The Indian Journal of Business Administration is publishing in June and December every year and this National peer reviewed refereed journal is an official organ of the Department of Business Administration, Faculty of Commerce and Management Studies, Jai Narain Vyas University, Jodhpur (Raj.). Since from starting issue of our departmental journal in year 1996 we aims at bringing and providing the surface to original studies - papers, research notes, reviews of literature - in different areas of Commerce & Business Administration, made by academicians, practitioners and independent thinkers having genuine concern with the theory and practice of Business Administration, for the purpose of fuller appreciation of the manifold dimensions of the subject that may lead to more effective and meaningful management of operations. Previously, it was yearly journal of Department but due to the huge academic demand the frequency of our journal has been changed as two issues for every year in the month of June and December and now it called as half-yearly journal.

PROFILE OF THE DEPARTMENT

The Jai Narian Vyas University was established on 2nd June 1962 as 'The University of Jodhpur'. Later on, it was renamed as 'Jai Narain Vyas University.' The University has a residential character. The erstwhile 'Faculty of Commerce' of the university was restructured into four separate teaching departments, viz The Department of Accounting, The Department of Business Finance and Economics, The Department of Business Administration, and the Department of Management Studies in the year 1990 with a new umbrella name of 'Faculty of Commerce and Management Studies.'

The Department of Business Administration came into existence on 3rd Feb.1990 and since then it has grown both academically and professionally, With Prof. P.N. Saxena as its first and founder Head of the Department, we have had a long journey of two decades. Prof. Saxena is both satisfied and happy to see the Department growing for his successors Dr. D.P.Ghiya, Mrs. Asha Malhotra, Prof. A. B. L. Mathur, Prof. R. R. Lodha, Prof. L. C. Bhandari, Prof. Rajan Handa, Prof. J.K. Sharma and Prof. R.C.S. Rajpurohit, all have taken the department to greater heights over the years.

The Department offers M.Com., Ph.D, and D.Litt in Business Administration. At the undergraduate level, the Department offers B.Com (Hons.), B.Com and BBA Degree courses in combination with sister departments. Two separate Post Graduate Diploma courses, namely Post Graduate Diploma in Marketing and Sales Management and Post Graduate Diploma in Human Resource Management have been successfully running on self-financing basis. Both the diplomas have proved quite useful as professional job oriented courses for past many years.

The M.Com. Program offers specialization in four different areas: The Human area, The Marketing area, The Finance area, and The Institutional area. Currently, teaching is provided in Marketing and Human areas. The Department is staffed with and enriched by Seven Assistant Professors. Since the creation of the Department to till date, regular research as good number of PhD degrees have been awarded and numerous of PhD researches are in progress thereby usefully contributing to Research for advancement of knowledge in the domain of business administration. Several of our graduates have been very well placed in different organizations both in India and Abroad. The Department is also contributing by working on major and minor Research projects undertaken by its faculty members. The department successfully organized various UGC Refresher Course, Workshops, National Seminar and Conferences sponsored by UGC, New Delhi.

I must say that we in the department have always worked with a team-spirit and therefore whatever we have achieved so far, it is the gainful result of that. For all communications, following is the address of the Department:

Dr Umaid Raj Tater
Head of the Department & Chief Editor, IJBA
The Department of Business Administration
Faculty of Commerce & Management Studies
Jai Narain Vyas University, Jaswant Campus, Jodhpur 342 001
Rajasthan, India

Prof. (Dr.) Pravin Chandra Trivedi
Vice-Chancellor
Jai Narain Vyas University, Jodhpur

MESSAGE

I am delighted to know that the Department of Business Administration, Faculty of Commerce and Management Studies is doing a commendable work by regularly publishing the journal entitled **"Indian Journal of Business Administration"**. It has been brought to the notice of the undersigned that previously twelve volumes have already been published successfully by the Department. Such academic ventures are highly useful for the students and researchers.

I am sure, the academic fraternity and the relevant subscriber of the journal will find its contents highly useful for their own intellectual renewal.

I hope that the Department shall continue to release this National Journal, which is of so vital importance for the academic community.

On this occasion, I would like to convey my sincere greetings to the editorial team for their continual efforts in publishing such a good journal.

With Best Wishes.

Pravin Chandra Trivedi

Dr. Raman Kumar Dave
Professor, Dean, FCMS &
Head of Department
Jai Narain Vyas University, Jodhpur

MESSAGE

I am happy to note that the Department of Business Administration is going to publish the 13th Volume of "Indian Journal of Business Administration" incorporating high quality of research papers on different international and national aspects of Business Administration contributed by eminent academicians, scholars, practitioners and professionals. 'Indian Journal of Business Administration' is an important publication for academicians as well as business people to enrich their knowledge.

I am sure that the current issue of the Journal shall continue to maintain the desired academic standard and add more to the existing level of research in the Department.

My best wishes to Dr. Umaid Raj Tater, Head. Department of Business Administration & Chief Editor of the Journal and also to the Editorial Board for their commendable efforts in publishing the Journal.

Dr. Raman Kumar Dave

Prof. (Dr) D.S. Kheechee
President
University Teachers' Association
J.N.V. University, Jodhpur

MESSAGE

It's heartening to learn that Department of Business Administration is bringing out the Annual Volume 13, 2020 of Indian Journal of Business Administration. It is believed that research is an unending process and it always requires upgradation and reforms. This journal holding a prestigious position among management researchers across country fulfils this thirst by the quality of papers from various important management aspects. I am sure that this new edition too would go miles through quality research contribution making an important feat for itself.

The world has changed Post Covid-19 pandemic and calls for new researches from management researchers for the new challenges faced by the business world. I hope the editorial team of journal would take up this challenge in its future editions by touching these aspects for providing feasible solutions to the new challenges faced by business world.

I would like to put on record my sincere appreciation for the young team of Department of Business Administration for committed efforts for academic advancement & enrichment. The continuance of this journal is indeed praiseworthy. The editorial team of the journal has really put in a great deal of effort for this issue for which they also deserve a big applause.

I congratulate to all fellow teachers of Department of Business Administration for their continued effort in active engagement in research.

With Best Wishes.

Prof. (Dr) D.S. Kheechee

Dr. Umaid Raj Tater
Chief Editor, IJBA & Head,
Department of Business Administration, FCMS
Jai Narain Vyas University, Jodhpur

MESSAGE

Shri Dr. S Radhakrisnan, former President of India inaugurated our University in the year 1962 as 'The University of Jodhpur' which was renamed as "Jai Narain Vyas University, Jodhpur" in the year 1986. Shri Jai Narain Vyas was a former Chief Minister of Rajasthan hailing from Jodhpur in whose name it has been rechristened. In the inaugural speech of Dr. Radhakrisnan he said: "It is my hope and it is my earnest desire that the young people, who will be educated in this University, will go forward not as prisoners of the past, but as pilgrims of the future, will develop in them a spirit of dedication, a spirit of wholeheartedness, single-minded concentration on the advancement of knowledge whether in science or in humanities".

As far as this issue of our Departmental Nation Peer Reviewed Refereed Journal in my ex-officio capacity as the Chief Editor of this Departmental Journal, I feel a sense of satisfaction in bringing out this current volume of our journal and we could not have reached this milestone without contributions and cooperation received at all levels of the editorial efforts and authors who have contributed to our growing and continued success. The Journal explores subjects of interest to academicians, practitioners and others involved in the field of business. Our goal is to promote awareness, provide a research outlet for the students and faculty, and increase educational exchange. Through earlier articles, and those in this issue, we have explored a broad range of topics including: instructional improvement, methods for delivery of course material, performance measures, learning approaches in new business environment. Our contributors have written their papers in the fields of Banking, Finance, Management, Marketing, Business Education, and MIS.

I must express my sincere thanks to our Dear of faculty Prof. (Dr) Raman Kumar Dave, Prof. (Dr) D.S. Kheechee, President, Jai Narain Vyas University Teachers' Association and all my fellow teachers, friends and non-teaching staff members in the department as well as in the faculty of Commerce and Management studies for their affectionate and supportive behavior. We are still learning, still experimenting and still attempting to improve our process and product. We would appreciate your feedback and suggestions, and welcome additional assistance to the editorial board.

Dr. Umaid Raj Tater

Dr. Ashok Kumar
Managing Editor, IJBA &
Assistant Professor
Department of Business Administration,
Faculty of Commerce and Management Studies
Jai Narain Vyas University, Jodhpur

MESSAGE

The "Indian Journal of Business Administration" portrays the cream of thoughts which are developed by the thinkers in the academic society on issues that are regarded as important, rather crucial in the contemporary world. In the process, it is usual that while old concepts get reconfirmed or revised, new concepts and techniques emerge for a fuller understanding of the problems and implications of diverse approaches and strategies. The "Indian Journal of Business Administration" is a peer reviewed referred national journal of Department of Business administration and although it is only as small star in the galaxy of learners, has been doing its humble bit in bringing to surface, some of the relevant issues in the realm of business administration, along with necessary and even implicit non-business orientations towards a wide range of public, and offering possible tips or clues to the academician, readers and managers for multiplying managerial/organizational effectiveness in general towards enhancing their quality of business as well as successful life.

This Journal was conceived of in 1992 by Professor P. N. Saxena as the founder Head of the Department of Business Administration and The Founder Chairman of the Editorial Board. The present volume is a modest but honest attempt in this direction, in the fervent hope that the exercise would help one have a better appreciation of the issues that matter.

Our first gratitude goes to Professor Pravin Chandra Trivedi, Hon'ble Vice-Chancellor, Jai Narain vyas University, Jodhpur, for all his inspiration and kind assistance that enabled the present volume see the light of the day. I also feel my sincere thanks to Professor Raman Kumar Dave, Dean, Faculty of Commerce and Management Studies for his kind support and blessings.

A wide variety of topics have been discussed in the following pages namely, Public Private Partnership, DuPont Analysis, Profitability of

Automobile Industries in India, Indian Industries and Economic Development, Work-Life Balance -Women Employees, Rural Youth Empowerment, Employee Engagement, Green Marketing, Impact of Covid-19 Pandemic, Women Empowerment, Tackling Malware and Network Intrusions, Stakeholder Capitalism, Consumer Buying Behaviour, Digital Marketing, E-Recruitment . It is fervently hoped that these studies by the experts, in their own right, would help stimulate the thinking of the readers and generate responses, possibly helping in ways more than one.

The Department has potential and drive, and each of the members holds the key to open up the pathway to excellence. The members involved in this have done appreciable work and unless members participate wholeheartedly, improvements would remain elusive. The success of the journal will depend upon the deep involvement of the members of the department as family and the kind support from Faculty of Commerce and Management Studies as well as University administration.

Through a significant attempt has been made in the improvement, quality being elusive as to its boundary limits, the subsequent issues would be further developed for which an evaluated feedback from the readers would be of immense help. The Editorial Board will focus on professionalizing this management circles. It is believed that the patronage and co-operation extended by contributors and readers will enable the department to improve the quality of the journal as a continuous process in its value growth. We are looking forward for valuable comments from readers and contributors for true improvement in the quality of our Departmental Journal.

Dr. Ashok Kumar

CONTENTS

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PUBLIC PRIVATE PARTNERSHIP IN SOCIAL SECTORS FOR HARMONIZED DEVELOPMENT IN INDIA

Dr. Dalpat Singh[*]

ABSTRACT

India is a welfare state since Independence and the primary objective of all government policies and programmes in our country has been the maximum welfare of millions of its citizens. Elimination of poverty, ignorance, diseases and inequality of opportunities and providing a better quality of life have been the basic premises upon which all the plans and blueprints of development were made. These objectives become all the more important for rural areas where majorityof our population lives.In the beginning of the 21st century, Public Private Partnership (PPP) has become a refined strategy for societal governance[']. PPP is a logical transformation of a mixed economy like India.[¨]Both Public and Private Sectors have matured in the last half century and have developed competencies in their respective spheres. PPP is a creative enterprise where the best of two sectors is brought together to achieve fruitful results[3].

KEYWORDS: *PPP, Mixed Economy, Public and Private Sectors, Government Policies.*

Introduction

Today, there has been a rapid rise of Public Private Partnership (PPP) across the world. Governments in developing as well as developed countries are using PPP arrangements for improved delivery of infrastructure services. Governments are improving infrastructure (roads, railways, power), education (schools and universities), health care (hospitals and clinics), waste management (collection, waste-to- energy plants), and water supply (collection, treatment and distribution) etc. through Public Private Partnerships. PPP is becoming the preferred mechanismfor infrastructure development and service delivery throughout the world and PPP hasbecome the buzzword in all developing nations including India[4].

The Concept of Public Private Partnership

A Public Private Partnership is a contractual agreement between a public agency (federal, state or local) and a corporation. Through this agreement, the skills and assets of each sector (public and private) are shared in delivering a service or facility for the use of the general public. New Public Management (NPM) is a liberal replica of PPP signifying a pattern of reform of public management per se.[5]

Public Private Partnership is essentially a collaboration between the govermnent and the private sector to create a structure in which improved value- for-money can be achieved through the involvement of private sector due to enhanced scope for innovation and allocation of risk to the party best able to manage it without undermining the government's overall responsibility to the tax payer for the quality of the service provided[6].

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The interplay between two sets of factors - endogamous and exogenous paved the way for PPP. The endogamous factors among others. include failure of the state-driven, socialist-command model of development policy as in India during the Nehruvian era (1947-1990), poor performance of most public sector undertakings, bureaucratic bungling, increasing corruption among political leaders and officials and poor delivery of public services resulting in growing discontentment among the people. In India, in addition to the above, the balance of payment crisis precipitated the transition of government's ongoing socialistic pattern of policy since the adoption of the Industrial Policy of 1956 to the liberalization, privatization and globalization (LPG) policy in 1991. The most important among the exogenous factors was the paradigm shift to the LPG model strongly advocated by the World Bank for governments of the developing countries availing credit and financial assistance from the Bank. Another influential external factor was the New Public Management paradigm strongly advocated by the New Right (Neo Liberal) scholars and management scientists and accepted by planners and policymakers in developing countries. PPP projects ensure efficient use of resources, availability of modern technology, better project design, optimal risk allocation, improved delivery of public services and thrust to public sector reforms.

Under the PPP format, the government role gets redefined as one of facilitator and enabler, while the private partner plays the role of financer, builder and operator of the service or facility. PPPs aim to combine the skills, expertise and experience of both the public and private sectors to deliver higher standards of services to customers or citizens. The public sector provides assurance in terms of stable governance, citizens support, financing and also takes care of social, environmental and political risks. The private sector brings operational efficiency, innovative technologies, managerial effectiveness, access to additional finances, and construction and commercial risk sharing. What is needed to transform India into a developed economy is the integration of vital sectors, networking, convergence of technologies and connectivity of rural-urban economies. The Golden Triangle of Industry, Government and the Research and Development institutions is crucial for competing in global markets and for bringing wealth and prosperityto the nation[s].

Public Private Partnerships in India

A welfare state has a much expanded role ensuring its citizens basic services as education, health services and public utilities like road, power and water supply etc. Under the Constitution of India, States are called upon to shoulder most of these responsibilities. As the governments want to improve costs and expedite delivery of public services, they are resorting to various kinds of partnerships between the state, industry and the civil society. In addition to providing better services, such partnerships are expected to tap community resources so that the decision-making is more responsive to the community needs and also provide additional capital for public activities. Ideally all partnerships benefit from establishing joint investment and long-term relationships. By working together, they can achieve their own objectives and a cooperative synergy builds between the partners. According to the World Bank Survey 2006, there were 86 PPP projects in India in various sectors as Roads and Bridges, Urban infrastructure, Railways, Airports and Ports. The total amount involved was Rs.339.5 billion. Figure 1 shows the total project cost of awarded PPPs by sector costing •Rs.339.5 billion. Figure 2 reflects the number of awarded PPPs sector- wise out of a total of 86 projects[9].

Successful PPP models are a recent phenomenon. The Tirupur project in Tamil Nadu is a shining example. It is a Build Operate Own and Transfer (BOOT) project, the first privately financed water and sewerage project in India. A Special Purpose Vehicle was set up for the purpose. The project took more than ten years from concept to financial closure. The US $100 million DelhiNoida Bridge Project, implemented on a BOOT framework of a 30-years concession, is India's first major PPP initiative. Also[)] NI-IAI, port development and telecom industry are some notable examples of successful PPPs. The Committee on Infrastructure headed by the Prime Minister is tasked with steering initiating policies that would ensure time bound creation of world-class infrastructure delivering services matching international standards, developing structures that maximize the role of PPPs, and monitoring progress of key infrastructure projects to ensure that established targets are realized[10].

The emerging issues in the PPP arrangements are the power and the limits of PPPs, competitive edge of public and private initiatives, private provisioning of public services, disinvestment dilemma, social obligations of private sectors, equity and welfare interfaces in PPPs, human face in PPP and societal transformation. The different Ministries of Government of India in recent years have been implementing their various schemes through PPP. India has seen real progress in the last 12 years in attracting private investment in the infrastructure sector, in telecommunication, ports and roads etc. There is a potential for PPPs to contribute more and help meet the infrastructure gap in India[)1,]

There is a massive scope for expansion of the use of PPP in nearly every sector and also the role of PPP as another way of promoting better services, is not limited to infrastructure. In health, education and even in the implementation of poverty reduction programmes there are promising ways to use the empowennent generated by allowing people to make their own choices by channeling funds to the people rather than to the providers. Maintaining transparencyis paramount and hence the goverment has consciously moved towards competitive bidding and maintenance of transparency in the award to infrastructure projects".

Public Private Partnership in Social Sectors in India

The Government of India is planning to use the public private partnership (PPP) route more effectively to finance projects in the social sectors especially health and education. According to Planning Commission, the government is developing a generic framework for various categories of PPPs at primary, secondary and tertiary levels of health care aimed at improving cost- effectiveness, enhancing quality and expanding access through extensive stakeholder consultations. Currently, the health sector gets only government investment which is just about 1 per cent of GDP. The Centre wants to increase funding to 2 per cent of GDP. The government would look at contracting out well-specified and delimited projects such as immunisation to help enhance accountability. Diagnostic and therapeutic centres set up by private players in hospital premises would be encouraged. The government may consider giving them infrastructure status by giving incentives such as land at concessional rates, increasing floor area ratio and ground coverage, tax holiday and loan at lower rate[13]. Here, Public Private Partnerships for various sectors are discussed to give an insight into the initiatives of the government.

PPP in Education

The access to education needs to be considerably improved if we are to catch up with the burgeoning demands from various sectors. Budgetary allocation for education by the Central Government for both for school education and higher education in 2008-09 amounts to Rs.38,703 crores which is an increase of 20 per cent from the the previpus year. Combining the government and private expenditure, the total expenditure on education is approximately 5.3 per cent of GDP and private sector share works out to be 47 per cent"'.

India ranks 115th in the world in terms of investment in education as a percentage of GDP. The foundation of good quality education only be laid by sound and widely accessible primary and secondary education. The government can meet the challenges of globalization with political commitment and by maintaining a high level of expenditure in social sector, especially in the field of education[a5].

For quantitative expansion and improvement in quality, educational sector will require large inflow of fresh capital which cannot be met fromgovernment finances alone. This calls for huge investment in the higher education which the government may not do on its own. Even if the government increases the allocation for higher education upto six per cent of the GDP, there will still be a huge gap in the demand and supply of finances for higher educational institutions. The only way to bridge the yawning gap between the available and required educational infrastructure is to place greater reliance on PPP in terms of attracting private capital as well as to improve efficiencies in the provision of educational services 16.

Public Private Partnerships have distinct advantages and can help to achieve desired education outcomes. It should not, however, be considered an end in itself but as a means to achieve desired education outcomes. It should not, however be considered as an end in itself but as a, means to achieve certain specific results. There are many successful examples of PPPs in the education sector of a number of countries - developed and developing. These examples include:"

- Relocating or building new schools, colleges, universities and providing management facilities for the new building/campus; projects might involve land swaps or enable the private sector provider to generate a third party revenue stream.
- Building facilities for education institutions (on the education institution's land or elsewhere) that will have potential for third party income generation such as sports or academic/conference facilities.
- Refurbishing existing assets or providing facilities management.
- Providing Information Systems - such projects may be to ensure the continued availability of hardware and software over a period of time, or may go further with the private sector provider taking on some administrative functions.

There may be opportunities for third party income generation by selling spare capacity at off-peak times. In addition, the private sector partner might provide catering facilities in a CyberCafe format. In a study conducted on Public-Private interface in Primary Education in West Bengal, it was found that both private and public schools had their pros and cons. On one hand, the poor quality of education delivered in many of government primary schools forced some parents to opt for private schools which were perceived to deliver better quality on the other hand, the negative correlation of annual expenditure and quality of education in some private schoolscreated a reverse trend among some private school parents[\$].

PPP in Health Sector

Public-Private Partnerships in the Health Sector is important and timely in the light of the challenges the public sector is facing in health care finance, management and provision. Improvement in the health status of the population has been one of the major thrust areas for the social development programmes of the country. This was to be achieved through improving the access to and utilization of health services with special focus on under-served and underprivileged segments of the population[ ]9.

Public Private Partnerships (PPP) in health sector are emerging across the country. India spends about 39 per cent of its total public expenditure on health which is less than one per cent of its GDP. The current allocation on health in the budget stands at Rs.16,968 crores. As funds are crucial for the maintenance of health, a search is on for new policy alternatives in the domain of health. A joint study undertaken by FICCI and Ernst & Young entitled 'Fostering Quality Health Care for All' estimates that country needs 17.5 lao beds, 700,000 doctors by 2025 to achieve the goal of health for all. While new initiatives like National Rural Health Mission are trying to find out the remedies to the existing situation, state governments are showing interest in PPP to tackle multiple ills afflicting the health sector. This situation persists despite a national policy commitment of atleast seven per cent. Public Private Partnerships are tried out in some parts of the country not only for mobilizing funds but also to explore the possibilities of replicating the successful and best practices adopted by private sector into the public arena[20].

Today, PPPs in the health sector focus on preventing diseases such as sexually transmitted infections and malaria, developing and facilitating access to vaccines and drugs, improving health service delivery. In 1993, the World Health Assembly called on to mobilize and encourage the support of all partners in health development, including non- governmental organizations and institutions in the private sector in the implementation of national strategies for health for all. Public-Private Partnerships are a central feature of the global health landscape and there seems no reason to believe that the current trend will not continue. India should establish "enabling task forces" at the central, state and local body levels for implementing public-private partnership schemes-l.

Women & Child Development

Women as an independent group constitute 48 per cent of the country's total population as per the 2001 Census. The importance of women as an important human resource was recognized by the Constitution of India which not only accorded equality to women but also empowered the State to adopt measures of positive discrimination in their favour. Also, India is home to the largest child population in the world. The development of children is the first priority on the country's development agenda, not because they are the most vulnerable, but because they are our supreme assets and also the future human resources of the country. The future of India lies in the future of Indian children across income groups, geographical locations, gender and communities. The involvement of voluntary organizations, associations, federations, trade unions, non-governmental organizations, women's organizations, as well as institutions dealing with education, training and research will be ensured in the formulation, implementation, onitoriflg and review of all policies and programmes affecting women and children. Towards this end, they will be provided with appropriate support related to resources and capacity building and facilitated to participate actively in the process of the empowerment of women.

Issues and Constraints In Public Private Partnership In India

In an attempt to explore the new paradigms of governance as reflected in the PPP model of development in India in the backdrop of a high growth state, it is found that there has been an asymmetry in the flow of funds and an overarching emphasis on infrastructure in the hard sectors. Wherever PPPs are implemented in the social sectors like health, education and water resources, old issues remain and newer concerns emerge.

There is a huge policy gap in this area. The reasons are multifarious. First, partnership between the public and the private sector is of recent origin. As a result, a large section of public sector is still skeptical about the gains from such a partnership. From the point of view of the private sector, there are concerns about political and economic stability and transparency of laws and regulations. There is also lack of capacities within the public as well as the private sector to carve out, operatioflalize and monitor such partnerships. The institutions required for facilitating implementation of PPP projects, e.g. independent regulatory bodies, dispute settlement mechanisms arealso not in place. Secondly, infrastructure projects involve crossover issues. Projects spill over several sectors and implementation agencies. For instance, a road project would typically involve agencies like public works department, revenue department, forest department etc. This means that the policy framework should, inter alia, address interdepartmental coordination issues to facilitate quick decision-making. Thirdly, PPP spans the entire gamut of infrastructure in all sectors. In sectors like power and roads, comprehensive policy framework has been developed. In certain other sectors like railways, irrigation, water and sewerage, industrial estates etc. very little work has been done[23].

The private sector now co-exists with the public sector in the field of infrastructure and social sectors, both subjecting themselves to the scrutiny of constitutionally appointed regulatory authorities. Infrastructure financing is a challenge to both the private and public sectors. Given the externalities, high risks and low rates of return, such financing cannot be left solely to the private sector. At the same time, given the budget constraints and inherent inefficiencies, the public sector too, cannot be fully relied upon. The solution, therefore, lies in public private partnership where the two complement each other's efforts in providing infrastructure services. The fundamental principle of PPP is that while the private sector is responsible for the design, financing, building and operation of the services, the government puts in place the legislative framework and provides institutional and political support. All successful PPPs suggest the need for effective communication with the stakeholders - the community, the political establishment and specific user group both before and after commissioning of the project on all sensitive issues, including rehabilitation and resettlement. It must be remembered that political consensus, even if initially achieved, tends to be fragile and needs to be continuously strengthened. But the cornerstone for all successful PPPs is trust and mutual respect[24].

It is becoming increasingly important that government policies are continuously reviewed and modified to fill up this policy gap and create an environment which is conducive to PPP.

Conclusion

Owing to enormous problems faced by developing countries, there is no alternative but to seek private sector partnership in providing the infrastructure and basic services to the citizens. There is an urgent need of involving the private sector and NGOs in supplementing the efforts of the government to achieve socio-economic development of the country at an accelerated pace. On the whole, the state with its resource crunch cannot neglect the affluent private sector looking for avenues to invest and hence, augment its sphere of activities. Developing India, with paucity of basic infrastructure and essential services is a new horizon for private sector. The governments should try and encash on the increasing importance being given to Corporate Social Responsibility by the industry and should find out ways and means of collaboration to accelerate multi-faceted development. Thus PPP emerges as an inevitable mode of providing infrastructure and other basic services. Of course there are doubts on the credibility and efficiency of PPPs. However, for a country like India, poised to be one of the leading economies of the 21st century, PPP is perhaps the best available option. The need is to use PPP extensively both for infrastructure development as well as for social development to transform India into a developed country. PPP is a tool for all-round development and the benefits depend on how such tools are utilized by the policy and decision-makers.

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DUPONT ANALYSIS – A TOOL OF FINANCIAL PERFORMANCE ANALYSIS

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ABSTRACT

'DuPont Analysis' is a financial performance analysis technique using ratios to analyse, compare or add meaning to information produced by financial statements so that users of financial information provided by financial statements can get the real picture of the financial performance of a business entity. 'DuPont Analysis' is the financial analysis tool which uses past and current data to compute ratios and determine whether the financial position of a business entity is sound or not by comparing it to its peers and draws a trend by comparing the ratios of different times (of the business entity itself) to see whether it's financial parameters such Return on Equity (ROE), Return on Asset (ROA) and Financial Leverages are in right manner or not. This study attempts to analysis of the financial performance of companies. In order to achieve the objectives of this paper, ratios such as ROE, ROA,how to calculate by applying the DuPont analysis. The DuPont analysis is an important tool to analysis of financial performance of any company. The volatility of the stock market makes investment decisions a controversial issue for aspiring investors. Investments of huge amounts of money need adequate analysis in order to make an informed decision. The main objective of this paper to build awareness among the investors to take better and strategic decisions using DuPont three steps and five steps.

KEYWORDS: *DuPont Analysis, Return on Equity, Return on Asset, Stock Market, Strategic Decisions.*

Introduction

The word "Performance" is a term which means how well someone has done achieved, implemented, or accomplished the goal is or task assigned to him/her has its genesis in the old Latin word 'Parfournir'. Parfournir' means to bring through, to carry out, to do or to bring forth something. Bourguignon has assimilated performance with an "action", with a certain "behaviour" (in terms of a dynamic view), meaning, "To perform" and not just as a "result" (in terms of a static view). Performance is a subjective concept, for instance, a guy gets 60% marks in an examination he might feel very heavy because he desired to get more than what he got but in the same examination if he had desired to get passing marks than he would be very happy for his performance and would even get motivated to improve his performance in next examination. Performance is a wide subjective term which is being measured against pre-defined sets of precision, standards, accomplishments timing and sometimes even against own desires and perceptions. Performance denotes how well an organisation has been able to work for the interest of its stakeholders. Performance indicates how well a company or any other form of organisation or an individual is progressing to achieve the goals. Performance is a measurement of how effectively and efficiently an organisation or company has worked, to match up to the aspirations of various interested parties.

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In the Field of Accounting and Finance, the term 'Financial Performance' is used to measure the performance of the business entity in financial terms. Under financial performance, whatever effects the financial position of a business organisation whether it is financial indicators like return, profitability, or non-financial indicators like efficiency etc. are studied depending on the information required. Financial performance is an attempt to show how far the financial goals of the business entity are being or has been accomplished or attained. Financial Statements that is, income statement and balance sheet do provide information about what has happened during the particular accounting period but whether the business entity has performed well or not, whether liquidity position of the entity is vulnerable or stable, whether management has been able to use resources efficiently and effectively or not, what are repercussions of performance of business entity on various interested parties (shareholders, bankers, investors, government, income tax authorities, lenders, etc.), etc. is what not conveyed by financial statements for this purpose analysts use various techniques, of which 'Ratio Analysis' is most popular and arguably easiest to apply of the various techniques used by analysts for analysing financial statements.

Du Pont Model is a century-old tool invented by a salesman of DuPont explosives Donaldson Brown in 1912. Donaldson Brown in his internal efficiency report used a version of the return on investment formula still known as the DuPont formula to analyze the efficiency level of management in, DuPont Corporation from which the model or the analysis got the name. DuPont Corporation started using Du Pont Model also known as DuPont identity, DuPont Model analysis DuPont equation, DuPont framework, or the DuPont method breaks return on equity or return on investment into three main components that are, net profit margin, asset turnover and leverage factor.

Objectives of the Study

The objective of the study is to make an assessment of the financial performance of companies using DuPont Model.

Objectives are as follows:

- To know the conceptual aspect of DuPont Model.
- To know the financial performance analysis using DuPont model.
- To study the using of ROE, ROA and Financial Leverage in DuPont modelfor profitability analysis.

Components of DuPont Model or Analysis

The Basic Model or 3 Step DuPont analysis breaks return on equity into three components or parameters which facilitates comparison of business entity

- **Net Profit Margin:** The net profit margin indicates the profit earned on the sales made. The net profit margin shows the excess of revenue from operations over costs as a percentage of revenue from operations. It is an attempt to measure the operating efficiency of a business entity by taking profit as a measuring rod. It shows whether the profitability of the business entity as a result of its pricing strategies or the result of its efforts on controlling costs. A high-profit margin signifies that with sales or revenue from operations there is an increase in overall return for equity shareholders. Net profit margin is simply a return on sales calculated with the help of following formula:

$$\text{Net Profit Margin} = \frac{\text{Net Income}}{\text{Revenue from Operations/Sales}}$$

Net Income = Income Available For Equity Shareholders or Earning After-Tax

- **Asset Turnover:** Assets Turnover attempts to show how efficiently asserts have been utilised by the management of a business entity. Assets Turnover indicates the revenue from operation generated from each penny invested in assets. Assets mean total assets that are cash in hand, debtors, bills receivables, property, plant and equipment, stock, short-term advances etc. Assets Turnover as a parameter is quite useful especially for manufacturing concerns where idle assets signify low capacity utilisation and equate it with an unforgivable crime. Asset turnover can be calculated with the help of following formula:

$$\text{Asset Turnover} = \frac{\text{Revenue from Operations/Sales}}{\text{Average Total Assets}}$$

- **Financial Leverage:** Financial Leverage, measured by equity multiplier reflects how much of the assets of the business entity have been financed by fixed cost bearing securities such as debentures etc. It signifies the risk and uncertainty associated with the expected return on equity. Higher leverage indicates that a business entity is using debt financing quite a lot to finance its assets which means a high return for equity shareholders involving high risk and uncertainty. Conversely that low leverage indicates a business entity is using less the amount of debt finance to finance its assets which means lower but, certainly of return to its equity shareholders with a lesser degree of risk. It is computed with the help of the following formula:

$$\text{Equity Multiplier} = \frac{\text{Average Total Assets}}{\text{Shareholder's equity}}$$

These three components are put together to compute return on equity under the original three-step equation. Return on equity is calculated as:

Return on Equity (ROE) = Net Profit Margin × Assets Turnover × Equity Multiplier

Or

$$ROE = \frac{\text{Net Income}}{\text{Revenue from Operations}} \times \frac{\text{Revenue from Operations}}{\text{Average Total Assets}} \times \frac{\text{Average Total Assets}}{\text{Shareholder's equity}}$$

Or

$$ROE = \frac{\text{Net Income}}{\text{Revenue from Operations}} \times \frac{\text{Revenue from Operations}}{\text{Average Total Assets}} \times \frac{\text{Average Total Assets}}{\text{Shareholder's equity}}$$

Therefore,

$$\text{Return on Equity (ROE)} = \frac{\text{Net Income}}{\text{Shareholder's equity}}$$

One must use the detailed formula for calculation of Return on Equity (ROE) because the primal objective of DuPont analysis is to identify factors affecting Return on Equity (ROE) instead of mere calculation of Return on Equity (ROE). The detailed formula will help to identify which component has caused its current value and which have not contributed towards its current value.

Five-step or 5-Factor DuPont Analysis

Five-step DuPont analysis is an extended version of three-step DuPont analysis which is the original equation giving a detailed analysis of factors affecting return on equity. Five-step DuPont analysis further breaks net profit margin into three components to know what impact does tax and interest burden have on return on equity of a business entity. 5-Factor DuPont Analysis helps in knowing the impact of operating margin, capital structure, and taxes in addition to the presence of financial leverage and Volume Impact that is how assets have been utilized by Management.

5-Factor DuPont Analysis can be computed with the help of the following formula

$$ROE = \left[\frac{\text{EBIT}}{\text{Revenue From Operations}} \times \frac{\text{EBT}}{\text{EBIT}} \times \frac{\text{NI}}{\text{EBT}} \right] \times \frac{\text{Revenue from Operation}}{\text{Average Total Assets}} \times \frac{\text{Average Total Assets}}{\text{Shareholder's equity}}$$

Here: EBIT= Operating Profit or Earnings before Interest and Tax

EBT = Earning before Tax

NI = Net Income

Relationship between 5-step and 3-step DuPont analysis

Basic DuPont equation

Return on Equity (ROE) = Net Profit Margin × Assets Turnover × Equity Multiplier

5-step DuPont analysis

$$ROE = \frac{EBIT}{\text{Revenue From Operations}} \times \frac{EBT}{EBIT} \times \frac{NI}{EBT} \times \frac{\text{Revenue from Operation}}{\text{Average Total Assets}} \times \frac{\text{Average Total Assets}}{\text{Shareholder's equity}}$$

Or

$$ROE = \frac{EBIT}{\text{Revenue From Operations}} \times \frac{EBT}{EBIT} \times \frac{NI}{EBT} \times \frac{\text{Revenue from Operation}}{\text{Average Total Assets}} \times \frac{\text{Average Total Assets}}{\text{Shareholder's equity}}$$

Now it becomes 3-step DuPont analysis

$$ROE = \frac{\text{Net Income}}{\text{Revenue from Operations}} \times \frac{\text{Revenue from Operations}}{\text{Average Total Assets}} \times \frac{\text{Average Total Assets}}{\text{Shareholder's equity}}$$

$$ROE = \frac{\text{Net Income}}{\text{Revenue from Operations}} \times \frac{\text{Revenue from Operations}}{\text{Average Total Assets}} \times \frac{\text{Average Total Assets}}{\text{Shareholder's equity}}$$

Net Outcome

$$\text{Return on Equity (ROE)} = \frac{\text{Net Income}}{\text{Shareholder's equity}}$$

Thus, it is quite clear that 5-step DuPont analysis is just an extended version of 3-step DuPont analysis which provides a detailed understanding and insight return on equity. It not only includes factors that were present in 3-step DuPont analysis but also adds two more factors to provide for in-depth and profound information for serving as the basis for investment decisions. The simple return on equity calculation might work in many of the cases but when the return on equity of a business entity is less than similar businesses then 3-step DuPont analysis and 5-step DuPont analysis exhibits the weak areas and also exhibits what are the key factors which are dropping or raising the return on equity of business entity to present level.

Interpretation of DuPont Analysis

The success of a DuPont analysis depends on how it is being interpreted by its users. DuPont analysis uses return on equity to show how well equity invested in a business entity is being utilised by Management. It gives the answer to the following questions

- Is the business entity has been able to utilise its assets base effectively?
- Whether the business entity is overleveraged?
- Whether the firm is earning a high net profit margin?
- Whether an increase in net profit margin without adding financial leverage?
- Whether a companys' increase in return on equity is only because of an increase in financial leverage?
- Are the profits of the firm sustainable?

- What impact does capital structure have on earning capacity of a business entity?
- What impact do taxes have on earning capacity of a business entity?
- Are the high profits of a business entity, the result of its pricing strategy?
- Are the high margins of business entity, the result of a reduction in costs?
- Is investing in the business entity is the right option?
- Whether lower return on equity is due to low-profit margin, low asset turnover, or poor leverage?

Why use DuPont analysis?

To the new generation, DuPont analysis might not seem as eye-catching as it was seen when it first came into the scene, where it was the only tool to measure return in this fashion. This century-old analytical tool has not lost its shine as DuPont analysis helps in analyzing what factors are causing increase or decrease in return on equity; this can also be with witnessed with the fact that various software and online portals are available for performing DuPont analysis and is being highly used for making investment decisions. It helps in understanding the cause-and-effect relationship that is, what actually causing the return on equity to be what it is. One of the key advantages it offers that it is equally useful for zero debt firms as it is for the firm having debt and uses the same formula for analysis barring one change where financial leverage of debt-free business entity is taken as one. It helps in analyzing the strength and weaknesses of a business entity. The areas of weakness pointed out can be further broken to get to the source of the weakness, so that management can take corrective actions.

Limitations of DuPont Analysis

DuPont analysis suffers from various shortcomings which one should keep in mind while making decisions on the basis of DuPont analysis. DuPont analysis suffers from all those limitations financial ratio analysis suffers from like

- It doesn't yield the desired result or doesn't suit standalone analysis. In other words, it yields quality results only when it is used for comparing two or more business entities or set standards.
- It does not consider the cost of investment that is it ignores valuation as a parameter. Investors would not like to invest in the business entity with the cost of investment is quite high in spite of the company having good fundamentals
- Modern age businesses like IT, online retail, etc. which are also termed as asset-light businesses, because of having very little assets where the parameter asset turnover used by DuPont analysis becomes irrelevant, as these businesses generate high revenues irrespective of the fact that they have very little of equity invested in assets.
- It is uses accounting data provided by financial statements prepared by management of a business entity which can manipulate the results of financial statements

Conclusion

The decomposition of Return on Equity allows investors to focus on the key metrics of financial performance individually to identify strengths and weaknesses of the organization.There are several robust tools that investors use during their stock analysis for better investment decisions. Looking at financial statements of each organization separately can be a tedious task where investors can simply do DuPont Analysis for a detailed assessment of the organization's profitability. DuPont Analysis is a tool that may help investors to avoid misleading conclusions regarding the organization's profitability. An investor confined solely to return on equity perspective may be confused if he or she has to judge between two options of equal ratio, where DuPont analysis is better option to find out the better stock option.

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HOW LIQUIDITY AND SOLVENCY RATIOS INFLUENCE THE PROFITABILITY OF AUTOMOBILE INDUSTRIES IN INDIA

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ABSTRACT

The Indian Automobile Industry is increasing at an average rate of 25 percent for the past few years. The main objective of this paper is to determine the impact of liquidity and solvency ratios on profitability of automobile industries in india. analyze the effects of various factors on the profitability in Indian Automobile Industry and determine the liquidity and solvency ratios of automobile indusries of india. The secondary data is collecting for five years for selected five companies, the specific ratios are chosen for analysing influence of liquidity and solvecy ratios on profitability of Indian automobile industry. Multiple ratios are analysis to measure the effects of the independent variables on the dependent variable. On the basis of our regression model we are trying to prove that the profitability of the Indian Automobile Industry is highly dependent on Operating Ratio, CR, QR,ROA, ROE,debt-to-Assets,ITR ,ICR.and Long Term Debt to Equity Ratio respectively. Result of the study may cater the management for taking suitable decision for future.

KEYWORDS: *Current Ratio, Quick Ratio, ROA, ROE, Inventory Turnover Ratio,Interest Covrage Ratio.*

Introduction

Automobile industry plays a very important role in the Indian Economy. Its links with various other sectors of the economy make it an important component of the economy. Infrastructural development of a nation includes urban development, rural development and industrial development, but the veiled requirement of infrastructure is the connectivity between different regions, which is fulfilled by the automobile industry. The car business assumes a crucial part in moulding a nation's economy and advancement. The fabricates of substantial business vehicle had offered ascend to another period in the Indian history. Gradually numerous organizations fired setting up different little assembling units in India. Accordingly, the initial not many traveller vehicles, for example, the Fiat, Premiere Padmini, Lambrate bikes, and so on came into creation in India. An all-around created transport network shows a very much created economy for quick improvement a very much created and well sew transportation framework is fundamental. As India's transport network is creating at a high speed, Indian Automobile industry is developing as well. Additionally, the car business has solid in reverse and forward linkages and thus gives work to a huge part of the populace. Accordingly, the job of car industry can't be disregarded in Indian economy. A wide range of vehicles are delivered by the automobile industry. In India, automobile industry is probably the biggest business indicating noteworthy development over the 6 years and has been altogether making expanding commitment to in general modern advancement in the nation.

The time from 1940 to late 1950's cultivated the emerging Period of the business; where in different new associations showed up for the production of the vehicles. Among this Very couple of associations bear the weights of the public position. A Major bit of the private territory in the potential

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business was swiped out as a result of license raj constrained by the public position. The public power had a socialist strategy towards progress, as such the car Industry didn't defy a ton of contention in its hidden stages. Due to Lack of competition the business stood up to hardships in sort of low purchases on account of a comparative vehicle models. The advancement of the business during this period was deferred due to the low financial status of the country. During the 1980's, the Indian government put forth limited attempts to change the vehicle business, and went into a joint undertaking with Suzuki of Japan. The joint-experience, called Maruti Udyog Limited, dispatched a little anyway eco-accommodating model (called "Maruti 100"). Assessed at about $5,500, the thing transformed into a second hit.

Liquidity and solvency management is most important for overall financial management decision of a business unit.

Liquidity and solvency plays the most important role in any organization as it is the important factor to run the business without any disturbances. In order to survive in the dynamic circumstances, the study of liquidity and solvency plays the vital role in taking key managerial decisions.ir serve as the basis for all the financial planning in the organization. The factors which affect liquidity are the availability of cash flows, loans, and inventory, delay the payment to creditors and offering of discounts to customers for encourage immediate payment. Not enough liquidity results the loss of gaining advantages or prices, weakening the relationship with business partner due to the non-acceptance of the contracts involved, late payments due to falling rates and interest on loans, difficulties in getting new short term credits etc.

Statement of the Problem

As we realize that now a days vehicle areas are significant for the transportation. Auto Sector is among perhaps the most imperative areas for the economy as it is the key financial development factor. Its immediate reliance on oil use influences the public security, economy, and the climate of the economy. At the point when the worldwide oil costs are high, an expansion in working expense is seen for the vehicles in this manner it streams down to the deals and income development for the association and furthermore shows an effect on the monetary development. In the year 2008 when the world encountered a downturn, the lessening in purchaser spending had an extreme effect on the deals of the vehicles. Auto area which causes a gigantic expense for the R&D division needed to battle to adjust the expenses of working together while looking after seriousness. The appearance of new and existing models, simple accessibility of account at moderately low pace of interest and value limits offered by the sellers and makers all have blended the interest for vehicles and a solid development of the Indian four wheeler automobile industry.therefore present study detemine profitability of four wheeler automobile indusry in india and mainly focus on the all factors that directly or indirectly influence the profitability of the firms.

Objective of the Study

The main objective of the study to determine the profitability of the four wheeler automobile industry in india and analysis all factors that directly or indirectly influence the profitability of automobile industry.

History of the Study

First car brought in India by a princely ruler in1898. first company established in 1840 Simpson & Co. Simpson & Co. was the first manufacture of a steam car and a steam bus, import American Chassis in India to attempt manufacture of petrol driven passenger car . In 1919 at the end of the world war, a huge of Military vehicles came on the roads. In 1942 Hindustan Motors Ltd come in existence and In 1950 first vehicle was made by Hindustan Motors Ltd. In 1944 Premier Automobiles Ltd built-in and in 1947 their first vehicle was produced.

In 1947 the Government of Bombay accepted an organism of Bajaj Auto to change the cycle rickshaw by the auto and assembly started in few of years under a license From Piaggio. scooters, motorcycles, mopeds and Autos are already commenced from 1955 by Automobile Products of India (API) and Enfield India. Bajaj Tempo Ltd came in the Indian market in 1956 with a agenda of manufacturing Commercial Vehicles, and Simpson for manufacture engines. And in the begning of 1959 AIA&AIA (association of the component manufacturers) came and that time indian Government approved Bajaj Auto Ltd's process for domestic manufacture of Vespa scooters and company granted authorization of production of around 6000 units yearly.

Since in the 1980s, the Indian car Industry has became a major renaissance with the Indian automobile markets opening for foreign manufacturers and collaborators. First Stage of liberalization

announced and inequitable practices of monopoly, oligopoly and etc gradually disappeared Many new Foreign Collaborations came up in the India in Eighties. Hindustan motor collaborated with Isuzu japanies automobile company and launched truck in the starting of eighties. From the end of the 1970s to the start of the 1980s India saw no new models, the nation proceeding to rely upon twenty years old plans. In 1986, to advance the vehicle business, the public authority set up the Delhi Auto Expo. The 1986 Expo was an exhibit for how the Indian car industry was engrossing new advancements, advancing native innovative work, and adjusting these advances for the tough states of india.

Significance of the Study

Liquidity, solvency and profitability important component for any organization automobile is vital in term of investment and employment in our socio economic scenario. Financial evaluation is of special importance in automobile Industry. From the observation of the socio-economic development of the country, automobile industry is important sufficient in terms of investment and employment. The sales and profitability function in automobile industry differs from that of other industries.

- The study will be helpful in understanding the prototype and the formation of financial variables of selected companies.
- The study will be helpful to determine correlation between the Current ratios, Return on Assets and checking current performance against Determine standards controlled in the plans and will be helpful in Evaluation of standards.
- The study will be helpful in measuring the liquidity solvency and profitability of automobile industry in India.

Data Collection

The financial data and information we are gather from the corporate databases developed by Centre for Monitoring Indian Economy (CMIE). The Data is secondary in nature. Secondary data sources will be annual reports, company reports, various websites, journal books, newspaper etc.

Period of the study

The period of this study covering five years from 2015 to 2019 and the essential data for this study collect from the annual reports of five companies as given in study. The financial year starts from 1st April to 31st March every year.

Sample size

The companies are selected on the basis of top four wheelers automobiles on the basis of also availability of data or the post five years. The following companies have been selected for the study.

List of Companies

- Tata Motors
- Maruti Suzuki India limited
- Force Motor limited.
- Mahindra &Mahindra
- Hindustan motors

Review of Literature

- **Ms. Nidhi Aggarwal (2015)** conducted a study. The study show that the financial structure, financial performance and financial health of Honda cars India Ltd and comparative study of Honda cars India Ltd.with Maruti Suzuki India limited and Tata Motors limited regarding their financial performance. **A.Vijaya kumar (2015)** The study attempt to investigate the relationship between the liquidity ,solvency and firm's profitability..the study has concluded that significant negative relationship between the portability and liquidity **Ms. R. Vidya & Dr.M.Krishnaveni (2015)**. This study based on the sample of 4 Indian two wheelers and four wheeler automobile industry. **K.Kanaka Raju(2016)** conducted study on liquidity and solvency analysis and that study based on the case study of automobile manufacturing industry in India.the main aim of the study to examine the relationship between one variable to another variable within a pair of quick ratio and current ratio.. It is also suggested that the organizations should maintain the optimum liquidity position to earn a maximum return; even through the existing liquidity position was satisfactory. **Sankar R(2017)** "That study was conducted on impact and implications on various industries in Indian economy". **Dr.Ritu and Dr. Vineet chouhan(2019)** study examine the

relations between liquidity, solvency and profitability in Indian automobile industry .aim of the study to calculate the current trend in the liquidity and profitability and as well as calculate the correlation between the liquidity and profitability.study concluded that the liquidity and profitability goes simultaneously in the automobile sector. As the increase or decreased in the profit with change in the liquidity and solvency ratios.

- **Joji Abey & R.Velmurugan(2018)** conducted study on which factors influence short-term solvency of Indian automobile industry The result of study is that age, return on investment, inventory turnover ratio and leverage are the factors that influences short term solvency position of the firm.

- **Diptendu simlai and Manish Gupta(2019**) "Analysis of financial stability, profitability and growth of automobile industry in India" study taken data of following selected industries(tata Motors, maruti Suzuki India Limited , bajaj Auto Ltd and hero Honda Ltd). Objective of the study to examine the profitability position liquidity position and examine the solvency position trough various related ratios to measure the long term solvency position of the automobile firms.

Tools and Techniques used for study

In order to measure the impact of liquidity several tools can be used. like descriptive statistics, correlation and regression analysis. At the time of study driving factors will also decide that what tool can be adopted to interpret the result. Following Techniques will use in the data analysis.

- Ratio's analysis
- Arithmetic mean
- Standard deviation
- ANOVA
- T-test

Ratios Analysis

- Current Ratio
- Quick ratio
- Return On Assets
- Return On Equidity
- Inventory Turnover Ratio
- Interest Covrage Ratio
- Inventory to Total Assets

Summary and Conclusion of the Study

Automobile sector has gigantic demand in our country. This demand attracts the giant automobile suppliers throughout the world .Due to the contribution of many different factors like sales incentives, introduction of new models as well as variants coupled with easy availability of low cost finance with comfortable repayment options,easly loan fesility,market demand and sales of automobiles are rising continuously. Today, this sector has emerged as a growing sector. The findings of the focus on the factor that impact on the profitability of the automobile industry in india.basically identity of a company depends on their goodwill and their profitability because without actual profit company not survive longer, so it very important to analysis the all factor in terms of financial ratios that impact on the profitability of the firm.present study determine how of the liquidity and solvency ratios Influence the profitability ratio of the company.

And study will suggest how a automobile industry manage their liquidity ,solvency and efficiency to improve the profitability.

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ANALYTICAL STUDIES OF INDIAN INDUSTRIES AND ECONOMIC DEVELOPMENT

Dr. Kanta Choudhary[*]

ABSTRACT

The industrial revolution is the key to economic development. The second five-year plan accorded the highest priority to industrialisation in India. The plan was based on a famous Mahalanobis model. It is decided that India should establish basic and capital goods. Industries on a large scale to create a strong base for industrial development. In this paper, I described the progress of industries in India and the weaknesses of industrial development. I lastly gave suggestions for further improvements.

KEYWORDS: *Industrial Development, Industrial Disputes, National Income, Public Sector, Private Sector.*

Introduction

Indian Economy was much better than Western European countries before coming of British in India. British looted the Indian industries and ruined them. Consequently, at the time of freedom, there was a weak industrial base, under-developed infrastructure, and a stable and stagnated economy. So, the government invited an industrial conference in December 1947, so that it can be used the current industrial capacity and fulfil the requirement of the people. With the supply of industrial goods, the government decided to establish an 'Industrial Finance Corporation' in 1948-49 and gave tax rebate in some matter related industries. Thus, the impact was good on industrial development and Index of Industrial Production raised 17.4% from 1946 to 1951.

Objectives and Methods

Industrial Expansion under the plans

Industrial base was very limited at the time of the First Five Year plan. Industrial development was limited to only consumer goods industries like cotton, sugar industry, salt, soap industry, leather and paper industry etc. Coal, cement, steel, power, non-metal and chemical industries etc. Intermediate industrial was there but their production was less because except cement their capacity was much less. Capital Industries were only to be started but their production was very low.

Industrial growth rate (base 1980-81=100) (in the decade of 1980) (%per year)

S.No.	Industrial group	1981-85	1985-90	1990-91
1.	Basic Industry	8.7	7.4	3.8
2.	Capital-goods Industry	6.2	14.8	17.4
3.	Intermediate good Industry	6.0	6.4	6.1
4.	Consumer good Industry	5.1	7.3	10.4
	(i)durable	14.3	11.6	14.8
	(ii)non-durable	3.8	6.4	9.4
5.	Gerhard Index	6.4	8.5	8.3

Source: Government of India, Handbook of Industrial Statistics, 1992.

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Liberalization and Industrial Growth

The period since 1991

Since 1991 there was a new era of Economic Liberalization. The Government was liberal in economic policies related licensing, easy in rules and regulations, it lessened the number of Reserved Industries in the public sector, heavy investment in public enterprises liberalization in trade and exchange etc.

The average yearly growth rate of Industrial

Development after 1991

S. No.	Industrial Group	1992-93* to 1996-97	1997-98* to 2001-02	2002-03* to 2006-07	2007-08 to 2011-12	2012-13	2013-14
1.	Basic Industry	6.8	4.1	6.6	5.4	2.5	2.1
2.	Capital good Industry	8.9	4.7	14.4	14.3	-6.0	-3.6
3.	Inter-mediate good Industry	8.5	5.8	6.2	4.0	1.6	3.1
4.	Consumer good Industry (i)durables (ii)non-durables	6.6 13.4 4.8	5.5 0.7 3.8	9.6 8.8 10.0	7.8 15.6 3.4	2.4 2.0 2.8	-2.8 -12.2 4.8
5.	General Index	7.4	5.0	8.2	6.9	1.0**	0.4**

*-Average of yearly growth rate
**-The base year 2011-12

After 2013-14 there is a 2.6% industrial growth rate from April to December of the year 2014-15 and 3.1% in 2015-16 during the same period time. The overall Industrial sector growth rate was 5.8% in the second quarter of 2017-18, and 6.9% in 2018-19.

The contribution of the industry to the GVA was 29.6% in 2018-19. The Industrial growth so far in the fiscal year 2020-21 (April-July) has contracted 29.2% compared to a 3.5% rise in the corresponding period year ago, the data from the ministry of statistics and programme implementation showed. The decline was due to economic slowdown, compounded with the effects of the Covid-19 pandemic.

Limitations

Some of the major problems are lack of capital, old technology, low productivity, the inefficiency of public sector units, low potential utilization because of strikes, lockouts, scarcity of raw materials, energy crisis, inefficient administration; etc. Except for these problems, there is a heavy demand for iron and steel, the government have to import and can't save precious foreign exchange. Because of a lack of modern technology and capital inputs and lack of infrastructural facilities, there is a poor and inferior quality of products in Indian industries. India is still dependent on imports for transport equipment, machinery, iron and steel, paper, chemicals and fertilizers, plastic material etc. Regional concentration, loss of public sector industries, industrial sickness, improper location base of industries, higher cost of production and low quality of goods, license policy, lack of organization etc. are many problems and issues of Indian industries.

Conclusion

In developing countries like India, people are poor and the country is still an agricultural country and 38% of the national income and 70% of the population depends on the land. Industrial disputes are a major problem. The reasons for the disputes should be analyzed impartially and methods should be developed accordingly for their solution.

Continuous research should be done on industrial problems and production processes. Research on scientific and technical subjects should be done. The expansion of power resources and the establishment of new units should be done. India has sufficient natural resources but due to their improper use, industrial development has not been done much. So, there could be explored in new areas. More various organizations and institutions should be established.

An efficient system of industrial management is required. Educated and skilled managers can understand the complicated problems of industrialization. The government should encourage capital formation and private sector. Foreign investors should be attracted. Proper taxation policy should be there in India.

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A STUDY ON WORK-LIFE BALANCE -WOMEN EMPLOYEES WITH REFERENCE TO SERVICE SECTOR IN NASHIK CITY

Dr. Manisha Shirsath[*]
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ABSTRACT

Work plays a significant part in all our lives. Our earnings ensure that the lights stay on, there's food on the table and the rainy-day pot is full. In today's fast paced & uncertain or unpredictable business world environment, it is very challenging task to achieve work life balance. It is very difficult to separate work from our personal lives due to advancement in IT & social media. Though we are at home till we check emails at all hours, take business calls at the dinner table and work on our laptops on weekends. Oxygenated work-life balance is a not only important part of good health & relationships but also it increases efficiency & effectiveness of employees. Put simply, if your people don't view work as a chore, then they will work harder, make fewer mistakes and are more likely to become advocates for your brand. The research study was focused on Women Employee Work-Life Balance of service sector namely Academics, Banks and IT sector located in SPPU Region. An Attempt was done to study the existence of work-life balance problem among the working women in the specified area. It was tried to examine how the factors affecting work-life balance influence quality of life of married working women.

KEYWORDS: *Work-Life Balance, Healthy Work Life Balance.*

Introduction

In the traditional era, Women were considered as home makers and were deprived of the right or opportunity to go outside home. They were confined to household work like cooking, washing, cleaning, taking care of children, etc.

But now in the modern era, situation is different. Women not only performing home maker role but they also have a significant role to engage even outside the home. With the increase in cost of living on one side and the improved education and employment opportunities on the other side, both husband and wife started working and many families became dual earners. Various initiatives taken by government for girl education leads to move from stay-at-home mothers to thriving professional women. In 21st century role of women is not only restricted to home maker but they made a noteworthy role or mark in every field. Now women are working in every field for e.g. teaching, health services, aviation, navy, bank and many more. Till it is observed that there is no significant change in performing the role of home maker. It is found in majority homes; the women still does household work, cooks, takes care of the family members and manages the office work. The work- life balance of women employees is at stake with increase in demands at home and work place. Current era is competitive era and every organization keeps high expectations from their employees and employees have to stretch themselves and more focus on work to meet their employer's expectations which is creation poor quality work life balance amongst employees. So it is very much challenging task for 21st century working women to maintain quality balance between work & life. It is said that many women employees working in various sectors[7].

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Objectives

- To study the existence of work-life balance problem among the working women in   service sector.
- To identify various causes/factors that influence work life balance of working women.

Review of Literature

In every working woman's life both personal-family life and professional-work life are important and women employees always strives to do fair treatment for both the personal & professional role and in the process if she fails to maintain balance in both then it result in negative outcome(Nair,2010)[1]. Both job and family demands are

Not compactible with each other and creating an imbalance between the two according to Peeters, Montgomery, Bakker and Schaufeli, (2005)[2]

Changes in demographics trends, technology ,values leads to the emergent relevance of work-life balance in industrialized societies and also some other supplementary factors like increasing complexity of work, change in nature of family and the extended number of women entering the workforce leads to work life imbalance according to Sverko et al (2002)[3] .

Work-life balance refers the division of one's time and focus between working and family or leisure activities. imbalance between these two working and family activities leads not only unhealthy symptoms (fatigue, stress, depression, etc.) but also causes great personal and financial hardship, both to the individual and the company.

Part- time work would really help women to balance their work and family (Higgins, 2000)1. This is the reason why many women employees choose part time job though there is lot of discrimination in wage (Schone, 2006)[4]

Although these programmes**5**were originally termed "work life programs", this book used to term "work life" programs, to reflect a broader perspectives of this issue. The term "work life" recognizes the fact that employees at every level in an organization, whether parents or non-parents, faces personal or family issues that can affect their performance on the job.

Various positive initiatives taken by employer for their employees to get balance in their personal and professional life increases their. At a general level such programs span five broader areas.

- Day care for both Child and dependent person (e g., on site or near site child or elder care programs, summer and weekend programs for dependents).
- Flexible working conditions (e. g., flextime, job sharing, tele working, part time work, compressed work weeks).
- Leave options (e.g., maternity, paternity, adoption leaves, sabbaticals, and phased re-entry or retirement schemes).
- Effective Information services and HR policies (e.g., canteen,cafeteria benefits; life-skill educational programs such as parenting skills, health issues, financial management and retirement; professional and personal counseling).
- Organizational cultural issues (e.g., it is supportive with respect employees, co-workers, and supervisors non work issues who are sensitive to family issues). Bardoel , E.A, Tharenou(1998)5

Organizations should undertake work life balance programs6, as in their absence both men and women will be exposed to stress, depression and anxiety. Following activities are aiming at work life balance include:

- Availability of Child care at or near the workplace
- Job sharing
- Facility care centers for sick children and employees
- On-site summer camp
- Supervisor training programs to respond to work and family needs of employees
- Flexible work scheduling
- Sick leave policies
- Dropping children at school

The organization that have taken initiative to develop balance in both personal & professional life have found happier and more productive employees. There are also many companies that still have not investigated, implemented or experimented with work life balance activities or policies. These firms believe that the work life balance is a personal problem and not with an organizational issue. Often the individual herself or himself balances her or his life at home and at work with her or his attitude. There are some interesting revelations about the status of Work life balancing. Two separate global surveys conducted among senior executives by AESC, as association of executive search firms, reveal that 53 percent of the executives agree that work life balance has worsened in the last five years. Asia Pacific executives are said to be worse off than their counterparts elsewhere in the world.[6]

Sr. No.	Particular	Specification
1	Type of Research	Basic Research (Qualitative)
2	Research Design	Questionanaire
3	Sampling Area	Nasik city
4	Sampling unit	The researcher selected working women in various sectors like banking, insurance, IT, BPO, health care and education sector
5	Sample Size	The sample size considered for the study is 150 working women employees selected from various professions and jobs. The sample respondents include doctors, teaching faculty, software engineers, customer relationship officers, bank employees, etc.
6	Sampling method	Stratified random sampling
7	Data Collection	Both primary and secondary data are collected for the purpose of the study. The survey method is used to gather primary information for the study. The data is collected from the sample respondents with the help of a questionnaire designed for the purpose and through personal interviews also. The secondary data is collected from books, journals, magazines, websites, etc.
8	Statistical Tools Used for Research	The tools that are used for analyzing data are graph chart, mean score ,chi square test, p-value and percentages

Research Methodology

The methodology used for the present study is mainly based on the Primary resources where mostly researcher going to be use questionnaire method and along with this researcher will use secondary source of from book, research paper, journals and websites

Data Analysis & Interpretation

6.Does your organization on take any initiatives/policy to manage work life of its female employees?

100 responses

- a.Yes
- b.No

57.7%

42.3%

7. If yes, what are the initiatives your organization has taken for managing work life ?

57 responses

- a.Provided Flexible work Timings
- b.Provide leaves to manage work life
- c. Job Share Option is provided by the organization
- D. Work from home
- e.recreational activities (organize Holiday camps/picnics/fun activities etc. .)
- f.crèche facility
- d.work from home

23.5%

29.4%

29.4%

14. You think initiatives/policy taken by management for work Life Management helps to increase productivity of the organization?

100 responses

- Strongly Agree
- Agree
- Neutral
- Dis-agree
- Strongly disagree

46.2%

42.3%

Hypothesis Testing

H₀: Policy/initiatives taken by organization for work life balance is not associated with productivity of women employees

H₁: Policy/initiatives taken by organization for work life balance is associated with productivity of women employees

Policy/initiatives	Work life Balance		Total
	Good	Not good	
Yes	30	17	57
No	20	23	43
Total	50	50	100

Chi square test values

Policy/initiatives	Work life Balance		Total
	Good	Not good	
Yes	**30(0.579)**	**17(0.724)**	**57**
No	**20(0.633)**	**23(0.792)**	**43**
Total	**50**	**50**	**100**

Chi-square=0.579+0.724+0.633+0.792=2.272
Degree of freedom=1
P Value=0.09863
"An association between Policy/initiatives taken by organization for work life balance & productivity of women employees was observed, ^{2}) = 2.272, p = 0.09863."

Conclusion

Women workforce is increasing and their contribution to the organizations is also considered to be valuable. It is very necessary for the organizations to acknowledge women employees by providing more appropriate work-life balance measures for them. Getting a healthy work-life balance is imperative for all the employees irrespective of the industry to which they belong. It is the joint responsibility of the employer and the employees to ensure strong work-life balance that can bring in fruitful results to organization as well as employees also.

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RURAL YOUTH EMPOWERMENT AND SELF EMPLOYMENT
(WITH SPECIAL REFERENCE TO DUDHI TEHSIL OF SONEBHADRA DISTRICT)

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Dr. S.P. Agrawal[**]

ABSTRACT

The present study focuses on problems o frural youth, their standard of living, economic and personal development. Data have been collected from primary and secondary sources then various analytical tools and techniques were applied in order to have clear cut idea. Study infers clearly that youth empowerment is very much helpful in economic empowerment and made them confident as well as self sufficient. The study concludes there is a change in the image of working people before and after empowerment. These positive changes have been discussed with specific reasons. The study concludes by an observation that access to Education, Employment and Change in Social Structure are only the enabling factors to rural youth empowerment.

KEYWORDS: *Rural Youth Empowerment, Self Employment, Personal Empowerment.*

Introduction

The present study focuses on rural youth problems, structure of living there economic and personal development. Therefore, it is necessary to find out dimensions of youth empowerment by various ways like individual, organizational and community. A country's ability and potential for growth is determined by the size of its youth population as India is a country of villages rural youth empowerment is essentially the process of upliftment of economic, social and political status in the society. In the present scenario role of youth in India plays a pivotal role in terms of Gross Domestic Product (GDP). The society can be developed easily through empowering youth by utilizing their ability and participation in production. Developing interest enables them to generate income and to be self-sufficient.

Modern technology has increased investments, creating a sizable employment for others and setting the trend for rural youth entrepreneurs in different sectors. As India is becoming knowledge economy is to be relevant to the emerging economic environment for the development of youth. Many programs are run by the government for strengthen rural youth and its empowerment. These steps are taken by various organizations for assistance of youth by **National Bank For Agriculture And Rural Development (NABARD), The Rural Small Business Development Centre (RSBDC), National Small Industries Corporation (NSIC), Small Industries Development Bank Of India (SIDBI), Rural And Women Entrepreneurship Development (RWED).**

The present study focuses on rural youth problems, structure of living there economic and personal development. India was expecting to have 34.33% share of youth in total population by 2020. The share of Indian population has reached its maximum of 35.11% in the year 2010. Therefore, it is necessary to find out dimensions of youth empowerment in different ways like individual, organizational and community. A country's ability and potential for growth is determined by the size of its youth population as India is a country of villages rural youth empowerment is essentially the process of upliftment of economic, social and political status in the society. In the present scenario role of youth in India plays a pivotal role in terms of GDP. The society can develop through empowering youth by utilizing their ability and participation in production. Developing interest enables them to generate income and to be self-sufficient.

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Modern technology has increased investments, finding a niche in the export market, creating a sizable employment for others and setting the trend for rural youth entrepreneurs in different sectors. As India is becoming knowledge economy is to be relevant to the emerging economic environment for the development of youth. Many programs are run by the government for strengthing rural youth and its empowerment. These steps are taken by different organizations for assistance of youth by **National Bank For Agriculture And Rural Development (NABARD), The Rural Small Business Development Centre (RSBDC), National Small Industries Corporation (NSIC), Small Industries Development Bank Of India (SIDBI), Rural And Women Entrepreneurship Development (RWED).**

Statement of the Problem

In the present scenario youth in India is playing a dominant role in economic development as being the second largest young country in the world. Government is running several programs for the development of youth according to the need of job providers. Government is also providing financial help in terms of aid/subsidies or loan at cheaper rate to enable them self sufficient. Main objective of the present paper is development of youth. In order to find out that various objectives are made as given below:

Objectives of the Study

- To examine socio-economic empowerment of youth in the rural areas.
- To study youth empowerment activities for self employment.
- To make suggestive framework based on findings.

Hypothesis

For achieving aforesaid objectives following hypothesis are made:

- No significant relationship exists between income and expenditure of the respondents before and after self-employment.
- No significant relationship exists between income and savings of the respondents before and after self-employment.
- No significant relationship exists between expenditure and savings of the respondents before and after self-employment.

Research Methodology

The present study is based on primary as well as secondary source. Primary data collected through structured questionnaire having 20 questions related to above. 200 questionnaires were distributed to different traders carrying business like food products, snacks, pickle, weaving etc out of which 125 were returned by them 90 questionnaires were found fully filled and those were analysed at the same time interview schedules also contributed for supporting primary and secondary sources of data (collected through published reports, magazines, websites, etc.). For analyzing data collected statistical tools like Percentages and Chi – Square was used.

Socio- Economic Profile of the Repondents

Socio-economic change depends on the basis of age, knowledge, experience, innovations, vision and ability to take risks. These all make them resourceful as well as better entrepreneur. An individual's responsibilities increase after marriage. In order to improve the economic position everybody has to work differently to meet out challenges and create situations. Family type and size of family creates an environment to take decisions or influences success of an entrepreneur.

Table 1: Socio-Economic Profile of the Respondents

Socio-Economic Profile	No. of Respondents	Percentages
Age in Yrs.		
Below 25	27	30
25-35	31	34.44
35-45	17	18.89
45 and Above	15	16.67
Educational Qualification		
UP TO 10TH	59	65.56
Up to Graduation	26	28.89
Any other Specialisation	5	5.55

Marital Status		
Married	58	64.45
Unmarried	22	24.44
Sapareted	10	11.11
Type of Family		
Joint	57	63.33
Nuclear	33	36.67
Size of Family Members		
0-2	16	17.78
3-5	29	32.22
5 and Above	45	50

Source: Based on questionnaire/opinion survey

   Table 1 depicts that majority of respondents more than 34 percent belongs to the age group of 25-35 and more than 65 percent of them were educated upto 10th only. Majority of the married youth belongs to joint family having more than 5 members in their family, so they are compelled to work.

Business Profile of the Respondents

   Self-employed youth get motivated as they earn money their own which increases their purchasing power, income and expenditure module with exploring new scenario in economic participation. Large numbers of them are engaged in unorganized sector activities such as saloon, Grocery shops, Pickle and spices, Snacks etc

Table 2: Business Profile of the Respondents

Self-Employment Activity	No. of Respondents	Percentages
Saloon	5	5.55
Grocery shops	16	17.78
Pickle and masala	11	12.22
Snacks	19	21.11
Puppet	6	6.67
Papad	8	8.89
Bakery	7	7.78
Juice-corner	11	12.22
Others	7	7.78
Experience		
	No. of respondents	Percentages
Yes	17	18.89
No	73	81.11
Training		
Yes	28	31.11
No	62	68.89
Investment		
Less than 5000	38	42.22
5000-10000	28	31.11
10000 and above	24	26.67
Working Hours		
Less than 6 hours	6	6.67
6 -8 hours	45	50
More than 8 Hours	39	43.33

Source: Based on questionnaire / opinion survey

   Table 2 transpires that out of 90 respondents 21.11 percent were involved in snacks making. Majority of them were neither having any experience nor got any training for starting their business. Almost 42 percent of the respondents invested less than Rs.5000 in their business, approximately 27% invested more than 10000 and rest 31 per cent invested between Rs.5 to 10 thousand only. Time devoted for their business is an important factor for the success of any business. More than 90 per cent businessmen were devoting above 6 hours in their business.

Economic Conditions of Respondents

As we know income, expenditure and saving of an individual is the basic economic indicator indicates standard of living of any person. This also determines the socio-economic empowerment of the individual. The present study is an attempt to find out changes in the income expenditure structure before and after self employment.

Table 3: Economic Conditions of Respondents

Factors	Improved		Not Improved		Total
	No.of Respondents	Percentage	No.of Respondents	Percentage	
Income	69	76.67	21	23.33	90
Expenditure	73	81.12	17	18.88	90
Saving	56	62.23	34	37.77	90

Source: Based on questionnaire / opinion survey

Table 3 clearly demonstrates the changes in the amount of expenditure and savings of the respondents after self-employment. It may be concluded that economic conditions of the youth improved on the basis of the data related to income, expenditure and savings indicated given above. It enables them to be self reliant and improving their standard of living.

Table 4: Changes in Economic Conditions of the Respondents

Economic Conditions		Before self Employment		After self- Employment	
		No.of Respondents	Percentage	No.of Respondents	Percentage
Family Income (in Rs.)	Less than 3000	21	23.33	7	7.78
	3000-4000	35	38.89	31	34.44
	4000-5000	19	21.11	28	31.11
	5000-6000	9	10	15	16.67
	More than 6000	6	6.67	9	10
Expenditure (in Rs.)	Less than 2000	13	14.44	11	12.22
	2000-3000	34	37.78	28	31.11
	3000-4000	23	25.56	25	27.78
	4000-5000	11	12.22	14	15.56
	5000 and above	9	10	12	13.33
Saving (in Rs.)	Less than 1000	6	6.67	9	10
	1000-2000	45	50	32	35.55
	2000-3000	24	26.67	28	31.11
	3000-4000	10	11.11	13	14.45
	4000 and above	5	5.55	8	8.89

Source: Based on questionnaire / opinion survey

Significant changes were noted in income, expenditure and saving of different respondents after self employment. Table -4 exhibits that the income group of less than Rs.3000 improved after self employment as its percentage reduced from 23.33 to 7.78 showing the strength of the youth. In this context we can suggest that the picture can be changed completely if focus on modern training, awareness program and financial assistance is properly provided to them well in time.

So for expenditure of youth is concerned before and after self-employment we find that they were becoming more comfortable. As per changes in the income slab between 3000-4000 their expenditure embarked at 27.78. Due to changes in income and expenditure, majority of the respondents were saving more implies that they can invest in new business and may be self reliant. As indicated by said table 50 per cent of the total respondents were saving between 1000 and 2000 which reduced to 35.5 percent after self employment.

Table 5: Results of Chi-Square Test

Relationship	Chi-Squire Value	Degree of Freedom	Tabular Value at 5 % Level of significance	Inferences Drawn
Income & Expenditure	9.285	4	9.488	Significant
Income & Savings	7.657	4	9.488	Insignificant
Expenditure & Savings	4.844	4	9.488	Insignificant

Source: Based on questionnaire / opinion survey

Since calculated value is more than tabular value so difference between income and expenditure will be significant our hypothesis there is no significant relationship exists between income and expenditure of the respondents before and after self-employment will be rejected. Since calculated value is less than tabular value in case of income and savings as well as in case of expenditure and savings will be insignificant and our hypothesis will be accepted before and after self-employment.

Conclusion

The Youth Empowerment has become one of the most important concerns of 21st century not only at national level but also at the international level. In most of the cases in rural areas youth get married in early age and only study upto class 10th. For fulfillment of their family need they enter into entrepreneurship with large family generally having 5 members or more. Youth empowerment must be molded properly with entrepreneurial traits and skills to meet the changes in trends, challenges global markets and also be competent enough to sustain and strive for excellence in the entrepreneurial arena. Rural youth empowerment will help in the removal of rural poverty in India. Therefore, there should be more stress on integrated rural youth development programs by government and other organizations. The present study provides rural youth to acknowledge additional generation of income with new business handling ideas and enables them to be independent and self-sufficient.

Findings

- The chi-squire test focuses on the significant changes in between income and expenditure in before and after self employment.

- LPG and other Socio - Economic factors have given some respite to a large proportion of the population.

- Youth Empowerment could only be achieved if economic, social and political status is improved. It could only be possible through adopting definite social and economic policies with a view of overall development.

- The business profile of the respondents reveals that only 18.89 per cent youth have business experience before starting business so there is need to focus on skill oriented business training for strengthening youth.

Suggestions

- Some entrepreneurship development program must be given in the rural areas.

- Government should provide them micro-finance assistance, loans at cheaper rate for financial assistance.

- Awareness training, vocational training, etc. should be provided to the rural youth.

- Rural youth employment market situation must be crated is to motivate youth to grant self-employment ventures, to help them in obtaining necessary skill from different sources.

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EMPLOYEE ENGAGEMENT: DESIGNING 5-C FRAMEWORK

Dr. Neelam Kalla[*]

ABSTRACT

Engaged and industrious employees are a focal point for every enterprise across the world and perceived as one of the indispensable constituent for efficacy and competence of organization. Employee engagement, being a multifaceted theory, is perceived as an intricate concept. Authors propose to synthesize a five C framework that makes it simple to comprehend and put into practice. If the content and processes of organization are woven around this 5 C framework, managers can easily augment the level employee engagement. The 5 Cs discussed here are namely- Compensation, Commitment, Communication, Culture and Contentment; is an intelligible five component model of employee engagement.

KEYWORDS: *Employee Engagement, Five C Framework.*

Introduction

Industries across the globe have to combat numerous challenges due to volatile environment, changing economic scenario, emergence of new markets, cut-throat competition and fast pacing technology and innovations. Managers are forced to cut costs, improve productivity, enhance quality and craft competitive strategies to remain competitive. Role of employees in these collective efforts is inevitable. In order to seek maximum efforts and support from employees human resource managers have to design new mechanisms to engage employees and reap the benefits in terms of greater commitment, organizational citizenship behaviour, and enhanced job satisfaction resulting into better performance of organizations.

Although employee engagement is one of the widely researched topics and an area of interest for researchers, academicians and corporate practitioners from across the globe for its potential benefits and role in organizational effectiveness and performance, the concept is relatively newer with a history of almost two decades. Employee engagement is a multi-fold concept. Impact of employee engagement on different organizational outcomes is unquestionable so far.

Employee Engagement

One of the earliest definition of the concept is stated by Kahn (1990, p.692), who defines employee engagement as "the harnessing of organisation members' selves to their work roles in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances". Kahn focuses on three aspects of employee engagement: emotional, cognitive and physical engagement of employee in the organization.

Employee engagement has its roots in the concepts like Job Satisfaction and organisational citizenship behaviour and organizational commitment. (Robinson et al, 2005). Also, there is a debate on originality of concept as the dimensions composing employee engagement seem to be quite similar with organizational commitment. Ferrer, J. (2005). However; Saks, A. M. (2006) argues that the concept is significantly different from the concepts of job satisfaction, organizational commitment and organizational citizen ship behaviour. This study also claims that job engagement and organisation engagement are two distinct concepts and can be measures by distinct constructs. Not only the constructs are different, but the antecedents and consequences also differ significant in case of above two constructs.

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In order to enhance employee engagement it is imperative to understand the antecedents of the concept and the distinct approaches used by researchers so far. In the field of research, the construct of employee engagement has different dimensions and various researchers have proposed different constructs to measure this. For example one of the most popular scales amongst researchers, Utrecht Work Engagement Scale or UWES (Hope-Hailey et al, 2014) is one of the most widely used construct of engagement.

According to this construct, there are three important dimensions of employee engagement: vigour, dedication and absorption. (Gonzales-Roma et al, 2002). So by working on these three variables, managers can enhance overall employee engagement.

Another popular construct for gauging employee engagement is proposed by Crawford et al (2010). It was specifically designed to measure Kahn's (1990) conceptualization of engagement including value congruence, perceived organizational support and core self-evaluations.

In 1990, Kahn (1990, p. 694) diagnosed three engagement conditions are as essential: meaningfulness (work elements), safety (social elements, including management style, process, and organisational norms) and availability (individual distractions). Also a team of Gallup researchers Fleming and Asplund (2007, p. 2) have defined employee engagement as "the ability to capture the heads, hearts, and souls of your employees to instil an intrinsic desire and passion for excellence".

5 C-Framework

Employee engagement offers a wide array of advantages to organizations including enhancement in employee satisfaction, work life balance, retention, loyalty, employee health and safety along with lower absenteeism and turnover intentions. Along with that, past studies indicate that engaged employees are a source of creativity and customer satisfaction too. They help achieving organizational objective more effectively with a reduced cost and better productivity. In order to reap the advantages of employee engagement organizations can adopt a 5 C approach: compensation, commitment, culture, communication and contentment.
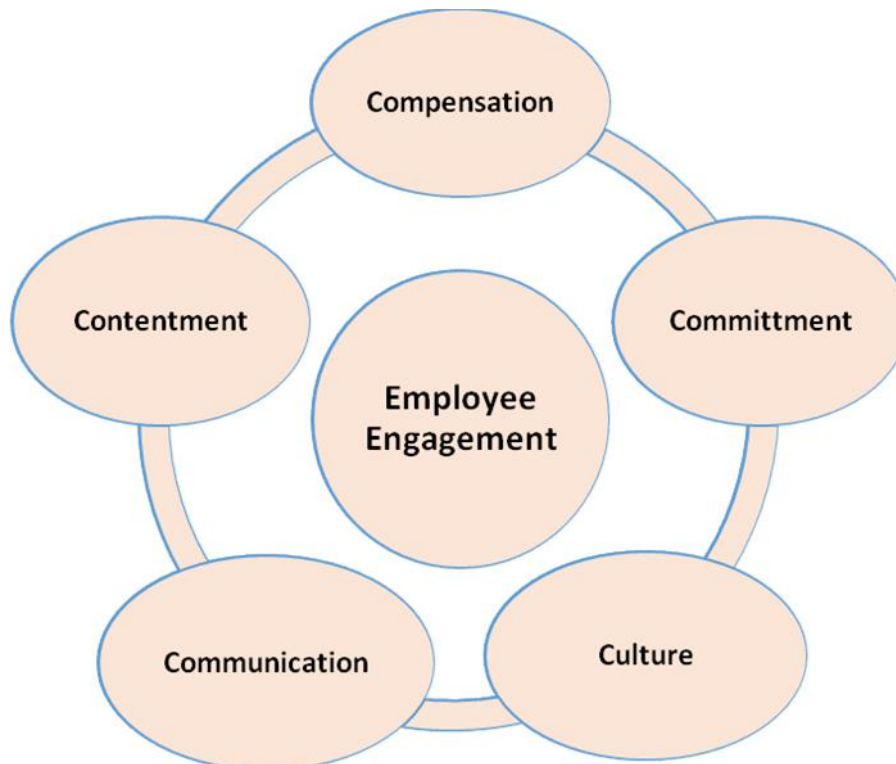

Figure 1: 5 C Framework of Employee Engagement

Compensation

Compensation generally termed as remuneration or pay package serves as a significant antecedent to employee engagement. A compensation package is an indispensable source of motivation to employee engagement. In simple words, compensation is any form of payment which is made in return to value of the time, efforts, experience, values and attributes an employee makes for an organization. This is form of recognition for his contribution in the achievement of organizational objectives. In the words of Robbins, 2005, (Robbins, 2005) "wages and salaries are documented to be an important, but multifaceted, multidimensional forecaster of employee satisfaction."

Similarly Saks and Rotman (2006) also describe recognition and rewards as significant antecedents of employee engagement. This study reveals that employee's response enhances due to obligation they feels when they receive due recognition, rewards and compensation.

Generally while designing compensation the employers must consider following dimensions:

The absolute amount paid to employee must be considered significant by him.

In another study conducted by Mokaya & Kipyegon (2014) also employee engagement has been found significantly associated with remuneration, workplace recreation, personal development and growth. The compensation package must be designed considering the industry norms and local competition by managers. The compensation policies must ensure that the perceived equity and fairness of pay and distribution of monetary rewards is high amongst employees. Employee generally refers to pay as a comparable reward for performance with other employees so the rewards must be linked with performance of employees, otherwise it will lead to dissatisfaction amongst employee (Meng, & Wu, 2015).

Commitment

Engaged employees are highly committed employee. By enhancing commitment, organization can achieve high level of employee engagement. Rhoades et al., 2001 describe affective commitment as a sense of belonging and emotional connection with one's job, organization, or both. Research suggests that Connect with organization or an emotional connection is one of the essential conditions for employee engagement (Harter et al., 2003). While developing commitment amongst employees the key consideration amongst managers are: using career growth as a commitment measure, understanding employee needs and focussing on fulfilment of needs, development of a healthy psychological contract.

Culture

Generally culture of organization can be understood as an aggregation of values, expectations, and practices that guide the actions of all the members of an organization. The culture of any organizations basically characterise the organization. Pathardikar& Sahu (2011) confirmed a relationship between cultural values and commitment amongst employees. Organizational policies, procedures and value system significantly affect employee engagement. Similarly Hamad et al (2017) also confirmed the role of organizational culture on employee engagement. As stated by Schein (1984), integration of members is enhanced by organizational culture and culture also provides guidance to employees about their mutual relationships and the working environment of the organization.

Organizational culture provides employees with a sense of identity and significantly contributes to development of commitment towards particular organizational values and policies. Along with this, organizational culture also facilitates an organization to adjust with the external environment. While designing organizational culture, managers must consider its linkage with organizational strategic intents, vision, mission and policies and linking the HRM practices like recruitment, selection to fit within organizational culture.

Communication

Kang, & Sung, M. (2017) provide an insight that How employee communication leads to employee engagement. Similarly, Lings et al (2015) provides an insight into the influence of internal communication on employee engagement. Communication ensures a clear understanding to employee about organizational objectives and also about his role in the process of achievement of these goals. This enhances the involvement of employee and his sense of being valued in the organization. The key consideration while designing the communication system are clarity, timeliness of communication, open communication policies in the organization and an efficient review and feedback system.

Contentment

Happy employees have greater senesce of being involved in the organization. For developing happy and content employees the approach of Workplace well-being has been defined as "a holistic approach to creating high performance organizations through establishing the right conditions to generate high levels of employee engagement" (Schmidt and Marson 2012).

According to this approach strong commitment from employees lead to achievement of high organizational performance; and a strong commitment can be developed practices of employee satisfaction, and by supportive, respectful and healthy work environments. Although workplace well being primarily focuses on physical health and wellness but also focus to enhance the social and psychological dimensions of three inter-related elements namely: Workplace, workforce, and the work people do.

Contentment in simple words can be understood as satisfaction level of employees. How happy or content your employees are, is determines their satisfaction. Job satisfaction has been a topic of interest for corporate practitioners, researchers and academicians due to a large number of benefits associated with the concept. Happy employees are creative; they put better coordinated efforts for success of organization and customer satisfaction. Modern organizations continuously look for measures to enhance job satisfaction and adopt various measures such as flexible working hours, performance linked pay, customised motivational packages and measures of intrinsic motivation.

The key consideration for developing content employees are: content with various dimensions of work, co workers and workplace such as: pay, cordial relations, recognition, work itself and organizational policies and procedure which are employee centric as well as customer centric. All the HR process of the organization must be employee centric and focus on creating happy and content employees.

Conclusion

Engaged employees are a primary focus for organization across the globe and perceived as one of the essential component for effectiveness and efficiency of organization. Employee engagement although being a multifaceted concept is perceived as a complex concept; but the five C framework makes it easy to understand and implement. If the content and processes of organization are woven around this 5 C framework, managers can easily enhance the level employee engagement. The 5 Cs discussed here, namely- Compensation, Commitment, Communication, Culture and Contentment is a simple to understand five component model of employee engagement.

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GREEN MARKETING:
EMERGING OPPORTUNITIES AND CHALLENGES IN INDIA

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ABSTRACT

Marketing in simple words simply going to the market to sell goods, while scientifically as defined by the American Marketing Association as "the activity and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large". The term from the definition which states ,"have value for customers, partners and society at large" is the key to this process. This precisely defines the concept of GREEN MARKETING, which is elaborated as the process of marketing of products which are environmentally safe . It includes broad range of activities like modification in product, change of packaging and the way it is advertised. Thus Green marketing refer to holistic marketing concept wherein production , marketing , consumption on disposal of products and services happens in a manner that is less detrimental to the environment. Marketing of goods is taking place since the inception of civilization then why GREEN MARKETING now ? The world is growing so also the population thereby the demand for food for this growing population is also growing which is putting pressure on Governments across the globe to fulfill the demand of its population which resulted in the excessive demand for the land for cultivation and thereby causing depletion of forests. This has led excessive usage of fertilizers, pesticides and underground water for cultivation. This has created undue burden on environment. Therefore, it is high time to switch to GREEN MARKETING to save the civilization. Now, with the growing awareness and environmental concerns people are switching to environment friendly products. So, it is imperative for companies to follow the peoples demand and because of the following reasons- Environmental Advantages, Economical Advantage, Efficient use of resources, Sustainability and Innovation. We can therefore say that it is the need of the hour to explore and reap the benefits of Green Marketing not only to reap its benefits but also to save our environment from greenhouse gases and other pollutants thus saving the MANKIND. This paper describes the concept, need and importance of Green Marketing. The paper also examines the present trends in Green Marketing, its benefits, principles of Green Marketing, its relevance in the current scenario. It also discusses the challenges being faced in switching to Green Marketing and the ways to deal with it. It conclusively highlights the various initiatives of by Government of India to support and propagate green technology and hence promoting GREEN MARKETING.

KEYWORDS: *Green Marketing, Environmental Advantages, Detrimental, Sustainability, Innovation, Environment Friendly, Green Technology.*

Introduction

It is very apt to say that the major reason behind the deterioration in the ecosystem is the unplanned management of resources and that of population explosion. Hence, the process of selling goods and services in an eco-friendly way is a big issue before the business houses across the globe.

It is a fact that the natural environment is the basis of all activities. Natural environment and ecosystem services provide us with food, water and material for living. Since the economic activities directly depend upon the natural resources and the environment, the protection of natural environment is the duty of all stakeholders.

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One should take utmost care to protect both the renewable and non-renewable energy sources. If we do not understand the importance of ecosystem and environmental resources in a proper way, the future generations will face severe imbalances in climate and availability of water, food, good quality air, etc. The real concern before us is to sensitize the people involved in the process of manufacturing and selling goods and services so as to cause least damage to the environment.

The above concerns have created a demand for Green Marketing.

In 1975 American Marketing Association (AMA) organized first workshop on Ecological Marketing. The findings were published in the book titled Ecological Marketing.

According to American Marketing Association- "Green Marketing is the marketing of products that is presumed to be environmentally safe. Thus Green marketing incorporates a broad range of activities, including product modification, changes in the production process, packaging changes, as well as modifying advertising. Hence green marketing refers to holistic marketing concept where in the production, marketing, consumption and disposal of product and services cause relatively less damage to the environment".[1]

According to Polonsky, 1994 – "Green or Environmental Marketing consists of all activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants, such that the satisfaction of these needs and wants occurs, with minimal detrimental impact on the natural environment".[2]

From the above definitions Green or Environmental Marketing satisfies human needs with minimal detrimental impact on our environment. "The term green marketing refers to the planning, development and promotion of products or services that satisfy the needs of consumers for quality, output, prices and services without a negative effect on the environment with regard to the use of raw material, the consumption of energy etc".[3]

In recent times, the environmental problems is more severe now than it was thirty years ago and seems to impact the whole economy all over the world. International researches show that consumers worry about the environment and change their behavior gradually. Thus a new market for viable or sustainable product emerges, which is further strengthened by active consumers since it is a way to contribute to the protection of the environment.

Moreover, selling eco-friendly goods to the ultimate users is the social responsibility of the manufacturer. The enterprises gradually recognize the various advantages and the opportunities from this ecological protective approach. The concept of corporate social responsibility of Green Marketing has also been devised with sufficiently effective practices. Business firms have also started responding to environmental challenges by adopting and practicing green marketing strategies. The benefit of green marketing is that eco-friendly goods have a competitive advantage over other firms selling non-eco-featured goods. At the same time, it should be noted that in the era of green marketing each and every shareholder should take part in this process as a social responsibility.

To our understanding, green marketing must be more than a green way of marketing of the so-called green products. Green means both to the method and to the product. The idea of green marketing needs considerable development and analysis, with rules and integrity in economic, scientific, academic and ethical terms.

In the contemporary times there is a huge requirement of wealth as well as fresh environment. It is the primary responsibility of the public and private sector organizations to provide the essentials of a life and the maintenance of the demands of the environment. In green marketing, products are offered to satisfy the customers with special consideration on environment.

Benefits of Green Products

Green Products are beneficial to everyone because they are eco friendly in nature. It helps to capture new markets and also improves sustainable environment. Green products can be broadly classified as under.

- The products that are organic in nature.
- The products that are being manufactured to save energy, reduce carbon footprint or reduce use of natural resources.
- Green products requires less resources to operate for example- minimum use of water in toilets and in washing machines.

- The byproducts may be used for some other purpose for example- coal ash may be used for making bricks.
- These products are recyclable, biodegradable and less toxic in nature.
- The product that do not pollute environment.
- The products that have eco-friendly packaging i.e reusable or refillable.

Objective of the Study

The objectives of the sudy are as follows:

- To know and understand the concept of Green Marketing.
- To identify the importance and need of Green Marketing.
- To study the challenges and prospects of Green Marketing.
- To focus on the Green Marketing in the context of Indian Business in recent times.

Advantages of Green Marketing

Green marketing prompts the companies to develop new and improved products, and services that are environment friendly which allows them to access the new markets, increase their profit sustainability and enjoy a competitive advantage.

Some of the advantages of green marketing are as follows:

- It ensures sustained long-term growth along with profitability.
- It saves money in the long run, although initial cost is more.
- It encourages innovation and creativity.
- It helps the companies to market their products in new markets and enjoying competitive advantage.
- Most of the employees also feel proud and responsible to be working for an environmentally responsible company.
- It promotes corporate social responsibility which is now mandatory as per Government of India Regulations.

Principles of Green Marketing

The concept of green marketing is based upon the following principles which are depicted in the following figure-1

Figure 1

Source- https://businessjargons.com/wp-content/uploads/2020/10/principles-of-green-marketing.jpg

- **Consumer-Oriented Marketing:** The belief says that the firm should perceive the marketing activities from the consumer's viewpoint, so as to develop a lasting and profitable relationship with them.
- **Customer Value Marketing:** As per this belief, the company should allot its resources that add value to the product or service they offer, rather than simply changing the product packaging or making a huge investment on the advertisement

- **Innovative Marketing:** To strive for real product and marketing improvements is the gist of innovative marketing. We all know that the world is ever-changing and so does the tastes and preferences of the customers.
- **Mission Marketing:** The company's mission should be broadly defined in social terms and not in the product. This is due to the fact that if a company states the mission that has some social welfare hidden in it, the employees feel proud to work for a good cause and work in the right direction.
- **Societal Marketing:** As per this principle, the marketing decisions made by the company must take into account the wants and interest of the consumers, company's preference and the social welfare.

Challenges in Green Marketing

- **High Initial Cost:** Evolution of Green products involves biodegradable products which is relatively higher in cost in the beginning.
- **Problems of deceptive advertising and false claims:** The consumers are not aware about ecological value of biodegradable products and therefore they fall in the trap of deceptive advertising claiming to be selling other items at cheaper rates.
- **High Research and Development Cost:** Green technology requires research and development to design and develop a green product hence lot of capital is require for the same.
- **Lack of awareness among people:** Majority of the people are not aware of the usefulness of green products and their uses for the betterment of their future.
- **Unwillingness to pay premium price:** Majority of the consumers are not willing to pay a premium for green products as they are expensive and the majority of population in India may not be able to afford that price.

Green Marketing Practices

It involves a wide spectrum of activities to create an eco-friendly image of the company to its target audience such as:

- Using recycled and renewable material for production.
- Use of green energy to produce products such as solar energy, geothermal energy and wind energy.
- Reduce product packaging or use eco-friendly packaging.
- Avoid using toxic materials, which are harmful to the environment.
- Making products which are reusable as well as recyclable.

So, basically, green marketing is all about developing and promoting products and services that fulfill customer requirements, in terms of quality, performance, affordability, availability and safety, but without causing any damage to the environment.

Green Maketing during Covid-19

Health, Hygiene and Immunity are key drivers of modern day consumer needs. People are more focused on improving their immunity and that of safeguarding themselves against the spread of corona virus. This has made the people to look for green (organic) products so as to boost their immunity and fight Corona virus effectively. This trend is also supplemented by the usage of single use plastic/ packing material. This has not only caused a concern on environment but also created an opportunity for the companies to develop packing material which is eco-friendly and biodegradable. Some companies has started using paper packaging and also using protective packaging material which prevents the spread of virus. The companies are also promoting touch free payment options using QR Codes and Payment Gateways.

Green Initiatives in India

Government of India is promoting green initiatives on a very large scale through various Governmental Schemes.

- **Namami Gange Programme:** The programme aims at reviving river Ganga and
- **Swachh Bharat Mission:** The programme aims at mobilizing people for clean India movement and make India free of open defecation.

- **Skill Development Programme:** The programme aims at developing green skills to preserve and restore environment and create a sustainable future.
- **Compensatory Afforestation Fund Act (CAMPA):** The programme aims at promoting individuals or organizations intending to use forest land for non forest purpose may be charged as per government policies.
- Digital India Programme.
- E-Payment Gateways.
- Toll collection via Fast Tags.
- One India mobility card.
- Promotion of E- Vehicles by minimizing registration fee.

Conclusion

The rapid increase for the environmental concerns mainly in last two decades is stressing companies to review and change sustainable model for the growth of their companies. Organizations too are now becoming increasingly aware about adopting green technology to survive in the current scenario. Though adoption of green marketing may not be easy due to cost involved in research, development and design of new products. It initially may not be viable but will yield greater results in terms of profit and most importantly protecting the environment for future.

The customers too have realized that their marketing behaviour have a direct impact on environment therefore they are gradually shifting towards green marketing to contribute to boost environment for sustainable growth for the future. For this they are ready to go little extra mile and pay premium price to own a green product, this behaviour was quiet evident during Covid 19 times wherein more and more customers were obtaining green products at a premium cost to safeguard their health and hygiene concerns.

To conclude green marketing is slowly becoming a way of life through socially responsible companies with the support of Government initiatives. It is rightly said that we do not own mother nature but have borrowed it from our generations.

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IMPACT OF COVID-19 PANDEMIC ON
SECTORAL MUTUAL FUND SCHEMES IN INDIA

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Ms. Tanya[**]

ABSTRACT

The Indian capital market is growing leaps and bounds by providing plethora of investment avenues to the investors. Among these avenues, mutual fund has emerged as widely preferred by the investors as it provides an opportunity to small investors to invest small chunks of money with the ability to diversify the risk. Mutual fund industry since its inception has flourished and floated diversified schemes catering to the needs of investors. But mutual fund industry has witnessed the downfall during COVID-19. The purpose of the paper is to analyse the performance of the selected sectoral schemes on the ground of return and risk evaluation by using Sharpe and Treynor Ratio during pandemic period from March 2020 to December 2020.. The findings revealed that all the schemes selected for study have underperformed as compared to their benchmark indices.

KEYWORDS: *COVID-19, Sectoral Schemes, Sharpe Ratio, Treynor Ratio, Mutual Fund Schemes.*

Introduction

Uncertainty has surrounded us since the outbreak of COVID-19. The pandemic has affected almost every economy in the world. The whole Indian economy was shut down during lockdown phases except for essential services. This had created various economic disruptions. The lockdown was implemented in four phases in India from March 25, 2020 to May 31, 2020. The unlock journey of Indian economy was also carried out in phases which started from June 01, 2020 considering the impact of pandemic. Uncertainty and lack of confidence and regular income among investors were the major reasons for the downfall of stock market. This pandemic has badly affected the Indian mutual fund industry.

Indian mutual fund industry started its journey in 1963 when the first mutual fund Unit Trust of India was established. Since then, this industry has witnessed a tremendous growth. As per AMFI Reports, the assets managed by Indian mutual fund industry in November 2020 are worth Rs. 29. 83 Trillion. "The Indian mutual fund industry is one of the fastest growing and most competitive segments of the financial sector. In terms of growth in mutual fund AUM, India stands on second position just after China" (Corporate Capital Venture Report, 2019). "A mutual fund is trust that pools the savings of number of investors who share a common investment objective and invest that money in diversified portfolio as per financial objective of the investors." It gives an opportunity to investors who don't have large sum for investments or don't have the knowledge, time and skills to grow their wealth. There are plenty of schemes available in market to suit the needs and preferences of investors. One of such type is Equity Mutual Fund schemes. According to the SEBI Mutual Fund Regulations "An equity mutual fund scheme must invest at least 65% of the scheme assets in equities and equity related instruments." Sectoral equity fund scheme falls under the category of equity fund. These mutual fund schemes invest in securities of a particular sector like Banking, healthcare, etc. The overall performance of a particular sector has an effect on performance of their respective sectoral scheme. It can offer high returns but it is considered to be risky schemes.

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Performance assessment is an indispensable task. There is a benchmark or market index and the performance of mutual fund scheme is compared with benchmark index. This evaluation is necessary as it will indicate outperformance or underperformance of schemes so that necessary changes can be done timely to ensure the scheme achieves its objective as committed. Average return, Standard deviation, Beta, Sharpe and Treynor model are the most used and validated parameters on which the performance of mutual fund schemes gets evaluated. The pandemic has impacted every sector of the economy and Indian mutual fund industry is not an exception. Therefore, it becomes important to evaluate the sectoral mutual fund schemes as their performance depends on the performance of their respective sector. Hence the purpose of this study is evaluating the performance of selected sectoral mutual fund schemes during COVID-19 pandemic from March 2020 to December 2020 on the criteria of Average Return, Sharpe Ratio and Treynor Ratio.

Literature Review

The pandemic has impacted the mutual fund industry and the share market relentlessly. **Gupta et al. (2016)** studied the impact of BREXIT and GST on the performance of mutual funds using event methodology. The results of the study highlighted that there was no significant impact of both events on the performance of selected mutual fund schemes. **Gupta et al. (2019)** investigated the effect of three national and six international economic events on the performance of mutual fund schemes. The results highlighted that all three national economic events had negative impact on Net Asset Value of selected scheme. Out of six international events, four events had the positive impact on performance of mutual fund. **Nicolescu et al. (2020)** analysed the risk and return of mutual funds and stock exchanges in young financial market during global economic and financial crisis. The findings revealed that on both parameters of risk and return, mutual funds performed better than stock exchange during crisis.

Giudice & Paltrinieri (2017) analyzed the impact of Arab Spring and Ebola outbreak decisions of mutual fund investors of Africa. The results revealed that overreaction of investors resulted into the withdrawal of savings from mutual funds. **Liu et al. (2020)** investigated short-term impact of outbreak on COVID-19 on stock market indices of twenty-one countries using event methodology. The result showed that the stock market of those countries which were majorly affected by covid-19 had fallen quickly after the outbreak of covid-19.The Asian countries had witnessed more negative abnormal returns as compared to other countries. **Pastor &Vorstaz (2020)** focussed on the performance and flows of U.S. active equity mutual funds during the COVID-19 crisis. It is found that performance of active funds is below the benchmark index. Those funds which were having higher star and sustainability ratings were preferred by investors in US as their performance was superior to other funds. **Rizvi et al. (2020)** investigated the impact of COVID-19 on mutual funds of European Union on the parameters of risk adjusted performance measures. The study revealed that average returns were negative during the sample period leading to negative Adjusted Sharpe Ratio and Reward to VAR ratio**. Yarovaya et al. (2020)** investigated the impact of human capital efficiency (HEC) on fund's performance in five European countries during pandemic. The study highlighted that majority of funds had negative returns and Jensen's alpha. The funds with higher HEC were having positive returns.

Avinash and Manoj (2020) compared the performance of the twelve growth-oriented equity diversified schemes for five months prior to outbreak of Covid-19 and five months during Covid-19 using Sharpe and Treynor Ratio. The results of the study revealed that selected schemes have witnessed a gradual decrease in their NAVs. All the schemes are having negative values in Sharpe and Treynor Ratio. **Karmakar (2020)** analysed the trend of selected money market mutual fund schemes from April to July 2020. The study depicted that returns were negative during initial days of pandemic but it started improving in unlock phase. It also predicted the trend of average returns for next six months, using R Software, indicating the returns will be higher in month of November and December 2020. **Mishra et al. (2020)** studied how the Covid-19 pandemic (January 3, 2003 to April 20, 2020) has impacted the Indian Financial market and how this impact is different from the time period of Demonetisation and GST. The results showed that all indices have negative returns during Covid-19. Covid-19 has impacted stock return severely as compared to the time period of Demonetisation and GST. **Patel & Dutta (2020)** examined the performance of ten growth oriented direct equity mutual fund scheme from October 2019 to July 2020 using Jensen model, Treynor ratio and Sharpe ratio. The results depicted negative returns, higher standard deviation and beta values in post covid-19 time period. Sharpe, Treynor and Jensen ratios turned into negative values during study time period. **Samira et al. (2020)** investigated the inclination of investors towards SIP based mutual fund investment during COVID-19 and found the

inclination of investors towards SIP schemes on the grounds of easy redemption and professionally managed funds. In the initial phase of pandemic, investments in mutual fund gave them the negative returns but it recovered and showed upward trend. **Venugopal & Sophia (2020**) evaluated the performance of 1475 Indian equity mutual fund schemes during COVID-19 pandemic January 2020 to June 2020 and found that the funds that invested in gold, pharma and government securities, yielded positive returns in comparison with other funds. It also concluded that the investors suffered negative returns irrespective of their risk bearing capacity during the pandemic.

Research Gap

The investments avenues are attractive but they are subject to market risk. The sudden emergence of COVID-19 has shaken the economies of the world. Due to this impact, like other industries, the returns of sectoral mutual fund schemes have been affected adversely. The previous studies have investigated the impact of pandemic on different schemes but there is no such study that has investigated the impact of COVID-19 on sectoral mutual fund schemes in India. Therefore, the present paper investigates the impact of COVID-19 on performance of sectoral mutual fund schemes in India.

Objectives

- To analyse the risk and return of sectoral mutual fund schemes.
- To measure the performance of sectoral mutual fund schemes by using Sharpe and Treynor model.
- To compare the performance of sectoral mutual fund schemes with their respective benchmark indices.

Methodology

This study analyses the impact of COVID-19 pandemic on sectoral mutual fund schemes in India. For this purpose, twelve schemes have been selected. These sectoral mutual fund schemes are from three different sectors namely Banking and Financial Service sector, Pharma & Healthcare sector and Infrastructure sector which are badly affected by COVID-19 pandemic. Four AMC's have been selected which are having the common type of these sectoral mutual fund schemes for comparison of performance. The four AMC's which are selected for the study are Aditya Birla Sun Life Mutual Fund, ICICI Prudential Mutual Fund, Tata Mutual Fund and UTI mutual Fund respectively. All the schemes selected under the study are of Regular Plan- Growth type. Their respective benchmark indices are also selected for comparing their performance (Table 1).

Table 1: List of Selected Schemes and their Benchmark Indices

Sr. No.	Name of scheme	Benchmark index
1	Aditya Birla Sun Life Banking and Financial Services Fund - Regular Plan – Growth	NIFTY Financial Services Total Return Index
2	Aditya Birla Sun Life Pharma and Healthcare Fund-Regular-Growth	S&P BSE Healthcare Total Return Index
3	Aditya Birla Sun Life Infrastructure Fund-Growth	NIFTY Infrastructure Total Return Index
4	ICICI Prudential Banking and Financial Services Fund – Growth	NIFTY Financial Services Total Return Index
5	ICICI Prudential Pharma Healthcare and Diagnostics (P.H.D) Fund - Cumulative Option	S&P BSE Healthcare Total Return Index
6	ICICI Prudential Infrastructure Fund – Growth	S&P BSE India Infrastructure Total Return Index
7	Tata Banking and Financial Services Fund-Regular Plan-Growth	NIFTY Financial Services Total Return Index
8	Tata India Pharma & Healthcare Fund-Regular Plan-Growth	NIFTY Pharma Total Return Index
9	Tata Infrastructure Fund-Regular Plan- Growth	S&P BSE India Infrastructure Total Return Index
10	UTI Banking and Financial Services Fund - Regular Plan - Growth Option	NIFTY Financial Services Total Return Index
11	UTI Healthcare Fund - Regular Plan - Growth Option	S&P BSE Healthcare Total Return Index
12	UTI Infrastructure Fund-Growth Option	NIFTY Infrastructure Total Return Index

Source: Compiled from Secondary data (amfiindia.com)

The time period taken for the study is of 10 months from March 01, 2020 to December 31, 2020. The study is based on secondary data which has been collected from the websites of AMFI, RBI, BSE and NSE. The NAV data have been collected website of Association of Mutual Funds in India (amfiindia.com) on daily basis over a period of ten months. For the risk-free return, value of 182 days Treasury Bill Yield 3.34% is taken. The average return has been calculated by using NAVs. For the risk measurement, standard deviation (for total risk) and beta (for systematic risk) has been calculated. Performance Evaluation of schemes have been done by calculating Sharpe and Treynor Ratio. By comparing the ratios of the schemes with the ratio of their respective benchmark indices, outperforming and underperforming schemes have been identified. A ratio higher than market/benchmark index indicates outperformance of mutual fund scheme and vice-versa. Below given the formulas used in the study:

Return: Return = $((NAV_t - NAV_{t-1}) / NAV_{t-1} * 100)$

Where t stands for time and NAV stands for Net Asset Value

Risk: Risk is represented by standard deviation.

Standard Deviation ( ) = $\{ (R_i - R_{avg})^2 / N-1 \}^{1/2}$

where R_i = return observed in one period (one observation in data set)

R_{avg} = arithmetic mean of returns observed

N = number of observations in data set.

Beta:

$$= \frac{\text{Covariance (Rz, Rm)}}{\text{Variance (Rm)}}$$

Where stands for Beta, Rz = Return of the scheme, Rm = Return of benchmark or market index, Variance = Square of Standard Deviation.

$$\text{Sharpe Ratio} = \frac{\text{Portfolio Average Return (Rp)} - \text{Risk Free Rate of Return (Rf)}}{\text{Standard Deviations of the Portfolio Return } (\text{}_p)}$$

$$\text{Treynor Ratio} = \frac{\text{Portfolio Average Return (Rp)} - \text{Risk Free Rate of Return (Rf)}}{\text{Beta Coefficient of Portfolio } (\text{}_p)}$$

A high and positive Sharpe ratio of the scheme indicates the superior performance of the scheme in comparison to the benchmark index whereas low and negative Sharpe Ratio indicates the unfavourable performance of the scheme. The value of risk-free return is 3.34% (182 days Treasury Bill Yield).The following notations have been used in the study.

AR = Average Returns	**TR** = Treynor Ratio	**JM** = Jensen Model
SD = Standard Deviation	**SR** = Sharpe Ratio	**RBI=** Reserve Bank of India
= Beta	**TR$_Z$** = Treynor Ratio of the benchmark index.	**AMFI =** Association of Mutual Funds in India
NAV = Net Asset Value	**SR$_F$**= Sharpe ratio of the fund	**BSE =** Bombay Stock Exchange
TR$_F$= Treynor Ratio of the fund	**SR$_Z$** = Sharpe Ratio of the benchmark index	**NSE =** National Stock Exchange of India Limited

Analysis and Interpretation

Here analysis has been done according to objectives

Objective 1: To analyse the risk and return of sectoral mutual fund schemes.

To achieve this objective, average returns have been calculated for ten months. Average return of schemes has been compared with their respective benchmark indices. For risk measurement, Standard Deviation and Beta are calculated. Ranks have been allotted to identify the top performers on the parameters of Average Return, Standard Deviation and Beta. The results of the study are presented in the forms of charts and tables.

- **Banking and Financial Services Sector**

    In this sector, the four schemes have been selected from four AMCs namely Aditya Birla Sun Life Mutual Fund, ICICI Prudential Fund, TATA Mutual Fund and UTI Mutual Fund. The benchmark index for all schemes is Nifty Financial Services Total Return Index. The monthly average return of ten months has been calculated. The risk and volatility have been represented by standard deviation and beta respectively.

Table 2: Average Return of Banking and Financial Services Sector Schemes

Month	Aditya Birla Sun Life Mutual Fund	ICICI Prudential Mutual Fund	TATA Mutual Fund	UTI Mutual Fund	Benchmark Index
Mar-2020	-1.9876	-2.08175	-1.52814	-2.03546	-1.66819
Apr-2020	0.679684	0.744144	0.741882	0.762586	0.774759
May-2020	-0.49377	-0.45939	-0.37708	-0.47745	-0.4889
June-2020	0.627918	0.553181	0.390657	0.539322	0.490801
July-2020	0.188021	0.205398	0.078627	0.093633	0.079829
Aug-2020	0.339305	0.36153	0.245007	0.388311	0.294726
Sep-2020	-0.33734	-0.29352	-0.2232	-0.36161	-0.30728
Oct-2020	0.346807	0.202465	0.385141	0.373429	0.447994
Nov-2020	1.219971	1.00496	0.860631	1.111589	1.103376
Dec-2020	0.303149	0.266835	0.264271	0.293284	0.287807
Average Return	0.088615	0.050385	0.08378	0.068764	0.101492

Source: Author's Calculation

Note: NAVs have been taken from amfiindia.com.

Figure 1: Average Return of Banking & Financial Services Sector Schemes
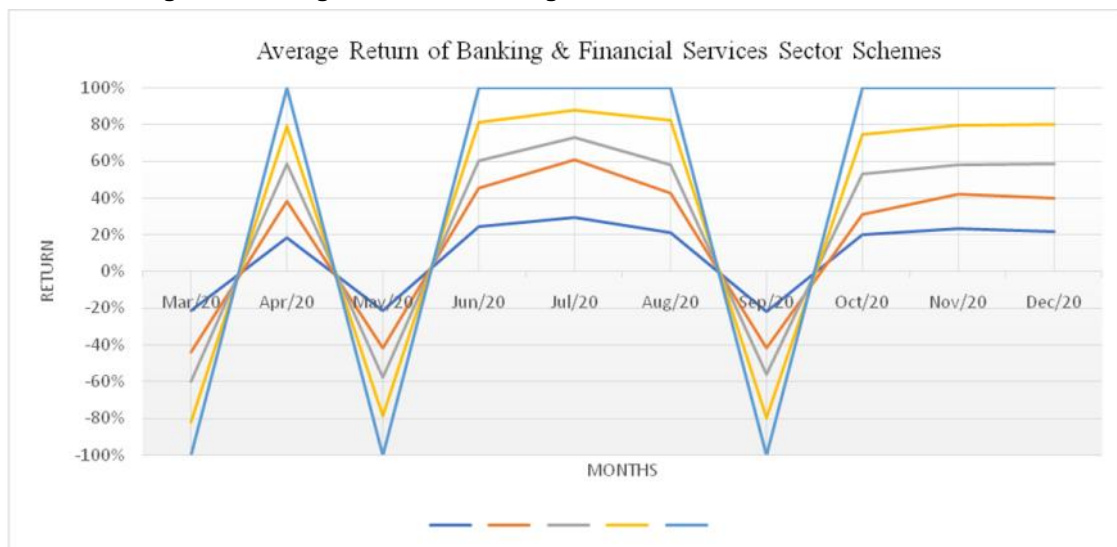
Source: Author's Calculations

    Table 2 shows the average return of Banking and Financial Services Sector schemes of all four AMC's from March 01, 2020 to December 31, 2020. It highlighted that none of the above selected scheme has been able to outperform the benchmark index on basis of average return. All four mutual schemes are having lower average return in comparison to their benchmark index.

    Figure 1 demonstrates during study period, all schemes are having positive return except in March, May and September 2020. In March 2020, lockdown phase in India was announced which has impacted the market to the extent that average returns become negative in this month. The whole economy was closed for 40 days during first and second phase of lockdown except for essential services.

In May 2020, third phase of lockdown was announced which created the uncertainty in the market. This uncertainty and lack of confidence of investors in share market have impacted the returns as the whole economy was suffering due to pandemic. In June 2020 unlock phases had started and schemes started achieving positive returns. In November 2020 average returns were highest during these ten months. It started falling again in December 2020 yet being positive. Aditya Birla Sun Life Banking and Financial Services Fund & UTI Banking and Financial Services Fund have outperformed the benchmark index in more than five months out of ten months.

Table 3: Risk-Return Profile of Banking and Financial Service Sector Schemes

Schemes	AR	Rank	SD	Rank	Beta	Rank
Aditya Birla Sun Life Banking and Financial Services Fund	0.087319	1	2.731598	3	0.947906	3
ICICI Prudential Banking and Financial Services Fund	0.050385	4	2.588007	2	0.893432	2
Tata Banking and Financial Services Fund	0.08378	2	2.470105	1	0.875696	1
UTI Banking and Financial Services Fund	0.068764	3	2.78435	4	0.981399	4

Source: Author's Calculation

Table 3 shows the risk-Return analysis of Banking and Financial Service sector Schemes of all four AMC's from March 01, 2020 to December 31, 2020. On the basis of analysed data of the schemes, Aditya Birla Sun Life Banking and Financial Services Fund is having highest average return amongst all schemes with 0.087% followed by Tata Banking and Financial Services Fund. ICICI Prudential Banking and Financial Services Fund have secured last rank as it is having the lowest average return. On the parameters of risk, which is represented by standard deviation Tata Banking and Financial Services Fund is at the top of the list as it is having the lowest standard deviation (2.470105) followed by ICICI Prudential Banking and Financial Services Fund. UTI Banking and Financial Services Fund are having the highest risk among the four schemes. All schemes are having beta value not exceeding 1 which shows that all schemes are less volatile as compared to their benchmark index. But amongst all, UTI Banking and Financial Services Fund is the most volatile mutual fund scheme in this sector because its beta value is highest among all schemes. Tata Banking and Financial Services Fund is the least volatile scheme as it is having the lowest beta value (0.875696).

- **Pharma and Healthcare Sector**

In the Pharma and Healthcare sector, four schemes have been selected which represents four AMCs. Return and risk of the schemes have been analysed. Ranks have been assigned to the schemes for performance assessment.

Table 4: Average Return of Pharma and Healthcare Sector Schemes

Month	Aditya Birla Sun Life Mutual Fund	ICICI Prudential Mutual Fund	TATA Mutual Fund	UTI Mutual Fund	Benchmark Index (S&P BSE)	Benchmark Index (NIFTY)
Mar-2020	-0.44404	-0.34022	-0.28542	-0.30177	-0.42781	-0.17026
Apr-2020	1.177491	1.351105	1.113762	1.262622	1.330096	1.507663
May-2020	0.051255	0.112314	0.13606	0.168499	0.113031	0.254263
June-2020	0.043533	0.273131	0.025419	0.072299	0.181479	0.106845
July-2020	0.457735	0.52676	0.481923	0.551816	0.516386	0.4901
Aug-2020	0.139712	0.032507	0.054864	0.05799	0.039421	-0.01415
Sep-2020	0.313727	0.362622	0.373102	0.383009	0.350193	0.296043
Oct-2020	-0.18366	-0.10537	-0.06807	-0.0884	-0.12725	-0.21097
Nov-2020	0.287419	0.26428	0.259185	0.259199	0.292556	0.279492
Dec-2020	0.290693	0.352215	0.320569	0.292764	0.301636	0.404221
Average Return	0.213387	0.282935	0.241139	0.265803	0.256975	0.294325

Source: Author's Calculation

Note: NAVs have been taken from amfiindia.com.

Figure 2: Average Return of Pharma and Healthcare Sector Schemes
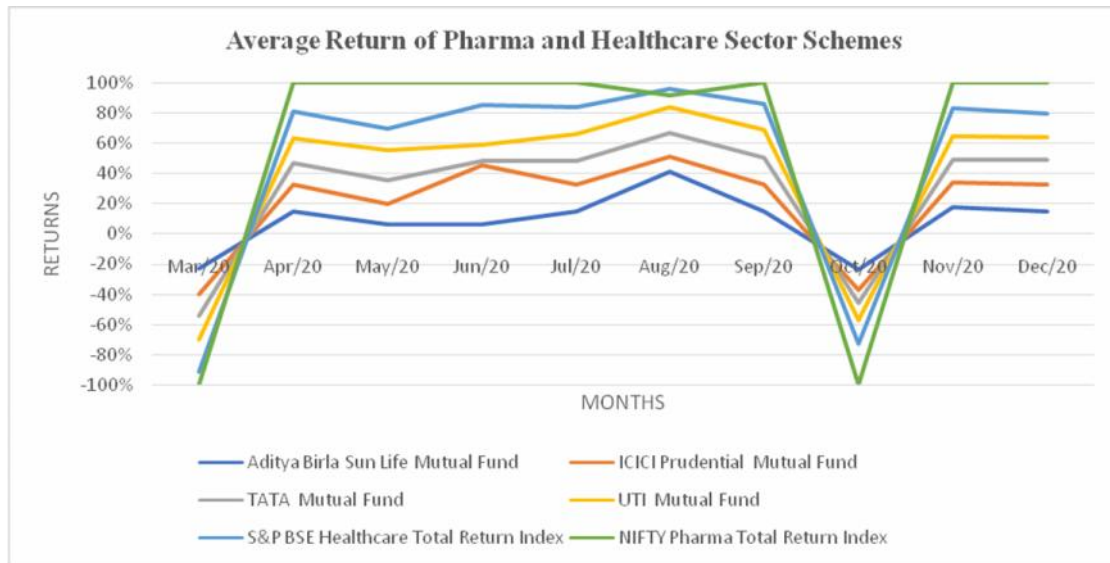
Source: Author's Calculations

Table 4 reveals the average return of Pharma and Healthcare Sector schemes of all four AMC's from March 01, 2020 to December 31, 2020. The benchmark index for these schemes is S&P BSE Healthcare Total Return Index except for Tata India Pharma & Healthcare Fund. The benchmark index for Tata India Pharma & Healthcare Fund is NIFTY Pharma Total Return Index. It shows that two out of four mutual schemes are having lower average return in comparison to their benchmark index. ICICI Prudential Pharma Healthcare and Diagnostics Fund and UTI Healthcare Fund have outperformed the benchmark index as their average return of both the schemes is higher than the benchmark index.

Figure 2 highlighted that all schemes are having positive return during study period except in March and October 2020. In March 2020, lockdown lead to uncertainty and lack of confidence among investors that during this situation, Pharma and Healthcare Sector has gained importance immensely. In September 2020 average returns were highest during these ten months. Various trials of vaccination for COVID-19 had started in world. It started falling again in October 2020 and all schemes were having negative returns. In October 2020, COVID-19 fear of rising cases worldwide impacted on returns of this sector. UTI Healthcare Fund and ICICI Prudential Pharma Healthcare and Diagnostics Fund have outperformed the benchmark index many times during this period of ten months. Overall ICICI Prudential Pharma Healthcare and Diagnostics Fund and UTI Healthcare Fund have outperformed the benchmark index as the average return of ten months of both the schemes is higher than the benchmark index.

Table 5: Risk-Return Profile of Pharma and Healthcare Sector Schemes

Schemes	AR	Rank	SD	Rank	Beta	Rank
Aditya Birla Sun Life Pharma and Healthcare Fund	0.213387	4	1.623397	1	0.878861	2
ICICI Prudential Pharma Healthcare and Diagnostics Fund	0.282935	1	1.693469	3	0.915823	3
Tata India Pharma & Healthcare Fund	0.241139	3	1.728301	4	0.803415	1
UTI Healthcare Fund	0.265803	2	1.686607	2	0.917767	4

Source: Author's Calculation

Table 5 shows the risk-return analysis of Pharma and Healthcare Sector schemes of all four AMC's (March 01, 2020 to December 31, 2020). It is found that ICICI Prudential Pharma Healthcare and Diagnostics Fund are having highest average return amongst all schemes with 0.283% followed by UTI Healthcare Fund. Aditya Birla Sun Life Pharma and Healthcare Fund have secured last rank as it is having the lowest average return. On the parameters of risk, which is represented by standard deviation, Aditya Birla Sun Life Pharma and Healthcare Fund (1.623) is at the top of the list as it is having the

lowest standard deviation followed by UTI Healthcare Fund. Tata India Pharma & Healthcare Fund is having the highest risk among the four schemes. All schemes are having beta value not exceeding 1 which highlights that all schemes are less volatile as compared to their benchmark index. But amongst all, UTI Healthcare Fund is the most volatile mutual fund scheme in this sector as its beta value is 0.91 which is highest amongst all schemes. Tata Banking and Financial Services Fund is the least volatile scheme as it is having the lowest beta value (0.8034).

- **Infrastructure Sector**

In the Infrastructure sector, four schemes have been selected from four AMCs. There are two benchmark indices in this sector for comparing average return of four schemes. Average return and risk have been calculated.

Table 6: Average Return of Infrastructure Sector Schemes

Month	Aditya Birla Sun Life Mutual Fund	ICICI Prudential Mutual Fund	TATA Mutual Fund	UTI Mutual Fund	Benchmark Index (S&P BSE)	Benchmark Index (NIFTY)
Mar-2020	-1.51467	-1.4061	-1.20846	-1.50191	-1.22954	-1.02522
Apr-2020	0.70533	0.680176	0.493579	0.659571	0.641647	0.882767
May-2020	-0.17324	-0.05554	-0.082	-0.06221	-0.00602	0.186602
June-2020	0.592092	0.413113	0.302834	0.323355	0.339371	0.297503
July-2020	-0.08017	0.076043	0.081812	-0.02711	-0.11876	0.176341
Aug-2020	0.42939	0.406367	0.237745	0.265202	0.437001	0.019303
Sep-2020	-0.16496	-0.37402	-0.07112	-0.23496	-0.25106	-0.10914
Oct-2020	0.020854	0.056438	0.075898	0.151623	0.0395	0.077775
Nov-2020	0.753573	0.765201	0.749134	0.732122	0.826513	0.479128
Dec-2020	0.480698	0.479491	0.393212	0.310988	0.549563	0.297962
Average Return	0.10489	0.104117	0.097264	0.061667	0.12282	0.128302

Source: Author's Calculation

Note: NAVs have been taken from amfiindia.com.

Figure 3: Average Return of Infrastructure Sector Schemes
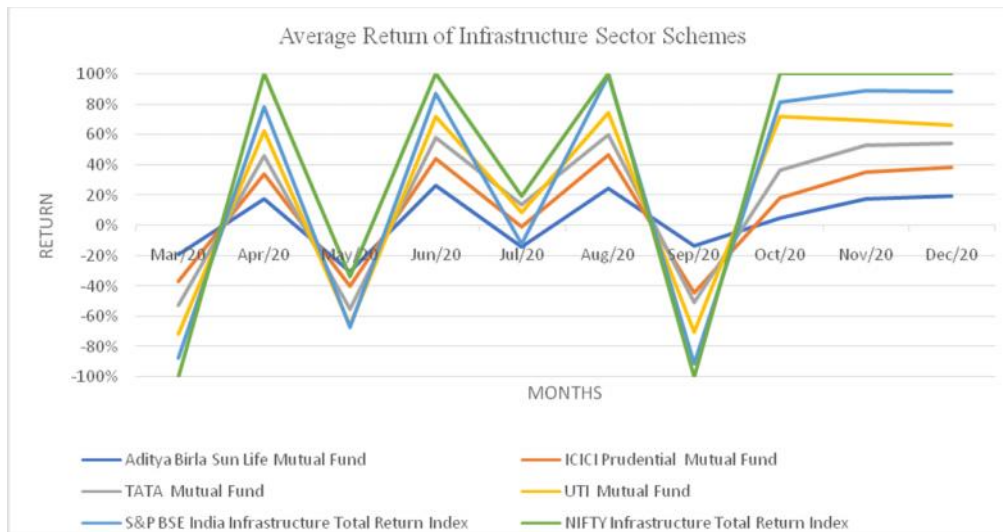
Source: Author's Calculations

Table 6 shows the average return of Infrastructure Sector schemes of all four AMC's of the study period (March 01, 2020 to December 31, 2020). The benchmark index for Aditya Birla Sun Life Infrastructure Fund and UTI Infrastructure Fund is NIFTY Infrastructure Total Return Index. The benchmark index for ICICI Prudential Infrastructure Fund and Tata Infrastructure Fund is S&P BSE India

Infrastructure Total Return Index. The average return of all schemes has been less than their respective benchmark indices. It shows that none of the above selected scheme has been able to outperform the benchmark index on basis of average return. All four mutual schemes are having lower average return in comparison to their benchmark index.

Figure 3 depicts that all schemes are having positive return except in March, May and September 2020. In March 2020, it was lockdown phase and in September 2020 it was peak of COVID-19 cases. In November 2020 average returns were highest during these ten months. All schemes outperformed their respective benchmark indices in month of November 2020. Aditya Birla Sun Life Infrastructure Fund and UTI Infrastructure Fund have outperformed the benchmark index in four months out of ten months.

Table 7: Risk-Return Profile of Infrastructure Sector Schemes

Schemes	AR	Rank	SD	Rank	Beta	Rank
Aditya Birla Sun Life Infrastructure Fund	0.10489	1	2.06938	4	0.912794	3
ICICI Prudential Infrastructure Fund	0.104117	2	2.01689	3	0.947606	4
Tata Infrastructure Fund	0.097264	3	1.789523	1	0.802144	1
UTI Infrastructure Fund	0.061667	4	1.969001	2	0.903937	2

Source: Author's Calculation

Table 7 highlights that Aditya Birla Sun Life Infrastructure Fund is having highest average return (0.104) and standard deviation (2.069). It is highly risky scheme but it is also highly volatile as beta coefficient is quite high of this scheme. It is in favour of the notion of higher the risk, higher will be the return. UTI Infrastructure Fund is having the lowest average return and the risk is also low in this scheme. Tata Infrastructure Fund is least risky scheme in this sector as it is having the lowest standard deviation (1.789). In terms of volatility, all schemes are having beta value not more than one which highlights that all schemes are less volatile as compared to their respective benchmark indices. ICICI Prudential Infrastructure Fund is most volatile scheme as it is having the highest beta value. Tata Infrastructure Fund is least volatile scheme in this sector as it is having the lowest value of beta among all schemes (0.802).

Objective 2: To measure performance of schemes using Sharpe Ratio and Treynor Ratio.

For the fulfilment of this objective, Sharpe and Treynor ratios have been calculated. Ranks have been allotted on the basis of SR and TR to identify the scheme which has performed excellent. The results of the study are summarised in the following tables.

Table 8: Performance Evaluation of Selected Schemes Using SR & TR

S. No.	Name of Scheme	Sector	SR_F	Rank	TR_F	Rank
1	Aditya Birla Sun Life Banking and Financial Services Fund	Banking and Financial Services	-1.19076	II	-3.43144	V
2	ICICI Prudential Banking and Financial Services Fund	Banking and Financial Services	-1.2711	III	-3.682	IX
3	Tata Banking and Financial Services Fund	Banking and Financial Services	-1.31825	IV	-3.71844	X
4	UTI Banking and Financial Services Fund	Banking and Financial Services	-1.17487	I	-3.33324	I
5	Aditya Birla Sun Life Pharma and Healthcare Fund	Pharma and Healthcare	-1.92597	XII	-3.55757	VII
6	ICICI Prudential Pharma Healthcare and Diagnostics Fund	Pharma and Healthcare	-1.80521	IX	-3.33805	II
7	Tata India Pharma & Healthcare Fund	Pharma and Healthcare	-1.79301	VIII	-3.85711	XI
8	UTI Healthcare Fund	Pharma and Healthcare	-1.82271	XI	-3.34965	III
9	Aditya Birla Sun Life Infrastructure Fund	Infrastructure	-1.56332	V	-3.54419	VI
10	ICICI Prudential Infrastructure Fund	Infrastructure	-1.60439	VI	-3.4148	IV
11	Tata Infrastructure Fund	Infrastructure	-1.81207	X	-4.04259	XII
12	UTI Infrastructure Fund	Infrastructure	-1.66497	VII	-3.62673	VIII

Source: Author's Calculation

Based on above analysed data (Table 8) UTI Banking and Financial Services Fund is found top performer as it is having the highest Sharpe Ratio (-1.17487) and Treynor Ratio (-3.33324) which belongs to Banking and Financial Services sector. Aditya Birla Sun Life Infrastructure Fund is securing the fifth position and sixth position on the basis of SR (-1.56332) and TR (-3.54419) respectively. In the case of Sharpe Ratio, the second place has been secured by Aditya Birla Sun Life Banking and Financial Services Fund (-1.19076) followed by ICICI Prudential Banking and Financial Services Fund (-1.2711). UTI Healthcare Fund and Aditya Birla Sun Life Pharma and Healthcare Fund are the worst performers as they are having the lowest Sharpe ratio. On the criteria of Treynor ratio, ICICI Prudential Pharma Healthcare and Diagnostics Fund (-3.33805) is on second rank followed by UTI Healthcare Fund (-3.34965).Tata India Pharma & Healthcare Fund (-3.85711) and Tata Infrastructure Fund (-4.04259) are the lowest rank holders amongst all on the basis of Treynor ratio as they are having the lowest Treynor ratio.

Objective 3: To compare performance of schemes with their respective benchmark indices on the basis of Sharpe Ratio and Treynor Ratio.

To achieve this objective, Sharpe and Treynor ratios have been calculated. The ratios of the schemes are compared with their respective benchmark indices to identify the outperformers or underperformers. The results of the study are summarised in the following tables.

Table 9: Performance Evaluation of Banking and Financial Service Sector Schemes using Sharpe Ratio and Treynor Ratio

Schemes	SR_F	SR_Z	Performance	TR_F	TR_Z	Performance
Aditya Birla Sun Life Banking and Financial Services Fund	-1.19076	-1.15795	Underperformed	-3.43144	-3.23851	Underperformed
ICICI Prudential Banking and Financial Services Fund	-1.2711	-1.15795	Underperformed	-3.682	-3.23851	Underperformed
Tata Banking and Financial Services Fund	-1.31825	-1.15795	Underperformed	-3.71844	-3.23851	Underperformed
UTI Banking and Financial Services Fund	-1.17487	-1.15795	Underperformed	-3.33324	-3.23851	Underperformed

Source: Author's Calculation

From inspection of Table 9 it is amply clear that ICICI Prudential Banking and Financial Services Fund's TR value is -3.682 which is less than its benchmark index value (-3.23851) of Nifty Financial Services Total Return Index. UTI Banking and Financial Services Fund's SR and TR is -1.17487 & -3.33324 respectively and it is below the benchmark index -1.15795 (SR) & -3.23851 (TR). All schemes are having the negative Sharpe ratio and Treynor ratio values. All four schemes' Sharpe ratio as well as Treynor Ratio is less than their benchmark index. It indicates that none of the schemes has performed better than the benchmark index during pandemic on both parameters.

Table 10: Performance Evaluation of Pharma and Healthcare Sector Schemes using Sharpe Ratio and Treynor Ratio

Schemes	SR_F	SR_Z	Performance	TR_F	TR_Z	Performance
Aditya Birla Sun Life Pharma and Healthcare Fund	-1.92597	-1.7026	Underperformed	-3.55757	-3.08303	Underperformed
ICICI Prudential Pharma Healthcare and Diagnostics Fund	-1.80521	-1.7026	Underperformed	-3.33805	-3.08303	Underperformed
Tata India Pharma & Healthcare Fund	-1.79301	-1.48652	Underperformed	-3.85711	-3.04568	Underperformed
UTI Healthcare Fund	-1.82271	-1.7026	Underperformed	-3.34965	-3.08303	Underperformed

Source: Author's Calculation

Here the benchmark index of three schemes namely Aditya Birla Sun Life Pharma and Healthcare Fund, ICICI Prudential Pharma Healthcare and Diagnostics Fund & UTI Healthcare Fund is S&P BSE Healthcare Total Return Index. The benchmark index of Tata India Pharma & Healthcare Fund is NIFTY Pharma Total Return Index. Aditya Birla Sun Life Pharma and Healthcare Fund is having the SR value of -1.92597 which is less than their benchmark index (-1.7026). Tata India Pharma &

Healthcare Fund's SR and TR is -1.79301 & -3.85711 respectively and it is below the benchmark index -1.4865 (SR) &   -3.04568 (TR). On the basis of analysed data of the schemes, it is found that all schemes are having the negative Sharpe ratio values. Treynor Ratio values are also negative. All four schemes' Sharpe ratio and Treynor Ratio is less than their benchmark index. It indicates that none of the schemes has performed better than the benchmark index during COVID-19 on both parameters.

Table 11: Performance Evaluation of Infrastructure Sector Schemes using Sharpe Ratio and Treynor Ratio

Schemes	SR_F	SR_Z	Performance	TR_F	TR_Z	Performance
Aditya Birla Sun Life Infrastructure Fund	-1.56332	-1.5982	Underperformed	-3.54419	-3.2117	Underperformed
ICICI Prudential Infrastructure Fund	-1.60439	-1.57731	Underperformed	-3.4148	-3.21718	Underperformed
Tata Infrastructure Fund	-1.81207	-1.57731	Underperformed	-4.04259	-3.21718	Underperformed
UTI Infrastructure Fund	-1.66497	-1.5982	Underperformed	-3.62673	-3.2117	Underperformed

Source: Author's Calculation

On the basis of analysed data of the schemes it is revealed that all schemes are having the negative Sharpe ratio and Treynor Ratio values. ICICI Prudential Infrastructure Fund is having the TR value -3.4148 which is less than their benchmark index (-3.21718). UTI Infrastructure Fund's SR and TR is -1.66497 & -3.62673 respectively and it is below the benchmark index -1.5982(SR) & -3.2117 (TR). All four schemes' Sharpe ratio as well as Treynor Ratio is less than their benchmark index. It indicates that none of the schemes has performed better than the benchmark index during pandemic on both parameters.

Discussion

The study focused on the impact of pandemic on the performance of sectoral mutual fund schemes. Average return, standard deviation, Sharpe ratio and Treynor ratio were the criteria used for performance assessment of schemes the findings revealed that during ten months of COVID-19, the average return of majority of schemes is less than their respective benchmark indices indicating that they did not outperform market indices. The lockdown phase has negative impact on returns of sectoral mutual fund schemes. Only two schemes from Pharma and Healthcare sector namely ICICI Prudential Pharma Healthcare and Diagnostics Fund and UTI Healthcare Fund have outperformed the benchmark index as the average return of both the schemes is higher than the benchmark index during the study period as due to pandemic, Pharma and Healthcare sector has gained immense importance. The average return of Banking and Financial Sector schemes and Infrastructure sector schemes was highest in the month of November 2020. The results of study have been consistent with the study of Karmakar (2020) where the results highlighted the predictive trend of average return to be highest in the month of November 2020.

In terms of volatility, all schemes are having beta value below one which makes them less volatile than the market portfolio. Performance evaluation of schemes on the parameters of Sharpe and Treynor ratio highlights that UTI Banking and Financial Services Fund is having the highest Sharpe and Treynor ratio values, which belongs to the Banking and Financial Services sector. In all three sectors, all schemes are having the Sharpe and Treynor ratio in negative values. It indicates that all schemes have performed poorly during these ten months. This result of the study is consistent with the studies of Avinash and Manoj (2020), Pastor &Vorstaz (2020), Patel & Dutta (2020), Rizvi et al. (2020) where the values of these ratios were in negative. It indicates that all schemes have performed poorly during these ten months. All schemes' Sharpe and Treynor ratio is less than their benchmark indices. So, it can be concluded that none of the schemes have performed better than the benchmark index during pandemic period. The overall results of the study are consistent with the results of other studies of Avinash and Manoj (2020), Mishra et al. (2020), Patel & Dutta (2020), Rizvi et al. (2020) Venugopal & Sophia (2020). The possible reasons for negative returns could be attributed to fall in income level, lack of savings, uncertainty and insecurity of the stock market, fall of stock markets, unfavourable market moments and negative sentiments of majority participants. The study concludes that COVID-19 pandemic has negative impact on performance of selected sectoral mutual fund schemes.

Conclusion

Mutual funds provide an opportunity to the small investors who are having small chunks of money to invest in the stock market in accordance with their financial objectives. These investments avenues are attractive but they are subject to market risk. The sudden emergence of COVID-19 has shaken the economies of the world, but the impact is of short-term nature. The study highlighted that

returns of sectoral mutual fund schemes are negative during initial phases of lockdown but eventually when industries started opening after lockdown, the returns showed upward movement. However the sectoral mutual fund schemes underperformed as compared to their respective benchmark indices during the lockdown period. The overreaction of investors, negative sentiments, and lack of confidence and fear of losing money has deviated the investors from rational thinking. All these elements contributed to the short-term disturbance in the stock market which resulted in negative returns during the pandemic Careful analysis, rational thinking and patience is key to deal with such situation..Investors who are aiming at long-term investment horizons should not pull out their money from mutual funds irrespective of short-term volatility in the equity and debt funds.

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WOMEN EMPOWERMENT THROUGH MICROFINANCE

Dr. Kamal Kanwar Rathore[*]

ABSTRACT

The role of women in society is critical for the development of the country. Women are a great human resource in all countries and Women workers throughout the world contribute to the growth of the economy and support in the sustainable development of their families and their communities. Microfinance helps in empowering women from poor households to make this contribution. Microfinance is now a day's considered as one of the most useful and flexible strategies in the battle against poverty, in other words, it can be said that it is a useful poverty abolition strategy especially for women as many microfinance institutions target female clients. The paper begins with the meaning of the terms microfinance, empowerment. The respondents were interviewed and primary data were collected with the pre-tested and well-structured questionnaire. The primary data analysis is of four districts (Jaipur, Jodhpur, Ajmer, and Udaipur) of Rajasthan. This paper focuses on the role played by the microfinance institutions on the social and economic empowerment of women in Rajasthan and also focuses on the unique challenges faced by the women in the aforesaid districts in Rajasthan. The paper concludes with recommendations that Micro Finance and women empowerment are the two sides of a coin therefore microfinance institutions should strengthen and expand their support to resource-poor women.

KEYWORDS: *Women Empowerment, Poverty Eradication, Entrepreneurship, Strategy, Microfinance.*

Introduction

Microfinance in simple words means providing financial services to the poor. According to Merriam Webster Dictionary "Microfinance means financial services especially in the form of microloans provided to impoverished individuals and groups in poor and developing regions". Institutions providing the microfinance generally target women and thus play very important role in women empowerment.

In the words of ILO Director-General Juan Somavia- "Microcredit plays a critical role in empowering women, helps deliver newfound respect, independence, and participation for women in their communities and their households". Women empowerment means that women should have all the power those men enjoy and should live life with dignity, respect, confidence, and independence. This paper is about microfinance and its role in the empowerment of women in the four districts (Jaipur, Jodhpur, Ajmer, and Udaipur) of Rajasthan. Although Jaipur is the capital of Rajasthan the women community in this region is deprived of many things like they have limited right- in using the income of the family, in sharing the household expenditure, they have limited access to information and learning from the outer world, they face gender discrimination, their role in the decision making in the family matters is very less, they have limited freedom to express their thoughts. Many Challenges are faced by women of the four districts of Jaipur, Jodhpur, Ajmer, and Udaipur. The lives of thousands of women have improved due to the microfinance. The areas where loan is distributed to women, they lack in their decision making power. And this lack of decision making could be seen in both the rural areas as well as in the urban areas.

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When women use the microcredit, they become more independent and become more confident as they are involved in the income generation and can easily access to the resources. There is social empowerment of women as well as the economic empowerment of women due to the financial aid provided by the microfinance institutions and this all helps in the overall development of the women or it can be said that this leads to women empowerment.

Objectives

The main objectives of this study are:

- To study the impact of microfinance programs on the social and economic empowerment of women in different districts in Rajasthan.
- To know the unique challenges faced by the women in Rajasthan.

Research Methodology

Primary data was the main source of the study. The purpose of the research is achieved by collecting data on women empowerment indicators (presented in the table) from the women clients of various SHGs and NGOs in Rajasthan. Due to the limitation of time, cost, and access to women using the microcredit facility the data was collected from 30 respondents, and the respondents were included in the sample based on ease of access. The details of the respondents were taken from the various Self-help groups and Non-government organizations of different districts in Rajasthan. A large number of respondents were interviewed telephonically whereas some respondents were interviewed in person. The data has been generated using a structured questionnaire related to women empowerment through microfinance. Respondents were asked to rate the parameters according to their choice. Their responses were collected, tabulated and the analysis was done to study the empowerment of women through microfinance.

Result and Analyses

Analysis done to study the empowerment of women through microfinance has been done on variables selected for study in the following manner. Section 1 of the questionnaire deals with the personal information of the respondents/organizations. Since this information was not important for any type of analysis, therefore this information has not been tabulated and discussed. Section 2 of the questionnaire deals with the indicators of women empowerment. For each indicator, five variables were given and respondents were asked to answer on a five-point scale. (a) Strongly Disagree (SDA)(b)Disagree (DA)(c)Neutral(N) (d)Agree(A) (e)Strongly Agree(SA).To study these various parameters Right of income usage. (A1), Sharing the household expenditure. (A2), Access to information & learning. (A3), Stand against gender discrimination. (A4), Decision-making in the family matters. (A5), Ability to express thoughts. (A6), (A1 A2, A3, A4, A5, A6) were developed, the responses to these parameters were collected and analyzed by formulating table which is given below. The table shows the responses from strongly agree to strongly disagree against each parameter of women empowerment. Strongly agree and agree are considered as positive responses and strongly disagree as negative responses. The women empowerment index is calculated by finding the responses of candidates on all the parameters of women empowerment.

Table 1: Social & Economic Empowerment of Women

S.N	P	SA	A	N	DA	SDA	Total
1.	(A1)	15	7	2	4	2	30
		(50)	(23.33)	(6.67)	(13.33)	(6.67)	(100)
2.	(A2)	14	8	1	4	3	30
		(46.67)	(26.67)	(3.33)	(13.33)	(10)	(100)
3.	(A3)	12	9	3	3	3	30
		(40)	(30)	(10)	(10)	(10)	(100)
4.	(A4)	10	8	4	6	2	30
		(33.33)	(26.67)	13.33)	(20)	(6.67)	(100)
5.	(A5)	9	14	2	2	3	30
		(30)	(46.67)	(6.67)	(6.67)	(10)	(100)
6.	(A6)	14	6	3	5	2	30
		(46.67)	(20)	(10)	(16.67)	(6.67)	(100)

Note: Figure in Parenthesis indicate percentage share of total.

- The above table reveals that approximately 73.33% of the women using microcredit gave positive response which indicated that microcredit has given women the ability to use income which is a sign of women empowerment.20% of the women using microcredit gave responses which indicated that microcredit has not given them the ability to use income and this sign of women empowerment was not found in them.

- Approximately 73.34% of the women gave responses which indicated that income generated through microcredit allows them to contribute in the domestic expenses 23.33% women gave responses which indicated that this sign of women empowerment was not experienced by them.

- Approximately 70% of the women were of the view that the use of microcredit has increased their level of information while 20%of the women were not benefited in this regard.

- Approximately 60% of the women using the microcredit could raise the voice against gender discrimination. While 26.67%gave responses which indicated that they couldn't raise voice against the discrimination and hence the sign of empowerment was not found in them.

- Approximately 76.67% of the women using the microcredit were of the view that their participation in decision making in family matters was increased.16.67% women respondents indicated absence in participation in decision making.

- Approximately 66.67% of the women were of the view that they gained the power to express thoughts.23.34% of women didn't had the power to express their thoughts.

Table 2: Women Empowerment Index

S.No.	Parameters	Rank
1.	A1	3
2.	A2	2
3.	A3	4
4.	A4	6
5.	A5	1
6.	A6	5

The analysis of the above table reveals that the parameter showing the participation of women in decision making in family matters(A5) was rated first rank among the women respondents while the last rank was given to the parameter (A4)which showed that the women raising their voice against the gender discrimination was not up to the mark .

Conclusion

Micro-finance is a Panacea for poor Women. Microfinance helps in eradicating poverty .The paper concludes with recommendations that Micro Finance and women empowerment are the two sides of the same coin. Microfinance is a major explanatory variable in this study and has a positive role in empowerment of women in the four districts in Rajasthan. Microfinance services lead to women's empowerment by positively influencing women's ability and right of income usage, their ability in sharing the household expenditure, their access to information & learning from the outside, increases their ability to take stand against gender discrimination, it enhances the decision making power of women in the family matters., increases their ability of expressing thoughts and thus it enhances their overall socio-economic status. In the end it can be concluded that microfinance institutions like the self help groups and the non government organizations working in the four districts of Rajasthan should be more strengthened so that they can expand their support to the poor women both in the rural as well as in the urban areas.

The unique challenges faced by the women in Rajasthan are that they are illiterate and are not able to perform the formalities of microcredit by themselves and they have to take help of their male family members and secondly they face lot of problems due to gender discrimination in the family.

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ROLE OF DEEP LEARNING IN DETECTING AND TACKLING MALWARE AND NETWORK INTRUSIONS

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ABSTRACT

The research and advances in the field of Machine Learning (ML) have produced algorithms and technologies for improving security solutions that help in identifying and decisively dealing with security threats. On the contrary, the brighter side of all these advances is making it possible for cybercriminals to use the very same knowledge in crafting and launching bigger and more sophisticated cyber attacks. This research paper focuses mostly on the literature survey of Machine Learning and data learning techniques for cyber security. Machine Learning is performing a task with the given data as input with a view to make its performance progressively better over time. Some of the Machine Learning and Deep Learning (DL) methods are explained and how they are relevant in the field of Cyber Security. With increasing digitization globally, the security concerns are also growing at an alarming rate. The need for dynamic and progressed security technologies and procedures to counter the complicated nature of cyber attacks becomes an imperative. This paper is intended to sensitize researchers desiring to begin their work in the field of ML or DL, and Cyber Security. Some references also have been made by citing distinct works and some valuable examples are provided as to how cyber problems are often detected and tackled by ML. This paper specifically discusses both defensive and offensive behavior on cyber-attacks targeted at ML models. Finally, the applications like malicious code, behavior of network traffic, malware system call sequence, and intrusion detection are also discussed in detail.

KEYWORDS: *Cyber Attacks, Phishers, Botnet, Malware.*

Introduction

While digitization process is reaching its peak globally, the digital security continues to remain as a daunting concern for one and all. Research papers are increasingly finding a place in the public domain every day and the digital world is becoming more and more open-sourced. These developments have resulted not only in the evolution in network technologies such as the Internet but also in providing greater access to cutting edge technologies most easy than ever. Correspondingly, the very same research findings and technologies are within the reach of both the security analyst and, unfortunately, the cyber criminals who have their own vested interests to carry out nefarious activities. However, there is a silver lining to all these dark clouds with undesirable consequences. The research and advances in the field of Machine Learning (ML) have produced algorithms and technologies for improving security solutions that help in identifying and decisively dealing with security threats.

On the contrary, the brighter side of all these advancement is making it possible for cybercriminals to use the very same knowledge in crafting and launching bigger and more sophisticated cyber attacks. On a day-to-day basis, we are witness to spam in unsolicited messages in humungous volumes to a single or multiple users. Reliable anti-spam filters came into picture to arrest this. Spammer is referred to as a person who gathers email addresses from various websites and viruses to send spam messages **[2].** Over the years, there has been a great concern with reference to spam messages raising a lot of apprehensions as

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they can potentially affect our lives. As spam can be classified as spam message, spam email, and malicious spam, organizations have already started making huge investments in ML methodologies for improvisation of mail spam detection. The second quarter in 2020 often saw *phishers* resorting to targeted attacks especially against fairly small companies or even the start-ups. To lure and attract attention, scammers imitated email messages and websites of companies whose products or services their potential victims could be using. None of the web elements appeared reliable as the scammers had created them as fake except for the login form. The prime aim of the scammers is to get the login username and password of the target. This is achieved by ensuring that the target is made to enter login credentials of their email account and making the desired online catalog available later.

Malicious code comes into being when software's intention is to harm or extinguish the operation of the system through adding, changing, or deleting few lines of code by illicit users in normal conditions. Over the past, malicious code instigations are mainly viruses, Worm, Trojan horse, etc. On 29th June 2020, Microsoft Security Endpoint Threat Report 2019 stated that Asia Pacific region continues to go through a *higher-than-average* encounter rate for malware attacks—1.6 times higher than remaining world. India has recorded the seventh highest malware encounter rate over the region at 5.89% in 2019, which was 1.1 times higher than the regional average. This record was achieved despite a 35 percent decrease in malware encounters in 2019 **[1].** Increase in malicious code count reflects in loss and harm is growing parally. The main focus of intrusion and detection in Network security Discovering is twofold: (i) recognizing the pattern and behavior of an intruder in the network and (ii) making attempts in the system by collecting and analyzing the main data in the network and the computer system.

Efficiency of intrusion and detection can be improved if the malicious code can be identified accurately and efficiently. Malicious code analysis and detection continue to remain as the main problems in intrusion detection technology. A cluster of compromised computers that is worked remotely to execute corresponding attacks or fraudulent acts is referred to as 'Botnet'. They are evolving constantly and hence the existing detection approaches are a little lagging. Of late, to tackle its detection problem, behavior analysis of network traffic seems to be the only solution. The objective of this approach is to observe at the similar patterns that Botnet uses across its life cycle. Its sole aim is to simplify the order to become efficient in identifying unidentified Botnet traffic. Botnet is described as various internet computers that have been placed to institute connections to other computers on the internet as per Hacheem et al. **[4].**

The constant evolving behavior of Botnets has proved that many of the traditional detection methods were unsuccessful to give the essential detection results **[5].**The prime action of a Botnet is that after giving new commands episodically, all the bots must connect to the Botmaster. This behavioral observation was perceived only after a prolonged time of observation and this is exactly the objective of behavioral detection method. The Stratosphere **[6]** Intrusion Prevention System (IPS) project, was initiated for giving to the society the state of the art behavioral IPS. Present Stratosphere IPS detection approach is built on Markov Model.

Though it has generated highly promising results, there is still scope for continuous improvements as it suffers from problems for committing to memory. On the contrary, Recurrent Neural Network (RNN) has shown to be efficacious when it is dealt with at large state sequences as it makes them a feasible applicant on the task of sequence behavior analysis. This paper discusses how RNN is used to detect the behavior of network traffic. Specifically, for recognizing the distinct sequence of states that generally change with time, an analysis of how a Large Short Term Memory (LSTM) network **[7]** is used.

Methodology

Spam Features using Restricted Boltzmann Machines

- **Introduction to Methodology**

Restricted Boltzmann Machines is composed by two neurons layers i.e. visible and hidden layers, which is unsupervised learning. This is same as classical Boltzmann Machine (Ackley et al. 1988), neurons in the same layer are unconnected. Architecture of a Restricted Boltzmann Machine is shown in **Figure-1**, here the visible layer is v (with m units) and hidden layer h (with n units).In the m × n matrix W models the weights between visible and hidden neurons, where wij stands for the weight between the visible unit vi and the hidden unit hj. **[8]**
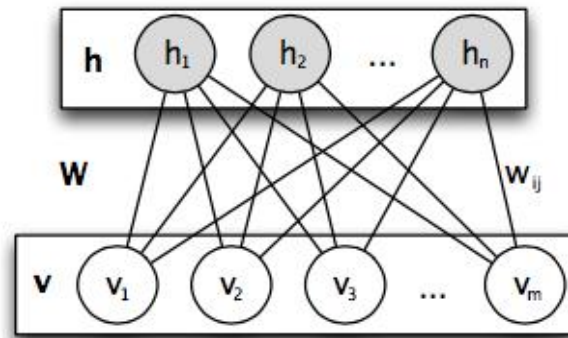
Fig. 1: Restricted Boltzmann Architecture.

Silva, Luis Alexandre da & Costa, Kelton & Papa, João & de Rosa, Gustavo & Albuquerque, Victor proposed an experiment to enhance spam detection by understanding the features using Restricted Boltzmann Machines enhanced by Harmony Search (HS)-based (Geem 2009) techniques. The learning step has four parameters: the learning rate , weight decay , penalty parameter , and the number of hidden unit 'n'. For comparison of results, they defined two experiments viz., EXP1 and EXP2 that had the objective at estimating different ranges regarding the RBM parameters. With regards to EXP1, they have the ranges: ∈ [0.0, 1.0], ∈ [0.0, 1.0], ∈ [0.0, 0.001] and n ∈ [5, 15]. In EXP2, they used the ranges: ∈ [0.0, 1.0], ∈ [0.0, 1.0], ∈ [0.0, 0.001] and n ∈ [30, 45]. For accuracy, they made a cross-validation process using 10 running, where 50% of the dataset was for training and rest 50% for testing.

- **Data Set**

  The authors **[8]** used three datasets sighting the task of spam detection:

  - **Spambase**: The dataset is accessible in the UCI ML Repository. It contains 4,601 samples where 39.4% are classified as spam messages. Each of the samples has 57 attributes. The features signified the occurrence of each word by dictionary set by the authors of the work (Bache & Lichman 2013) **[9]**.

  - **LINGSPAM**: The dataset has spam and non-spam e-mail messages gathered through a Linguist mailing list. There are 2,893 e-mail messages where 2,412 are non-SPAM and 481 are spam (Androutsopoulos, Koutsias, Chandrinos, Paliouras & Spyropoulos 2000) **[10]**.

  - **CSDMC**: The dataset has messages that are divided into those related to training and testing. The training set has 4,327 messages where 2,949 messages are ham and 1,378 messages are spam. (Group, 2010) **[11]**.

  The authors **[8]** used the same dictionary of words for all the three datasets. All the samples were labeled ham or spam in three datasets too.

- **Experiment**

  Ten agents were employed over 50 iterations for merging for all methods. They also engaged with 100 epochs and mini-batches with a size of 100 for the RBM learning weights procedure via the Contrastive Divergence (HINTON, 2012) **[12]**. The Harmony Memory Considering Rate (HMCR) and the Pitch Adjusting Rate (PAR) prevent Harmony Search and Improved Harmony Search to get stuck from local optima and was utilized to alter the step size of new solutions. Authors conducted 2 experiments were accomplished to gauge the robustness of the proposed approach. They first extracted the features for the datasets based on the dictionary-based approach, so called ORIGINAL.

- **Experiment Results**

  The authors **[8]** significantly focused on RBM-based reconstruction in EXP1 experiments that used on an average only 10 features, i.e. about 5.7 times lesser compared to original. Likewise behavior was seen in EXP2 experiment that showed superior results than ORIGINAL and EXP1 datasets, as they had huge amount of hidden neurons. Figures 1 and 2 displayed the experimental results with respect to SPAMBASE datasets for EXP1 and EXP2 rounds, respectively.

Fig-1: SPAMBASE Dataset (EXP1) results

Fig-2: SPAMBASE Dataset (EXP2) results

Figures 3 and 4 displayed the experimental results with respect to LINGSPAM datasets for EXP1 and EXP2 rounds, respectively
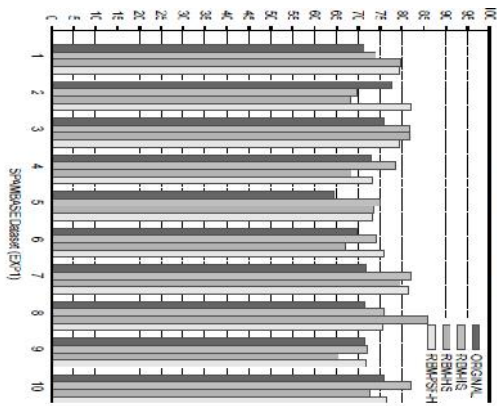

Fig-3: LINGSPAM Dataset (EXP1) results

Fig-4: LINGSPAM Dataset (EXP2) results

Figures 5 and 6 displayed the experimental results with respect to CSDMC datasets for EXP1 and EXP2 rounds, respectively

Fig-5: CSDMC Dataset (EXP1) results

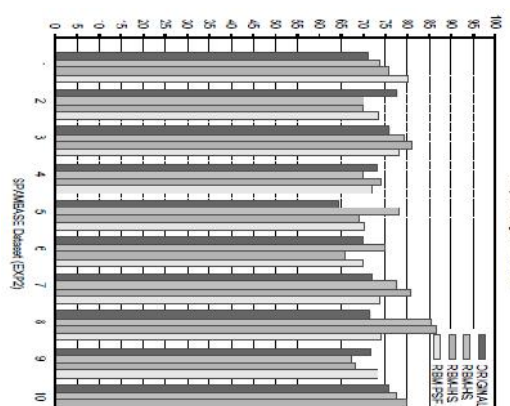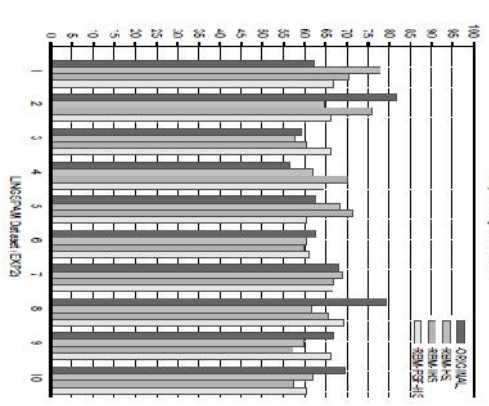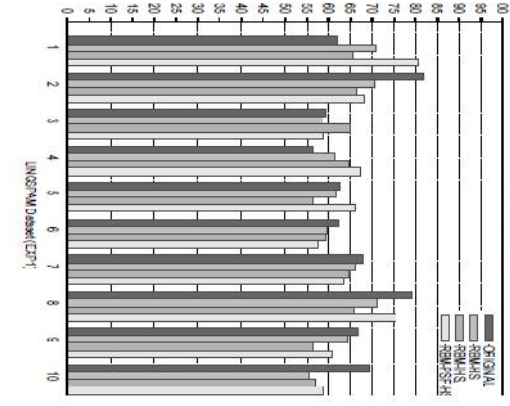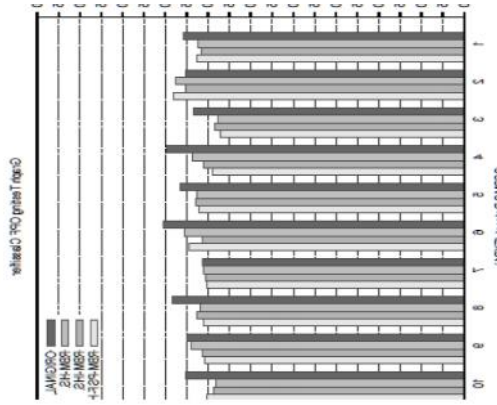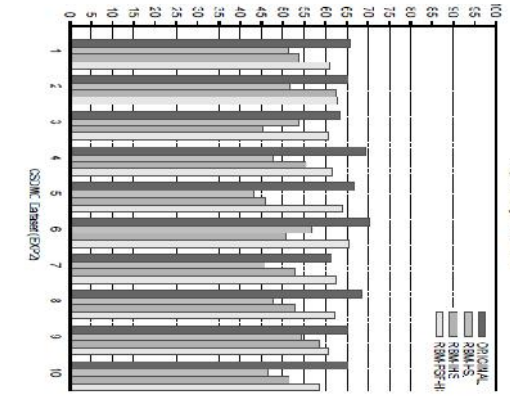

Fig-6: CSDMC Dataset (EXP2) results

This experiment has helped to learn the impact of a more acumen and compact set of features learned by Restricted Boltzmann Machines that was optimized by HS-based techniques. The SPAMBASE dictionary was a basis to LINGSPAM and CSDMC which was a bad choice because it did not give good results than SPAMBASE dataset. The results showed that the hidden neurons did not impact the quality training samples and also results **[8].**

Classification of Malware System Call Sequences

- **Introduction to Methodology**

The malware zoo, are executable files that is the input data which is retrieved by executing malware in a safe environment. The results are preprocessed to ensure we get numerical features which are then forwarded to the neural networks as an input. The neural network classifies the malware in the respected predefined malware family. The authors have used Tensor flow and Theano.

- **Dataset**

The authors **[19]** have used the Malware samples from three sources: (a) Virus Share **[13]** (b) Maltrieve **[14],** and (c) few of their private collections. Hence, this was a diverse volume to get much needed data. Cuckoo Sandbox an open source tool was used to execute the malware as this provides as controlled environment. While the malware was getting executed all the samples were recorded of which calls from the kernel API was made. These did further help in malware classification of the malware samples where the classification labels are obtained using Virus Total **[15].** The Virus Total service was leveraged to get to see the malware analysis results and specific signatures for the samples in the malware zoo. The authors were keen on the antivirus signature as they wanted to retrieve the labels for supervised learning. Each extracted unique sample needed a numerical label. Each antivirus has its own version or way of providing signatures through Virus Total which certainly makes it tough for classifying the tests in ML. Therefore, the authors approach was to execute the clustering of signatures from various anti viruses and get the classes from the resulted clusters. Though reverse engineering could have been made use of, due, to larger scale of dataset was not an ideal scenario.

- **Experiment**

The authors **[19]** have come up with their own neural network architecture that combined the convolutional and recurrent layers in one neural network which utilize the maximum possibilities. The convolution layer performed the feature extraction from the raw one-hot vectors, which has captured the correlation between the neighboring inputs and produced new features. They used two convolution filters of size 3 X 60. This corresponds to 3 grams of instruction. The result of this convolution was taken as a feature vector of sizes 10 and 20 for both the layers for all the input features. Max- pooling was used to reduce data dimensionality by a factor after every convolution layer.

These outputs were finally connected to the recurrent part in their neural network. Each output that was filtered from the convolutional filter was considered as one vector. LTSM cells were used to model the resulting sequence. VAMO **[16]** was used to simplify the simplified clustering process from the Virus Tool signature. A Boolean vector was then attached to each of the samples to check for presence or absence of different virus signatures. There were 10 clusters collected and a total of 4753 malware samples which covered most of the sample sets, remaining sample sets were considered as outliners. The redundant data was removed and the data was converted to a sequential numerical feature vector, now the data is fed as an input to the Neural Networks. There is a preprocess sequence performed that removed the repeated subsequence API calls. For every API call that was present in the dataset they needed to find a unique binary vector hence, one-hot encoding was used. As this becomes a zero feature vector, it also results in a sequence of binary vector rather than sequence of API call names given by Cuckoo sandbox.

- **Result**

For evaluation the authors did note performance for all families in accuracy (ACC), precision (PR) and recall (RC). They performed a 3-fold cross validation where two-thirds of the total samples were used for training and one third for testing. They averaged results of ten-cross validation tests, which was executed every time with permutation of randomly new dataset to ensure a reliable performance estimate. In experiment 1, they investigated the performance of their neural network architecture of how simpler it was comparatively, like feed forward neural network, or convolutional network. **Figure-7** shows their configuration has got classification performance improvements.

Family	Results of various neural network architectures (%)								
	Feedforward network			Convolutional Network			ConvNet+LSTM		
	ACC	PR	RC	ACC	PR	RC	ACC	PR	RC
Multiplug	99.6	100.0	99.3	98.9	98.9	98.9	98.9	99.8	99.0
Kazy	100.0	71.7	100.0	100.0	100.0	100.0	100.0	99.9	100.0
Morstar	0.0	0.0	0.0	100.0	100.0	100.0	100.0	99.9	100.0
Zusy	9.1	57.2	68.5	100.0	56.8	100.0	100.0	57.5	100.0
SoftPulse	100.0	100.0	98.2	100.0	99.6	100.0	100.0	99.1	100.0
Somoto	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mikey	89.1	37.1	28.8	0.0	0.0	0.0	0.0	0.0	0.0
Amonetize	100.0	98.4	100.0	99.1	100.0	99.1	99.1	100.0	99.6
Eldorado	100.0	100.0	96.4	99.2	100.0	99.2	99.4	100.0	99.5
Kryptik	100.0	100.0	100.0	95.0	100.0	95.1	96.6	100.0	96.2
Average	79.8	76.4	79.1	89.2	85.6	89.2	89.4	85.6	89.4

Fig-7: Evaluation of deep hybrid network.

They also were keen to measure the improved performance of their proposed methodology. Hence, they compared the deep hybrid architecture to that of Hidden Markov Models and Support Machine Vector performance. **Figure-8** shows the highly improvement with respect to neural networks usage as classifiers. The statistically significant improvement had a 5x2cv t-statistics value with 95% confidence level when compared to SVM.

Family	Deep Neural Network			Hidden Markov Model			Support Vector Machine		
	ACC	PR	RC	ACC	PR	RC	ACC	PR	RC
Multiplug	98.9	99.8	99.0	91.5	74.5	91.5	99.3	99.9	99.3
Kazy	100.0	99.9	100.0	73.1	95.1	73.1	96.6	93.1	96.6
Morstar	100.0	99.9	100.0	80.0	63.7	80.0	82.3	91.0	82.3
Zusy	100.0	57.5	100.0	65.4	45.1	65.4	100.0	58.4	100.0
SoftPulse	100.0	99.1	100.0	51.1	100.0	51.1	99.9	99.6	99.9
Somoto	100.0	100.0	100.0	50.0	37.6	50.0	99.8	100.0	99.8
Mikey	0.0	0.0	0.0	5.7	20.0	5.7	0.0	0.0	0.0
Amonetize	99.1	100.0	99.6	29.4	100.0	29.4	99.3	100.0	99.3
Eldorado	99.4	100.0	99.5	20.0	80.4	20.0	100.0	100.0	100.0
Kryptik	96.6	100.0	96.2	10.0	100.0	10.0	97.1	100.0	97.1
Average	89.4	85.6	89.4	47.5	71.6	47.6	87.4	84.2	87.4

Fig-8: Comparison with previously used methods and proposed method by the authors.

Their last experiment was to portray their inner working of their neural network. Figure 3 displays the correlation of 5-grams of likeliness and likeliness of results derived from convolutional filters. It was evident that neuron activation values pursue the likeliness between n-grams of kernel API calls. They received their best classification for using convolutional filters with width 3 but they used width 5 to get visualization [19].

Hybrid Malicious Code Detection Method

- **Introduction of the Methodology**

The authors [20] proposed a hybrid malicious code detection model that's based on deep learning where the dimension of the data is reduced by the Auto Encoder's space mapping capability of various dimensionalities and then removing the main characteristics. They kept this as a base and set the DBN as a classifier various timed for deep learning. They were also keen on improving the detection accuracy and time complexity reduction of the hybrid model. The algorithm the authors proposed is shown in **Figure-9.**

The hybrid detection algorithm is described as follows:

(1) Initialization, input training samples; then digitizing and normalizing the input data;

(2) Reducing the dimension, AutoEncoder was used to realize the feature mapping;

(3) Input eigenvector with dimensionality reduction, network parameter to initialize DBN classifier;

(4) Set the layer i=1;

(5) Train the network layer by layer according to RBM learning rules, then save the result including the weights and biases;

(6) If i< max layer, set i i+1; when i>max layer, do the supervised learning for BP network;

(7) Input the test samples into the trained classifier to detect malicious code and the normal code.

Fig-9: Hybrid Detection Algorithm

- **Dataset**

The authors have used KDDCUP'99 dataset to detect the malicious data that included five categories: UZR (User to root), RZL (Remote to Local), probe, DoS (Denial of Service) and normal data too. The KDDCUP'99 dataset has 494,021 for training and 311,029 for testing but the authors used only 10% from the dataset was used as sample. Each record in this dataset has 41 properties with character type and numerical type data only.

- **Experiment**

The experiment was performed on platform of Intel Core Duo CPU 2.10GHz and 2.00G RAM's, Matlab v7.11. As the authors used only 10% of the dataset results as 2000 samples hence, the proportion shows 141 attacks which is recorded test data and also additional 14 experiments. The experiment planned the Auto Encoder has five layers. Here the neurons count in the preceding four-layer was 41, 300, 150, and 75. The last layer is a variable and the number of neurons here would determine the data dimension after the dimensions are reduced. Auto Encoder was used for data dimensional reduction once, the training and testing was completed. By making changed to the iterations of pre training, different models were got

  - AutoEncoder+ DBN5-5
  - AutoEncoder+ DBN10-10
  - AutoEncoder+ DBN10-5

- **Result**

The results showed that with the increase in iterations, in the respect of detection accuracy, the method the authors have proposed was superior to the method of single DBN, which they have used in the first experiment. Usage of Auto Encoder for reduction of data dimension did prove effective. The accuracy of detection (TP) was reduced. This process can be used in complex environment, which could effectively detect malicious code, besides, less time consuming.

Recurrent Neural Networks for Botnet Detection Behavior

- **Introduction to the Methodology**

The authors **[21]** have proposed a LSTM network for constructing detection models based on how the connections behave. The ideology here is transforming each symbol into a binary vector for encoding the behavioral connections to LSTM inputs. **Figure-10** shows the possible symbols that have been used in the behavioral model.

SYMBOL ASSIGNMENT STRATEGY FOR BUILDING BEHAVIORAL MODEL ACCORDING TO THE STRATOSPHERE PROJECT.

	Size Small			Size Medium			Size Large		
	Dur. Short	Dur. Med	Dur. Long	Dur. Short	Dur. Med	Dur. Long	Dur. Short	Dur. Med	Dur. Long
Strong Per	a	b	c	d	e	f	g	h	i
Weak Per.	A	B	C	D	E	F	G	H	I
Weak Non-Per.	r	s	t	u	v	w	x	y	z
Strong Non-Per	R	S	T	U	V	W	X	Y	Z
No Data	1	2	3	4	5	6	7	8	9

Symbols for time difference
Between 0 and 5 seconds: .
Between 5 and 60 seconds: ,
Between 60 and 5 mins: +
Between 5 mins and 1 hour: *
Timeout of 1 hour: 0

Figure-10: Possible symbols used in behavioral model

Hence, the authors were able to represent these symbols in a binary vector of size 50. Every element that was on the vector did represent a symbol. They observed two issues when they tried to build the detection model. Firstly, the size and proportion of the historical data were used to build the model. It was needed and the count of connection behaviors that belonged to the Botnet class has to equal the Normal class. Having this state, it was possible the learned model could present a bias to the majority class. Secondly, it was essential to know the optimal length of connection states required to correctly detect a malicious behavior and proactively prevent the usage of unwanted computational time.

- **Dataset and Sampling Techniques**

The authors have used two data sets to evaluate their proposed methodology LSTM detection method. The network traffic was captured from CVUT University campus networks. These datasets are available as part of the Malware Capture Facility Project (MCFP) **[18]**.

Figure-11 below gives a quick glimpse of the dataset.

GENERAL INFORMATION ABOUT DATASETS

ID	Desc.	Botnet Conn.	Normal Conn.	MCFP IDs
A	Bonet Neris	2101	713	CTU13-42
B	Bonet DonBot	188	300	CTU13-47

Fig-11: Dataset

- **Experiment**

As the users had to deal with unbalanced classes on LSTM performances they have used Under-sampling and Over-sampling methods. In Under sampling to balance the classes randomly instances are removed from the majority class. In Oversampling to balance both the classes the randomly instances are selected from the minority class and duplicated until the classes are made even. This was applied to the dataset. K-fold cross validation with k equaling to 10 was trained on the LTSM network. As randomness is associated with these sampling techniques this process was executed for 50 iterations. The results are compared against Attack Detection Rate (ADR) and False Alarm Rate (FAR) as they don't use any sampling strategy. Figure 12 shows the results

AVERAGE AND STANDARD DEVIATION VALUES FOR ADR AND FAR
AFTER 50 EXECUTIONS FOR DIFFERENT SAMPLING STRATEGIES

	ADR		FAR	
	Avg.	Sd.	Avg.	Sd.
No Sampling	0.9796	0.0106	0.0372	0.0227
Under Sampling	0.9680	0.0197	0.0195	0.0179
Over Sampling	0.9601	0.0132	0.0111	0.0068

Fig-12: Results

ADR values did not show any significant disparity on all the three evaluation cases but, while using these two sampling technique it is observed that there is a minimal performance loss. Less malicious connections were used to train the LSTM network while using the under sample technique. On the contrary, the detection model that was obtained did not have the opportunity to learn the probable valued information from the connections that were lost. When it came to Over Sampling technique it was seen that there was no sample reduction but there was a greater amount of normal samples that had influenced the capability of the learned model to detect.

FAR values showed a significant decrease that was observed while both sampling techniques were compared to when no sampling was applied. It seemed that both the sampling techniques had prospered in reducing the tendency of classifying majority of the connections as 'malicious observed' in the no sampling case. They also focused on exploring the amount of states in connections of the behavioral models to prove the optimal length need to supply the LSTM input layer. This was applied to the dataset. K-fold cross validation with k equaling to 10 was trained on the LTSM network and only the results of the Under-sampling technique are reported. They also observed good average for ADR with case of 25 connection states. From here the point average decreased. They also observed in FAR, good improvement with the case of 50 connection states. According to standard deviation values, there was no major difference with respect to ADR and FAR where more than 10 connection states are used.

- **Results**

This experiment was conducted to examine the effect of Under-sampling also the chosen state connection length on the functioning of the LSTM detection model. LSTM detection model was first trained on dataset A with the Under-sampling technique and the optimal length of behavioral models. Dataset B was then used to evaluate the LSTM detection model. Dataset B on which the LSTM detected model was tested gave a value of 0.809 for ADR and 0.300 for FAR. Performance loss was at 15% for ADR and 1% for FAR. **Figure-13** shown below is a Barplot for connections that were labeled Botnet for the analysis of detection performance of LSTM. It was for all the connections that were labeled as Botnet, correctly classified connection were shown in color cyan and the incorrectly classified were shown in color pink.

Fig-13: Bar plot for connection

Conclusion

Since the start of the computer revolution, the cyber attackers have always tried to stay a step ahead to misuse different kinds of software that are vulnerable to execute malicious activities. DL technology having been reasonably well established in the industry, attackers are now searching for alternative paths to misuse this domain too. This paper has analyzed how DL can be useful from a security perspective for defensive and attacking viewpoints and also the probable threats aimed at DL models. It is evident that DL is a strong tool that can be applied for automating complicated defensive and offensive cyber activities. We have analyzed the impact of a highly classified and compressed set of features studied *via* Restricted Boltzmann Machines optimized by Harmony Search based techniques.

Experiments were performed for spam detection using the three public domains—**SPAMBASE**, **LINGSPAM**, and **CSDMC**. Words were modeled through an array of frequency distributions wherein every dimension of the array represents a feature in a dataset while applying natural language process. Size of the vocabulary is easily written of a huge quantity of words. The dimensionality impacts the time for training and computation resources. Here, using tools as RBMs to study features is highly important. It's observed that it is probable to attain appropriate results using 5.7 times features less from the original dataset. **SPAMBASE** dictionary was used as a base to **LINGSPAM** and **CSDMC** that could have been thought about again as the results for the latter could have been at least similar to those of the former dataset.

The results analyzed were promising as there are circumstances where new learned features could improve the original with a significant advantage. Optimal classification results are obtainable by using the combination of convolutional and recurrent layers in neural network architecture. Usage of a hybrid neural network having two of the former and one of the latter received an innovative approach to malware classification that showed superior performance results in comparison to the classical malware classification approaches. Hybrid method of detecting malicious code using DL has the combinational advantages of Auto Encoder and DBN respectively. Lastly, the experiment was proved by using KDDCUP-99 dataset and the results were showed in comparison to the detection method with single DBN. Hybrid method of detecting malicious code improved detection accuracy, even though the time complexity of the model was reduced.

For detecting network behavior, two crucial problems with respect to the application of **LSTM** were studied. Under sampling and Oversampling techniques were used for evaluating the dataset having more Botnet rather than normal traffic for a traffic imbalanced case. Without using any sampling technique FAR value can be increased significantly. In spite of its ease, oversampling resulted in a highly suitable sampling technique for enhancing detection. Completely independent tests were performed on an unseen dataset by an opposite traffic imbalance that also stated adverse kind of Botnet. Generally, the **LSTM** Detection Model showed good values for ADR and FAR. FAR values have stayed within the required levels when seen during cross validation.

Deeper analysis displayed that **LSTM** was efficient in detecting precisely those Botnet behaviors which were substantially different from the Normal. In contrast, when these differences were not evident,

the class having highly similar behavior was ideal. Cyber attackers are also influencing DL in their collection of cyber weapons and it is predicted to experience highly sophisticated and big attacks driven by **AI.** In the final analysis, it's highly important that both security and DL experts focus on the recent progressions in DL with adversarial DL. For this, we need to be continuously on the search out to make usage of possible AI-related security applications.

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STAKEHOLDER CAPITALISM: AN INSIGHT INTO THE INCLUSIVE APPROACH OF BUSINESS ADMINISTRATORS

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ABSTRACT

Businesses have existed in varied organised forms and structures across decades. The approach of ownership has also graduated from single/personalised ownership to companies. Over years, the stakeholder approach has also come into existence in light of various societal, cultural, environmental concerns along with human interaction with the business environment (ecosystem). Business administrators have forever ensured an 'all-inclusive' approach towards each of these factors and have grown with each such change: from Human Resource Accounting to Stakeholder Capitalism as their guiding light. All such approaches have opened the realms of business thought-process as well as decision-making process into the world of intangible and non-commercial factors like inclusivity, stakeholder approach, pay-back to the indirect contributors like the natural environment, human resources beyond their pay packages and others. These have caused businesses and their administrators to follow the inclusivity approach and have promised as well as showcased better results, both financially and otherwise. This lead to the acceptance of the concept of virtuous circle of prosperity and validated the humanitarian approach of business activities.

KEYWORDS: *Stakeholder Capitalism, Mutual co-existence, Ethical Sourcing, ISO Standards.*

Introduction

The concept of Stakeholder Capitalism has been around for a really long period of time and like various sensitive business insights, is slightly mis-construed and hence ill-applied. The core idea of this concept is to painstakingly align and engage all the stakeholders of the business with its mission and vision. Unlike theories that find their practical implication after due formulation, application and the associated research, this concept has found its niche in the direct practical implementation circles of the business arena. It has developed due to the unflinching faith of the 'all-inclusive' business administrators who wish to improve their businesses by working around their customers as well as stakeholders. This concept came into being as a practice initiated and adopted by business people (owners/managers) who continuously look for better and more productive ways of doing business. The beauty of this owner oriented concept is that it does not have an official definition but the application is universal. Since it did not germinate as an academic theory, neither does it have an official definition nor can limiting factors control its application.

The (accepted) definition implies Stakeholder Capitalism to be a system which allows organisations to work in a manner that caters to the interests of all the stakeholders/ stakeholder groups. It also translates to the idea of creating a long-term value for the business and not being limited to profit maximization. It therefore calls for upholding the interests of all the stakeholder groups and not be confined merely to maximization of profits or shareholder value.

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Decoding the Concept and its Relevance

'Stakeholder Capitalism' seeks to create shareholder returns only by creating value for society – customers, employees, suppliers, communities and the environment. It therefore translates into aligning the interests of all the stakeholders in a manner that each party grows. It would be interesting to examine this in the light of the age-old Indian concept of mutual co-existence. It is imperative here to highlight that as a concept 'Stakeholder Capitalism' derives its core principles from the very Indian ethos of श्सर्वे भवन्तु सुखिनः' and vows to not grow or expand at the cost of any of the stakeholders. This also finds its relevance in the humanitarian sentiments of Buddha as well as the anti-exploitative spirit of Marx. In Richard Powers' words, "There is symbiosis at every single level of living things and you cannot compete in a zero-sum game with creatures upon whom your existence depends." The ancient practices like worshipping a water body to ensure that it wasn't exploited and adequately recharged by prohibition of certain activities, is one of the few examples. These ancient practices allowed these natural elements to be protected and cause the human psyche to be acutely aware of their duty to pay back the non-monetary contributions of the various elements like society and environment. Hence, sustenance can be closely linked to Norton's (1999) view (of the problem) where he argued that we can continue to co-exist if we do not reject the crude economic valuations of environment's contributions.

This concept (of pay-back) was extended to employees, communities, suppliers and other related parties under stakeholder capitalism and that is why businesses have started valuing those units which invest in their people. As a strategic and systematic process, duly implemented, this is bound to create not only a better organization but also a value system that compliments this totalitarian aspect of the organization's existence. It ultimately translates into sustenance, improved performances and better manner of existing in the business stratosphere by making the experience more enjoyable for all the associated parties. This strategy strives to focus on stakeholders and sees growth as an inevitable outcome of this 'all-inclusive' strategy.

Edward W. Deming (1982) in his article titled "14 points for Management" articulated the need for organisations to address the needs of all external and internal customers to achieve quality management goals. These external and internal customers are today called 'Stakeholders'. Tom Peters (1982) also talked of a sensibility and style of management that called for a seven 'S' framework. Research Groups at Medill School of Marketing Communications have also published research results showcasing the link between customers and employee engagement and organizational results. Bryan Booker and Walter Tucker (2015) in their paper titled 'Lowest Level Employee in Employee Engagement in Quality System Compliance: Audit & Improvement' figured out the need of engaging the top management to be as significant as the lower level. Allan Steinmetz was a pioneer in the application of this concept and artfully applied customer as employee engagement in his company. Hubert Joly also used the concept to turn-around his recession-hit company. Calvert pioneered the application of Environmental, Social and Governance investing through his investment business. Robin Wall Kimmerer (2013) also referred to this concept as 'Gift Economy' as is based on the principles of both gratitude and reciprocity.

Deloitte (2019) showcased Stakeholder Capitalism to be a model of enrichment and better growth by proving that if companies focus on the successes of their business ecosystems, these ecosystems reward them in return.

The Enterprise Engagement Alliance defines the concept as:

"Stakeholder Capitalism seeks to create shareholder returns only by creating value for society – customers, employees, suppliers, communities and the environment." The spirit of this definition is furthered by Professor Alex Edmans in his book, *Grow the Pie* and he disalienates it from schools of political thought as well as socialism. This concept of Stakeholder Capitalism has therefore enjoyed academic relevance as well as industry application.

It is thus a people's process which can be applied in strict consonance with their ideologies, preferences and community patterns with the ultimate goal of sustainable performance and existence along with achieving better experiences for all the involved parties – customers to employees, distribution partners to vendors and beyond. The concept has been limited to working towards the organizational goals with the support of the stakeholders as it cannot make performances happen.

Management Practices involved in Stakeholder Capitalism

With the globalization of businesses and such community feeling across units such ethical practices have percolated to the lowest level of business functioning. For example, The Body Shop

ensures ethical procurement of its supplies and a large chunk of its customers have solely stuck to it for their shared belief of ethical sourcing and the associated non-exploitative practices (from the remotest African countries). These brands support diversity too and intentionally buy from smaller firms/ ethnic minority based units/ women-owned set-ups or from firms that ensure good and fair labour treatment. These units also seek environmental protection credentials from their suppliers and ensure their disengagement from child-labour and other exploitative practices.

Ethical sourcing too is a manifestation of Stakeholder Capitalism as the businesses seek to be wary of both human and animal rights, their safety and a close check on environmental abuse. The earliest efforts in this direction thus lead to the Ethical Trading Initiative (ETI) which expects its member organisations to apply the ETI base code. This code ensures ethical practices for the firm as well as its suppliers. Ethical sourcing also applies to business areas of exaggerated marketing, incomplete product information etc. Green Purchasing also grew as a concept from the idea of environmental awareness. Organisations ensured following a defined set of environmental objectives and vowed to follow practices that translated into waste reduction, hazardous waste elimination, recycling, remanufacturing and maximum re-use. Thus the concept of green purchasing started with the purchasing process and encompassed product as well as process design procedures too. Eventually customers also started seeking evidences of environmental and social responsibility. Soon these concepts of ethical sourcing, green purchasing and similar concepts amalgamated to bring to life the concept of Sustainable Sourcing into existence.

Sustainable Sourcing is defined as the process of purchasing goods & services that takes into account the long-term impact on people, profits and the planet. With the evolution of this as a concept, large organisations seek to increase revenues by introducing varied sustainable products and services. It also extends to reduction in costs by working on parameters like increased resource efficiency, strategising/re-thinking of transportation and distribution designs. Another facet of this concept relates to customers, where-in organisations seek to manage and uphold their brand reputation by strategizing to meet the new norms and capture the customer base that upholds social and environmental concerns as the deciding factor for their association with the product.

These revolutionary concepts (of Ethical Sourcing, Green Purchasing, Sustainable Sourcing and others) also led to the formation of strategic alliances aimed at collaborative commitments among similar organisations. Such organised alliances have allowed entities to work and research towards specialisation and develop smarter solutions. These exist as certifications like ISO 9000 (quality) or ISO 14000 (environmental). Similar ISO (International Organisation for Standardisation) standards are now embedded in over 160 business management standards and encompass the needs of the various stakeholders. The ISO Quality Management Standards outlined seven principles for organisations that sought to seed-in quality management into the culture of business units. These engage the employees as well as customers, vendors, other community partners and that too around common goals. They seek collaboration as well as innovation along with measurement of results (of these efforts). The concept of engaging all stakeholders towards shared goals does not philosophise community protection and regeneration. Moreover, it does not shun away the financial aspects of an organisation's existence. These engagements (as a part of stakeholder capitalism) are seen as aids to growth under this approach and not its sole purpose. Hence the concept also recognizes the need of profits and wealth. Thus, it treats an organization (applying these concepts) as an entity that works better and aligns it resources to achieve the same (financial) results as others but in a more sustainable and organised manner. Though these management standards found their legal existence in 2017, these concepts have been applied since ages in different forms across varied cultures, in consonance with their ethos and business practices. Since the model can engage more people and creates a virtuous cycle as all the involved people are included in the value flow. It also allows the larger group of connected people across the ecosystem to enjoy reciprocal benefits.

Conclusion

Stakeholder Capitalism, ISO standards and other allied concepts aim to align the expectations of all stakeholders so as to achieve better, harmonious and sustainable results. It is said to deliver better results by allowing continuous communication within the organisation and avoid any disconnect between the entity and its customers, allied communities. It is a tool that connects and unifies expectations (across the entity) and hence fosters greater prosperity and improved experiences for all the stakeholders. The need to grow in alignment with the stakeholders is a by-product of this approach and hence it does not do

away with the need and relevance of profits for an organisation. It forecasts long-term sustenance and manifestations across the expectations of various stakeholders. These organizations do not shy away from making profits but only put the success of their employees, customers, ecosystem partners and other alliances ahead of their own financial successes. It finds its root in the concept of growing together and upholds the belief that only values can create values. It therefore allows an organisation to move from the traditional models to a broader outlook of looking after the members of the ecosystem (in which the organization exists) and hence achieve a broader cost and value approach which involves multiple members of that ecosystem and hence move beyond the immediate target population. Holistic success oriented models like this should be used as a defining principle for companies that wish to emerge successful in the new-normal parlance of the COVID-shocked business ecosystem. It can be seen as an adaptive, innovative and humanitarian approach that allows sustained innovation and growth. The current times call for us to look beyond what worked in the past and design success for our ecosystem partners and grow with them.

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IMPACT OF CONSUMER BUYING BEHAVIOUR ON PURCHASE DECISION

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ABSTRACT

Consumer behaviour may be a multi-disciplinary field which attracts its concept from several fields of study. It's useful to the marketing organisations, consumer groups and government authorities. It's an applied field, since the concept of behavioural science disciplines are applied to the understanding of human behaviour as far as consumption is worried. It increases appreciative content of promoting, and results in simpler and consumer-oriented marketing programmes. Consumer behaviour is interwoven with the emergence of promoting discipline and has extended the motivation research of 1950s. By 60's consumer behaviour acquired a formidable body of information. The foremost commonly thought of a consumer situation is that, of a personal making procurement with little or no influence on others. However, in some cases, variety of individuals may be jointly involved in an exceedingly purchase decision. For instance, planning for a vacation or deciding to shop for a brand new car can involve a complete family. In other cases the purchaser may acquire a product for somebody else who has asked for a specific item. These situations suggest that people can take different roles in what we define as consumer behaviour. Some purchase situations involve a minimum of one person in each of those roles, while in other circumstances, one individual can take several roles at the identical time. Understanding how the patron takes a choice about purchasing and therefore the product attributes and also the thing he/she will consider as important will help the marketers to predict how the patron chooses and if there exists any homogeneous groups, marketers also can segment the market, either on the idea of the psychological characteristics or product attributes so as to raised reach the target market.

KEYWORDS: *Buying Decision, Behaviour, Perception, Homogeneous, Attributes, Expectation.*

Introduction

Any study of consumer behaviour would be incomplete if it treats just one consumer. However, emphasizing one role, while still treating others adequately, can simplify our study in many cases. When it becomes useful to contemplate just one role we are going to tend to settle on the customer i.e. the individual who actually makes the acquisition. This approach is helpful, because, even when told what to buy, the customer often makes decisions regarding the acquisition timing, store choice, package size and other factors. Therefore, that specializes in the client, while allowing the influence of others on the acquisition decision, still gives considerable flexibility when concentrating on one consumer role. The way within which definition characterizes "behaviour" also deserves special attention. That is, consumer behaviour is seen as involved in a very mental decision process further more as physical activity.

The particular act of purchase is simply one stage during a series of mental and physical activities which occur during a period of your time. A number of these activities either precede or succeed the particular buying. However, since all are capable of influencing the adoption of products or services, they're going to be considered as a part of the behaviour during which we have an interest. An example will illustrate the advantages of this viewpoint. Suppose a photographer who regularly purchases a specific brand of film suddenly switches over to a competing brand, while there has been no change in either the films or their prices. What has caused this shift in loyalty? Just to notice that the

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individual's purchase behaviour change doesn't help our understanding of that situation. Perhaps the competing film received a robust recommendation by an acquaintance, or possibly another photographer because he believed that the competing brand captures the colours of some subject material of interest. On the opposite hand, his decision may have caused either by general dissatisfaction with the results from his regular film or got interest from recent exposure to an ad of the competing brand.

Purchase or Buying Decision

For an individual to create a call, a choice of alternatives must be available. When an individual features a choice between making a buying deal and not making a procurement, a choice between brand X and brand Y, or a choice of paying time doing A or B, that person is in a very position to create a choice. In many Purchase situations the buyer is confronted with a fancy set of alternatives. He has got to choose among a range of products, he makes a variety, supported size, colour, style, model and brand. Also, the buyer can makes decision about when and where to shop for a particular product, what quantity to pay and the way to pay. Some purchase situations involving more money outlays, safety and health, must be examined. Many product purchases require the evaluation of type of economic, social, and psychological factors because the consequences of a wrong decision are often costly.

The economic concept of consumer sovereignty points out that consumer may be a king or queen within the market. In keeping with this idea all the productive resources are deployed so to fulfill the requirements of the patron. Consumers' tastes and choices are alleged to be fulfilled by the method of economic process. Is it so in reality? There are often two explanations for such a reality. One is that the economic process and also the laws of economics aim at fulfilling the requirements and aspirations of the consumers at the macro level, and not at the micro level. That's to mention that although each and each need of a private consumer isn't fulfilled, the overall or overall trend within the consumer tastes and choices as reflected within the market seem to be fulfilled by the economic process. Otherwise, markets cannot exist. The other explanation relies on the character of markets in individual products and services.

There are two kinds of markets, i.e. buyers market and sellers market. While in buyers market, the consumers are presupposed to have the superiority and therefore the products are designed to meet their needs and aspirations whereas within the latter, whatever is produced is sold and hence, there's absolute confidence of consumer needs. There are five stages in the buying decision process:

- Problem recognition (Need arousal),
- Information search (Identification of alternatives),
- Evaluation of alternatives (Evaluation of various brands),
- Purchase decision (Taking a final decision), and
- Post-Purchase behaviour (Feedback information i.e., Post-Purchase feelings of satisfaction or dissatisfaction).

The decisions that customers absorb reference to purchases are influenced by various factors. The influential factors of consumer behaviour are

- Culture,
- Sub-culture,
- Social class
- Social group
- Family influences
- Personal factors

Consumer Behaviour

Consumers are unique in themselves, and have different needs and desires are various and diverse from one another; and have different consumption patterns and consumption behavior. The marketer helps to satisfy these needs and needs through product and repair offerings. For a firm to survive, to compete and to grow, it's essential that a marketer identifies these needs and desires, and provides product offerings more effectively and efficiently. Consumer behavior could also be defined as interplay of forces that takes place during the consumption process, within himself /herself and his/her

environment. This interaction takes place between three elements viz., knowledge, affection and behavior. It continues through pre-purchase activity to the post purchase experience and it includes the stage of evaluating, acquiring, using and getting rid of goods and services. It explains the rationale and logic that underlie the purchasing decisions and consumption patterns.

The study of behavioural aspects of consumers is the study of how individuals take a choice in spending their available resources i.e. money, time, efforts on consumption related items. It includes the study of what they buy, why they buy, how they buy, once they buy, where they buy and the way often they buy. It's a known proven fact that consumer behaviour is the interest of a purchaser towards the products for better utilization of the identical in day-to-day life. Therefore, there must be a detailed association between the two terms i.e. consumer behaviour and buying decisions so as to satisfy themselves on various grounds i.e. on product quality, damage and its durability. Consumption affects our lives either through our own actions or those of other consumers. It's got an excellent deal of practical relevance to our daily living. Thus, consumer behaviour refers to acts of people directly involved in obtaining and using economic goods and service, including the choice making process that proceeds to work out these acts.

So as to achieve success, the marketer is worried with who is the consumer? What do consumers buy? When do consumers buy? How do consumers buy? From where do consumers buy? Why do consumers buy? The customer is additionally influenced by the social environment within which he lives his family, society, neighbours, friends and colleagues. When the buyer evaluates the results of his purchase decisions, he may perceive some extent of 'perceived risk'. In such cases, the buyer may have the choice to scale back his perceived risk through search and acquisition of additional information before purchase.

It's amply clear from that the customer behaviour may be a complex subject and several other models are argued with the intention to elucidate the customer behaviour. All the social sciences like Economics, Psychology, Sociology and Anthropology have influenced the customer behaviour studies. Understanding the buying behaviour of the buyer is that the target of the marketer and it's the essential task of the marketing managers under marketing concept.

Models of Consumer Behaviour

- **Traditional Models of Consumers:** The earliest comprehensive consumer models were actually devised by Economists seeking to grasp financial system. Economics involves the study of how scarce by the resources are allocated among unlimited wants and wishes. Its two major disciplines macro-economic and micro-economics have each developed alternative views of consumers, partially because, they need undergone some modernization. These models still influence the contemporary views of consumers.

- **Micro-Economics Model:** The classical micro-economics approach, developed early within the nineteenth century, focused on the pattern of products and costs within the entire economy. It involved making a series of assumptions about the character of the "average" consumer, and so developing a theory useful in explaining the working of an economy made of many such people. Emphasis was placed on the consumer's act of purchase, which, of course, is merely some of what we've got defined as consumer behaviour. Consumers develop various needs and preferences and rank them. Thus, the micro-economists focused on explaining what consumers would purchase, assuming these purchases to be known already and thus, micro-economics chose to ignore why consumers develop various needs and preferences and the way they rank them. Economists argued that perfect rational consumers would always purchase the great that provide them with the best ratio of additional benefit to cost. For any given good, this benefit /cost ratio are often expressed as a ratio of its utility to cost.

- **Contemporary Models:** Because the study of consumer behaviour evolved into a definite discipline, newer approaches were offered to explain and explain what influenced consumer behaviour. These contemporary views are quite different from previous models, due to their concentration on the choice process that buyers engage in, when deliberating about products and services. Therefore, contrary to the economic models, emphasis is placed on the mental activity that happens before, during, and after purchases are made. A second distinctive feature of latest models is their extensive borrowing from material developed within the behaviouaral sciences. In fact, most of the variables discussed within these models were originally identified

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in the fields of Psychology and Sociology. An outsized number of latest consumer models are developed. Varying considerably in terms of their sophistication, domain and scope, some of the foremost widely quoted are presented here.

- **Nicosia Model:** Francesco Nicosia was one in all the primary consumer behaviour modelers to shift focus from the act of purchase to the more complex decision process that buyers engage in about Products and Services. He presented his model during a flow- chart format, resembling the steps during a computer virus. Also, all variables are viewed as interacting, with none inherently dependent or independent. Thus, the model describes a circular flow of influences where each component provides input to the subsequent. This model is viewed as representing a situation during a firm which is designing communications (Advertisement, Products, etc). To consumers, their consumer's respondents will influence subsequent actions of the firm. This model contains four major components or fields: (1) the firm's attributes and outputs or communications and therefore the consumer's psychological attributes, (2) the consumer's look for and evaluation of the firm's output and other available alternatives, (3) the consumer's motivated act of purchase, and (4) the consumer's storage or use of the merchandise. Nicosia assumes that the patron is seeking to meet his/her specific goals which initially there's no history between the patron and therefore the firm; so no positive or negative predispositions towards the firm exist within the mind of the buyer.

Consumer behaviour is complex and intensely often not considered rational. The vulnerable consumer, who doesn't always have access to the identical number of choices because the typical consumer, also must be taken into consideration. Influencing consumer behaviour is in spite of everything about targeting the right people with the right message. Indian society is made from many religion and languages. Different religion in India is characterized by their own, culture, customs and beliefs. Due to this religion diversity, the Indian society is differentiated into many strata or groups which significantly are significantly vary among each other. Despite societal differences, the people across the assorted parts of India would like to celebrate all customs, festivals and occasions by purchasing new clothes, ornamentals etc. But, the pattern of shopping for and consuming goods and services are different among these groups because of cultural differences. Therefore, marketing strategies related to consumer behaviour are made to beat cut throat competition in global context.

In contemporary world, prediction of consumer behaviour is much essential for prosperity of the business. Its prediction and strategy formulation could also be a challenge for the management of any business organization. This scenario of worldwide market has drawn the attention of researcher and marketers towards the interest and satisfaction level of consumer. the present models of consumer buying behaviour determines the link between several independent variables, like cultural, social, personal, psychological and marketing mix factors, and consumer behaviour.

Example
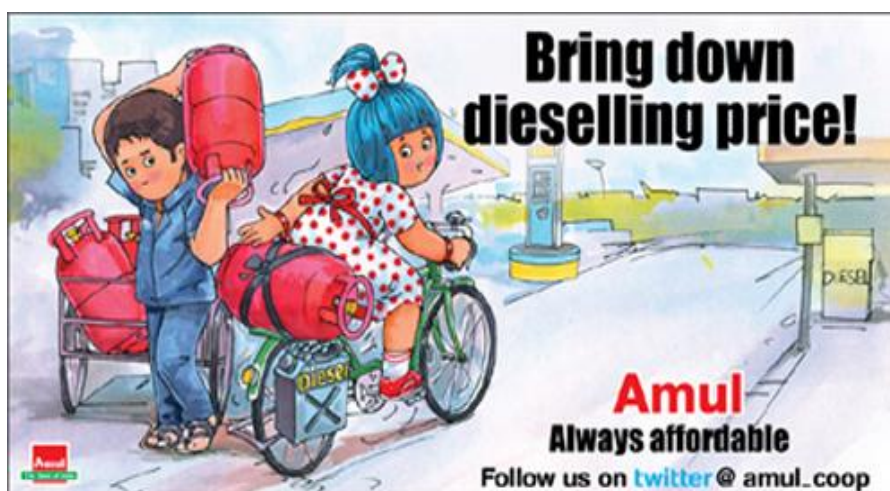
Amul: The Taste of India. Need we say more? No!

However, our love and connect with the brand Amul make us ruminate over it. A native brand success story example-Amul. A Consistent Advertisement elevating Brand Identity-Amul. The utterly butterly 'Amul girl' is an icon of the middle class India right from 1967. Woah! Do we have any other mascot that old? The Amul girl is a hand-drawn cartoon of a young, chubby Indian girl dressed in a polka dotted frock with blue hair and a half pony tied up. May be she is the reason Polka Dots are never out of fashion in India! Back then, brief provided by Amul was simple; 'Draw a mascot which is easy to paint in walls and outdoors'. Huge outdoor print Advertisement was still to see the billboards. The advertisement idea of Amul was conceived by an agency called ASP (Advertising, Sales and Promotion) headed by Sylvester Da Cunha and his Art Director Eustace Fernandez

Conclusion

Consumers may be exposed to several different types of information, except for the individual consumer, the narrow environment in which he lives limits the data he will face in forced learning situations what he/she will experience are biased to the extent the environment is biased, and therefore the same applies to the knowledge to which he can attend in situations where he's actively acquiring information. Similarly, the buyer isn't likely to own exposure with all possible products and types. After purchase consumer might not even evaluate the selection because they're not highly committed the merchandise. For low involvement, the buying process for a product begins with brand beliefs formed by passive learning and is followed by purchase behaviour which can be followed by evaluation. Within the recent days e-information is helpful to understand about the merchandise features and performance. So, we are able to get the knowledge about the merchandise easily.

Advertisement plays a significant role in buying behaviour and therefore the entire product has service after sales. So, each form of consumer buys the products easily. Most of the patrons they like to shop for the consumer durables only form the authorized dealers. Consumers visit quite one shop to assemble the knowledge about the merchandise. The manufacturer conducting research fairly often, majority of the consumers collected information from commercial sources that product features, any misleading fact and wrong selection in media adversely affect by the choice. Today's consumers are well informed all people are consumers we consumed things of daily use etc., The marketers therefore try and understand the wants of various consumers and their behaviour patterns which require and in-depth study with relevancy their internal and external environment formulates their plans for marketing.

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PUTTING DIGITAL MARKETING INTO EFFECT

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ABSTRACT

Digital marketing is defined by the use of digital channels to promote and sell products and services, which is no different from what we already know as marketing. The difference lies in the channels being used and, subsequently, the strategies and tactics in utilizing those channels. The main concept of marketing is to connect with customers as much as possible. The traditional marketing tactics were centered on reaching as many people as possible. So, much of past marketing was done through mass media channels such as video advertisement on television, audio advertisements on radio, huge newspaper columns and more. In particular, television and radio advertisements were planned to be broadcast at certain times of the day according to the peak times that people tune in. The idea was to reach the highest amount of viewers, listeners or readers, as big of an audience as possible. While the core idea remains the same, the customers have become more accessible now with the advent of a central network where they, more or less, spend all of their time.

KEYWORDS: *Digital Marketing, Digital Channels, Advertisements, B2C, B2B.*

Introduction

The first rule of marketing is to provide the right offer in the right place at the right time and to the right people. And this quest has become much simpler now that there are online channels to leverage. Today, there is a huge spectrum of online media channels for businesses to bring forth their messages to their customers. People can constantly stay updated on business offerings around the world or search for them online from anywhere. They can ask questions about the products and services sold by a particular business and get instant answers on, say, Amazon, which enables companies to get regular feedback on how well their offerings are being received.

Having so much flexibility and accessibility has provided marketers with prime opportunities to support their goals by conducting larger and louder campaigns with minimal cost and high reach. However, it also calls for newer and smarter strategies because it allows more competing businesses to emerge and influence the market. So, digital marketers have to create their own tactics in order to learn the needs and demands of their target customers, attract customers and prospects, build a relationship with them and foster that relationship by continually responding to their queries and complaints. Because of how fast-paced and ever shifting the digital world is, marketers absolutely have to stay up-to-date on current affairs to align themselves into the bigger picture and leverage their position accordingly. Traditional marketing is not complete obsolete from the equation but it is undeniably largely composed of digital presence. And it is not just utilized by business-to-consumer (B2C) businesses but also business-to-business (B2B) ones even though their approach and strategy may differ. For B2C companies, the goal is to increase their website traffic, attract more and more prospects and convert them into consumers by simply using their online presence.

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No salesperson has to go door-to-door to plug their website, even though some companies still do that. They do not focus on what is known as "leads" in traditional marketing. They emphasis the entire buying process and try to add value within the buyer's journey, starting from the moment they click on the website, throughout their browsing, until they make a purchase and even afterwards. They have to use strong call-to-actions within their channels including their Facebook page, Instagram blog, Twitter and more.

On the other hand, B2B firms use more business-focused platforms such as LinkedIn for marketing since the target demographic for B2B businesses usually spend time there. In this case, lead generation is the goal and the end to which all the online and offline marketing efforts are directed towards. Such firms utilize their website and corresponding social media platforms to attract and convert leads.

Communication via Digital Media Channels

In just a few years of its advent, digital communication has taken over our lives. And with that, businesses have had to adopt the trend in order to build profitable relationships with their customers and fellow brands and companies. The internet has provided businesses with numerous communication channels to utilize for marketing. Consequently, companies can now reach their customers more easily and personally. They can now target their audiences in micro segments and interact with them on different levels to promote their products and services. Websites are no longer the only facet for digitized content; social media, blogs, podcasts and many more channels are taking the central place in communication. Corporate communication has turned into a global ecosystem where each facet is interconnected and interrelated. But with so many opportunities for outreach, it has become necessary to develop new levels of expertise in order to use the channels effectively. Brands do not only focus on making their online presence known but also emphasize building a communication design to optimize their marketing functions.

Setting Up a Communication Plan

The main purpose of a communication plan is to form an effective mode of interacting with prospective customers. With a well-designed communication strategy, a company can be prepared to serve their customers even before the said customers even decide to seek out their products or services. Before going into the digital communication channels, the marketer of the company must first go through the following steps:

- The first step in setting up a communication plan is to determine why exactly you are doing so. The marketer of a brand has to sketch out the goals that he or she wants to meet through the communication strategies to provide a consistent direction for the marketing activities. The goals can be listed in the form of leads, clicks, sales, conversion or even overall brad awareness.

- The next step is to determine the audience you want to reach through your communication plan. This is an extremely important step because targeting the wrong audience is not only costly but also time consuming with no resultant profit. Based on the product or service to be sold, a marketer must research on targeting the audience that would be interested in the market offerings.

- After fixing the target audience, the marketer must then decide on the message the brand wants to communicate this message is significant because it has to remain consistent with the brand personality to build its identity. The central message must be able to portray what prospective customers should expect from the brand.

- Choosing the communication channels is the most challenging step because it varies from business to business and customer to customer. When trying to land on the right channel to pick, it is essential to consider what kind of audience you want to reach and in which media you can have the best reach towards them. You cannot expect to reach an audience base of mothers on Snapchat the same way that it does not make sense to reach out to teenagers on Viber. Hence, knowledge about the audience analytics in different digital channels is necessary for settling on the right one. A marketer also has to consider factors such as the marketing budget. Fortunately, the cost of marketing and communication on digital channels is quite low in comparison to traditional channels. While a higher budget can facilitate higher reach, proper strategies and effective implementation can lead to organic reach.

- The last step is to determine which communication strategies to follow throughout the communication processes. This is not just about creating a strategy for one channel. Companies have to operate on more than one channel and develop multichannel marketing strategies for higher visibility. Inbound marketing, email marketing, Search engine optimization, social media marketing, native advertising, content marketing, affiliate marketing etc. are some of the commonly used strategies. Each of these may not be vital to every kind of business or every channel, but they are effective in building an audience.

By following these steps, a brand can deliver the right message to the right audience in the right communication channels in order to reach their marketing goals effectively. Success in carrying out all of these contribute to the success in reaching your target market. Some of the commonly used communication channels in both the digital world and the offline world are shown in the figure below:
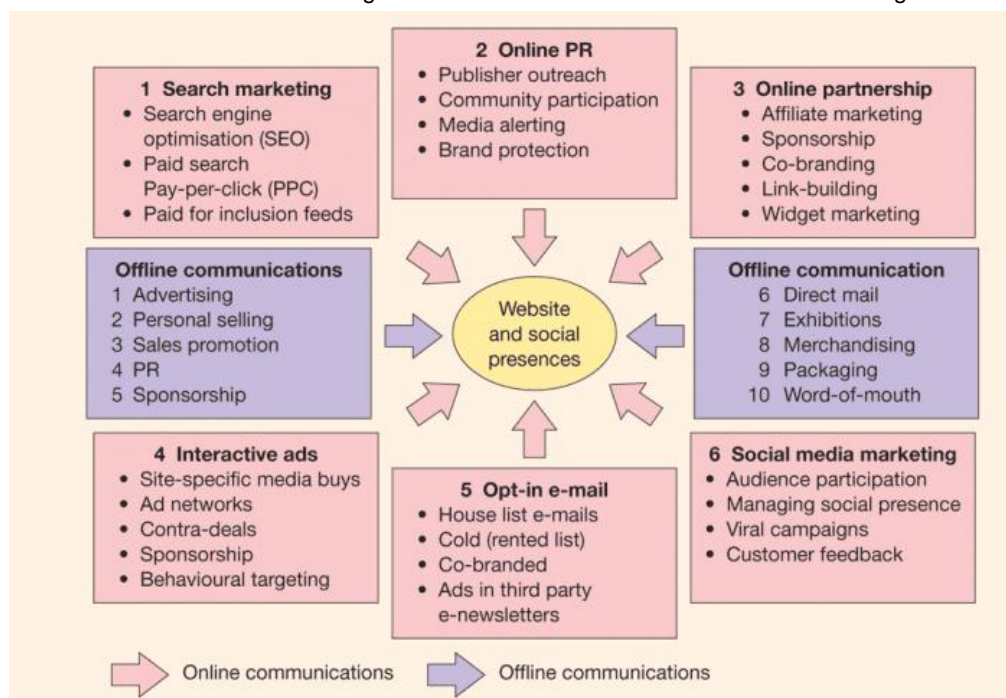
This figure provides an overall summary of how a business can drive both organic and paid communication. It shows how offline communication in the form of advertisements on traditional media channels like television, radio etc., door to door selling, a well-managed PR, sponsorships and sales promotion can strengthen brand awareness. On the other hand, advanced tactics such as – exhibitions, email marketing, merchandising, packaging and even word-of-mouth can contribute to a brand's goodwill and subsequent lead generation. Besides that, online channels like search engine marketing, online public relation, partnerships, interactive ads, and social media can boost the social presence of a brand.

Giving the Desired Digital Customer Experience

Digitization has led to a much-desired transition in how we market our products & brands, Digital Marketing. In today's world, companies must adapt to the digital eco-system if they hope to survive in these hyper-competitive markets.

An Understanding of Digital Customer Experience

Every instance of consumer interaction with brands or their products, on a virtual interface encompasses digital customer experience. Simply put, it's a series of consistent interaction aimed towards achieving peak customer satisfaction. Digital Customer Experience (CX) is a virtual experience, significantly less laborious yet equally significant to traditional offline CX if not more. With an *MIT study citing a 26% profitability for companies that have embraced digital customer experience,* most companies have shifted to it. They've recognized the need for an enhanced customer experience and the

subsequent loyalty upon successful implementation. Digital Customer Experience is instrumental when tapping into untapped revenue streams while simultaneously creating a legacy behind your brand.

This seismic shift in market balance is representative of the fact that the Customer is in the driving seat – which is one of the finest things about the free market. To appeal to this customer, brands must thoroughly understand who this customer is, what is his agenda, what reaches out to him and the many nuances behind him.

Digitally Conscious Customer

Buyers are rarely disconnected to this virtual world, constantly equipped with mobile phones, the internet and the godly presence of social media. Mused by the internet, customers have achieved ultimate accessibility – being able to attain everything at the press of a button. This has simultaneously reshaped the customer experience, in which buyers are now expected to be connected and aware – contributing to a healthier market system &better quality control. Orthodox sellers must adapt to these modern digitized buyers if they wish to survive.

What Does Adaptation Look Like?

- **For B2B Sales**, social selling must replace cold calling – being assertive rather than waiting for customers to reach out. Digital CX involves proactive marketing, building relationships and offering your expertise.

Often forgotten is how business-to-business customers are people too. There is always a person behind the phone and they must be equally catered to, if not more. Currently, only a few business websites deliver insightful yet personalized information to the consumer and this must be capitalized upon. In this ever-growing digital ecosystem, B2B professionals must check a few boxes if they wish to adapt.

  - **Individualized Customer Experiences:** As millennials climb the corporate hierarchy, at least 61% of all B2B transactions begin online. Business-To-Business Customers have started to think like consumers, getting used to personalized, fast, and seamless experiences. A Salesforce survey claims that 81% of B2B customers want a consumer level customer experience, $2/3^{rd}$ having shifted vendors to achieve it. This rising demand for digitized consumer level CX, combines with an estimated 8.1% revenue increase for B2B businesses on average – twice of traditional methods. However, the distinction must be made by recognizing the fundamental differences in purchasing behavior, decision making dynamics, and transaction procedures as opposed to spontaneous and emotional individual consumers. Business buyers will have a complex framework that has nuanced specifications considering the interests and inputs of all relevant business stakeholders, a single consumer just spends money on things they want.

  - **Making The Best Use of Evolving Analytics and Algorithms:** Digitization has kick started the B2B potential with Big Data Analytics, capable of identifying market behavior are important things to consider when going into a B2B agreement today. Combining Big Data Analytics with Algorithmic Decision Making – completely reshapes the B2B purchase methods, often using algorithms to make important decisions. This not only optimizes purchasing, it also pushes towards trends and personalization through analysis of individual data facets.

- **Marketing** teams must learn to prioritize online over offline. Gone are the days of print media & billboards, significantly replaced by sponsored posts towards targeted audiences – achievable by data driven strategies. Customers want to feel important, and marketing must be catered towards helping them achieve fulfillment in this regard. Marketeers must use digital channels to properly implement account based marketing and other relevant tactics.

- **Customer Service** teams must no longer sit around, anticipating faxes/emails. They must be proactive instead of responsive, going the extra mile to help these customers with a plethora of digital resources. There needs to be a priority set on social media, forums, review sites, and communities to cater to today's market. Customer Service cannot afford to be technologically challenged, and must instinctively respond with progressive and online solutions unless asked for otherwise – The Modern Online Consumer might have time, but they have very little tolerance.

What are the Elements of a Digital Customer Experience?

Integration: The need for synchronization between the online and the offline is often underrated, a lack of consistency will always drive customers away because of how unprofessional it is in nature.

Innovation: Boredom is intolerable, especially if you're a consumer. Change is a necessity and the same generic experience is extremely monotonous, albeit comfortable. It is important to switch this up every once in a while to ensure an engaged consumer culture. The operational digital channels must be updated, redefined and redesigned, in constant pursuit of the consumer sweet spot.

Interaction: Customer Loyalty is a massive revenue stream, make your customers happy, relevant, and ensure their brand loyalty. This is mostly done through digital interaction because of the simplicity behind it. Most consumers would prefer to text rather than call – it's less labor. These interactions must be exploited and handled with utmost care depending on your brand identity. Formal brands might opt into more corporate conversations while hip-modern brands might opt into personalization and humor to make these interactions worthwhile.

Give your customers a reason to click, open, and scroll.

To the consumer, Digital channels might seem new and complex and for this specific reason, the interfaces must be extremely intuitive to cater properly. There are three ways to look at intuition (i) proactive service (ii) empathetic intuition and (iii) innovation – all combining to build the perfect experience.

- **Proactive Service:** Take the words out of the consumer's mouth, know what they want before they do. Proactive service makes life simpler, eliminating the need for repetition in a poorly structured customer experience model. **Empathetic Intuition:** Unlike the Proactive Service, this refers to the 'soft stuff' by sensing emotions pre-emptively. Empathic Intuition steps into the customer's shoes by recognizing their struggles, and acting on it. It is about doing what is right without fear of retribution and treating the customer in the best way possible.

- **Innovation:** Overlapping with a previous element, Innovation is fundamental to Intuition. Often customers will be unaware of what they want or need – be that solution. In the words of Henry Ford – **'If I had asked people what they wanted, they would have said faster horses'.**

Achieving Peak Digital Customer Experience

There are many facets to digital customer experience, peak performance requires holistic growth in all of them with consistent quality and care.

- **Reachability:** Reachability can sustain an entire business. Reachability is the ease of contact with something or someone – whatever the need. Digital Marketing has vastly opened up the prospects for reachability making it very convenient for consumers to operate. Consumers will often look for reachability, when a shop will open/close, the availability of items, the prices and all other important information that a digital eco-system makes available. In e-commerce, a customer must easily be able to navigate the web shop, ensuring quality and all necessary information to give them a nice experience. Reachability is also synonymous with reliability. Staying accessible is the first step to attaining trust and loyalty from your customers. This not only satisfies your customers by making them feel important, but it also improves brand identity by eliminating the murky factor behind online platforming. Furthermore, it improves brand equity and value to clients – something very important to satisfy them.

- **Service Convenience:** Service Convenience measures how easily customers can be served digitally. Back in the day, Convenience meant driving to the supermarket for milk rather than walking there. In the age of smartphones, this definition has been entirely redefined. With the tap of a button, you can have milk delivered to you in 10 minutes – making life easier for the consumer. Consumers expect swift responses, equally so on weekdays and weekends. This need for instant gratification requires 24/7 on-demand accessibility, something that would've been considered inhumane a decade ago. It is necessary for this service convenience to be in line with tackling decision fatigue, giving consumers tailored suggestions/simplifying the decision process. Consumers don't want to waste time on procedures designed to save time, brands need to look out for this. Beyond this, personalization is key. Brands must cater to customers on a personal level, with exclusive offers and individual recognition. Domino's Pizza does this by highlighting the consumer experience, making the customer feel valued.

- **Purchase Convenience:** Convenience is key to winning the future, Price Convenience is an important aspect of this – determining how easy digital transactions are. Foreign E-Commerce brands have a hard time operating in countries without this purchase convenience while easy transaction mechanisms like Bkash in Bangladesh have simplified business procedures.

- **Personalization:** Personalization is the recognition of customers as individuals. Prosperity often hinges upon how personalized your experience is, helping customers decide whether their trust is misplaced or not. The rule of thumb for personalization on a very basic level is name recognition, knowledge of their purchasing history, and tailored recommendations. Personalization results in improved customer retention. A survey showed that 44% of customers come back, given a personalized touch. This is a strategy used by coffee shops as they scribble on your name by the side of the cup. Customer Experience is all about satisfying their necessities, and this does accordingly. To properly personalize the customer experience, a customer-centric work culture must be built from the ground up in the most compassionate way possible. Loyalty programs must be created, incentivizing their use of your products & service. Location based technology & on-demand personalization is largely helpful in this regard as well.

- **Simplicity and ease of use:** No one likes spending their days roaming a shopping mall and that is exactly why digital alternatives exist. Customers must have access to a prompt query management mechanism, clearing them of all doubts and attaining their trust. User Interfaces for apps and websites alike must be made considering the average rational human being and their willingness to accept complication. In most cases, they look for resolve in simplicity. Amazon, E-bay and other E-commerce enterprises have been spending a lot to improve Simplicity behind their UI & Procedure. It is not a bad investment to develop mechanisms that aid and abet simplicity.

- **Channel Flexibility:** Channel flexibility ascertains how easy it is for customers to change channels. This process involves ensuring consistency, and the ability to save and display a customer's history and data for convenience purposes. Digitization has seen the rise of the Omni-channel approach for customers that want to map their own journey. With no fidelity lost, instantaneous availability is the base expectation. A utopian implementation of channel flexibility would be initial research on a laptop, a smartphone for selection, and purchases on a tablet – without any form of compromise.

Strategy

Strategically, top management needs to make digital customer experience a top-priority if they wish to adjust to this fast paced digital eco-system. Unless it is well integrated into the corporate channel, this will never be dignified enough to make progress. Brands must clear channel roles, divide responsibilities and outline guidelines to make it an operational success.

Organizationally, there is a need for a dedicated digital team that should be held with equal regard as physical teams. Our world has a twin, the digital dimension and it must not be ignored. These teams must be synchronized well with marketing, sales, and customer services to ensure a hands-on consistent channel. The creation of a digital culture must always be prioritized, with a willingness to abandon traditional mechanisms that will soon act as dead-weight.

Beyond this, CX analytics must not be undermined at any cost. Web stats, digital affinity, and customer data are all quintessential in ensuring a well-rounded customer experience. Effective Omni-Channel solutions must have a 360-degree view of customer interactions across the channel to monitor all traffic, usage, and relevant journeys from a customer perspective. Mechanisms of Search Engine Optimization (SEO) and Search Engine Marketing (SEM) must be leveraged, User Interfaces must be aggressively customer centric, and digital marketing must be in-line with the above mentioned policies.

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ROLE OF E-RECRUITMENT DURING COVID-19 PANDEMIC

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Usha Joshi[**]

ABSTRACT

Most of the companies adopted the e-recruitment process and done their recruitment process for potential employees through online mode facility due to the current unavoidable covid-19 pandemic. This is done in order to achieve mixed success. It is also a good way in which right person gets the right job. Probably this is cost saving and value saving process. Those employers who actively engage in online search technology, uses the online search tools. Most of people reports that they have positive experience with online application due to its large benefits. In the study given below, we have shown the significance of e-recruitment. The e-recruitment term is also known as internet recruitment, online recruitment, web recruitment etc. For the purpose of this electronic based process there is basically need to use and access the web based technology, for the process of recruitment process. There is several importance of E-recruitment and it had been widely adopted by most of the companies due to its merits and valuable benefits. It is very fast and cheapest process as compared to traditional based recruitment. This trending E recruitment have played major role during the covid-19 time by helping job seeker to get job online by remaining safe at their home. This was a tough time because companies were firing instead of hiring. As we all know that during covid-19 pandemic, it was a gigantic challenge for each and every establishment regarding fulfillment of demand of recruitment of companiesand there is a big question behind that is, how to recruit new talent?.This study will throw some light upon the various demand of the staff which being fulfilled will successively planning of e-recruitment process only. This study is very important as without knowing the traditional methods of requirements of manpower we cannot find the actual important role of e-recruitment process in this covid-19 pandemic. For the purpose of this study we collected the information through secondary data which was published in various journals, books, e-books, research paper and article etc.

KEYWORDS: *Job Seekers, Social Media, E-recruitment, Online Job Boards, Covid-19.*

Introduction

Recruitment and selection is an important function of human resource management to increase employee strength. E recruitment also known as online recruitment. E recruitment web based technology is mostly used for recruiting candidates job boards are essentials for online recruitment. Where companies advertise their vacancies like monster.com and carrier builder job portals. Social media now a days helping job seekers by connecting then with suitable recruitment companies. Covid-19 hits band to the economy of whole world but some were it boosts the IT industries. HR manager are scrambling to adjust recruitment strategies in the wake of this out break. Fortunately technology is available to help minimize exposure while still producing quality hires.

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NACE data reveals that 16 % of employees really on video interview on screening video interview software does not require any training and avoid delays and scheduling conflicts increase productivity.The revolution in recruiting has only just begun new advanced technology allows company to shorten hiring cycle by becoming more efficient .the expected development of standards for describing applicant characteristics and job requirements will help companies get better at matching applicants to jobs.

Literature of Review

- According to **Dr. SayelSabba** traditional methods should not be replaced by E recruitment it is always an alternative methods the coopholesof E recruitment can covered by traditional methods.

- According to **Prabhjot Kaur,** bringing the right person on board saves you thousand and your business will run smoothly and efficiently. It is very important to hire best qualified candidates for a job opening in a timely and cost effective manner.

- According to **Galanki E. (2002)** online requirement is a new tool which has known a phenomenal success in very short time research tries to identify the effect that perceived attributes of the practice have on the decision of organization to recruit via E-recruitment.

- According to**Hadass Y.S.(2004)** we can get impact of the spread of online recruitment on the matching of workers and firms. The adoption of internet recruiting is modeled as reducing application cost to workers and improving screening technology for firms.

- According to **Natia Sultana (2018)** now a days more countries launches in india and such MNC's depends more on internet by helping MR team.As the days goes faster and better MNC's prefer online recruitment by social media which reaches more people at time.

- According to **Cappeli P.(2001)** for most job seekers the internet is where the action is. In large open competitive market brands and reputation are crucial recruiters have to act with the speed, flexibility and creativity of marketers.

- According to **Dr. B.V. Kapparashetty** as the covid 19 crisis affects many global industrial product companies are facing times including production stoppages due to supply chain disruption, cost escalation and workforce dislocation.

- According to **Navdeep Kumar (2010)** internet allows high volume of traffic reach very easily and effectively. The author has selected about positive candidates who brings awareness of individual interest in their career , usage of time and also by refreshing their friends.

- According to **B. Akila ,Dr.S. Vasantha , Dr. P.G. Thirumagal** this study is an attempt to make the researchers understand the selection process that takes place in manpower solution.

- According to **Parry E. and Wilson H. (2009)** the internet is initially hailed as a future of recruitment and is expected to replace other media as the preffered recruitment method but the adoption of online recruitment has not been as comprehensively predicted.

- According to **NAS Insight (2006)** this research was conducted on effectiveness of using e-recruitment .the findings indicated that using e – recruitment in travel agents and hotels was more effective than traditional method hiring.

- According to **Fister (1999)** probably most of the companies feel that online recruit the passive job seekers and that are a major factor in their decision to adopt this method it is good , fast and very cheap also .

- According to **A Kar and S Bhattacharya** the factors that could contribute to the effectiveness of job portals and satisfaction on the use of portals. 250 purposively selected respondents participated in the study.

Covid-19 Out Break

In early 2020 after a December 2019 outbreak in China, the world health organization identified SARS COV -2 as a new type of corona virus .It spreads around the world . It can affect our upper respiratory tract (sinuses , nose , throat) or lower respiratory tract (wind pipe , lungs) corona virus that causes covid 19 is mainly transmitted through droplet generated when an infected person cough , sneezes , exhales . These droplets are too heavy to hang in the air, and quickly fall on floors or surfaces. Anyone can be infected by breathing in the virus if someone within close proximity of who has covid 19 or by touching a contaminated surface and then eyes nose or mouth .

The Corona Virus is affecting whole world the economy has fallen into a recession and covid19 pandemic also affecting all industries but recount industries has biggest challenge how to recruit new talent. At the same time many other method adopted such as face to face job interviews need to be replaced with more innovative method like online and digital recruitment .

Top 5 industries hit by coronavirus

01	02	03	04	05
Travel and tourism	Hotels, bars and restaurants	Entertainment	Conferences and trade shows	Manufacturers

Source:-https://images.app.goo.gl/QTU1YJyt385gPZey9

Online Recruitment

It refers to the hiring of candidates using the internet . It can be done by applying variety of ways like social media recruiting or online portal.

Following are the ways ofe-recruitment:-

- **Professional Association Websites**: It is a great way to source candidates. Candidates can see on a website frequent.

- **College and Alumni Organization**: often colleges and universities allow us to post jobs to their websites for free .It allows to tap into a candidate pool that is actively soon to be actively looking for jobs.

- **Government Resources**: Central, Local and state government often have websites where they list job openings for job seekers these websites often have high volumes of traffic .

- **Social Media**: Eighteen to thirty five age group are searching jobs through a social media various social media platforms is a great way to search younger candidates.
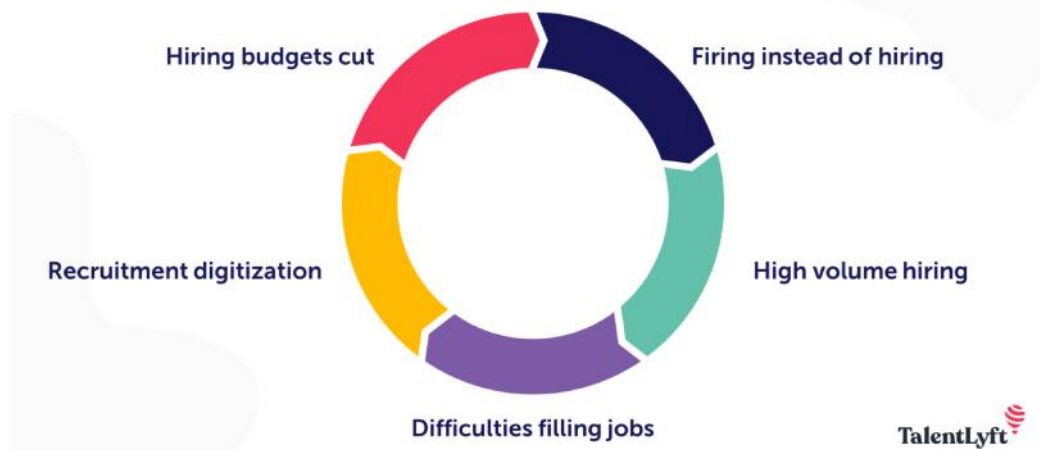
Most of the companies and industries recruits offline before corona pandemic. Now some companies and industries are hiring candidates or employees by online recruitments or above discussed method. By adopting online recruitment technique covid-19 risk is low and process is fast. While e – recruitment is becoming more common place due to covid-19 other benefits for e – recruitment is time (time is a major pain point for today's world) and simplicity recruitment process.

Electronic based recruitment process begin with few electronic tools for line managers to commence the recruitment process for example , line managers were putting their hiring needs into a word document and sending it to the responsible recruiter. The recruiter reads each applicant and rate the order. In some cases this is handed through filter programmers bringing top applicants to the forefront.To try and prevent the spread of covid-19 a nationwide lockdown on 24th of March to gauge the impact on MSME's and other IT's sector recruitment process. We expect 60 to 65% interviews getting dropped and delayed as there is lockdown in many parts of the world and online and digital recruitment plays an important role in covid-19 pandemic.Video interviewing is also most part of online recruitment during covid-19 pandemic. Due to video interviewing,anyone who belongs to remote areas can give interview freely and become candidate or employee of IT's sector

Advantage of Video Interview

- Increase staff productivity with flexible interviews that let staff get more done.
- Conduct interviews from everywhere avoiding delays and scheduling conflicts.
- Connect in seconds directly from and norms training required.

Top 5 coronavirus challenges for recruiters

Hiring budgets cut

Firing instead of hiring

Recruitment digitization

High volume hiring

Difficulties filling jobs

TalentLyft

Source:-https://images.app.goo.gl/ZxFUAn7ZCn9ie3Zs8

Objective of Study

- To give appropriate data to enhancethe E- recruitment process.
- To analyse the role of demographics(Age, gender, education,quality) variable on adoption of online recruitment (E- recruitment Portal).

Limitations of Study

- If a job seeker lives very far from the original work place we conduct the screening phase by telephone or E-mail but if the person is not interested then it is not worth it to call the person for personal interview.
- The process is fast but it is too impersonal employer or job seeker is not properly checked to be fit.
- There are some security issues related to online recruiting like when an employer give its sensitive data, it can be some time exploited which can cause damage to employer.
- Sometimes there are some technical glitch are seen and poor website can lead to failure of online requirement.
- Transparency of data.

Benifites of E-Recruitment

- Online recruitment process can give the result in seconds.
- It is affordable to any job seeker because it is very cost effective.
- There is no physical interaction needed which is right now the demand of organization. It is also save time.
- Through online recruiting the domain of employers and company gets bigger.
- More opportunities for smaller companies.
- Efficiency gains.

Conclusion

E-Recruitments are at satisfactory level when we saw this from the perception of expenses and trust the process. Now- a - days getting advanced to recruit the job seekers and new job seekers are mostly aware of job boards and portals.The covid 19 fallout is unprecedented, with more than half of the world's population forced into lockdown and countries struggling to get a glisp on the fast evolving healthcrises, so online recruitment play important role. Online recruitment portals e.g. Naukri.com, Monsterindia.com, Shine.com, in developing country like India awareness and adoption is bound to play a significant value exchange between job seekers as well as job givers. All the authors concluded with one point that e-recruitment is effective than other kinds of method.

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THE LAW OF INDIVIDUAL GROWTH :

Evolution is always experimental. All progress is gained through mistakes and their rectification. No good comes fully fashioned out of god's hand, but has to be carved out, through repeated experiments and repeated failures, by ourselves. This is the law of individual growth...... The right to err, which means the freedom to try experiments, is the universal condition of all progress.

-Mahatma Gandhi

What is important is to observe what is actually taking place in our daily life, inwardly and outwardly. To observe, to look, need no philosophy, no teacher, You just look. If you try to study yourself according to another, you will always remain a second-hand human being. We must therefore learn about ourselves, not according to some philosopher because then we learn about him, not ourselves - we must learn what we actually are. Let us start on our journey together with all the remembrances of yesterday left behind and begin to understand ourselves for the first time.

-Jiddu Krishnamurti

GUIDELINES FOR CONTRIBUTORS

The following are the guidelines applicable to contributions:-

1. The cover page should include Title, Abstract, Keywords, Authors(s) and Affiliations(s) Official Address (es) as well as Residential Address (es) with Pin Code (s) Email Address (es). Please indicate the corresponding author. The abstract not exceeding 200 words along with 5 Keywords, citing the purpose, scope and conclusion of the submission. Preferably it should explain why the readers should consider the same important.

2. Articles should not be more than 2500-4000 words including notes, references & tables.

3. Text should be 1.5 spaced typed in MS-word on A4 size paper leaving one inch margins all around. The text must be typed in font size 12 and font type "Times New Roman".

4. The main text should bot contain name of the author. The manuscript should not contain footnotes. References should be given at the end of the manuscript.

5. Reference should be given in APA style.

6. Tables: tables (each on a separate sheet) should be numbered consecutively in Arabic numerals and should be referred to in the text as Table 1, Table 2 etc. tables should not duplicate results in Graphs.

7. Graphs: With minimum descriptive text and Graph axes should be labeled with variable written out in full, along the length of the axes, with the unit in parenthesis.

8. All submissions for publication are referred on the 'double blind' system by at least two professionals.

9. Articles must be original and hitherto unpublished.

10. The final decision on the acceptance or otherwise of the paper rests with the Editors, and it depends entirely on the standard and relevance of the paper.

11. The final draft may be subjected to editorial amendment to suit the Journal's requirements.

12. All author/s must sign and send the "Copyright Certificate" along with their submission.

13. In the case of website, please do not forget to mention the date of accessing.

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