their frequency is lesser. Theta waves represent a person who is performing some leisure activity.

· Delta waves- They have the highest amplitude with lowest frequency. Example: a person in deep sleep

Dr. Hans Berger was the pioneer in application of EEG in 1920`s.This is the only method that measures the electrical activity of the brain. On March 21, 2011 NeuroFocus the Neuromarketing arm of Neilson announced Mynd™ world`s first dry, wireless Full-brain EEG measurement headset.

fMRI:
fMRI is functional magnetic resonance imaging wherein the person is scanned by making him/her lie down in a long, narrow tube made up of very powerful magnets. When these magnets become active electrical fields are produced. fMRI depends upon the blood flow to brain. More the flow of blood more is the neural activity.

GSR:
GSR stands for Galvanic Skin Reaction which provides us with information to determine the extent of subject's involvement in an external stimulus. Human skin is a good conductor of electricity. Example of External stimulus: audio, visual.

Success stories of the applications of Neuromarketing: Campbell`s Soup
Background:
Condensed soup has been a slow growing category in which the budget conscious consumers have little tolerance for price increase. The objective of the company was to boost sales by 2% over the next two years without increasing the prices.

Problem Identified:
It is not easy to know what prompts people to buy soup, except for something warm to eat on a frosty day. They identified a need to connect better with their consumers.

Methodology Used:
The organization took help of Neuromarketing studies to tackle this problem. For years Campbell`s researchers asked the consumers whether they remembered an ad & whether it made them buy the product. The analysis further revealed that, ads had very little impact on the sales. The traditional interview had limited usefulness as the words of the respondents did not capture their unconscious responses.

The organization settled on biometric tools combined with a different type of deep interview to more accurately gauge which consumer communications worked better. Campbell then hired Innerscope Research Inc. a Boston Company to conduct further research. Biometrics tells only if a person reacted to something not whether they liked or disliked something. The Neuromarketing tools can`t pin point what emotions a person feels but if all the biological metrics move simultaneously in the same direction, the subject is likely to be emotionally engaged with something. Researchers interviewed 40 people at their home & later in grocery stores. The team also clipped small video cameras to the 40 testers at eye level & made them watch the tape of themselves shopping for the soup. Sensors attached to the video monitor tracked the eye movements & pupil width. Vests that the testers wore also captured skin-moisture levels, heart rate and pace of breathing as well as posture.

Findings:
The warmth and other positive attributes people associated with Campbell`s soup at home evaporated when they faced the store shelves. Typically, the consumers show simultaneous blips in most of their biological metrics when they decide to buy something. The people who spent more time exploring varieties showed more & bigger spikes in biometrics and tended to put more soup cans in their baskets. The Campbell team figured it could boost sales by triggering more emotional responses in stores & prompting more people to focus on more soups.

Following are the changes in the labeling based on Neuromarketing experiments:

· The studies showed that when logo was placed at the top with red background it drew too much attention so the new label suggested had logo at the bottom of the can so that all labels look similar.

· The bowl was updated while the spoon in earlier packing design showed very less emotional connects to the consumers. As a result the new creative was without the spoon.

· The steam was added in the creative of the soup to give a feeling of warmth as well as to increase the consumers emotional connect.

· The different varieties of soup were color coded for easy identification to the consumers

Future of Neuromarketing:
There is no element of doubt that Neuromarketing will enable advertisers to be very specific in providing products that the consumers really want. The more senses you trigger about your products and service you can influence the buying behavior. Still Neuromarketing is in ones infancy and not free from critics as well as issues.

NeuroFocus, Inc. is an American multinational Neuromarketing company with headquarter in Berkeley. NeuroFocus combines neuroscience research with consulting and marketing practices. NeuroFocus is the global market leader in neurological testing. In India too they have set up an office in Chennai. First *annual Neuromarketing awards* were announced by media brands IPG Media Lab and Affectiva at Cannes Lions International Advertising Festival in June 2011.On February 2-3rd 2012 *Neuromarketing World Forum* met in Amsterdam with a theme "Science meets business" where *Neuromarketing Science and Business Association* was launched. This was a great success as 100 delegates from 29 countries participated in the same.

Yet this concept is not totally free from criticism. The cost of conducting studies can be a major hurdle especially for start-ups. Brain activity in a lab may not equate to brain behavior in a mall. Neuromarketing studies are not yet common in B2b scenario where the buying process is lengthy and involves many people. In-spite of all these issues Neuromarketing is here to stay. All advertising campaigns are not commercial as many focus on changing the behavior of the people. For example to convince people not to smoke, don't drink and drive or talk on a cell phone while driving.

References:

Agarwal, J. P., Deepak, K. K., Singh, D., & Sharma, J. K. (2010). *Neuromarketing: A Peep into Customers Minds*. Prentice Hall.

Brat, I. (2010, February 17). *The Emotional Quotient of Soup Shopping*. WSJ. https://www.wsj.com/articles/SB10001424052748704804204575069562743700340

Britt, B. (2004). Automakers tap consumer brains. *Automotive News Europe*, *9*(1), 1–22. https://www.autonews.com/article/20040112/SUB/401120876/automakers-tap-consumer-brains

Dr. A. K. Pradeep, A. (2010). *The Buying Brain: Secrets for Selling to the Subconscious Mind* (1st ed.). Wiley.

Lewis, D., & Brigder, D. (2005). Market Researchers make increasing use of Brain Imaging. *Advances in Clinical Neuroscience and Rehabilitation*, *5*(3).

Miley, M. (2008, October 27). *Ad Experts Not So Quick to Buy Into 'Buyology'* Ad Age. https://adage.com/article/news/ad-experts-quick-buy-buyology-neuromarketing/132035

Morin, C. (2011). Neuromarketing: the new science of consumer behavior. *Society*, *48*(2), 131–135. https://link.springer.com/article/10.1007/s12115-010-9408-1

Nelson, J. (2010, May 10). *Marketing: Science sells soup - Canadian Business*. Canadian Business - Your Source For Business News. https://archive.canadianbusiness.com/business-strategy/marketing-science-sells-soup/

Phan, V. (2010). *Neuromarketing Who Decides What You Buy*. The Triple Helix. https://www.scribd.com/document/162240361/Neuromarketing-Who-Decides-What-You-Buy

Randall, K. (2012, July 30). *Neuromarketing Hope and Hype: 5 Brands Conducting Brain Research*. Fast Company. https://www.fastcompany.com/1357239/neuromarketing-hope-and-hype-5-brands-conducting-brain-research

A Study on Location Strategy and Trade Area Analysis of Top 10 Malls of Western Suburbs of Mumbai

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ABSTRACT

Mumbai is the financial capital of the country and home to important financial institutions and Multinational companies. The City has a rich cosmopolitan culture. it is also the capital of entertainment industry and city of dreams. These are enough reasons for the growth of organized retail and real estate development here. It is the capital of Maharashtra & the commercial capital of India & is one of the most populous cities of the world. It has a per capita income of more than 2 lakh which is over three times the rest of India. It homes a large middle class, upper middle class, and the rich class of the country. Retail sector is one of the booming sectors of the city in last 20 years a lot of Mall have come up and the people of Mumbai are adapting to the mall culture. Mall is usually a large, enclosed area, a mercantile establishment consisting of a carefully landscaped complex of shops representing leading merchandisers; usually includes restaurants and a convenient parking area. The word shopping mall is made up of two words: shopping and mall. Shopping can be defined as the activity that involves the exchange of goods and services for money. According to Kuria (1975). Lousberg (2009) defines shopping malls as "premises selling general merchandise or fashion related goods. They are enclosed inward facing stores, connected by a common walkway. Parking surrounds the outside perimeters." A shopping mall can therefore be defined as a complex that encompasses several retail stores, restaurants and other businesses with a common interest in soliciting sales. The complex is put up and managed as a single unit. Shopping malls offer private, off-street parking facilities.

Keywords: Financial Capital, Multinational Companies, Cosmopolitan Culture, Entertainment Industry

Introduction

Mumbai is the financial capital of the country and home to important financial institutions and Multinational companies. The City has a rich cosmopolitan culture.it is also the capital of entertainment industry and city of dreams. These are enough reasons for the growth of organized retail and real estate development here. It is the capital of Maharashtra & the commercial capital of India & is one of the most populous cities of the world. It has a per capita income of more than 2 lakh Rs which is over three times the rest of India. It homes a large middle class, upper middle class, and the rich class of the country. Retail sector is one of the booming sectors of the city in last 20 years a lot of Mall have come up and the people of Mumbai are adapting to the mall culture. Mall is usually a large, enclosed area, a mercantile establishment consisting of a carefully landscaped complex of shops representing leading merchandisers; usually includes restaurants and a convenient parking area. The word shopping mall is made up of two words: shopping and mall. Shopping can be defined as the activity that involves the exchange of goods and services for money. According to Kuria (1975). Lousberg (2009) defines shopping malls as "premises selling general merchandise or fashion related goods. They are enclosed inward facing stores, connected by a common walkway. Parking surrounds the outside perimeters." A shopping mall can therefore be defined as a complex that encompasses several retail stores, restaurants and other businesses with a common interest in soliciting sales. The complex is put up and managed as a single unit. Shopping malls offer private, off-street parking facilities.

Location strategy of Malls:

In Mumbai choosing a mall location is complex, cost can be quite high, and it has a big impact on the strategy. The size of population and the traits of population like income level, lifestyle traits, and other demographic characteristics, competition, transportation access plays an important role in selecting a malls location. It requires a huge investment and cost & so it is difficult to change the location easily. The choice of location influences long term planning. The location decisions are also based on the study of the population trends, the distances people travel to the store, and competitor's entry and exit

In Mumbai, most outlets are located on the high streets. The earlier high streets now mainly comprise of offices and centers of commercial activities.

Residential areas have a miniscule presence on the high streets. Mumbai's Bandra has come up to be as the hottest high street in the metro. The biggest advantage of high streets is the easy access that they provide to the shopper.

Destination Location

Shopping malls location strategy tries to be a destination for the shoppers of that trading area. This concept is very common in India and has existed for a long time now. In India, selling the property has been the primary aim of the real estate developers and the government bodies concerned with it. Basic facilities like parking, security and maintenance etc. were overlooked in the process. But the things have been changing in the recent times. With the organized retailing coming up as a booming industry, the attitude of the developers, government bodies and corporates, towards shopping centers, has witnessed a drastic change. With retailing industry taking a proper shape in India, several projects of opening modern malls are either on the verge of completion or are in the pipeline. The Western Suburbs have some of the biggest malls of Mumbai, like infinity mall, Inorbit mall and Oberoi mall' etc. Mumbai is credited with housing the first Mall of the country & has a retail development the total stock of 11.26 mn. Sq. ft. The city has some of the most successful and grand malls of the country. Retail rental in the city is highest in the world. the size of consumer market is big, and the real estate is struggling to catch up to demand for retail space. The City of Mumbai is divided into 4 zones Island city, western Suburbs, central Suburbs and Navi Mumbai.

Western Suburbs: some of the fastest consumer market is in the western suburbs which includes Santacruz, Linking road in Bandra, Andheri, Malad, Goregaon, Kandivali and Borivali. 10 of the operational malls in western suburbs are studies for the paper. Major Mall in this suburb are Oberoi mall, Infinity Mall, Inorbit Mall. Western suburbs accounts for the around 50 percent of the mall space of the city. The area around Goregaon has more mall space than any other place of the city. Some of the Malls are struggling to get tenant. Inorbit Mall is designed by Raheja, s and Growel Mall 101 designed by Growel and Weil are experiencing good footfall and tenant mix.

Trade Area Analysis

A trade area is simply the geographic area that generates most of the customers for a mall. Knowing the trading areas demographic and lifestyle information is the key for building a successful strategy. A Market analysis study is done to understand demand and supply in the area. Demand refers to the amount of retail mall space that could be supported by consumers residing in the trading area and the supply refers to the gross leasable area (GLA), that currently exist in the trading area. Trade area analysis describe the characteristics of the area around a store or network of stores. Without accurate trade area definitions, the key statistics that impact a store's performance can't not be measured.

Trade area analysis provides information about

- Where a store's customers are coming from,
- How many customers are there in a trade area?
- Where to look for more customers

Factors that Impact Trade Areas:

Analysing trade areas is performed regularly to provide key metrics for improving sales and marketing performance. A change to product offerings will impact the trade area, as will shifts in population and demographics, the existence of competitors, changes to highways and roads, and the addition of other businesses that attract people to the area.

Each trading area has three parts: the primary trading area which encompasses 50 to 80% of the store's customers. The secondary trading area contains 15% to 25% of store customers and the fringe trading area includes all the remaining customers.

There are computerized trading Area models for assessing new store location. An analog model tries to establish a relationship between potential sales and based on revenue of similar stores in the existing area. Regression model uses a series of mathematical equation showing the association between potential stores sales and several variables like population size, average income, the number of households, nearby competitors etc.

Literature Review

Reilly's Law of Gravitation: It establishes the point of indifference between two cities or communities at which consumers are indifferent to shopping at either. According to the law more consumers go to the larger city or community because there is more store to shop from.

It is based on the premise that people are attracted to larger places to larger places to do their shopping, but the time and distance they must travel influence their willingness to shop in a given city. In other words, people are more likely to travel shorter distances when possible. Additionally, customers are more likely to shop in larger communities, as they provide a greater opportunity for goods and services.

Huff's Law: It delineate the trading areas based on product assortment carried at various locations, travel times from the shopper's home to alternative locations, and the sensitivity of the kind of shopping to travel time.

Central Place theory:

Central place theory has been over past 60 years extremely influential in providing a framework for the analysis of both spatial and non-spatial retailing patterns, although it is subject to certain limitation discussed by Carter and Brown. Kivell and Shaw's have criticized it for reducing a complex model for simple observations, as it suffers from high degree of abstraction in terms of the assumption of identical consumers, an even distribution of population and the concept of single purpose shopping trip to the nearest center which supplies the merchandise. Center place theory assumes consumers to be identical, which is not a very realistic concept. The single most shortcoming of this theory is the failure to accommodate change successfully. Most of the authors have criticized that oversimplification of the single product or the purpose approach. Factors like price, quality and image is been ignored. New models are been propounded on the bases on multipurpose shopping.

Spatial interaction theory

The large retailers have recognized the commercial opportunities offered by changing consumer demands, and they respond with the provision of new shopping facilities offering the advantages of easily accessible out-of-center sites, adequate car parking, larger premises to provide larger range of products and associated services, and a more attractive shopping environment in more secure surrounding (Thomas and Brommlay 2002). These findings have encouraged large concentration of retail outlets in all the areas of retailing. Service encounter is the outcome of interaction with the service provider, physical environment, and service users. The customers present in the premises also affect the total experience of the service encounter (Lovelock).

Spatial interaction theory is based on hypothesis that consumer trade-off the attractiveness of alternative shopping areas against the deterrent effect of distance (Clarkson, 1996). This offers an alternative model to explain behavioural interaction, in the process it discards the assumption made by central place theory that consumer choose to go to the nearest place for shopping. This theory has originated from the studies of William j. Reilly. He drew an analogy between this with Newtonian Physics, linked with empirical observation of shopping behavior placed in an inter-urban structural context. Gravity model considers variables like population and road distance. The problem is these parameters unity and inverse square do not always perform well in practice. Some empirical studies showed that Reilly's model perform well in practical situations, others found inconsistencies. The modification in the Reilly's law came from identifying “inertia factor” that reflected the reasons for consumers not following the Reily s law.

Most significant modification came from Huff (1962-1963). He believed that consumer patronize the competing shopping areas on the basis of its overall utility. He stated that when consumers have a number of shopping alternative opportunities, they may visit several different stores rather than restrict patronage to a particular store. Therefore, each store within a geographic area with which the shopper is familiar has some chance of being patronized

Land value theory

Land value theory is also known as bid rent theory and urban rent theory. Haig and Hotelling have propounded it in the year 1926.it argue that competition for an inelastic supply of land ensures that, in the long run all the urban land will be occupied by the activity capable of paying the highest rentals, and land is thereby put to its “highest and best use”.

It proposes that location of different activity will depend on competitive bidding for specific sites. Land use activities occupy locations sequentially and once established they can prove difficult to move in. in an urban area there can always be nonconforming and outmoded land. In Mumbai the center has lost much of its accessibility because of traffic and congestion this has led to the existence of positive and non-negative rent which do not always decline with distance.

Alonso (1964) developed models for utilization of land on the bases of Haig's work. He constructed bid rent curves for each land used function. With the objective of attracting most of the customers from the adjoining areas of central sites, retailer are prepared to bid high rental, but the amount they are willing to pay is inversely proportional to the distance from the central business district.

The principle of minimum differentiation

This principle originated from Harold Hotellings (1929) classic paper. It suggests that a given number of stores operating within the same market sector will achieve superior performance if they are clustered together. Hotelling made key assumption regarding location, pricing, transport cost, consumer behaviour, market shape, conjectural variation and number of competitors. In retailing context, a number of empirical studies support the principle that sellers of same and similar categories tend to cluster totally together. These studies have been carried out in number of different countries; Brown explains that the high order retail trades, like ladies outfitter or departmental stores, exhibit the most clustered distribution, whereas low order retail business such as convenience stores and personal services are the least agglomerated of all.

Chief factors to evaluate in retail trading areas

Population size and characteristic like density of the population, age distribution, average education level, total disposable income, occupation distribution, percentage of residents owning home, availability of labor, closeness to sources of supply like delivery cost, timeliness, promotion facilities availability and frequency of media cost, economic base like dominant industry, extent of diversification, competitive situations, availability of store location and the regulations. The sites can be evaluated on the parameters like

Pedestrian traffic, vehicular traffic, parking facilities, transportation, store composition. The planned shopping center-This is a group of architecturally unified commercial building, is designed and operated as a unit. It has balanced tenancy had good parking facility. It has the support of strong suburban population. Some big retailer is also involved in the making of shopping centers. A regional shopping center is a large planned shopping facility appealing to a geographically dispersed market. A regional center offers a very broad and deep assortment of shopping-oriented goods, megamall is a type of regional shopping centers.

Analysis of Spatial Distribution of Shopping Mall and their Trade Areas in Mumbai

Some of the major upper class and upper middle-class household resides in Western Suburbs which includes Santacruz, Linking Road in Bandra, Andheri, Malad, Goregaon Kandivali, Borivali and Dahisar. Main operational malls in this zone are Infinity Mall, Inorbit Mall, Oberoi Mall, Thakur Mall, Growel 101 etc. Western suburbs, micro-markets accounts for 6 large malls. A reason for this could be the lack of organized retail in these spaces and hence the need for large malls. Another reason could be the fact that a lot of individuals in these areas have an income higher than the other parts of Mumbai.

Table 1

Western Suburbs: Population Growth			
Census	Pop.		%±
1971	1,705,490		—
1981	2,858,170		67.60%
1991	3,947,990		38.10%
2001	5,095,680		29.10%
2011	6,220,000		22.27%

Population density 15000/km2

Source: MMRDA Data is based on Census 2011

Each of the suburbs has their own railway station. Bandra, Andheri and Borivali are important railway station western suburbs. The Western Express highway connects Dahisar to Bandra and then Worli and South Mumbai.SV road is another major road of Mumbai Suburbs which houses some of most fashionable retail destination of Mumbai. Goregaon has the area around has maximum amount of mall space in the western suburbs.

Table 2. Population Size and Characteristics of Mumbai

Sr. No.	Demographic analysis	
1	Area	603 Sq. Km
2	Population	1.84 million
3	Population rate growth	0.03%

4	Estimated Population growth in 10 years	1.31%
5	Historical population Growth	2.03%
6	Number of households	6.6 Million
7	Number of households with an annual income of 2 Million	4%
8	Rate of increase in the household of 2 million income	150%
9	No. of households with an estimated income 1-2 million	15%
10	Per capita income of Mumbai	199,150
11	Population density	26,000 square km
12	Average age of city population	29.9 years
13	0-15	22.50%
14	16-44	58%

Table 3: Commercial and Residential Property rates of Western Suburbs locations

Sr. No	Name of the Mall	Location	Property rate- Commercial	Property rate - Residential	Commercial Lease per sq. ft.	Residential lease outright
1	Infinity Mall	Malad	Rs 14,500*	Rs12700/-	Rs 85	15,000- 2,00,000
2	Inorbit Mall	Malad	Rs. 14,500/-	Rs 12,700/-	Rs 85	Rs 15,000/-Rs 2,00,000
3	Oberoi Mall	Goregaon	Rs 16,500/-	Rs14,200/-	Rs 100	
4	Growels 101	Kandivali	13,000-17,500	Rs 13000- 18000	Rs 80- 150	18,000-75000
5	Thakur Mall	Dahisar	10,000- 12,500/-	10,000- 12,000/-		

*All the rates are in Square feet

Source: https://www.mumbaipropertyexchange.com/research/mumbai-property-rates

Table 4: Western Suburbs Mall Demand and Supply Gap

	20111	2012	2013	2014
Estimated Demand	4.43	4.47	4.50	4.54
Total Stock	4.13	4.38	4.38	4.38
Shortfall percentage over	7	2	3	3
Oversupply	NA	NA	NA	NA

Note: Figures are in million square feet
Source: (Research studies on mall in India) asipac report, 2011.

Table 5: Spatial Distribution of leasable space, population, income and connectivity

Malls	GLA (in sq ft	Population (in Million)	Household Income (in million per annum)	Connectivity (distance from railway station (Km)
Raghulila Mall	1,50,000	5	1.8	1
Infinity Mall	8, 50,000	9.5	3	2
Growels 101	7,50,000	5	2.4	2
Obroi Mall	5,50,000	4.5	2.3	3
Infinity Andheri	3,00,000	9.5	3.4	3
Inorbit Mall	5, 47,00,	4	3	2
Moksha Plaza	1,00,000	9.5	3	1
Thakur Mall	4,00,000	4	2	2
Maxus Meera	2,50,000	5	2	1
Maxus Gorai	2,00,000	3	1.5	1

Source:
1. Knight Frank India Research (Mumbai) 2002, 'Searching for space', Praxis Business Line,
2. Source: https://www.statista.com/statistics/658634/share-of-annual-income-in-mumbai-india/
3. Statistical analysis of Primary data.
4. MMRDA Data is based on Census 2011

In this section, the factors which affect the location of shopping malls and analysis of their trade areas and consumer behaviors are investigated. The hypothesis is that the leasable space is a function of population, income, and connectivity. The relationships between the leasable shopping space and distance to CBD, population and income of the districts are investigated using regression analysis. Data is given in Table 1. An Excel program was used for the analysis.

Table 2 contains a summary of the standardized coefficients of regression analysis. According to the results, income is the only factor to affect the shopping mall space among the variables considered. Connectivity and the population of districts are found not significant. These results are within the findings of Simkin (1990) that Household Income is the most important influence on the market within a given metropolitan area. The level of household income, primarily because of its effect on purchasing power, and secondarily because of variations in purchasing patterns that occur among income groups. Income disparities between different parts of the Mumbai Suburbs are found.

For the analysis of trade areas, 10 malls are selected from the Western Suburbs of the city since some of the major malls are in this area. all are good enough to provide a good indication of the urban commercial environment in which it is located. The spatial data was collected from application of the questionnaire on personal preference nature. Analysis of commercial structure is difficult because many of the shopping malls do not permit the surveying of their customers

Table 6: Regression analysis of the factors which effect shopping malls location

Regression Statistics	
Multiple R	0.309028
R Square	0.095498
Adjusted R Square	-0.01756
Standard Error	258969.5
Observations	10

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	102084.7	344583.4	0.296255	0.77458	-692526.1077	896695.6	-692526	896695.6
Income	126071.8	137176.5	0.919048	0.384943	-190257.7529	442401.4	-190258	442401.4
Intercept	408012.5	618690.9	0.659477	0.528113	-1018691	1834716	-1018691	1834716
Population	375	136148.8	0.002754	0.99787	-313585	314334.6	-313585	314334.6
Intercept	1.2375	1.890349	0.654641	0.531065	-3.12165	5.596652	-3.12165	5.596652
Connectivity	0.125	0.415989	0.300489	0.771465	-0.83427	1.084272	-0.83427	1.084272

Table 7: The factors which effect the number of customers to the Mall

Variables	Beta	t	significance
Income	0.909420741	4.299863	0.113360473
Connectivity	-0.81232	-4.23	0.09
Adjusted R Square	0.193544766		
F	3.159949895		
Significance F	0.113360473		

A Survey was conducted of 100 randomly selected customers shows that 40% come for shopping, 25% for eating, 15 % for entertainment and 20% for walking and window shopping. Seventy-five per cent of its customers come from the primary trade area and 22% from secondary trade area and 3 percent from tertiary trade area. 50% customers come up to 1-hour distance, 44% customers come from more than one-hour distance.45% of the customers come by car, 55% customers come by public transport and 5% by walking. The malls attract more customers because of its size location as propounded by Reilly and Huff Models. The results of the study show that income of the trade area is the most important factor to affect the location of malls.

Conclusion

With respect to trade areas of the shopping malls, large malls in Mumbai are quite successful in getting traffic due to tremendous population increase, increase in household incomes growth in car ownership & changing lifestyles. in consequences more and more malls are coming up, with new housing projects, bridges, highways, flyovers, subways, has increased the connectivity. Mumbai with its large population and its rapidly growing retail market offers a great potential for new investors in leisure property. There is still a huge gap between demand and supply of Mall space.

The investigation of consumer behavior reveals that rise in income is one of the major reasons for the growth of shopping mall in the western suburbs. The relationship between leasable shopping area and income, population connectivity was investigated using regression analysis. The result showed that only rise in household income is related to the leasable space available in the area. Thus, shopping malls are generally located in the high-income location. Furthermore, surveying of consumption pattern of the shopping malls in the western suburb showed these malls are accessible by car as well as public transport. People visiting the malls also come from secondary trade areas and besides shopping, the customers come to malls for spending quality time. Thus, a further research is required to understand the changing pattern of consumption and spatial distribution of commercial structure to develop efficient retail market.

References

Berman, B., & Evans, J. R. (2010). Retail Management: A Strategic Approach. In *No Title* (11th ed.). Prentice Hall.

Das, A. (2008). Mall Management With Case Studies. In *No Title* (2nd ed.). Taxmann Publications Pvt. Limited.

How to get to Growels 101 Mall in Kandivali East by Bus, Train or Metro? (2022, August 17). Retrieved September 13, 2022, from https://moovitapp.com/index/en/public_transit-Growels_101_Mall-Mumbai-site_31972271-3732

Indian Retailer Bureau. (2015, May 15). *Best shopping malls 2015: Infiniti Mall, MALAD*. Indian Retailer. Retrieved September 13, 2022, from https://www.indianretailer.com/article/whats-hot/property/Best-shopping-malls-2015-Infiniti-Mall-MALAD.a3401/

Infiniti Mall Andheri West. (n.d.). Mumbai. Retrieved September 13, 2022, from https://mumbai.mallsmarket.com/malls/infiniti-mall-andheri-west

Singh, H., & Prashar, S. (2014). Anatomy of shopping experience for malls in Mumbai: A confirmatory factor analysis approach. *Journal of Retailing and Consumer Services*, *21*(2), 220–228.

T, A. (2016a, July 26). *Concept of Tenant Mix | Retailing*. Your Article Library. Retrieved September 13, 2022, from https://www.yourarticlelibrary.com/mall-management/tenant-mix/concept-of-tenant-mix-retailing/87354

T, A. (2016b, July 26). *How to Manage Retail Tenant Mix? | Mall Management*. Your Article Library. Retrieved September 13, 2022, from https://www.yourarticlelibrary.com/mall-management/tenant-mix/how-to-manage-retail-tenant-mix-mall-management/87360

Transgressing Perceptual Barriers in Pharma Sector

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ABSTRACT

The pharmaceutical sector, with its critical role in healthcare, often faces perceptual barriers that hinder effective communication, collaboration, and progress. This paper delves into the concept of transgressing these perceptual barriers within the pharma sector. It explores the challenges arising from misconceptions, biases, and miscommunication that impede innovation, research, and patient care. Through case studies and illustrative examples, the research highlights successful strategies and initiatives that have broken down these barriers, fostering cross-disciplinary interactions and knowledge exchange. The abstract underscores the importance of transparent communication, interdisciplinary collaboration, and public engagement in reshaping the perception of the pharma sector. By embracing diverse perspectives, understanding patient needs, and aligning with societal expectations, the pharma sector can transcend these barriers and contribute to improved healthcare outcomes. This study offers insights to professionals, researchers, policymakers, and stakeholders seeking to facilitate meaningful change within the pharmaceutical industry by addressing and overcoming perceptual barriers.

Keywords: Transgressing, Perceptual Barriers, Pharma Sector

It seems extraordinary that one of the world's largest consumer goods market pharmaceuticals stood for so long as Laad Rest with little help from Brand management – **Tom Blackett**

Introduction

When relation between buyer and seller is direct and open, which is not the case with pharmaceuticals industry. The industry is use and has great value, it has learnt to cope up with extraordinary degree of regulations placed upon it, and would seemingly have no need for a brands.

Pharmaceuticals industry is highly technology oriented. Production and distribution is controlled by drug and cosmetics act 1940, promotion is controlled by Magic remedies act, price by DPCO, because is highly regulated industry. However as market opens up and competition source the industry needs more branding. The burgeoning $800 billion worth pharmaceutical market is now assiduously changing strategies to extend the product life-cycle of their molecules. Besides most of the Pharma-majors are charging at $49.8 billion OTC market.

Study also reveals that, branded formulation can attract up to 50% premium on the generic products. Thus the importance is branding. The concept of brands is central to marketing. Brands pay salaries, brands empower companies and in recent years, they have become an asset on balance sheet.

Brands are more than trademarks; they are trust marks. Tylenol could sustain the blow, only because it was a strong brand. In what follows we have to try to look at some of the marketing practices from branding perspective. Bad health to good health is a continuum and various categories of formulation are useful at various stages of this continuum.

The market can be divided into bad health (major & minor problems) and good health (prophylactic or preventive and improving) major health problems are generally treated by prescription or ethical route, while minor health problem and preventive treatment is administered by OTC formulation. Improving is the benefit given by FMCG is the continuum that treats the patients at various levels of severity of the problem. Obviously they are not in a water tight compartment, but there is a very thin boundary between OTC-Ethical and OTC-FMCG products.

OTC may include nutraceuticals & cosmetics, whereas FMCG may include cosmetic-shampoo skin care. These thin boundaries may be called, perceptual barriers. In order to cash the success in one therapeutic group, is another therapeutic group. And also, in order to attract unrepresentative market segments.

'Clinic all clear' from prophylactic route entered into FMCG segments where as Fair & Lovely appeals to the consumers suffering from minor health problems (OTC) 'Revital' and 'Thirty-plus' both have ginseng and appeal to similar health problem, but whereas Revital has entered OTC segment through ethical route, Thirty-Plus originally positioned as life-style FMCG product became energy recharger (prophylactic) to aphrodisiac (minor health problem).

While transgressing the perceptual barriers, it is observed that, marketers use similar kind of communication. But, the question is, do all the consumers in the product category sahre similar behavioural pattern when it calmed to response hierarchy models?

We all know that FMCG consumers exhibit 'Awareness — interest — desire — action' pattern while selecting the product. What it means is that media advertising first makes the prospect aware about the product. If the prospect becomes aware about the product, he is likely to buy the product. If the prospect is not aware about the product, there is hardly any chance of his buying it. It is not sufficient that, the prospect is simply made aware about the product, he should develop interest in the product; the role of promotion is not only awareness but also persuasion. The next stage is desire. The prospect wants to buy the product, desires the product, and last bit of action is generated by the push given by sales promotion activities, like free offers, discount, consumers contests, consumer promotion schemes, etc they result into action.

So the question arises is do consumers in ethical and OTC market also follow the same "a-i-d-a" model; or some other path? We propose to test this hypothesis : Consumer follow AIDA model when it comes to ethical and OTC products.
As against
"Awareness - information - reinforcement - retention - purchase" route.
To begin with we show some empirical evidences, followed by proper testing of the hypothesis

Bad Health		Good Health	
Major	Minor	Prophylactic	Improving
Ethical	Crocin Benadryl Vicks Strepsils Fair & Lovely Revital Thirty plus	OTC Saffola Nizoral	FMCG Clinic all clear
Awareness Information Belief	Awareness Information Reinforcement		Awareness Interest Desire
Reinforcement Conviction Retention Action	Retention Purchase		Action

OTC ; It is observed that the prospection in OTC market follow.

1. Awareness
Adversity has to make the consumer aware about the product

2. Information
Rather than interest, information is more important. Advertisers need to bridge the credibility gap, giving

more information about the product. Consumers are not necessarily interested in knowing the ingredients that the formulation contains but to know, & how the product is important and useful to them.

3. Reinforcement

Consumers need reinforcement. They need to know the perception in time. They need reinforcement either from physicians or from chemists, friends and relatives. Often advertisements can do this work. Research shows that the ads, where reinforcement is given i.e cause and effort relation is exhibited, are more effective, and such products users are less likely to ask chemist or doctors for reinforcement. So, reinforcement through advertisements are important and however this does not eliminate the role of retailers on promotion.

4. Retention

Very rarely will one observe that after the advertisement the patients rushed to the chemist and buy the product. This phenomenon is common in FMCG products. Where promotion excites the consumers and he buy the product. Barring a few products, like Crocin, Vicky's, buenos, most products are stocked at the house, most often products are bought wheat he need arises. Hence the retention is of importance. This can be achieved by the promotion like, 'pudin hara' where stocking is promoted. Alternatively point of purchase material and achieving TOM (top of the mind) brand salience can help here.

5. Purchase

After the consumer buys the product when need arises. In FMCG sectors after achieving desire, sales promotion activities like free offers, consumer contests lead to purchases. Such is rarely the casein OTC Market.

Ethical (Prescription) Market

In case of prescription products, the sequence is different Awareness.Information-Belief-Reinforcement-Conviction-Retention- Action

After the physician is made aware of the product, he seeks further information .Ads is medical journal and information from MR is of importance here .Many doctors write to the marketer or search on web. Those doctors who don't belief in the product, are mainly those who are not happy about the information provided by the company. Most doctors actively search for information and only when they believe in the product use Samples. Consonant effect of samples lead to reinforcement and their conviction. Here again retention is of primary importance lance behind stickers, reminders follow up action by medical representative will lead to retention.

Once the Doctor is convinced about the product, and is constantly reminded, does he prescribe the product when need arises.

Different promotional mix elements can be used to push the prospect through the response hire rely model. Like M.R. Visits and detailing for awareness and information, medical journals and conference the information and belief. Sampling clinical research data Now and websites for conviction and leave behind, stickers, reminders visit for retention. It can be observed that response hierarchy models operate differently for different product categories Brand equity at are product category cannot easily be leveraged for other product category.

Interests of innovative drug molecules are closely guarded by patent Act. Introduction of errew molecule ingredient is very expensive and time consuming. The introductions of new molecule can be highly profitable, when the market is guarded However after the patent protection, the product life cycle short term the market gets fragmented and profitability erodes. This is the time, many manufacturer want to introduce the Rx product in OTC or generic market.

But, can all successful Rx product became successful OTC brands, even if legally they can he converted into OTC products? In other words is transgressing the perceptional barriers possible?

Crocin originally an ethical product could become a successful OTC brand Can Metacin, calpol paracetamol be as successful in other words what is inherited by the and over a period of time which makes it possible or impossible for the grand transgress the perceptual barriers

High Tech ——>

Rx	OTC Medicine
Generic Doctors	OTC Lifestyle Consumers

Low Tech ——>

Brand Inheritance Map

Technological factors and Touch Factors decide whether equity can be leveraged across perceptual barriers Touch factors are through the brand inheritance. These are perceptions and not actual tech as touch values.

Serious-----Friendly
Unapproachable-----Approachable
Not Safe-----Safe
Not Families-----Families
Doctors product-----Self Medication

Are the factors which give the combined effect called Touch factor. These perception are developed by various factors like

1. Long presence in the market.
2. Brand Name
3. Communication
4. Word of mouth.

These factors together give high touch score the ethical products ®.) which have developed high touch selve can be successful OTC brands

Rx products typically have high tech law touch perception Over a period of time due to long presence in market, promotion, word of mouth, They develop high/low touch score This is called brand inheritance, The touch score is amongst the common consumer and Not doctors. The high low Technology factors are the perception amongst the common consumer or doctor as the case may be, Thus, a typical R. product, if it over period of time develop High touch score, can become a successful OTC brand If not, then ver a period of time when the Doctors start considering it a low tech product, it can become generic product

The implications of the phenomenon to the marketer are as follows Rx (Ethical Product): More information medical journal conferences, samples are Essential
2 Branding is important

Generic
1 Corporate branding is essential
2 Sampling is important
3 Availability & affordability is the key
4 Dealers role is important

Medical OTC
1 Communication through mass media
2 Reinforcement through advertisement is important
3 Ration & Emotional appeal
4 Brand conviction
5 Top of mind awareness

Life style OTC
1 Mostly emotional appeal
2 Dealers role important
3 Classical conditioning through advertisements, routinisied
4 Brand familiarity, more important than brand conviction
5 Dealers role is important

Role of Retailers in strategic Branding

The importance of retailers in healthcare market can hardly be overestimated. More than 1,30,000 retailers in India play a vital role in distributing & marketing pharma products. They have three important functions to perform.

1 Availability: It is estimated that, there are more than 65000 formulation registered in India, Some are locally promoted, hence about 35000 formulations are availability at any time, any place. Rarely do chemists stock more than 3000 formulation, as rest of the formulation get subscribed. Hence availability is of prime importance. With so many brands/products existing in the market, in limited shelf space. This became one of the prime task of marketer

2 Information: Response hiraruly model developed by the authors show that, information is an important element of consumer buying process in OTC market. Dealers has a pivotal role in OTC market. Dealers has a pivotal resseminative information. The success depends upon the factual information that has been made available to the retailers.

3 Marketing: The response hierarchy model by the authors also show that ,retention & reinforcement are important factors which decide the shelf off take. The point of purchase material, window displays can result in sale of OTC products.

4 Promotion: The research shows that more than % prospects depend upon the chemists, while buying the medicines. The chemist's recommendation will decide which brand they buy. While margins & benefits are the primary source of motivation to chemists, there is Uniformity are the benefits marketers after to chemists hence the confidence & belief in the product in the sole determinate beyond a particular level. The best method to understand this phenomenon is perceptual mapping.(or MDS)

To be competitive, the brand must he distinctive consumers must have distinct perception about the brand. This unique perception about the brand is called positioning, on any two (or more) use the consumer perception can be plotted and uniquele position of different brands in the product category can be understood. The products exist in the retailers shelf, the brand exists in the mind of the consumer. Once the unique position for the brand is established it cannot be easily dislodged from that position by competing product. Hence for that perceived benefit the consumer continues buying the product. Now it is important that consumer has a unique perception about the brand. However it is also important to consider the positioning in the mind of retailer has he is an important influence in the consumer buying process. The resultant position of the brand is the sum.

Total of the vector suggesting consumer as well as retailer perception Thus to conclude:

1 Pharmaceutical branding will become more & more relevant in future.

2 Marketers of ethical formulation may want it transgress the perception barriers & leveraged its brand aglima in other product categories in order to attract new market segments & to prolong the product life cycle.

3 The concerns of this strategy will depend upon the brand heritance & not all producers. Can be leveraged across the perception barrier.

4 The response hierarchy models can differ in ethical OTC market from FMCG market

5 A prudent brand manager may like to use different promotional mix in different categories.

References:

Eichler, H. G., Pignatti, F., Flamion, B., Leufkens, H., & Breckenridge, A. (n.d.). Balancing early market access to new drugs with the need for benefit/risk data: a mounting dilemma. *Nature Reviews Drug Discovery*, *7*(10), 818–826.

Eichler, H.-G., Bloechl-Daum, B., Abadie, E., Barnett, D., König, F., & Pearson, S. (2010). Relative efficacy of drugs: an emerging issue between regulatory agencies and third-party payers. *Nature Reviews Drug Discovery*, *9*(4), 277–291. https://www.nature.com/articles/nrd3079

Kumar, A., Juluru, K., Thimmaraju, P. K., Reddy, J., & Patil, A. (2014, December 1). *Pharmaceutical market access in emerging markets: concepts, components, and future*. Taylor & Francis Online. https://www.tandfonline.com/doi/full/10.3402/jmahp.v2.25302?cookieSet=1

Odeyemi, I. (2014). Demystifying pharmaceutical market access. *Paris, France: European Market Access University Diploma*.

Rofail, D., Taylor, F., Regnault, A., & Filonenko, A. (2011). Treatment Satisfaction Instruments for Different Purposes during a Product's Lifecycle. *The Patient: Patient-Centered Outcomes Research*, *4*(4), 227–240. https://link.springer.com/article/10.2165/11595280-000000000-00000

Impact of Social Media Marketing on iGen Consumer Buying Behaviour of White Goods

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ABSTRACT

The industry has witnessed the unprecedented changes in the marketing competitive landscape over the past few years. People across the globe have drastically enhanced and integrated themselves to the new digital life. Furthermore the amplifying technological advancement and the disposable income are substantially enabling the consumers to shift for the consumer durable smart appliances. This has further boosted the demand for the consumer durable white goods. At the same time the businesses also had to and are still thriving on the Digital and Social Media platforms to not only survive but also endeavouring to grasp the attention of the customers to engage.

Maintaining relationship with the existing customer, increasing brand equity and constantly encouraging them to stay with a company is a dynamic and conscientious work. Therefore, it is crucial to gain knowledge about the consumer behaviour for creating innovative marketing strategies, accessing consumers in a cost effective way and to dominate in the competitive market. Hence, the organisations should adopt and adapt the overwhelming change in marketing climate to meet the needs of broader audience in the multiple platforms.

Keywords: White Goods, Consumer Durables, Social Media Marketing, AIDA Model, Honeycomb Model

Introduction

Social media has become a ubiquitous part of modern society, and its influence on various industries and sectors cannot be understated. It has transformed the way we communicate, interact, and consume information. It has become a powerful tool for businesses to reach out to customers and build brand awareness. There are 467mn social media users in India in January 2022, it is no longer an option, social media is very crucial for all the organisations to use this platform to reach out to the customers, gain valuable acumen, tracing the customer journey, effectively engaging with them and growing the brand.

In recent years, social media has had a significant impact on the white goods industry. With the rise of digital marketing, manufacturers and retailers of white goods appliances are increasingly leveraging social media to reach out to consumers and build brand loyalty. White goods refer to large household appliances that are typically finished in white enamel or painted white. These appliances include refrigerators, washing machines, air conditioners, and other major appliances that are typically used in homes.

About White Goods Industry

In India, white goods have become an essential part of modern living as they offer convenience and comfort to millions of households across the country. With the rise of the middle class in India, the demand for white goods has increased significantly over the past few decades. People are increasingly adopting smart appliances to improve their life standard, so companies dealing in white goods are heavily investing on R&D activities.

Market Growth

According to a report by the India Brand Equity

Foundation (IBEF), the white goods market in India is expected to reach a value of USD 48.5 billion by 2025, growing at a CAGR of 10.5% during the forecast period. This growth can be attributed to several factors, including the rise in disposable incomes, the growing population of working women, and the increasing urbanization of the country.

• Refrigerators
Refrigerators are one of the most essential white goods appliances in India. With the rise in incomes and changing lifestyles, consumers are looking for more advanced and efficient refrigerators. The Indian refrigerator market is dominated by players such as LG, Samsung, and Godrej, with LG leading the market share with a 32% share. The market is expected to grow at a CAGR of 11.7% between 2020-2025.

• Washing Machines
The washing machine market in India is dominated by top brands like LG, Samsung, and Whirlpool. The semi-automatic washing machine segment still holds the largest market share due to its affordability and easy maintenance. However, with the rising adoption of fully automatic washing machines, this segment is expected to grow at a faster rate in the future.

• Air Conditioners
The air conditioner market in India is expected to grow at a CAGR of 10.5% between 2020-2025. The increasing temperature in the country and the rise in disposable incomes are some of the major factors driving the growth of the air conditioner market. Brands such as Daikin, Hitachi, and LG are leading the market share in this segment.

Purpose: To study the impact of the customer's social media journey through the AIDA model and the effectiveness of user's engagement through the Honeycomb model in the white goods industry.
According to the white goods market analysis, the white goods market segmented into product, end user, distribution channel, and region. According to distribution channel, it is divided into supermarket & hypermarket, specialty store, retail store, e-commerce and others.

Methodology
This research paper uses a secondary research and qualitative approach has been used to analyse the social media post to understand the consumers buying behaviour towards white goods. The pandemic has given the leverage to the organisation for using social media to lure the consumers in purchasing the products. The AIDA Model and Honeycomb Model will specifically help in innovative strategy in branding and engaging with the young customers and prospective customers via social media platform. Few interviews were taken experts dealing in white goods.

Theoretical Construct and Hypothesis:

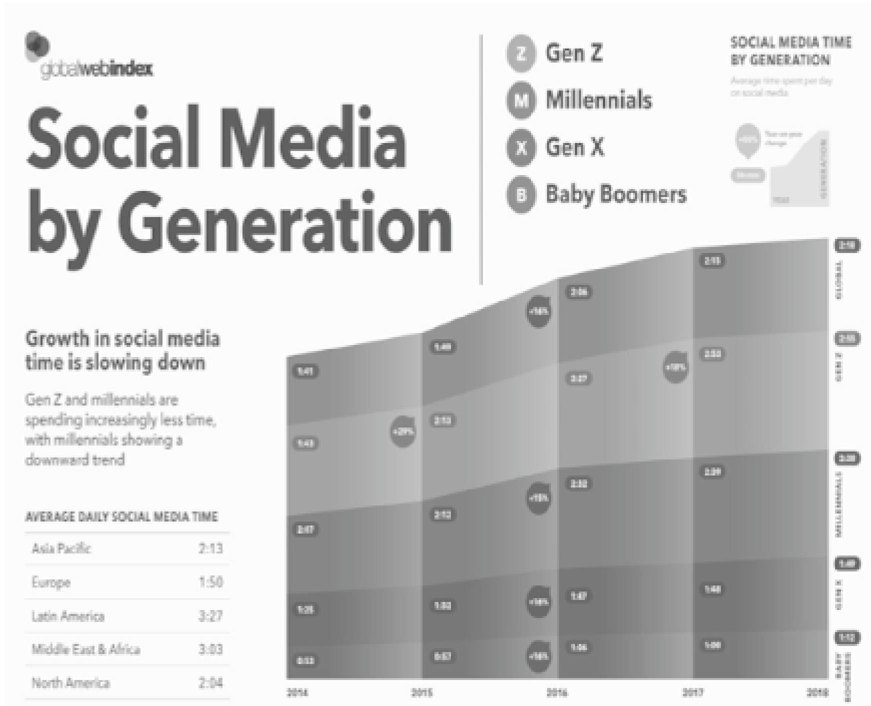
• Ha1: There is a significant impact of the customer's social media journey through the AIDA model in the white goods industry.

• Ha2: There is an significant impact on the effectiveness of user's engagement when they are engaged through the Honeycomb model in the white goods industry.

Marketers can reach a total potential audience of 2.109 billion users with ads on Facebook in January 2022. As increasing digital penetration Number of Facebook users in the world (monthly active users): 2.912 billion (January 2022), Size of Facebook's global advertising audience: 2.109 bn (Jan. 2022). Meta made significant changes to the ways in which it reports advertising audience data for Facebook in Q4 2021 For example, one person may maintain more than one active presence on the same social media platform (i.e. “duplicate” accounts). Similarly, some accounts may represent “non-human” entities, including: pets and animals; historical figures; businesses, interests and causes, groups and organisations; places of interest; etc.(KEMP)

Google says that people now consult up to 10 sources before they make a purchase. According to PWC 2018 study 54% of the people use social media to look for products, whereas 37% of the people find inspiration for their next purchase from social media. And as Mr. Rick Kauffeld, a PWC Principal mentioned that “Today's consumers trust the wisdom of the crowd, what somebody in their network says about something.

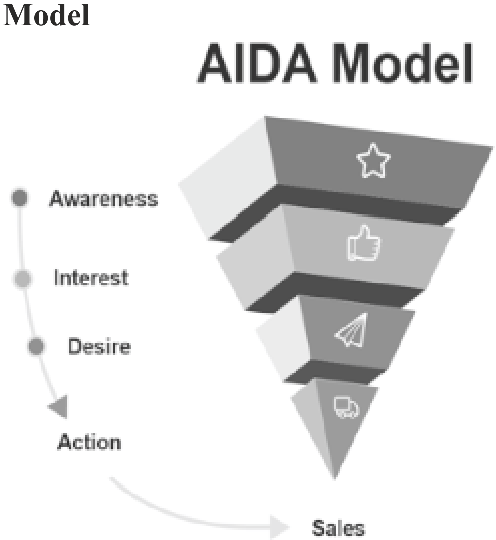
Below is the diagram which shows how much each generation spends time on social media that means this is the amount of time the businesses get to target them, if done correctly.



Source: GlobalWebIndex (GWI)

So when social media branding is done correctly, it helps to connect to target market in an optimal way. Social media branding forms a natural but essential part of overall marketing efforts. Since the rise of social media brands have taken to these platforms and content marketing to reach its potential customers. Social media is also a great way to build followings for your brand. There are some standard models which brands implement to get their names big on social media, two of the models that we can look into are AIDA and the Honeycomb Model.

AIDA Model



Source: THIMPRESS

The AIDA model is a marketing framework that stands for Attention, Interest, Desire, and Action. It is commonly used to plan and execute marketing campaigns, and it can be applied to various industries, including the white goods industry. This model was developed by Elmo Lewis as American advertising expert.

AIDA stands for:

Attention – The first step in the AIDA model is to grab the customer's attention; the need to win the consideration of the potential of the new clients who don't have an idea about your organization.

In the white goods industry, this can be done through advertising, social media campaigns, or in-store displays. For example, a company could create an attention-grabbing ad showcasing their latest washing machine with innovative features.

Interest – Once the customer's attention has been captured, the next step is to generate interest in the product. This can be achieved by highlighting the benefits and features of the product, such as energy efficiency, ease of use, or durability. For example, a company could create content highlighting how their refrigerators save energy and reduce electricity bills.

Desire – After generating interest, the goal is to create a desire for the product. It is about want. This can be done by creating an emotional connection with the customer, such as highlighting the convenience of having a dishwasher or the satisfaction of owning a high-end range. For example, a company could create an ad that showcases a happy family enjoying a meal cooked using their state-of-the-art oven.

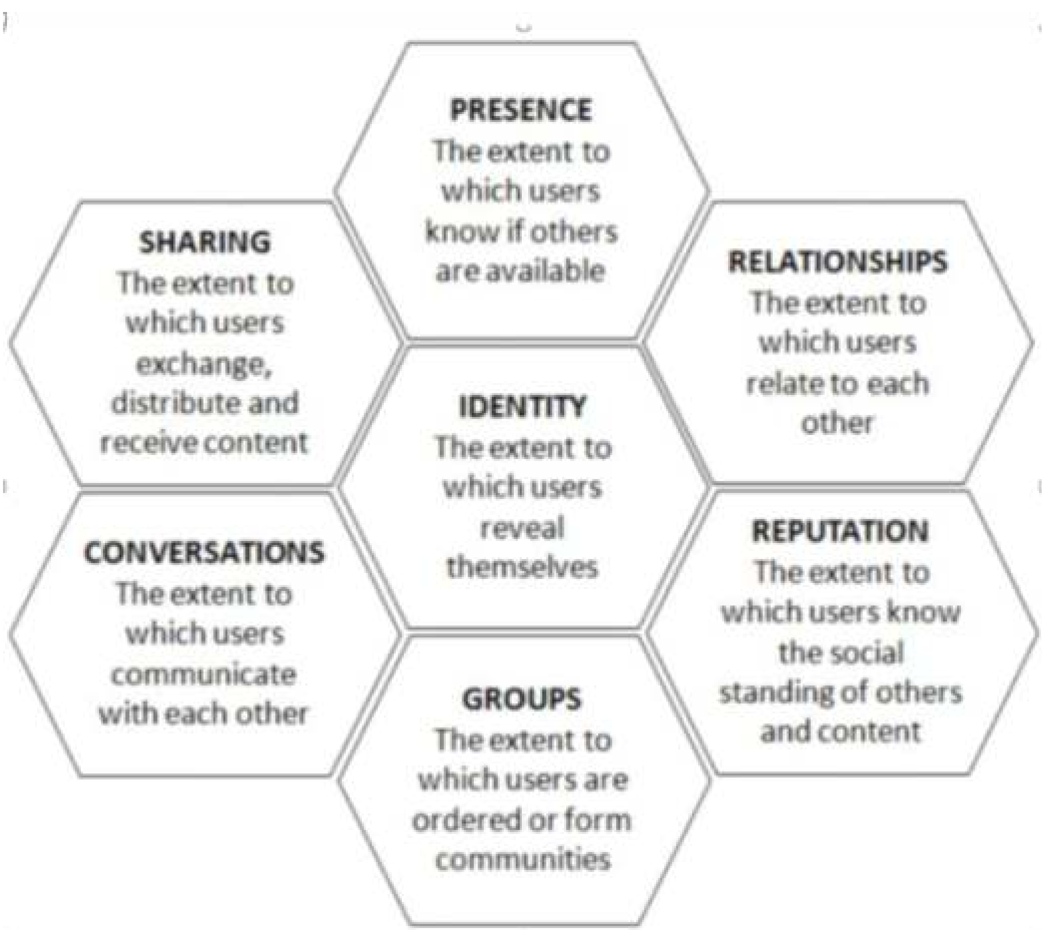
Action – The final step in the AIDA model is to encourage the customer to take action and make a purchase. This can be done by providing a clear call to action, such as offering a discount or limited-time promotion. For example, a company could offer a discount on their latest washing machine for a limited time to encourage customers to buy.

Overall, the AIDA model can be applied to the white goods industry to create effective marketing campaigns that attract and convert customers.

Example: Whirlpool Corporation Marketing Strategy
The promotional plan of Whirlpool Corporation Marketing Strategy requires the company to consider the following factors:

· Start with clearly defining your unique selling propositions and understand why customers need the product and how it is different from available alternatives.
· Craft the message content and evaluate how the crafted message will help customers in creating a clear image of the offered product. Consider the AIDA (awareness, interest, desire, action) when developing the message.
· The promotional strategies like direct selling or high-profile advertising will suit if the company wants to push the product. However, the pull strategy will require the development of a prestigious brand image that could attract the customers towards the offered product.

Honeycomb Model: The Honeycomb model is a way of setting out the most important forces behind the social media ecology which all social media marketers, users and platforms operate within.



The honeycomb framework of social media (Kietzmann et al., 2011 p. 243)

The honeycomb model is a marketing framework that considers multiple facets of a customer's experience with a brand. It consists of seven components, which can be applied to the white goods industry to create a comprehensive marketing strategy.

1. Identity: The identity component refers to the brand's unique personality and values. In the white goods industry, this can be showcased through branding and messaging that emphasizes the company's commitment to quality, innovation, and customer service.

2. Groups: The culture component refers to the shared beliefs and values of the organization. In the white goods industry, this can be demonstrated through company culture initiatives that prioritize employee well-being, diversity and inclusion, and sustainability.

3. Conversations: The conversations component refers to the ways in which the brand engages with customers and fosters a dialogue. In the white goods industry, this can be achieved through social media engagement, customer service interactions, and online forums.

4. Relationships: The relationships component refers to the long-term connections that the brand establishes with customers. In the white goods industry, this can be achieved through loyalty programs, personalized offers, and follow-up communications.

5. Presence: The presence component refers to the brand's ability to stay current and adapt to changing consumer needs. In the white goods industry, this can be achieved through product innovation, research and development, and market analysis.

6. Sharing: The experience component refers to the customer's overall experience with the brand, including product design, ease of use, and customer service. In the white goods industry, this can be achieved through user-centered design, user testing, and streamlined customer support.

7. Reputation: The reputation component refers to the customer's confidence in the brand's integrity, reliability, and security. In the white goods industry, this can be achieved through transparent communication, high-quality products, and strong security measures.

Overall, the honeycomb model can be applied to the white goods industry to create a holistic marketing strategy that considers multiple aspects of the customer's experience. By prioritizing identity, culture, conversations, relationships, relevance, experience, and trust, brands can establish a strong and lasting connection with customers.

Challenges

Despite the growth prospects, the white goods market in India faces several challenges. One of the major challenges is the high price sensitivity of consumers, which has made it difficult for companies to maintain profitability. The intense competition in the market has also made it challenging for players to differentiate their products and services, resulting in a margin squeeze.

Future Prospects

The white goods market in India is expected to witness significant growth in the coming years, driven by the rising disposable incomes, changing lifestyles, and increasing urbanization. The government's focus on improving infrastructure and providing affordable housing is also expected to boost the demand for white goods appliances. With the increasing competition in the market, companies are expected to focus on product innovation, value-added services, and expanding their distribution networks to stay ahead in the game.

Conclusion

The white goods market in India is a significant contributor to the country's economy, offering employment opportunities to millions of people. With the growth in disposable incomes, urbanization, and changing lifestyles, the demand for white goods appliances is expected to rise significantly in the coming years. Companies that are able to navigate the challenges and capitalize on the growth opportunities are likely to emerge as winners in this lucrative market.

The white goods industry has been impacted by social media in significant ways, with companies using social media to build brand awareness, engage with customers, and provide after-sales support. Companies that can effectively navigate the challenges and leverage the benefits of social media are likely to emerge as winners in this sector. Social media platforms such as Facebook, Twitter, and Instagram have become important marketing channels for white goods manufacturers and retailers. Companies are using social media to build brand awareness, engage with customers, and provide after-sales support.

One of the key benefits of social media for the white goods industry is the ability to engage with customers in real-time. Social media platforms allow companies to respond to customer queries and complaints promptly, improving customer satisfaction and loyalty. Social media also provides companies with an opportunity to monitor customer's sentiments and gather feedback on their products, allowing them to make necessary improvements.

However, social media also presents several challenges for the white goods industry. One of the main challenges is the risk of negative publicity. Social media platforms provide customers with a powerful tool to voice their opinions and experiences, which can lead to negative publicity for companies. Another challenge is the need to constantly monitor and update social media profiles, which can be time-consuming and resource-intensive. But with the help of AIDA and HoneyComb model the organisations can not only keep a tab on the positive and negative publicity but also take a strategic action and improve their branding and public engagement on social media.

References:

Kietzmann, J. H., Hermkens, K., McCarthy, I. P., Silvestre, B. S., (2011). Social Media? Get Serious! Understanding the functional building blocks of Social Media, Business Horizons, vol. 54, no. 3, pp.241-251.

White Goods Market Size, Share & Trends | Research Report 2027. (n.d.). Allied Market Research. https://www.alliedmarketresearch.com/white-goods-market-A06558

Do, S. (n.d.). Retrieved from https://thimpress.com/what-is-the-aida-model/

KEMP, S. (n.d.). DIGITAL 2022: INDIA. Retrieved from https://datareportal.com/reports/digital-2022-india

India White Goods Market Value by 2030. (n.d.). Data Bridge Market Research, https://www.databridgemarketresearch.com, All Right Reserved 2023. https://www.databridgemarketresearch.com/reports/india-white-goods-market

Improving the Retailing Experience of the New Age Information-Seeking Consumers Using QR Code

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ABSTRACT

Shopping your apparels by scanning your friend's clothes sounds bizarre, however QR technology can make it possible. This paper intends to introduce the idea of how QR Codes of shoppable links can be printed on the tags of apparels and can be scanned by the wearer's social group to shop the product anywhere and anytime. The QR technology was developed by an engineer at Denso Wave, a company located in Aichi, Japan. It started as 1D Barcode then progressed to a 2D barcode and now we have multi-coloured, customisable and personalised QR Codes. This technology has a long history. Since QR codes have been around for more than a decade now there is already a considerable share of businesses and brands that have successfully started the use of QR code campaigns. However apparel marketing industry is taking longer than expected to catch up with QR code technology. Today, smartphones come with in-built QR Code Readers, hence it takes only a few seconds to scan the code that lends customers to the product's website. In Scannable marketing, QR Codes have a big future.

Keywords: QR Code, Scannable Marketing, Shopping Apparels, History of QR technology, Use of QRC

I. *Introduction*

People are now using their smartphones more than ever before, thanks to the advent of better and quicker technologies. It's all about moving details from one person to another, or from a company to a customer, as quickly as possible. The QR code is one of the most popular marketing platforms today. Most people have heard of QR codes, those odd-looking black and white graphical barcode displays that enable advertisers to send additional information to anybody with a QR code reader. QR Code has been used by marketers on advertisements, magazines, websites, and other marketing materials.

Brands that have successfully implemented QR Code Marketing.

1. Porsche

Porsche unveiled an interactive experience at the 2018 Digital Signage Expo that allowed attendees to design the 2019 Porsche Cayenne Turbo and interact with it using haptic cues.. Scanning a QR code was all it took to accomplish all of this.

2. Louis Vuitton

Visual QR codes have been introduced into the promotional campaign of the luxury giant and manufacturer of high-quality and stunning leather handbags. The brand collaborated with Takashi Murakami, a Japanese artist, to create its first designed QR code, which was tailored to the brand's intent and goal (Claeys, 2020). They ran a 'cute' and 'cool' QR code campaign to support the Louis Vuitton online store, and it succeeded!

3. Instagram

Instagram has introduced a feature called Nametags, which is similar to Snapcodes in that it can be completely personalised by users and searched by other users using the camera inside the app to follow accounts (Chaudhary, 2019). When it comes to cross-platform compatibility, this also fits well. Businesses may use their Nametag to gain more followers by putting it on other social media profiles.

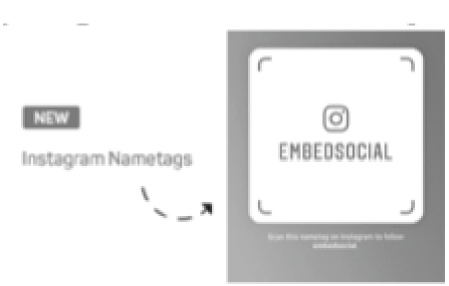

***Figure No.01 Nametag feature on Instagram*.**

4. PayPal

PayPal brought QR code use to the next level, integrating it into their overall mobile strategy. Using QR codes, PayPal users can automatically initiate payments with other people or businesses on the platform (Kelly, 2020). No sign-up is required, either. The QR code can be used to make purchases quickly and easily.

Figure No.02 Sample of QR Code used in PayPal.

5. Starbucks

Starbucks is another well-known company that has adopted QR codes as a marketing tool. They began integrating QR codes into their print and outdoor ads, often connecting customers with discounts or promotions through the app (Katts, 2020). They have used QR codes in their store to accept cashless mobile payments, which was a very innovative idea when it was first launched in 2016. Since they cater to a millennial demographic, the QR code programme has been so popular that they have incorporated QR codes into all of their promotions since the initial launch.

Figure No.03 Sample of QR Code used in Starbucks.

6. Burger King

During the COVID-19 pandemic, Burger King announced two big deals for people caught in lockdown. One of the deals encouraged users to check a QR code found in their TV advertisements, while another encouraged them to exchange screenshots of video calls with their peers (Chaudhary, 2019). Three TV advertisements using a floating QR Code across the frame were used to promote the QR Whopper giveaway. Users were routed to a website promising coupons for a free Whopper via their BK app after scanning the QR Code.

7. IKEA

IKEA launched a mobile checkout initiative that used QR codes to mark the items that the shopper was ordering in an attempt to increase user interactions and speed up the checkout process. They basically check the QR codes on the items they want to purchase (Kelly, 2020). The total is calculated, and users will pay for their purchases and print a receipt right in the app.

8. Netflix and Snapchat

As part of a promotional campaign for Gilmore Girls, Netflix used QR codes to turn 200 real-world cafes into Luke's Diner from the film. Snap codes which is Snapchat's equivalent of QR codes was printed on the coffee cups of these cafes, giving the initiative a branding boost. When the snap codes were scanned, a Gilmore Girls Snapchat filter was unlocked.

9. L'Oreal

To grab consumers waiting in traffic, L'Oreal collaborated with Glamour and used QR codes within taxis. By connecting QR code promotions to videos on how to use the products and redirecting to the shop website, the initiative supported the Lancôme and Yves Saint Laurent product lines (Claeys, 2020). L'Oreal increased app downloads by 80% as a result of the promotion.

10. Nike

Nike used QR codes to make personalised QR codes sneakers for consumers, they brought QR code marketing to the next level. Nike collaborated with WeChat, a popular Chinese messaging app, to create this initiative (Joshi, 16 Epic QR Code Examples from Brands Killing it!, 2020). To begin, customers had to scan a QR code in order to follow Nike. The users were then required to choose a colourful image of their choice and submit it to Nike, who would then respond with a personalised shoe that matched the colours in the image.

11. Diesel

Knock-offs of apparels is a major problem in the fashion industry, especially with name-brand clothing. This is particularly true for flea market and aftermarket specialty store customers. It's impossible to tell whether you're having something genuine or a plausible knockoff. Diesel decided to use QR codes to tackle consumer dissatisfaction by allowing shoppers to check the authenticity of the clothes they purchased (Claeys, 2020). The Diesel app will tell you if the product you're buying is genuine by checking the QR code, as well as other product information.

***Figure No.04 QR Code used by Diesel to verify their apparels*.**

QR codes are a solution that can support the customers in a number of ways. With a little imagination, you can come up with innovative ways to use QR codes that will not only motivate your customers to act, but will also enrich their experience. However many advertisers are still unsure how to use QR codes effectively.

II. *Objectives*

- To explain the reason why usage of QR Codes is a viable Scannable Marketing Option.
- To throw light on why using QR Codes as a means of shopping apparel items is easy and feasible.

III. *Literature Review*

Before we get into the origins of QR codes, let's make sure we understand what they are. The abbreviation 'QR' refers to a quick response code. A two-dimensional square barcode that can store encoded data is known as a QR Code. The data is almost always a connection to a website. QR Codes can now be used on leaflets, posters, magazines, and other printed materials. These two-dimensional barcodes are easy to find all over the place QR codes are now so ubiquitous that hardly a day goes by without seeing one (Reulier, 2014). QR codes are being used more and more to access information and, more recently, to pay for products and services. The technology was the brainchild of an engineer at Aichi-based manufacturer Denso Wave.

Invention of Barcodes.

It was the year 1948. Pennsylvania, United States of America. Bernard Silver, a graduate student, overheard his Dean and the President of a local store discussing business. The topic at hand was developing technology that could read product information during the checkout process. This would reduce human errors and relieve staff of the tediousness of data entry by hand (Rizwan, 2016). Bernard and his friend Norman Joseph Woodland produced the first barcode after a few experiments in the year 1951. By the late 1970s, barcodes had become an essential component of inventory management. Particularly in the retail and automotive manufacturing industries. The invention of the barcode simplified people's lives.

Invention of 2D Barcodes.

The invention of the barcode simplified people's lives. It did, however, have some drawbacks. For starters, barcodes were one-dimensional i.e. 1D and could only store data in one direction. The barcode would not scan if the scanner was not aligned in that direction. Just 20 characters could be stored in a barcode. Barcodes stopped working when affected by dirt or damage. More the characters, the longer the Barcode. Printing a long barcode on a small product was a challenge. To overcome the limitations of barcodes, 2D barcodes were created. David Allais created the first 2D barcode in 1987. This code, too, has limitations, but it was the forerunner of the famous PDF417. Aztec Code, Data Matrix, NexCode, and many other 2D barcodes quickly became common (Jathar, Gurav, & Krantee, 2019). These were more compact than 1D barcodes and could hold more data. Most 2D barcodes remained proprietary, and as a result, they did not gain widespread acceptance.

Invention of QR Code - a 2D Barcode and its release for public use.

When Japan entered its era of rapid economic growth in the 1960s, supermarkets selling a wide variety of goods from food to clothing started to spring up in many areas. The price had to be manually entered into cash registers, which were then used at these stores' checkout counters. As a result, many cashiers experienced wrist numbness and carpal tunnel syndrome. Cashiers yearned deeply for a way to ease their load. The invention of barcodes solved this problem. Following that, the POS scheme was developed, in which the price of an item of goods was automatically reflected on the cash register when the item's barcode was scanned by an optical sensor, and the item's information was transmitted to a computer at the same time. However, as barcodes became more widely used, their shortcomings became clear. The fact that a barcode can only contain about 20 alphanumeric characters of information was the most noticeable. Users approached Denso Wave Incorporated which was a subsidiary of Denso Corporation at the time, asking if it was possible to create barcodes that could carry more details, like the capability to code Kanji and Kana characters as well as alphanumeric characters (Goyal, Yadav, & Mathuria, 2016). Moreover Denso Wave, a Toyota subsidiary needed a way to track vehicles and parts during manufacturing more accurately. To achieve this, they looked to develop a type of barcode that could encode kanji, kana, and alphanumeric characters, a development team at Denso Wave set out to create a new two-dimensional code, all in the name of meeting the needs of users.

A QR Code capable of coding about 7,000 numerals with the additional capability of coding Kanji characters was finally developed a year and a half after the development project began and after countless and repetitive trial and error. Along with his other two members, Hara came up with the concept of the square because their analysis found that it was an easily distinguishable shape. This shape also allowed for information to be coded both horizontally and vertically. Another benefit was that it increased the speed at which this data could be read i.e. up to 10x faster than Barcodes (Schwabstr, 2020). The combination was a jackpot. In the year 1994, Denso Wave Corporation announced the official release of QR codes. Denso Wave released their QR Code invention to the public without keeping their patent rights, and the use of QR Codes flourished.

Evolution of Adoption and Development of QR Code.

Kanban, a form of electronic communication tool used in the automotive industry in Japan, was the first to use QR Codes. They soon realised QR Codes' flexibility and started to use them in a variety of applications, including manufacturing and shipping, as well as transactions. Following the societal demand for increased product traceability, especially in the food and pharmaceutical industries, these industries realised that QR Codes could provide them with a competitive advantage (Schwabstr, 2020).The QR Code was used not only in Japan, but also in countries all over the world, since it was an open code that everyone could use. Its use grew as rules for its use were established and the code was standardised. It was designated as an AIM i.e. Automatic Identification Manufacturer standard for use in the automatic identification industry in 1997. JIS i.e. Japan Industrial Standards accepted it as a standard 2D code in 1999, and it became a standard 2D mark on the Japan Automobile Manufacturers Association's EDI i.e. Electronic Data Interchange standard transaction forms (Inc., 2013). QR Codes were later introduced to ISO i.e. International Organization for Standardization international specifications in 2000.

The idea's initial adoption was slow, and although QR codes were simple to create, QR readers were not widely accessible. The first mobile phones with built-in QR readers were released in Japan in 2002. As a result, the number of businesses using QR codes grew, and the first consumer-ready QR codes appeared. The marketing of cell phones with QR Code-reading capabilities was the reason the code was widely adopted by the general public in Japan (Goyal, Yadav, & Mathuria, 2016).People could access a website or get a coupon by simply scanning a weird, eye-catching pattern on these phones. The code's popularity among the general public grew quickly as a result of its simplicity.

QR codes became commonplace in people's everyday lives. Meanwhile, technological advancements continued to evolve. In 2004, a micro QR code was designed to meet the need for smaller codes. This was so small that it could be printed in a small space and it was made a JIS standard in 2004. The iQR Code was released in 2008, with a limited footprint despite its huge coding capability and the ability to use rectangular code modules (Inc., 2013). Around the same time, the first iPhone was released, putting QR readers in the hands of a larger number of people all over the world. When brands and companies realised the potential of QR codes for sales and marketing, they began to develop their own. The QR code received a Good Design Award for industrial design in 2012, eighteen years after its invention. The QR code had spread all over the world by this time, and it could be seen on billboards, magazines, leaflets, and other locations (Kaspersky, 2020). In 2014, 'FrameQR' was introduced. FrameQR helped to improve the look of code by allowing to mix and match diagrams and images. As previously mentioned, evolutionary changes to QR Codes have been made to them on a regular basis, based on the technical knowledge gained at DENSO WAVE, so that any of a variety of varieties can be selected to satisfy a particular need.

Since 2019 QR codes have been more vibrant, personalised, and enticing. QR codes have become much more accessible and important in comparison to their implementation in the past, with the new Android and iOS smartphones enabling native scanning of QR codes without the need for a third-party app (Joshi, The Story of QR, 2019). Denso Wave continues to build on their original concept even now, in 2020. Their new QR codes include features including traceability, brand security, and anti-forgery protection. The QR code has a variety of new applications, ranging from payment transfers to identifying the location of items in augmented reality.

III. *FINDINGS*

***Figure No.05 Invention of 2D Barcode from 1D Barcode**.*

Use of QR Code for Marketing Campaigns.

While the original purpose of QR codes was to aid in the storage of more product and inventory-related data, they have since developed into a marketer's favourite tool for driving offline traffic online and thus bridging the online and offline marketing gap. Different types and formats of QR codes have arisen, allowing advertisers to use each QR code for a specific purpose. The good news is that QR Codes can be designed without compromising scan ability. Marketers may use this function to use QR Codes in their marketing campaigns. Since QR Codes can be personalised, brands can use them to integrate their visual identity into their QR Codes (Reulier, 2014). They can be any colour as long as there is a strong contrast between the light and dark areas. QR codes can be multi-coloured as well. Some guidelines regarding the composition of QR Codes must be observed when customising so that they remain readable. Customization of QR Code is a very successful way to promote the brand's visual identity.

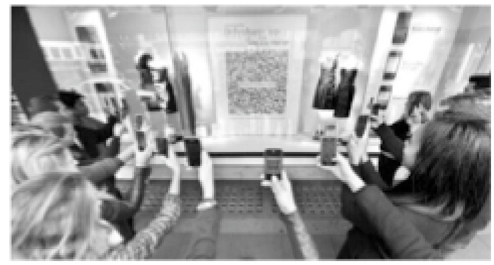

Figure No.06 Customers scanning a QR Code service
Outside a retail store.

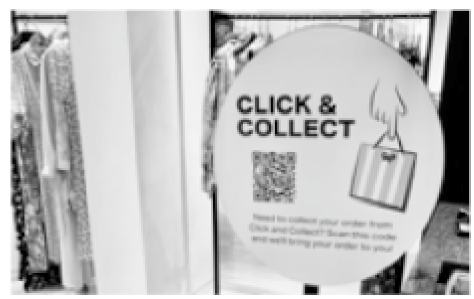

Figure No.07 Click and collect service
***provided through QR Code**.*

IV. *Conclusion*

QR codes have come a long way. Once invented to solve a basic labelling and sorting problem,
Now have become an extensively used marketing tool.

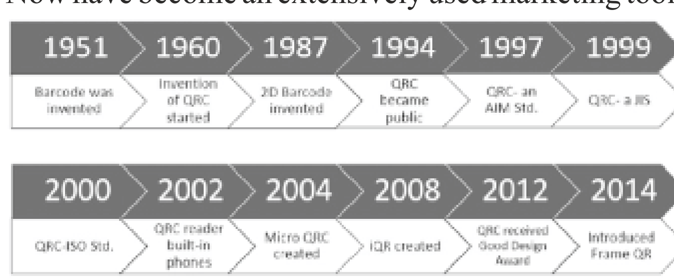

***Figure No.08 Timeline of QR Code technology**.*

QR codes are all over the place. Businesses and brands have realised the potential of QR codes as a tool in their marketing arsenal, from using scan and go technology at convenience stores to using QR codes as a way to propel post-purchase consumer interaction through strategies such as coupon marketing.

Denso Wave has produced advanced versions of QR

Codes based on their popularity. There are four types of QR codes: Micro QR Code, iQR Code, SQRC, and Frame QR. Although these are more technologically advanced than QR Codes, they are not in the public domain. These technologies, without a doubt, outperform the QR Code. However, neither are they affordable nor universal. The majority of smartphones, for example, also lack NFC readers. Users would need to download a new app for each AR campaign. In the end, technology has progressed, but the QR Code has held its ground since 1994 (Rizwan, 2016). QR codes aren't going to replace UPC barcodes anytime soon. The latter is too deeply embedded in supermarket activities to be dethroned in a few decades. However, many of the characteristics that made QR Codes such a good fit for Denso Wave in the 1990s still make them good choices for individuals and businesses today. For starters, they're simple to operate. They are more user-friendly than barcodes because they can be scanned from many angles. Since cameras are perfect optical two-dimensional scanners, they can be scanned by anyone's phone (Scott, 2020). As a result, they're ideal for a variety of customer-facing applications, such as QR code menus and QR codes on tables in bars and restaurants. They can also store vast volumes of data, making them suitable for QR code marketing in general. Finally, they're simple to make and keep. Even for small businesses.

Given that QR codes have a vast range of uses across various industries, each organisation is developing its own unique use-case for QR codes, and niche-popular brands are still awestruck by their capabilities, it is fair to assume that QR codes are here to stay. Today, QR codes are a game-changing method of integrating the tangible and digital realms of industry. QR code-based campaigns act as a bridge for driving offline traffic to achieve online exposure. QR codes are a point of fascination for all types of companies, from small retail outlets to niche famous luxury brands. QR codes offer a company's customer service a competitive advantage. Over the course of its two-decade lifetime, QR codes have been used in a wide range of industries and have been successful as a means of marketing. Hence, using them in the apparel industry for Scannable Marketing can boost Return of Investment of a brand. Printing QR Codes on apparel items is easy and feasible. Brands can print a coded link on the apparel to make shopping possible in seconds of time. Hence, from the history of its technology and its success in various marketing campaigns it is safe to say that the idea of printing QR Codes of shoppable links on the tags of apparels as scannable marketing is plausible. With QR Code your camera can be your browser.

Figure No.09 Illustration of Scannable marketing in apparel industry.

Future of QR Code in Marketing

Touch-free controlled solutions with QR Codes have come to our rescue as the novel coronavirus has wreaked havoc. In the aftermath of the pandemic, QR Codes, once thought to be a long-dead legacy of the early 2000s, have resurfaced, ushering in a touch less world. QR Codes are used in contactless shipping, contactless pickup, and, most notably, contactless payments all around the world. The QR Code market is expected to accelerate due to the growing need for a secure way to keep customers engaged. Since a large percentage of companies and brands of all sizes are heading into a technology-enabled market, QR Codes are more relevant than ever. The number of scans has been steadily growing, drawing everyone's attention to QR Codes. Over the next few years, the technology is expected to multiply by a huge margin. In-app use and scanning capability will be one of the main areas where QR Code technology will be focused. Contactless payment systems, the transit and travel industry, healthcare, and marketing are all expected to expand.

V. *Future Scope for Research*

Usage of QR Codes for Reverse Engine Supply chain management has a great potential. This will enable the product users to retrieve information about the source and history of the product and verify the authenticity of the same. Contactless proof of delivery of parcels is also an area where QR Codes can play a vital role. To confirm successful delivery, recipients won't even need to sign on the mailman's screen or paper. The application on the smartphone can be used to search the QR code on the parcel. When customers sign in on their own devices to confirm delivery, the process is complete. QR Codes can be a key to touch less future.

References

Chaudhary, S. R. (2019, January 17). QR Code Marketing: QR Code Use Cases for Proximity Marketing in 2021. Retrieved from Beaconstac: https://blog.beaconstac.com/2019/01/qr-code-use-cases-for-marketing/

Choudhary, S. R. (2021, March 7). Why 2021 is the year of QR codes. Retrieved from Beaconstac: https://blog.beaconstac.com/2019/02/year-of-qr-codes/#Reasons-why-QR-Codes-will-trend-in-2021

Claeys, B. (2020, March 19). 10 luxury brands are using QR Codes for marketing. Retrieved from QR Code Tiger: https://www.qrcode-tiger.com/top-10-luxury-brands-that-are-using-qr-codes-for-marketing

Goyal, S., Yadav, D., & Mathuria, M. (2016, September 21). Exploring Concept of QR Code and Its Benefits in Digital Education System. Retrieved from IEEE Explore: https://sci-hub.se/https://ieeexplore.ieee.org/document/7732198

Inc., D. W. (2013, April 03). History of QR Code. Retrieved from QR Code: https://www.qrcode.com/en/history/

Jathar, C., Gurav, S., & Krantee, J. (2019, July 07). A Review on QR Code Analysis. Retrieved from Ijaiem: https://www.ijaiem.org/Volume8Issue7/IJAIEM-2019-07-02-3.pdf

Joshi, C. (2019, July 18). The Story of QR. Retrieved from Yourstory: https://yourstory.com/mystory/the-story-of-qr-codes-past-present-and-future

Joshi, C. (2020, November 20). 16 Epic QR Code Examples from Brands Killing it! Retrieved from Beaconstac: https://blog.beaconstac.com/2019/03/15-epic-qr-code-examples-from-brands-killing-it/

Kaspersky, E. (2020, November 21). What is QR Code? Is it safe to scan QR codes. Retrieved from KASPERSKY: https://www.kaspersky.co.in/resource-center/definitions/what-is-a-qr-code-how-to-scan

Katts, R. (2020, December 12). Top 10 QR code campaigns. Retrieved from Marketing Dive: https://www.marketingdive.com/ex/mobilemarketer/cms/news/software-technology/12604.html

Kelly, D. (2020, July 14). Why QR Codes In Marketing Suddenly Make Sense. Retrieved from Postalytics: https://www.postalytics.com/blog/qr-codes-in-marketing/

Reulier, B. (2014, August 17). What is a QR Code. Retrieved from Unitag: https://www.unitag.io/qrcode/what-is-a-qrcode

Rizwan, Z. (2016, July 26). QR Code History: Evolution of the popular 2D Barcode. Retrieved from Scanova: https://scanova.io/blog/blog/2016/07/26/qr-code-history/

Schwabstr. (2020, January 01). How QR Codes work and their history. Retrieved from QR Code Generator: https://www.qr-code-generator.com/blog/how-qr-codes-work-and-their-history/

Scott. (2020, September 14). Who Invented the QR Code? QR Code History & Creator. Retrieved from SproutQR: https://www.sproutqr.com/blog/qr-code-history

A Study on Identifying Factors Driving Purchase in the Retail Sector with Special Reference to the Green Initiative

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ABSTRACT

This study likely seeks to determine the factors that influence consumer purchasing behavior in the retail sector, with a specific focus on the impact of "green initiatives." This could include factors such as eco-friendliness, sustainability, and environmental impact, as well as consumers' attitudes and perceptions of these initiatives. The study may use research methods such as surveys, focus groups, or observational studies to gather data on consumer behavior and purchasing decisions in the retail sector.

Keywords: Retail, Customer Satisfaction, Green Marketing

Introduction:

Indian Real Estate Industry: Indian retail industry has emerged as one of the most dynamic and fast-paced industries due to the entry of many new players. Over 10% of the nation's gross domestic product (GDP) and about 8% of employment are attributed to it. In the 2019 Business-to-Consumer (B2C) E-commerce Index published by the United Nations Conference on Trade and Development, India came in at position 73. India is the fifth-largest international retail destination in the world and is ranked 63 in the World Bank's doing Business 2020 report. In recent times, the retail industry has been pushing and looking to pursue its marketing by focusing on green initiatives to claim market share. These new norms imposed by the government have caused many brands to rethink their packaging of products to satisfy the government rules to carry their operations as usual.

1.1 What is green retailing?

Green Retailing (GR) refers to the management approach that pursues environmental protection to improve the retail value chain through eliminating waste, increasing efficiency, and reducing costs. This model focuses on ensuring the endangered environment conditions are revived and are sustainable for future generations.

1.2 Consumer buying behaviour with reference to the green initiative

Consumers with green attitude tend to focus on buying sustainable, ethical, and environmentally friendly products that do not harm the environment. In the studies of (Chang, 2012, Bhattacharya, 2011 and Boztepe, 2016) it was found that green consumers were more likely to give up bad habits which may harm the environment and they are more likely to change their behavior by purchasing green products even by compromising on price, quality, and branding of the product. Examples of green purchasing or green consumerism include recycling, minimizing energy consumption, buying hybrid cars, or green food products (Bonini and Oppenheim, 2008).

Consumers are still very concerned about sustainability in the retail industry. People are more aware of how their lifestyle and purchasing habits influence the environment, and they expect businesses to play their part. This awareness has led to the emergence of pre-used and vintage goods, low-impact packaging, and traceable origins.

Literature Review

In the past, studies have found that values (concern for the health of children and family members) and knowledge (about environmental concerns and goods) had a substantial effect on eco-friendly purchasing behavior. Constraints such as price, lack of knowledge, lack of availability, risk of trying new brands deterred the purchase of eco-friendly products.

Eco-friendly purchasing is still a relatively new notion in India. However, as a result of government laws, commercial organizations and consumers are becoming more cognizant of eco-friendly products. (Factors Affecting Green Purchase Behaviour: An In-Depth Study of Indian Consumers by Aarti Kataria, Aakanksha Kataria and Ruchi Garg).

Green consumerism serves as the foundation for making green purchasing decisions. Green purchases are seen among consumers that consider environmental considerations while making purchasing decisions. Green customers are people that research the materials and components of items before purchasing them in order to protect the environment by purchasing less toxic and recyclable products. Environmental concerns, product features, environmental awareness, and subjective norms appeared as important drivers, whereas high price, limited availability, and a lack of consumer trust in green products emerged as major obstacles to green product purchase.

While other researchers demonstrate that environmental concerns, product features, environmental awareness, and subjective standards are key drivers, high prices, limited availability, and a lack of customer trust in green products are major hurdles to green product purchasing. Another component of the research is that shops should not carry only one or two green items in their stores as a formality. They should maintain a variety of items on hand so that consumers have a greater and larger range of options, so truly encouraging consumers and society to 'become green.' (Factors Affecting Green Purchase Behaviour and Future Research Directions by Yatish Joshia and Zillur Rahman).

Furthermore, the findings reveal that environmental protection and the urge for environmental responsibility, green product experience, environmental friendliness of enterprises, and social attractiveness all have a substantial impact on Indian customers' buying decisions for green products. Marketing experts must also connect green products to the functional, emotional, and experiential demands of consumers. Furthermore, green product marketing should provide consumers with data about a company's environmental performance, knowledge on green products, congruence with their desired social image, and relevance to their lifestyles. As a result, they should thoroughly evaluate the needs of their consumer categories and position green products properly. (Factors affecting consumers' green product purchase decisions by Prashant Kumar and Bhimrao M. Ghodeswar). According to other studies, environmental protection, environmental responsibility, green product experience, social appeal, and environmental friendliness all have a substantial impact on green product purchasing decisions and green brand image. Consumers work hard to gather information about green items from their surroundings and possessions in order to respond favorably to environmental concerns. Consumers also try to determine whether brands have a positive green image or not. (Factors influencing consumer's green product purchase decision by mediation of green brand image by Ayesha Bukhari, Ramaisa Aqdas Rana, Usman Tariq Bhatti).

Research gap/ Opportunity

In the past, researchers have focused mainly on price points and impact of green packaging on the consumers in different sectors. Whereas others have focus on other studies, environmental protection, environmental responsibility, green product experience, social appeal, and environmental friendliness to name some.

The current research mainly focuses on identifying the factors affecting purchase decisions in the retail sector, why, how, they purchase and who influence their decisions and also having a overview whether price, social appeal, product quality play an role in the customers decision making

Importance of topic

Many studies on green shopping behavior have found a "gap" between customers claimed positive opinions and actual purchasing patterns (Tanner and Kast, 2003; Vermeir and Verbeke, 2006; Vermeir and Verbeke, 2008). Hughner (2007) discovered that, while many customers had a good attitude toward purchasing organic packaged food products (67%), just a small percentage of those consumers (4%) actually purchased those products. Similarly, Defra (2006) discovered that 30% of UK consumers have expressed worry about the environment, yet this concern is rarely turned into a green purchase. As a result, it is evident that there is a disconnect between consumer thinking and actual behavior (Chen and Chai, 2010; Wheale and Hinton, 2007). This disparity or gap between consumers' favorable attitudes toward, and actual purchase behavior of, green items is known as 'green purchasing inconsistency' or 'green attitude-behavior gap.'

It will also help us learn consumer attitudes on eco-friendly packaging, such as how they feel about the product in green packaging. Their sense of accomplishment and initiative in raising awareness and encouraging others while buying such products. This study will also help us understand do consumers are really accepting/rejecting this initiative of packaging. It will also assist retailers in understanding consumer behavior, attitudes regarding it, and any annoyance caused so that key business decisions may be made.

Objective of the research

The main objectives of this study are:

I. To identify factors driving purchase in the retail sector with special reference to green initiative.

ii. To understand purchasing motive of consumer considering green products.

iii. To understand the importance of product attributes to the customer.

iv. To study consumer's preference on environmentally friendly products considering pricing.

v. To study if consumer bought the product mainly for its environmental effect or any other reason evoke the purchase of the product.

vi. To addresses the main motivators that influence customers to buy green products as well as well as profiling the decisions that shape their behaviour.

Hypothesis

I. H0: There is a significant impact of price, perception & convenience on a retail store customer's buying behavior.

ii. H1: There is no significant impact of price, perception & convenience on a retail store customer's buying behavior.

iii. H0: There is a significant impact of green packaged products on a customer's buying behavior

iv. H1: There is no significant impact of green packaged products on a customer's buying behavior.

Research Design

Type of research

A survey-style study was carried out to collect primary data in order to better understand consumer purchasing behaviour. This survey's data will be used for quantitative research. Furthermore, because it focuses on differentiating numerous aspects involved in buying decisions in the retail sector with specific reference to the green initiative, this research is experimental research.

Sampling Process

A draft has been developed early on, keeping the study's goal in mind. To determine the accuracy of the questionnaire, an experimental study has been conducted. The final questionnaire has been developed only once certain significant revisions have been made. The data from the respondents has been gathered using a random sample technique. The respondents are chosen using a random sampling method. Random sampling is a sampling method in which every individual unit in the population has an equal chance of being chosen for the sample. It is most frequently used method of selecting a representative sample. The availability and speed with which data can be acquired are advantages of this sort of sampling.

Data collection tools and analysis:

Primary data: Information is collected by conducting a survey by distributing a questionnaire to more than 100 respondents. These 100 respondents are of different age group, qualification and gender.

Secondary data: This data is collected by using the following means

I. Articles in newspapers (The Hindu, Times of India, Bombay Times etc.)

ii. Expert's opinion published in various print media.

iii. Books written by various Foreign and Indian authors on green initiative.
iv. Data available on internet through reliable websites.

Data Analysis

***I.* Age group vs retail store visit**

Chi-Squared Tests			
	Value	df	p
X^2	23.98 8	20	0.243
N	180		

Since the value if p is greater than 0.05 (0.240) the null hypothesis is rejected which concludes that the age group and the visit to retail store don't have a significant impact on each other.

I. **Age group vs recycled packaged products purchased, awareness and external influence.**

a) Age group vs recycled packaged products purchased

Chi-Squared Tests			
	Value	df	p
X^2	9.95	25	0.997
N	180		

b) Age group vs Product Awareness

Chi-Squared Tests			
	Value	df	p
X^2	19.18 8	25	0.788
N	180		

c) Age group vs external influence

Chi-Squared Tests			
	Value	df	p
X^2	17.75 9	25	0.852
N	180		

Since the value, if p is greater than 0.05 i.e. (0.997), (0.788), (0.852) the null hypothesis is rejected which concludes that the age group doesn't have a significant impact on purchases of recycled packaged products, awareness and external influence.

***I.* Age group vs quality of product**

Chi-Squared Tests			
	Value	df	p
X^2	28.857	25	0.27
N	180		

Since the value, if p is greater than 0.05 i.e. (0.27) the null hypothesis is rejected which concludes that the age group doesn't have a significant impact on purchases of quality recycled products.

Gender

***I.* Gender vs retail store visit**

Chi-Squared Tests			
	Value	df	p
X^2	9.799	4	0.044
N	180		

Since the value, of p is greater than 0.05 (0.044) the null hypothesis is accepted which concludes that gender and the visit to retail store have a significant impact on each other.

***I.* Gender vs recycled packaged products purchased, awareness and external influence.**

a) Gender vs recycled packaged products purchased

Chi-Squared Tests			
	Value	df	p
X^2	3.48 4	5	0.626
N	180		

b) Gender vs Product Awareness

Chi-Squared Tests			
	Value	df	p
X^2	2.44 1	5	0.785
N	180		

c) Gender vs external influence

Chi-Squared Tests			
	Value	df	p
X^2	2.69 8	5	0.746
N	180		

Since the value, if p is greater than 0.05 i.e. (0.626), (0.785), (0.74) the null hypothesis is rejected which concludes that genders don't have a significant impact on purchases of recycled packaged products, awareness and external influence.

Chi-Squared Tests			
	Value	df	p
X^2	1.70 6	5	0.888
N	180		

Since the value, if p is greater than 0.05 i.e. (0.88) the null hypothesis is rejected which concludes that the gender doesn't have a significant impact on purchases of quality recycled products.

Conclusions

With the above analysis, we can conclude that customers of retail shops have a mixed buying behavior with respect to products of green initiative. Green products are not perceived to be relevant to a customer's lifestyle. Pricing plays an important factor among genders but not at age groups which means gender- wise customers' preference of products change preferably women are buyers a high involvement in buying products having green packaging.

The customers are aware of products promoting green initiative on the age group as well as gender levels as it promotes a sense of social belongingness. Some customers only buy products that have green packaging as they believe it makes them socially attractive. Whereas, some customers only buy green packaged products so that they are not perceived to be outdated in the society. Customers would only buy products with green packaging when it makes them feel an environmentally responsible person. Customers by gender and age are perceived not to buy overpriced products irrespective of the quality it offers. Also, inconvenience is a matter to address as many consumers feel that the green initiatives cause a lot of inconvenience to the customers.

References:

Murthy, D., & James, L. (2018, April). Key drivers for Adoption of Green Logistics by Organized Retail Sector in Bengaluru. *International Journal of Management Studies*.
https://doi.org/10.18843/ijms/v5i2(2)/01

Luthra, C, & Deshwal, P. (2022). Determinants of green purchase behavior-a literature review on specific product categories. Academy of Marketing Studies Journal, 26(1), 1-16.

Joshi, Y., & Rahman, Z. (2015, April). *Factors Affecting Green Purchase Behaviour and Future Research Directions*.

Kataria, A., Kataria, A., & Garg, R. (2013, July). *Factors Affecting Green Purchase Behavior: An In- Depth Study of Indian Consumers*.

Kaufmann, Hans Ruediger; Panni, Mohammad Fateh Ali Khan; Orphanidou, Yianna (2012) : Factors Affecting Consumers' Green Purchasing Behavior: An Integrated Conceptual Framework, Amfiteatru Economic Journal, ISSN 2247-9104, The Bucharest University of Economic Studies, Bucharest, Vol. 14, Iss. 31, pp. 50-69

Sarumathi, S. (2014, March). *Green Purchase Behavior–A Conceptual Framework of Socially Conscious Consumer Behavior*. http://www.ripublication.com.

Barge, D. S., More, D. K., & Bhola, S. S. (2014, August). *A Review of Research Articles on Influence of Demographic factors on green buying behaviour*.

Swadesh, D. (2020, June). *FACTORS EFFECTING TO CONSUMER'S BUYING BEHAVIOUR WITH REFERENCE TO INDIAN RETAIL SECTOR OF LUCKNOW CITY*. www.researchgate.net.

Chahal, B. P. S., Prakash, V., Nemmaniwar, Dr. V. G., Mehra, Dr. K. G., & Radhakrishnan, Dr. S. (2022, May). *Effect of E-Word of Mouth on Brand Equity and Intention to Purchase: A Study on Green Products in The Retail Sector*.

Deniz, A., & Onder, L. (2017). Determinants Of Brand Equity In Green Products: The Relationships Among Green Brand Image, Green Trust And Green Satisfaction. International Journal of Arts Humanities and Social Sciences, 2(1), undefined-undefined

Diryana, I., Yuyus, I., Sudarma, S., Sari, I. D., &Febrian, E. (2017). The Influence of Customer Value, Integrated Marketing Communication and Customer Trust on Brand Equity: A Study on Green Cosmetic Product in Bandung, Indonesia. International Journal of Business and Applied Social Science, 3(1), undefined- undefined.

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