



**Journal of Fundamental
& Comparative Research**

This is to certify that the article entitled

**PERCEPTIVENESS OF MUTUAL FUNDS INVESTORS: A STUDY WITH SPECIAL REFERENCE TO
BENGALURU CITY**

Authored By

Shashidhar Yadav J

Associate Professor, MLA – Academy of Higher Learning Malleshwaram, Bengaluru

Published in

Shodhsambhita : Journal of Fundamental & Comparative Research

Vol. VIII, No. 1(II) : 2022

ISSN: 2277-7067

UGC Care Approved, Peer Reviewed and Referred Journal
Kavikulaguru Kalidas Sanskrit University, Ramtek

Prof. S. Shashidhar Yadav J



PERCEPTIVENESS OF MUTUAL FUNDS INVESTORS: A STUDY WITH SPECIAL REFERENCE TO BENGALURU CITY.

Manjunatha G Asst. Professor, Seshadripuram Academy of Business Studies, Kengeri, Bengaluru.
Shashidhar Yadav J Associate Professor, MLA – Academy of Higher Learning Malleshwaram, Bengaluru.

ABSTRACT:

In today's complex and modern financial environment, a mutual fund is the best investment instrument. When compared to other financial instruments, mutual fund investment has gained much importance in India. Mutual fund investments are safer and give higher returns on the investment. A mutual fund is a type of investment vehicle that pools money from a number of different investors and invests it in stocks, bonds, short-term money market instruments, other securities or assets, or a mix of these. A mutual fund is a professionally managed institution that provides low-cost services to investors. With the increasing number of investment alternatives, it is critical to examine mutual fund investment from various perspectives, particularly investor perceptions of mutual fund investing. This research paper concentrates to evaluate the various factors which influences investor's perception towards mutual funds. The survey was conducted and data was collected through structured questionnaire. The study applies descriptive statistical tools like chi-square test have been used for analysing the relationship between various factors and demographic data among the investors.

Key Words: *Mutual fund; investments; perception; chi-square; relationship.*

Introduction:

The economic growth of India, among many other factors, has been associated with its financial sector development as it facilitates the efficient mobilization and allocation of resources. The financial intermediaries within the financial sector are important as they mobilize the savings of the household sector through various instruments. Mutual funds, as one example of a financial intermediary, offer the benefit of pooling resources and portfolio diversification to a professional investor at a lower cost. Mutual funds are a platform for pooling inexperienced investors' investments and putting them in the hands of professionally managed fund managers for a regular return and capital appreciation. The funds raised are subsequently invested in capital market instruments such as stocks, bonds, and other assets.

Finally, unit holders enjoy the income and capital appreciation generated by these assets in proportion to the number of units they possess. Because investors with little savings do not have adequate knowledge or access to required diversification, mutual funds provide a mechanism for investors to approach most schemes and obtain a well-diversified portfolio. Mutual funds usually have a variety of schemes with various investment objectives that are launched on a regular basis.

As a result of their expert administration, mutual funds are able to allocate resources more efficiently by making markets more efficient, offering transparency, and, most importantly, risk management. By finding hidden patterns and predicting future trends and behavior in financial markets, automated procedures built by new technology and data mining are assisting AMC's of mutual funds in strategy planning and investment decision making. Global competition is fierce, and ICT-enabled tools are attracting more sophisticated investors every day. To meet the needs of investors, mutual funds are developing more lucrative and inventive solutions that take into account individual investors' risk appetite. AMC's primarily consider risk return trade-off while establishing these novel fund schemes, and after thoroughly examining the various securities on various risk levels.

REVIEW OF LITERATURE:

Priyanka Sharma and Payal Agrawal (2015) in their study made an attempt to understand the effect of demographic factors in mutual fund investment decisions. The study reveals that the investors' perception is dependent on their demographic profile. Investor's age, marital status and occupation has a direct impact on investors' choice of investment. The study further reveals that the female segment

is not fully tapped. The research also reveals that the liquidity and transparency are some factors which have a high impact on investment decisions.

Vipin Kumar & Preeti Bansal (2014) this research paper has focused attention on various parameters that highlights investor's perception on mutual funds. It was studied that the scheme of mutual fund investment was not known to many of the investors as still the investors rely upon the traditional pattern of investments like investment in banks and investment in postal savings. As most of the mutual fund investors used to invest in mutual fund for not more than three years and used to quit from the fund as they were not giving desired result as stated in the objective during inception of mutual fund scheme. It was also found from the research that maximum number of mutual fund investors has to depend upon their brokers and agent to invest in mutual fund.

J.Lilly and DrAnasuya published a research paper "An empirical study of performance evaluation of selected ELSS mutual fund schemes" published on International journal of scientific research (2014) which examined the performance of 49 selected tax saving else schemes by applying Sharpe ratio, Treynor ratio, Sortino ratio and Jensen's alpha measure and found out LIC NOMURA MF GROWTH and dividend schemes has the highest return and are risk home when compared to other schemes

Walia and Kiran (2009) studied investor's risk and return perception towards mutual funds. The study examined investor's perception towards risk involved in mutual funds, return from mutual funds in comparison to other financial avenues, transparency and disclosure practices. The study investigated problems of investors encountered with due to unprofessional services of mutual funds. The study found that majority of individual investors doesn't consider mutual funds as highly risky investment. In fact, on a ranking scale it is considered to be on higher side when compared with other financial avenues. The study also reported that significant relationship of interdependence exists between income level of investors and their perception for investment returns from mutual funds investment.

Singh and Jha (2009) conducted a study on awareness & acceptability of mutual funds and found that consumers basically prefer mutual fund due to return potential, liquidity and safety and they were not totally aware about the systematic investment plan. The invertors' will also consider various factors before investing in mutual fund.

Research Methodology:

The study conducted with an objective of understanding mutual fund investors perception with special reference to Bengaluru city. Data was collected based on primary source by using questionnaire method. In the study totally 118 respondents were collected from the investors however only 100 respondents were finalised and remaining were excluded due insufficient information for the study. The data for study was collected through structured questionnaire designed with google form. Questionnaire consisting of investment factors and demographic data which consist of 5 points likert scale. In this study, the data were analyzed with the help of statistical techniques of Chi-Square test to ascertain relationship among various investment factors and investors perception.

Study results:

Table 1: Demographical Profile

| Demographic Profile | | Frequency | Percent |
|---------------------|------------------|-----------|---------|
| Gender | Male | 73 | 73% |
| | Female | 27 | 27% |
| Age | Below 20 | 64 | 64% |
| | 20-40 | 18 | 18% |
| | 40-50 | 18 | 18% |
| | 50 and above | 0 | 0% |
| Marital Status | Married | 37 | 37% |
| | Unmarried | 63 | 63% |
| Qualification | SSLC | 18 | 18% |
| | Under Graduation | 18 | 18% |

| | | | |
|---------------|------------------------------|----|-----|
| Occupation | Post-Graduation | 46 | 46% |
| | Professional | 18 | 18% |
| | Business | 20 | 20% |
| | Salaried | 62 | 62% |
| | Profession | 18 | 18% |
| Annual Income | Below Rs. 1,00,000 | 9 | 9% |
| | Rs. 1,00,000 to Rs. 3,00,000 | 36 | 36% |
| | Rs. 3,00,000 to Rs. 5,00,000 | 55 | 55% |
| | Above Rs. 5,00,000 | 0 | 0% |

Source: primary data.

In the study with respect to gender it is found that the number of male respondents are more that is about 73% and female respondents are only about 27% so mainly men are preferring to go for mutual fund investment.

According to the study respondents were of different age groups 64% of respondents are about 64% which is majority and 18% respondents are of between 20-40 and 40-50 respectively and no respondents in study found between age group 50 and above.

In study it is found that 37% of total respondents are married and the rest 63% percentage of population are unmarried who are interested to invest in mutual fund. Qualification of the respondents in the study is found to be that 18% of total population are having a qualification of SSLC, under-graduation and professional respectively each and majority of the respondents in study are having qualification of post-graduation

In the study occupation of the respondents is analyzed that 20% are having own business, 18% are professionals and majority of the respondents that is 62% of total population are salaried. According to the study annual income of respondents is found that only 9% respondents have annual income below Rs. 1,00,000, 36% respondents have an annual income between Rs. 1,00,000 to Rs. 3,00,000, between annual income of Rs. 3,00,000 to Rs. 5,00,000 is majority in study that is of 55% and no respondents have annual income above Rs. 5,00,000.

Table 2: Objective and association of Investors on Mutual Funds.

| Particulars | | Frequency | Rank | Percent |
|--|--------------------------------|-----------|------|---------|
| How do you come to know about Mutual Funds | Television | 11 | 4 | 25.00% |
| | Internet | 36 | 1 | 100.00% |
| | Banks/Asset Management Company | 27 | 2 | 75.00% |
| | Financial Advisors | 8 | 5 | 0.00% |
| | Peer group/Friends | 18 | 3 | 50.00% |
| Which Mutual Fund have you invested | Open ended | 25 | 2 | 75.00% |
| | Close ended | 18 | 3 | 50.00% |
| | Growth oriented scheme | 16 | 4 | 25.00% |
| | Income oriented scheme | 27 | 1 | 100.00% |
| | Liquid fund | 14 | 5 | 0.00% |
| What are objective of savings in Mutual funds? | To provide for Retirement | 18 | 3 | 25.00% |
| | For Tax Deduction | 27 | 2 | 75.00% |
| | To meet contingencies | 18 | 3 | 25.00% |
| | For children education | 9 | 5 | 0.00% |
| | For Purchase Assets | 28 | 1 | 100.00% |
| How do rate the risk associated in Mutual Fund | Low | 37 | 1 | 100.00% |
| | Moderate | 29 | 2 | 66.60% |
| | High | 18 | 3 | 33.30% |

| | | | | |
|--|---------|----|---|-------|
| | No risk | 16 | 4 | 0.00% |
|--|---------|----|---|-------|

Source: Primary Data

In the study we found that the respondents are aware about mutual fund by different medium in that most of the respondents that is 36 came to know through internet and ranked 1st, 27 respondents are aware from Banks/asset management company ranked 2nd, 18 respondents came to know with their peer group and friends by ranking 3, 11 from television ranked 4 and only 8 respondents were aware of mutual funds through financial advisors and ranked 5.

Study found that respondents have invested in mutual fund more in income-oriented scheme standing 1st by 27 respondents, followed by open ended mutual fund by 25 respondents, close ended ranked 3, growth-oriented scheme is at 4 and liquid fund ranks 5th. According to the study the objective of saving in mutual fund is majorly for purchase of assets ranking 1, next ranked by tax deduction, 3rd rank is to meet contingencies and to provide for retirement, and children education is ranked 5.

Study shows that the risk associated in mutual fund is low which ranks 1, followed by moderate risk, 18 responded with high risk and lastly 16 responded with no risk is associated with mutual fund and stand 4.

Table 3: Descriptive statistics While investing your money in Mutual Fund, how these factors affecting decision

| Factors affecting decision | Mean | Mode | Standard Deviation |
|----------------------------|------|------|--------------------|
| Diversification | 3.82 | 4 | 1.114 |
| Liquidity | 3.82 | 5 | 1.114 |
| Better return and safety | 3.73 | 4 | 0.863 |
| Regular income | 3.47 | 3 | 1.000 |
| Tax Benefit | 3.74 | 4 | 0.872 |

Source: Primary Data.

Study analyzed the factors affecting decision while investing in mutual fund, risk diversification and liquidity factors have mean score of 3.82, mode value 4 and 5 respectively and standard deviation of 1.114, better return and safety factor is with mean score of 3.73, 4 mode and standard deviation of .863, regular income mean is 3.47, 3 modal value having 1.000 standard deviation and tax benefit having 3.74 mean value, 4 mode value and 0.872 standard deviation.

Table 4: Chi-square test on factoring affecting decision.

| | Age | Marital Status | Qualification | Occupation | Annual Income |
|--------------------------|-------|----------------|---------------|------------|---------------|
| Diversification | 1.000 | 0.007 | 0.360 | 0.457 | 0.283 |
| Liquidity | 0.000 | 0.004 | 0.977 | 0.753 | 0.967 |
| Better return and safety | 0.000 | 0.031 | 0.999 | 0.945 | 0.988 |
| Regular income | 0.002 | 0.176 | 1.000 | 0.998 | 1.000 |
| Tax Benefit | 1.000 | 0.022 | 0.999 | 0.937 | 0.995 |

Source: Research Compilation.

In the above table relationship between factors and demographic data is analyzed, diversification factor has a strong relationship between age, liquidity factor have strong relationship with qualification, occupation and annual income of respondents, better return and safety factor has strong relationship with qualification, occupation and annual income, regular income is having strong relationship with qualification, occupation and annual income, tax benefit factor has significant relationship with age, qualification, occupation and annual income.

Table 5: Investors Perception towards Mutual Funds

| Investors Perception | Mean | Mode | Standard Deviation |
|----------------------------|------|------|--------------------|
| It provides more liquidity | 3.56 | 5 | 1.313 |
| Funds are riskier | 2.65 | 2 | 0.783 |

| | | | |
|--|------|---|-------|
| It provides higher tax shield | 3.37 | 4 | 1.228 |
| The less risk involved comparatively | 3.09 | 4 | 0.996 |
| Investment are highly liquid in nature | 3.82 | 4 | 0.716 |

Source: Primary Data

According to the study investors perception toward mutual funds is more with providing liquidity on investment scoring mean 3.56 and 1.313 standard deviation, risk factor is with 2.65 mean and 0.783 standard deviation, providing higher tax shield mean is 3.37 and standard deviation is 1.228, mean score 3.09 is for less risk involved comparatively and standard deviation 0.996, investment are highly liquid in nature have mean of 3.82 and 0.716 standard deviation.

Table 6: Chi-square test on Investors perception.

| Investors perception | Age | Marital Status | Qualification | Occupation | Annual Income |
|--|-------|----------------|---------------|------------|---------------|
| It provides more liquidity | 1.000 | 0.078 | 0.046 | 0.715 | 0.295 |
| Funds are riskier | 0.671 | 0.996 | 1.000 | 1.000 | 1.000 |
| It provides higher tax shield | 0.005 | 0.103 | 0.865 | 0.968 | 1.000 |
| The less risk involved comparatively | 1.000 | 0.918 | 0.026 | 1.000 | 0.991 |
| Investment are highly liquid in nature | 0.000 | 0.008 | 0.999 | 0.911 | 0.998 |

Source: Research Compilation.

In the above table relationship between investor's perception and demographic factor is analyzed, it is found that there is a significant relationship with providing more liquidity to age and occupation, funds are riskier is having strong relationship with all the data age, marital status, qualification, occupation and annual income, providing higher tax shield has relationship with qualification, occupation and annual income, for factor involving less risk comparatively is having significant relationship with age, marital status, occupation and annual income, investment are highly liquid in nature is having strong relationship with qualification, occupation and annual income.

Table 7: Investors Perception towards Mutual Funds - 2

| Investors Perception | Mean | Mode | Standard Deviation |
|---|------|------|--------------------|
| It provides better returns than other investments | 3.45 | 3 | 1.234 |
| It provides easy withdrawal facilities | 3.73 | 4 | 0.863 |
| Funds are useful for small investors | 3.72 | 4 | 0.861 |
| These are highly regulated instruments | 3.73 | 4 | 0.863 |
| Information of funds are easily available | 3.28 | 4 | 0.965 |

Source: Primary data.

The above table shows investors perception towards mutual funds, mean score is 3.45, mode is 3 and standard deviation is 1.234 for providing better returns than other investments, for providing easy withdrawal facilities mean is 3.73, mode is 4 and standard deviation is 0.863, useful for small investors mean is 3.72, 4 mode, standard deviation is 0.861, for being highly regulated instrument mean is 3.73, mode is 4 and 0.965 is standard deviation, easy availability of information of funds mean is 3.28, mode is 4 and standard deviation is 0.965.

Table 8: Chi-square test on Investors perception - 2

| Investors perception | Age | Marital Status | Qualification | Occupation | Annual Income |
|---|-------|----------------|---------------|------------|---------------|
| It provides better returns than other investments | 1.000 | 0.162 | 0.910 | 0.939 | 0.382 |
| It provides easy withdrawal facilities | 0.001 | 0.035 | 0.984 | 0.901 | 0.993 |
| Funds are useful for small investors | 0.001 | 0.026 | 0.996 | 0.945 | 0.993 |

| | | | | | |
|---|-------|-------|-------|-------|-------|
| These are highly regulated instruments | 0.001 | 0.019 | 0.999 | 0.901 | 1.000 |
| Information of funds are easily available | 0.059 | 0.431 | 0.999 | 1.000 | 1.000 |

Source: Research Compilation.

The above table shows the relationship between factors, there is a strong relationship with providing better returns than other investment to age, qualification and occupation, providing easy withdrawal facilities is having relationship with qualification, occupation and annual income, funds are useful for small investors is having relationship with qualification, occupation and annual income, for being highly regulated instruments is having relationship with qualification, occupation and annual income, information of funds are easily available is having significant relationship with qualification, occupation and annual income.

Conclusion:

A study on investor's perception toward the mutual fund was conducted by preparing the questionnaire and 73% male and 27% female were responded to the study whereas 65% respondents age were below 20 and 63% respondents were unmarried also 46% respondents were with the post-graduation likewise 62% of the respondents were dependent upon salary and 55% of the income group annually were 3Lakhs to 5Lakhs among the respondents. Objective and association of the investors on mutual funds found that internet was the major influential communication about the mutual fund compared with other major sources also, income oriented scheme were highly agreed by respondents for investing mutual funds compared with the other schemes, likewise the major objective of saving in mutual fund found to be for purchasing assets and respondents likely to invest in mutual fund which is associated with low risk comparatively as per the respondents.

In a study it is found that diversification of mutual fund is related to marital status, liquidity is related to age and marital status. Whereas, better returns in safety related to age and marital status also, regular income related to age group and tax benefit have a strong relationship with the marital status. As per the investors perception liquidity and qualification are strongly related whereas investments are highly liquid in nature have a strong relationship with age and marital status. Easy withdrawal facility provided by mutual fund companies, funds for small investors and highly regulated instruments strongly related with the age.

Reference:

- Agrawal, G. (2013). Investor's Preference Towards Mutual Fund in. 1(4), 115-131.
- Bajracharya, R. B. (2018). A Study of Investors' Attitude towards Mutual fund in Kathmandu City, Nepal. *Journal of Advanced Academic Research*. <https://doi.org/10.3126/jaar.v4i1.19514>
- Begum, N. N., & Rahman, S. (2016). An Analytical Study on Investors' Preference towards Mutual Fund Investment: A Study in Dhaka City, Bangladesh. *International Journal of Economics and Finance*. <https://doi.org/10.5539/ijef.v8n10p184>
- Hawaladar, I. T., & Ur Rahiman, H. (2019). Investors perception towards stock market: An exploratory approach. *International Journal of Scientific and Technology Research*.
- Kandel, L. R. (2020). Investors' Preference Towards Mutual Fund: An Analytical Evidence From Kathmandu Valley. *Pravaha*. <https://doi.org/10.3126/pravaha.v25i1.31939>
- Kaur, L., & Kaushik, K. P. (2016). Determinants of investment behaviour of investors towards mutual funds. *Journal of Indian Business Research*. <https://doi.org/10.1108/JIBR-04-2015-0051>
- Kaur, S. J., & Bharucha, J. (2021). The emerging mutual fund industry in India: An impact analysis of investors' awareness on investment behaviour. *International Journal of Business and Globalisation*. <https://doi.org/10.1504/IJBG.2021.111960>
- Kaur, S., Batra, G. S., & Anjum, B. (2013). Investor's Perception towards Selection of Mutual Funds Rather than Stock Market. *International Research Journal of Business and Management*, V, 53-63.

Keerthana, P. M., Nidheesh, K. N., & Balasubramanian, P. (2019). Investor's perception toward mutual fund in the Ernakulam city. *International Journal of Innovative Technology and Exploring Engineering*.

Khitoliya, P. (2014). Investors Awareness and Perceived Risk Attitude towards Mutual Fund: An Empirical Study in Delhi. *IRACST - International Journal of Commerce, Business and Management*.

Kiran, R., & Walia, N. (2009). An Analysis of Investor's Risk Perception towards Mutual Fund Services. *International Journal of Business and Management*, 4(5), 106-120.
www.ccsenet.org/journal.html

Kumar Reddy, M. C. P., & Sudhakar, P. A. (2016). The Perception of Individual Investors towards the Performance of Mutual Funds. *JOSR Journal of Business and Management*, 18(09), 09-14.
<https://doi.org/10.9790/487x-1809010914>

Kumar, R., & Goel, N. (2014). Factors affecting perception of investors towards Mutual Funds. *International Journal of Research and Development*, 3(4), 27-32.

Muthalif, R. A., & Munivel, K. (2019). A Study On Customers' Awareness and Perception Towards Mutual Funds in Dharmapuri District. *International Journal of Scientific Research and Review*.

Padmaja, R. (2013). a Study of Consumer Behavior Towards Mutual Funds with Special Reference to Icici Prudential Mutual Funds. *Mgmt Res. & Bus. Strat.*

Rajasekar, D. (2013). a Study on Investor ' S Preference Towards Mutual Funds with Reference to Reliance Private Limited, Chennai - an Empirical Analysis. *International Research of Business and Management*, 3, 38-44.

Rehan, R., Naz, S., Umer, I., & Ahmed, O. (2018). Awareness and {Perception} of {Investors} {Towards} {Mutual} {Funds} {Industry}. *RADS Journal of Social Sciencess & Business Management*, 5(1), 1-14.

Rehan, R., Naz, S., Umer, I., & Ahmed, O. (2018). Awareness and {Perception} of {Investors} {Towards} {Mutual} {Funds} {Industry}. *RADS Journal of Social Sciencess & Business Management*.

Sailaja, V. N. (2018). A study on investors awareness towards mutual funds investment. *International Journal of Civil Engineering and Technology*.

Sharma, N. (2012). Indian Investor ' s Perception t owards Mutual Funds © Society for Business and Management Dynamics © Society for Business and Management Dynamics. *Business Management Dynamics*, 2(2), 1-9.
<https://pdfs.semanticscholar.org/d7c0/7c1bcc8f9b5a0e9f695193af401e44fa3e7c.pdf>

Thoufiqulla, & Raju, D. V. (2019). Perception of indian investor towards investment in mutual funds with special reference to mip funds. *Journal of Advanced Research in Dynamical and Control Systems*, 11(5), 177-183.

Thoufiqulla, & Raju, D. V. (2019). Perception of indian investor towards investment in mutual funds with special reference to mip funds. *Journal of Advanced Research in Dynamical and Control Systems*.

Tripathy, D. P., & Kumar Patjoshi, D. P. (2020). Study on Awareness and Perception of Investors Towards Indian Mutual Funds. *GEDRAG & ORGANISATIE REVIEW*.
<https://doi.org/10.37896/gor33.02/316>

Velmurugan, G., Selvam, V., & Abdul Nazar, N. (2015). An empirical analysis on perception of investors' towards various investment avenues. *Mediterranean Journal of Social Sciences*.
<https://doi.org/10.5901/mjss.2015.v6n4p427>

Wagle, S. (2020). Investors' Attentiveness towards Mutual Funds in Nepal. *Prithvi Academic Journal*.
<https://doi.org/10.3126/paj.v3i1.31288>.



Kala Sarovar

UGC CARE Group - 1 Journal

ISSN : 0975-4520

CERTIFICATE OF PUBLICATION

This is to certify the paper Entitled

**IMPACT OF ORGANIZATIONAL CULTURE ON EMPLOYEE JOB SATISFACTION:
AN EMPIRICAL STUDY OF IT SECTOR BENGALURU**

Authored By

Dr. P. V. Padmaja

Principal, MLA Academy of Higher

Published in

Vol-24 No.01(E) January-March 2021

Kala Sarovar

ISSN : 0975-4520

UGC Care Group 1 Journal



IMPACT OF ORGANIZATIONAL CULTURE ON EMPLOYEE JOB SATISFACTION:
AN EMPIRICAL STUDY OF IT SECTOR BENGALURU.

Mrs. Rajeshwari. M
Research Scholar, Tumkur University, Tumkur.

Dr. P. V. Padmaja
M.Com., PGDBA., Ph.D., Principal, MLA Academy of Higher Learning

Abstract:

This study shades and evaluates to know the performance of organizational culture and how job satisfaction is impacted towards it. The objective of this study is to examine and measure of organizational culture. The study is expected to enable their effective role of organizational culture and help the managers to implement the culture and help to increase the efficiency of performance and productivity. After analysis with literature, the both variables are positively correlated with each other and organizational culture and job satisfaction has strong relationship. The present Organizational culture can foster commitment to the organization's work life style and values. Organizational culture serves as a control mechanism to pattered behaviours toward desired behaviours and out off from undesired behaviours. To create the value based and ethical approached employee performance and employee productivity is more important in today's organization that the main relative elements that impact organization culture and employee commitment should be understood so we take survey to shed the relation impact in organization culture and job satisfaction a special case study reference to IT sector Bangalore. The Cultures that are agreed upon by the employees working in the same organizations showed that the level of performance increase and helps the business grow effectively if job satisfaction environment is created.

Keywords: Organizational Culture, job satisfaction, Productivity, Work culture, Employee Performance, Ethical approach, Technologies.

Introduction

Organizational development can be improved if we know that on which factors it depends upon. Organizations and managers of organization should know about the employees, their commitment and their needs, through this productivity can be increased. Management should arrange meetings with new employees to tell them about their norms, values and mission of the organization which helps in understanding the organizational culture. By adopting this how effectively origination achieves the towards the performance creating employee job satisfaction. Its co-relative factor which process depended on origination culture (that might be organisation norms, ethics, present Environment) Employee satisfaction or job satisfactions one of the major key to active the organization target. A satisfied employee is not just a retained employee but an ambassador for best performance towards work and creating brand and goodwill towards the product. Happy employees are more loyal to the company and its objectives, they go the extra mile to achieve goals and take pride in their jobs, their teams and their achievements. If employees know the

organizational culture then they will perform well. Employee's performance is back bone for the industry and it plays a vital role in the development of organization. Therefore organizations aim to get full attention of the employees to their work and they should be loyal. Any organization cannot be complete without Organizational culture which shows its importance. Johnson and Scholes (1999) defined organizational culture as "it is encompassed of essential ideology, notions as well as verdicts that are shared by members of an organization". The features of a dominant Journal of Quality and Technology Management organizational culture includes a flexible learning of environment in which environmental changes can be absorbed and consisting of the workforce that is highly friendly, hardworking, powerful, responsible and well inspired (Barratt, 1992). "Indisputably organizational culture has been documented as an essential aspect in bringing the organizational success in getting most wanted business performance outcomes" (Irianto, 2005; Sigler and Pearson, 2000; Madu, 1997). Organizations in private sector are well-known by their competitive, performance based reward system, diverse and office conflict among employees and groups, and other responsibilities and discharging of employee.

Forehand and von Gilmer (1964), defined culture as a distinguish attribution chest that articulates organization itself and from others as well. According to Hofstede (1980), it's a massive mind thinking's that brought difference among members of one group to another. Organization cultural concept was first come into sight in 1970s and 1980s (e.g., Hofstede, 1981; Ouchi & Price, 1993; Pettigrew, 1979; Schwartz & Davis, 1981), and in a little while this concept became one of the most prominent but in management research and practice it also became most disreputable concept (Crane, 1995; Jarnagin & Slocum, 2007). According to Geertz (1973); culture is "and previously conveying pattern of meanings embodies in symbols, a system of innate commencement articulated in symbolic form through which men can correspond, achieve and build up their knowledge about and their approach towards life. Robins (2000) compared this with social glue that helps to grasp the organization jointly. According to Robins (2000), Organizational culture refers to a system of common meanings held by members that makes a distinction among different organizations. Strong organization cultures have an enormous control over behavior of its members. It is considered that national culture take priority over an organization's culture because of its huge impact on employee performance.

Literature review

Organizational culture

Organizational culture includes an organization's expectations, experiences, philosophy, as well as the values that guide member behavior, and is expressed in member self-image, innerworkings, interactions with the outside world, and future expectations. Culture is based on shared attitudes, beliefs, customs, and written and unwritten rules that have been developed over time and are considered valid (The Business Dictionary). Culture also includes the organization's vision, values, norms, systems, symbols, language, assumptions, beliefs, and habits (Needle, 2004). Simply stated, organizational culture is "the way things are done around here" (Deal & Kennedy, 2000).

While the above definitions of culture express how the construct plays out in the workplace, other definitions stress employee behavioural components, and how organizational culture directly influences the behaviours of employees within an organization. Under this set of definitions,

organizational culture is a set of shared assumptions that guide what happens in organizations by defining appropriate behaviour for various situations (Rayasi & Schultz, 2006). Organizational culture affects the way people and groups interact with each other, with clients, and with stakeholders. Also, organizational culture may influence how much employees identify with their organization (Schrodt, 2002).

Culture is stated as "the direction of life for a whole society". The culture of a group defined by Schein (1990). An outline of communal necessary gatherings that the group learned as it solved its problem of outdoor variations and inside incorporation that has worked as much as necessary to be considered legitimate and consequently to educate fresh members in the correct way through which they were observed, assume and be aware of problems incorporated by such things.

Job Satisfaction

Job satisfaction may be defined in many different ways.

E. A. Locke describe job satisfaction as, "the pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's job values" According to P. E. Spector, "Job satisfaction is the extent to which people like or dislike their jobs". De Nobile defined job satisfaction as "the extent to which a staff member has favorable or positive feelings about work or the work environment."

Davis, Newstrom, and Dessler describe job satisfaction as "a set of favorable or unfavorable feelings for the employees to perceive their work and that determine the possibility of a major disposition to achieve higher performance". According to S.P. Robbins, "Job satisfaction refers to an individual's general attitude toward his or her job." According to Dawis and Lofquits (1984) "job satisfaction is evaluation of individual's assessment level that how the working environment fulfill their needs. The employees who are satisfied will work for the progress of an organization and make their organizational culture healthy (Lock, 1969). Some researchers said that the job satisfaction is very important for the motivation of employees (Rao, 2005). Some research says, that if employees are happy with their job then it is better for the productivity of organization so result is that the employee's commitment with the organization (Beutinbach and De Witt, 2005). If the employees show the positive attitude towards work it shows that they are satisfied with the job (Sekaran, 1989). Egan et al., 2004, Silverthorne, 2004 mention that job satisfaction has a positive impact on employee productivity and it is negatively associated with employee's turnover. According to the Kreis and Brockopp (1986) job satisfaction is related to self-actualization needs of employee fulfillment through organizational work. Many studies demonstrate the good relationship between the job satisfaction and customer satisfaction (e.g., Band, 1988; George, 1990).

Job satisfaction relates to the total relationship between an individual and the employer for which he is paid. Satisfaction means the simple feeling of attainment of any goal or objective. Job dissatisfaction brings an absence of motivation at work.

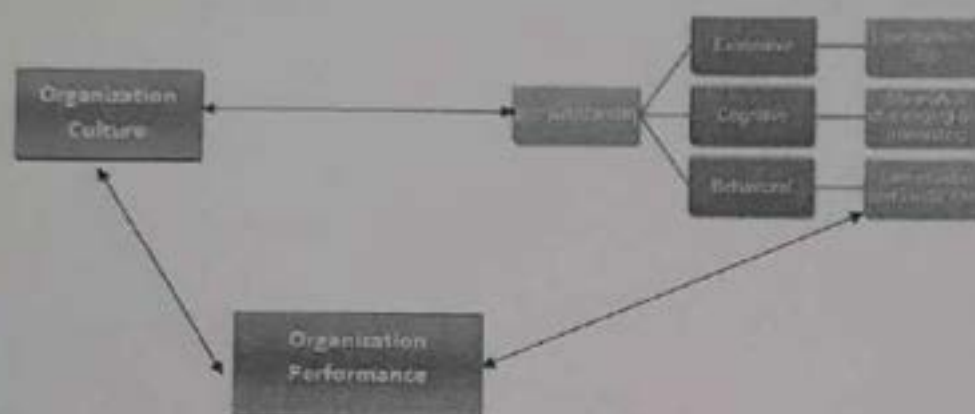
Objectives of the Research

1. To identify impact of organizational role towards organization culture
2. To identify impact of organizational culture on organization performance
3. To find out whether organizational culture impact job satisfaction

Hypothesis

H1: Adopting organization culture positively impact towards organization. H2: Organizational Culture is positively related to Employee Performance. H3: Organizational Performance is positively related to job satisfaction.

Theoretical Framework



Research Methodology

Participants

Company are taken sampling survey like Accenture, Epsilon, Ey, Hewlett Packard, IBM, Infosys, Innoviti payment solution, JP Morgan And Chase, Northern trust, SAP india, Omni matrix ltd. In Bengaluru city of Karnataka state from India.

Instrument

Questionnaire having four research variables each variable contained six questions, so questionnaire was consisted of total 32 questions.

Sampling & Sample Size

Followed the method of Random sampling design to select sample from population. The Sample size of research was 400 respondents from which we collected the data.

Data Collection

Questionnaire consists of 32-Questions of 3 variables of impact of organizational culture by job satisfaction. We distributed 438 questionnaires and received 400 in complete form.

Data Analysis

Data collected from respondents was uploaded into SPSS 19 and correlation analysis test was applied to revile the research results.

Results

| | Mean | Std Deviation | N |
|--------------------------|--------|------------------|-----|
| Organizational Culture | 3.1631 | .40785 | 400 |
| Job Satisfaction | 4.6777 | .56324 | 398 |
| Organization Performance | 3.3211 | .42753 | 398 |

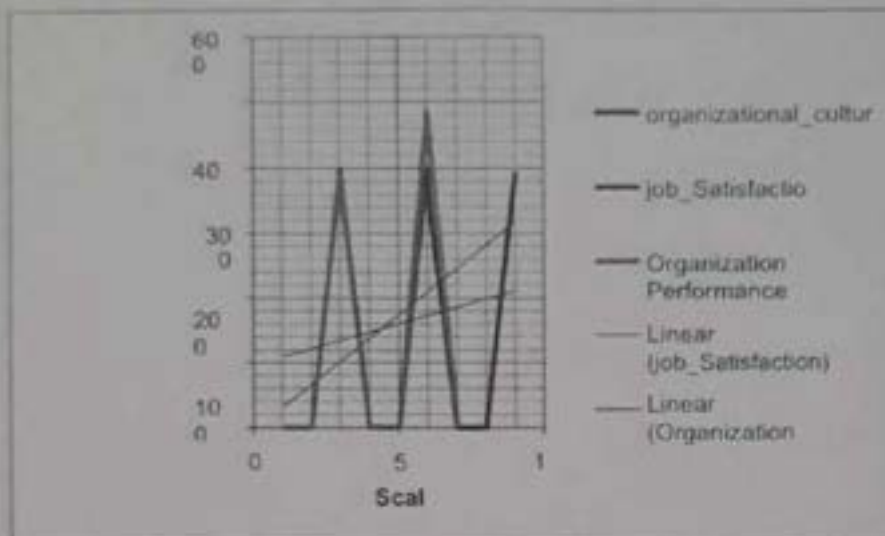
Correlations

| | | Organizational Culture | Job Satisfaction | Organization Performance |
|-------------------------------------|------------------------|---------------------------|---------------------|-----------------------------|
| | Pearson Correlation | .344* * | 1 | .399* * |
| Organizational Culture | Sig. (2- tailed) | 0 | | 0 |
| | N | 385 | 400 | 390 |
| | Pearson Correlation | 1 | .387** | .472* * |
| Job Satisfaction | Sig. (2- tailed) | 0 | | 0 |
| | N | 400 | 366 | 489 |
| | Pearson Correlation | .486* * | .412** | 1 |
| Organization Performance | Sig. (2- tailed) | 0 | 0 | |
| | N | 394 | 392 | 400 |

** Correlation is significant at the 0.01 level (2-tailed).

The relationship among the variables. Correlation +1 to -1 This shows positive and negative correlation. The significant level for correlation is 1% (0.01), on the basis of that we will accept or reject our hypothesis. Table value of level of significance for Organizational Culture (Independent Variable) is .005, which is less than our significant level of correlation 0.01. While according to the given table, significant value of Job Satisfaction, Organization Performance (Dependent Variables) is 0.00. So (0.00 < 0.01) shows there is positive relationship between job Satisfaction and its dependent variables.

Graph Representing The Impact Of Organizational Culture On Job Satisfaction And Organization Performance



Limitations of the study

study of organisational culture is strongly recommended and its is in wide in nature to evaluate so in study we taken only considerable standard variable as a scale and Study only done with preferred geographical area like Bengaluru city IT sectors only. The moderating effects of industry, micro-environments, and stage of growth require further clarification. Such studies would allow for the accumulation of comparative and normative data necessary for the evaluation of the impact of organisational culture and job satisfaction.

Conclusion

This paper mainly examinations with the relationship between organisational culture and job satisfaction based on preferred geographical area like Bengaluru city IT sector for the study. The findings identify the particular aspects of culture which have an impact on job satisfaction. Further, the higher levels of job satisfaction in IT companies may give these organisations adopt the organisation culture by implicating by its own role and culture may be more conducive to maximising employee job satisfaction it as indentified that job satisfaction measures vary in the extent to which they measure feelings about the job or cognitions about the job. This could be the job in general or their attitudes towards specific aspects of it, such as their colleagues, pay or working conditions. Also, the extent to which work outcomes meet or exceed expectations may determine the level of job satisfaction. As the organizational culture impacts positively or negatively on these three variables and considered as the base for performance of any organization. If the organizational culture is positive, it will enhance employee's commitment, job satisfaction and the performance will increase. It is viewed in this study that strong organizational culture is very helpful for the new employees to adopt the organizational culture and to get the competitive advantage

References

- Deal T. E. and Kennedy, A. A. (1982, 2000) *Corporate Cultures: The Rites and Rituals of Corporate Life*, Harmondsworth, Penguin Books, 1982; reissue Perseus Books, 2000
- The Business Dictionary. Organizational culture
- Needle, David (2004). *Business in Context: An Introduction to Business and Its Environment*.
- Ravasi, D.; Schultz, M. (2006). "Responding to organizational identity threats: Exploring the role of organizational culture". *Academy of Management Journal*, 49 (3): 433-458.
- Schrodt, P (2002). "The relationship between organizational identification and organizational culture: Employee perceptions of culture and identification in a retail sales organization". *Communication Studies* 53: 189-202.
- Schein, Edgar H. *Organizational Culture and Leadership*. San Francisco: Jossey-Bass, 2010. Print.
- Tsai, Y. (2011). "Relationship between Organizational Culture, Leadership Behavior and Job Satisfaction." *BMC Health Services Research BMC Health Serv Res* (11)1, 98.
- Boundless. "Types of Organizational Culture." *Boundless Management*. Boundless, 21 Jul. 2015. Retrieved from boundless.com
- The Tipster. (2013). "4 Types of Organizational Culture." *ArtsFWD*. 14 May 2013. Retrieved from <http://artsfwd.org/4-types-org-culture/>
- Costanza, David P., Nikki Blacksmith, Meredith R. Coats, Jamie B. Severt, and Arwen H. Decostanza. (2015). "The Effect of Adaptive Organizational Culture on Long-Term Survival." *J Bus Psychol Journal of Business and Psychology*, 1-21. Web
- Appelbaum, S., Bartolomucci, No, Beaumier, E., Boulanger, J., Corrigan, r., Dore, L., Girard, C., & Serroni, C. (2004). Organizational Citizenship behaviour a case study of culture, leadership and trust. *Management Decision*, 42 (1), 13-40.
- Bill Pollock, White Paper, Employee Retention reducing recruitment by increasing retention board after downsizing. Palo Alto, CA: Davies-Black Publishing. Brinkers and Phillips, (1969), Employee Retention, Reducing Recruitment by increasing retention.
- Buitendijk, J.H & De-Witt, H. (2005). Job insecurity, extrinsic and intrinsic job satisfaction and affective organizational commitment of maintenance workers in parastatal. *South African journal of Business Management*, 36(2), 27-39.
- Bateman, T. and Strasser, S. (1984), "A longitudinal analysis of the antecedents of organizational commitment", *Academy of Management Journal*, Vol. 21, pp. 95-112
- Caplan, Gayle and Teese, Mary. (1997). Survivors—How to keep your best people on
- Chang S, and Lee MS. *Learning Organization*, 2007, 14(02): 155-185.
- Dawis, R. & Lofquist, L. (1984). *A psychological theory of work adjustment*. Minneapolis, MN: University of Minnesota Press.

A J O M C

Volume 7, Number 1
January-March 2022
ISSN: 2456-8937

Asian Journal of Organic & Medicinal Chemistry



<http://ajomc.asianpubs.org>



Asian Publication Corporation
Sahibabad (India)
<http://asianpubs.org>

Editor-in-Chief

Dr. Bimal K. Bainik

Vice President of Research & Education Development
Community Health Systems of South Texas
Edinburg, USA

Asian Journal of Organic & Medicinal Chemistry

Editor-in-Chief

Bimal Krishna Banik

Professor and Senior Researcher

Department of Mathematics and Natural Sciences

College of Sciences and Human Studies

Deanship of Research Development

Prince Mohammad Bin Fahd University, Kingdom of Saudi Arabia

Editorial Advisory Board

Prof. (Dr.) Doralyn S. Dalisay

Head, Department of Pharmacy

College of Pharmacy and Medical Technology University of San Agustin Iloilo City, Philippines

Prof. (Dr.) Hongchao Zheng

Center for Integrative Chemical Biology and Drug Discovery,
UNC-Chapel Hill, Chapel Hill, NC 27599

Prof. (Dr.) Marek Cyprian Chmielewski

Institute of Organic Chemistry
PASKasprzaka 44/5201 - 224 Warsaw 42,
P.O. Box 58 Poland

Prof. (Dr.) Joaquin Tamariz

Department of Organic Chemistry, National School of Biological Sciences,
National Polytechnic Institute. Prol. Carpio and Plan de Ayala, 11340 Mexico City, DF, Mexico

Dr. Biswa Mohan Sahoo

Department of Pharmaceutical Chemistry
Vikas College of Pharmacy, Vissannapeta, Krishna Dist.
Andhra Pradesh, India

Dr. Pranjal Baruah

Department of Applied Science
Gauhati University, Guwahati, India

Dr. Jhuma Ganguly

Department of Chemistry
Indian Institute of Engineering Science and Technology
Shibpur, India

Dr. Chittaranjan Sinha

Department of Chemistry
Jadavpur University, Kolkata, India

Dr. Aman Bhalla

Assistant Professor
Department of Chemistry & Center of Advanced Studies in Chemistry
Panjab University, Chandigarh

Dr. Hemant Vilas Chavan

Department of Chemistry
A.S.P. College, Devrukh, Ratnagiri, India

Dr. Seema P Mengshetti

Emory University, E469
Laboratory of Biochemical Pharmacology
Health Sciences Research Building
1760 Haygood Drive, Atlanta GA 30322

Dr. Shovan Mondal

Department of Chemistry
Syamsundar College, Shyamsundar, Purba Bardhaman, India

Asian Journal of Organic & Medicinal Chemistry

Special Issue

on

**Current Research Trends in Management, Science
and Technology**

CONTENTS

Research Papers

- Oxidative Conversion of Nickel Assisted N-Methyl-2,6-Diphenylpiperidin-4-One Oxime by Trimethylammonium Fluorochromate in Aqueous Acetic Acid Medium: A Kinetic and Mechanistic Study** 1 – 6
J. Vijaya, J. Dharmaraja and V. Raj
- 2-(Pyridin-2-Yl) Pyridine Catalyzed Oxidative Conversion of Copper Supported N-Methyl-2,6-Diphenylpiperidin-4-One Oxime by 2,6 - Dicarboxypyridinium Fluoro Chromate-A Kinetic and Mechanistic Study** 7 – 13
S. Mohanapriya, J. Dharmaraja and V. Raj
- Complex Equilibrium Studies of Sitagliptin Drug with Different Metal Ions** 14 – 17
Ganesh Babasaheb Akat and B.K. Magare
- Mixed Ligand Complex Formation of Copper (II) with Some Amino Acids and Metoprolol** 18 – 20
Ganesh Babasaheb Akat and B.K. Magare
- Occupational Health Hazards Faced by the Workers of Knitting Units** 21 – 29
Bhupinder Kaur, Chanchal and Shefali Singh
- Mass Attenuation Coefficients and Effective Atomic Number of Yttrium Oxide (Y_2O_3) at Energies 122 KEV to 1330 KEV** 30 – 35
Pradip Dahinde
- Motivational Strategies in ESL Classrooms: Teachers' Perspective** 36 – 45
Vidhya.L, K. Anbazhagan and Sukanya Saha
- A Study to Assess Consent Practices in a Multispeciality Hospital** 46 – 51
Mahin Kousar, Divya Rao and Shalini N
- Child Marriage and Its Bane: Influence of Society and Family** 52 – 58
M. Suryakumar
- Assessment of Pharmacognostic and Physicochemical Standards of *Prosopis Cineraria* (L) Druce. Leaf** 59 – 67
Varsha Pandey, Priyanka Dasai and Teena Agrawal
- A Brief Study on Artificial Intelligence in Cancer Research, Diagnosis and Therapy** 68 – 75
Pooja Kabra, H. Venkatesan, Poonam Agrawal, Danish Ather and Shabnam Sayyad

| | |
|---|-----------|
| Education Empowerment is Manifestation to a Girl Child to remove Gender Inequality in the Society – A Study with Reference to Kadambattur Village, Thiruvallur District, Tamilnadu India | 76 – 79 |
| <i>P. Libia, N. Swarnalatha, P. Priya and M. Jeevitha Kumari</i> | |
| A Review on Issues and Problems of Women Entrepreneurs in Micro, Small and Medium Enterprises in India | 80 – 83 |
| <i>Pratima Singh</i> | |
| A Review on Women Entrepreneurship: Evidence from India | 84 – 87 |
| <i>Aruna Singham</i> | |
| Artificial Intelligence: A Study on Technological Innovation towards Online Fashion Websites | 88 – 95 |
| <i>Sandhya M and Anli Suresh</i> | |
| Edge Computing Technology: An Overview | 96 – 99 |
| <i>Sheetal Zalte, Meenakshi Patil, Suvarna Tone and Nilam Randive</i> | |
| How Communication through Social Media Platforms Play Substantial Part in Employee Engagement | 100 – 103 |
| <i>Ashu and Deepti Wadera</i> | |
| Kinetic and Thermodynamic Studies of the Controlled Oxidation of Cinnamyl Alcohol by Potassium Persulphate in Acidic Medium | 104 – 106 |
| <i>Himanshu Gupta, Freddy Havaldar and D.V. Prabhu</i> | |
| The Role of Human Resources in Hospitality Sector | 107 – 109 |
| <i>T. S. Poorna Chandrika</i> | |
| Textile Trade between India and Bangladesh on the Backdrop of the Phase Out of MFA | 110 – 115 |
| <i>Arifa Tabassum</i> | |
| Ideologies of Swami Vivekananda for Universal Peace and Harmony and its Implications on Human Life | 116 – 120 |
| <i>Usha Devi N and Asha K</i> | |
| Cashless Payment Policy and Its Effects on Economic Growth of India: An Exploratory Study | 121 – 128 |
| <i>Meena Wadgule</i> | |
| Mitigating Financial Risks in the Tractor Industry -A Case Study on Post Covid-19 Recovery in Escorts Ltd | 129 – 134 |
| <i>C.A Reena S. Desai</i> | |
| A Report on Emerging Dimensions of Women Empowerment through Micro Finance | 135 – 142 |
| <i>Samrat Srivastava</i> | |

Ideologies of Swami Vivekananda for Universal Peace and Harmony and its Implications on Human Life

Usha Devi N¹ and Asha K²

¹Department of Commerce, MLA First Grade College for Women, Bengaluru

²Department of Commerce & Management, MLA Academy of Higher Learning, Bengaluru

ABSTRACT

This study is undertaken to present a descriptive and prescriptive argumentation on Ideologies of Swami Vivekananda. It is descriptive because it is primarily a literature review and it is prescriptive because it reflects the author's opinion about Ideologies of Swami Vivekananda for universal love and harmony and its impact on human life.

Keywords: Swami Vivekananda, Universal peace and Harmony, Human life

INTRODUCTION

Swami Vivekananda is the great visionary and spiritual leader. He visualized in bringing peace and harmony to the entire world through universal love and compassion. He always stressed that the people with humility will have qualities of the human spirit. For instance, corporate leaders like Aditya V. Birla, Bill Gates, JRD Tata, Azim Premji, Narayan Murthy had positive qualities such as love and compassion, patience, tolerance, forgiveness. They strongly believed that positive energy can bring Peace, Prosperity and Plenty to the whole organization through perfection, commitment and quality-consciousness. It is this belief helped them to carve out the goal, provide direction, and create a road map to move forward.

Swamiji in his speeches always said that Spiritual leadership guides people to attain self-realization and this kind of realization is a lifelong process of growth that transforms ordinary man into extra ordinary. For example, in Bhagavad Gita, Sri Krishna tells Arjuna about the purpose of battle i.e battle is not for his own benefit, not for satisfying his own greed and desire, but for the good of many². It is these inspiring words, which changed Arjuna's mind from a state of inertia to a state of self-confidence and fight against evils and ultimately achieved the victory of "dharma".

There are people like the banyan tree. There are also people like the coconut tree. Banyan tree is one which gives the umbrella of protection to those coming under its shade, but it never allows a single grass to grow under it. Persons of banyan tree concept build up an empire with committed loyalties, for which the benefits are passed on. But the people who get benefit would not grow by themselves. They are always the parasites. On the other hand, Coconut tree is one which does not give shade, but offers tender coconut to the person who may be tired of day's hard work and wanting to go back to work after some relaxation. Persons of coconut tree concept allow others to independently develop themselves. They only extend the support and not the shelter. Swami Vivekananda advocated that in the situation of changing environment, we need the persons of coconut tree.

Swamiji always stressed upon one significant point i.e 'you touch somebody's body, you injure them; you touch somebody's mind, you create fear, worry, anxiety; you touch somebody's intellect, you injure his ego. You touch his soul; you may facilitate the transformation. For example, Valmiki the sage was earlier the great robber. He was transformed into a great sage, with the touch of NARADA.

Spiritual workplace is an employee-friendly work environment that recognizes, supports, and develops the spirit of its employees. Swami Vivekananda said that under such work environment, people would be willing to go to any extent to make sacrifice for the achievement of the great purpose. The most exciting example is the Dandi march launched by Gandhiji, where thousands of people willingly sacrificed their lives for the cause of freedom.

Swami Vivekananda came into this planet significantly. He is the eternal cure for all the ills of all the times. He allowed himself to be captured with the bondage of pure love. That is why he came down, perhaps to the levels of people and situations. He is like a mighty river, from which everybody can draw, may be rich or poor, idiot or scholar, beautiful or ugly, male or female and anybody. His spirit can solve all and the so-called "modern complex human problems", may be that of individual, family, office, factory, government etc.

NEED FOR THE STUDY

It is a known fact that Emotional dishonesty creates distrust and tension among the people. This in turn may create more crimes and violence in the society. If people are emotionally dishonest, they will only think about

themselves and their personal profits. Again, If the person is emotionally dishonest, he will lose the value of natural feelings. They won't care about national development or other people's welfare⁴. Just to take an example, public taps that leak, street lambs that burn during day time are the common sights on which we have an active control, but we remain as passive spectators for the things that are happening around us. We hunger for wealth without work, knowledge without character, commerce without morality, politics without principle and science without humanity. We have developed an attitude of finding fault in others but not developing an attitude to do our job to the best of our ability. We have become more conscious of our rights than responsibilities. We are still in the dark. Therefore, an attempt has been made in the present study to explore the Ideologies of Swami Vivekananda for universal peace and harmony and convey to the mankind about its implications on human life.

REVIEW OF LITERATURE

This study is undertaken to present a descriptive and prescriptive argumentation on Ideologies of Swami Vivekananda for Universal Peace and Harmony and Its Impact on human Life. It is descriptive because it is primarily a literature review and it is prescriptive because it reflects the author's opinion about Ideologies of Swami Vivekananda for universal love and harmony and its impact on human life.

IDEOLOGIES OF SWAMI VIVEKANANDA

1. Purity of mind

Purity includes both external and internal purity. Purity of mind constitute internal purity, while Purity of body constitute external purity. Internal purity bestows strength, happiness, and instils love, & patience. On the other hand, external purity leads to better blood flow, and a greater ability to increase muscle tone¹.

The tips to be considered for attaining purity

- Faith in almighty is important, faith in oneself is more important and faith in the goodness of others is most important.
- Ability of the body, stability of the mind, mobility of the intellect, debility of the ego is required to attain the nobility of the soul.
- We should Keep our body hygienically neat and clean and do exercise or Yoga regularly.
- Choose good man for emulation, bad man for correction, and no man for imitation. Create a friendly world.
- To purify the mind the first prerequisite is to consume pure food. Therefore, before eating, the food is offered to God, it becomes Prasada (a gift from God). All the impurities in the food are thereby removed. This helps the process of cleansing the mind. This practice has to be kept up continuously.
- Participate, deliberate, contemplate and meditate to know yourself, your organization, your society, your environment and your role.
- Our foremost duty is to show our gratitude to our parents. We have to take care of them in their old age. Such discharge of duty is itself a Sadhana, a form of Yoga.

2. Emotional Honesty

Emotional honesty is expressing the true feelings freely and spontaneously. A person who is honest with himself recognizes his weaknesses and works towards becoming a better person and also learns to share his feelings respectfully with others⁴. Further, if we are emotionally honest, we hear another's feelings without judging, criticizing, fixing, or defending. Emotional Honesty brings good health and happiness and if the person is known as an emotionally honest person, people believe him, honour him and respect him.

Emotional honesty allows people to be intimate and connect deeply with other persons. Honesty encourages open communication between employer and employees. It leads to effective relationships in an organization. For instance, Pizza Huts¹ adopts customer-oriented strategies to build long term relationships with the customers. Google Company⁷ sends appreciation letters to home address of the employees, as the company strongly believes that the appreciation from the spouse improves morale of the employees and makes them to discharge their work with zeal and enthusiasm.

3. Virtue of Humility

Virtue of Humility is the quality of being humble. Humble means accepting our limitations and making an effort to make the world a better place without wanting to take all the credit. Such kind of people will be

satisfied with what they have and they expect good things to happen in future⁸. They recognize people for their achievements and patiently listens to the views of the people without interrupting them.

People with virtue of humility admit their mistakes and they don't gossip about people or put them down. They realise that knowledge is infinite, and they always ask people to share their knowledge with others.

Humble person develops the habit of spending more time with the children and makes yoga a regular part of their life. They pay attention to minute details. For instance, Employees in the Boston consultancy group¹ pay attention to the minute details, that helped them to create an environment for innovation and personnel development and instil in every employee a sense a pride in the work they do.

4. Proactive Behaviour

Proactive person takes ownership of their performance and hold themselves accountable. They do not blame circumstances. Proactive person will anticipate an incident/event that may occur in the future and tries to prevent it from happening or lessen the impact. Proactive people don't need to be asked to do something, and they usually require less detailed instructions

Research study conveys that more proactivity equals better productivity and better productivity usually means improved financial performance, happier shareholders, and less sleepless nights for leaders. For instance, In Coromandel cements employees improve their performance at least by 5% every year irrespective of the approaches they follow. Further, Proactive employees constantly find new and better ways of doing their work. As a consequence, organization becomes more efficient and more productive. Another example⁸ to support this view is the Toro Company and Dixon Industries collectively recalled 62,000 faulty commercial riding mowers. These companies worked directly with their dealers, distributors and customers during the recall campaign to proactively fix or replace the affected units already in the market. When companies voluntarily take a proactive stance, it is easier to keep customers and get new business.

Examples of proactive behavior:

- Reducing the risk of crime by hiring additional police officers.
- A nurse who, while waiting for the doctor to arrive to see a patient, anticipates and prepares the equipment and information that the doctor might need, enabling the doctor to do job much more effectively.
- Students studying for the full semester class during their summer vacation.
- Reactive people tend to use "I can't", "If only", "I have to". Proactive people say, "I can", "I will", "I want to". A simple change in language can make a big difference.

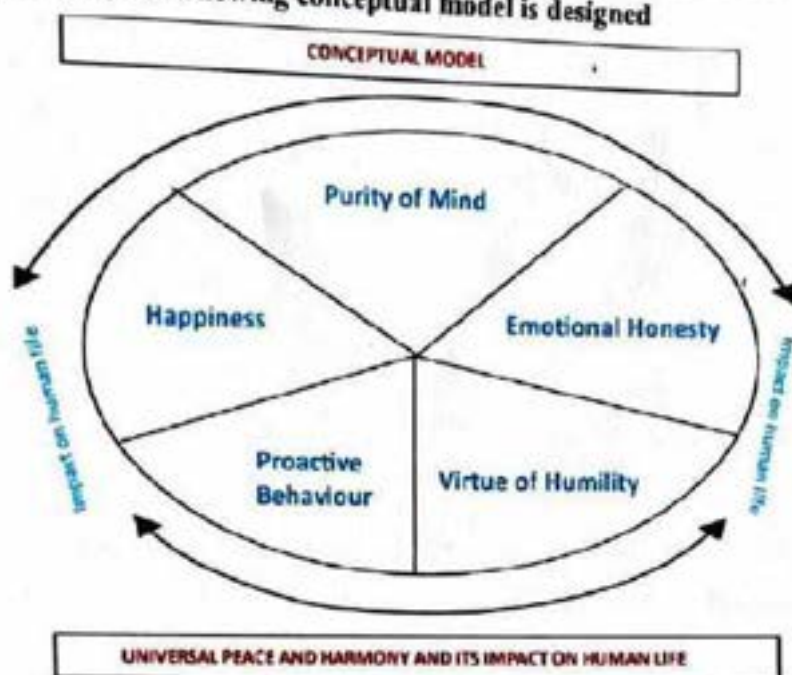
5. HAPPINESS

Happiness relates to life satisfaction, appreciation of life, and positive experience of emotions.

Swami Vivekananda says that every individual will have their own definition of what makes them happy. Studies shows that there is correlation between health and happiness⁸ i.e., people who experience positive emotions frequently require fewer hospitalizations and are less prone to stroke and heart attacks. Further, there is a significant correlation between happiness and social life. Happy people will have successful friendships, happy marriage life, positive relationships, better social engagement and better interpersonal skills⁹. Studies show that supportive relationships contribute to greater happiness.

Swamiji says that thoughts, beliefs, expectations have a direct bearing upon the happiness and wellbeing of the people. Happier people are more optimistic and more willing to push themselves without feeling defeated or rejected⁵. They learn from their experiences and adapt better to situations, balancing their expectations with pragmatism. On the other hand, If the person feels he is helpless, restricted and limited by others, he will not be happy. Happiness comes if the person has freedom to make decisions, freedom to mould his life according to his dreams and desires¹¹. Research study conveys that the people who have the freedom to make decisions for themselves are generally happier than those who have to depend upon others to make decisions for themselves. Further, if people practice forgiveness, the world becomes a better place to live. Forgiveness is essential to release fear and live in peace. In fact, forgiveness is the single most important factor, which helps person to create a life of love and happiness. Without it, people live in hurt, anger and upset. With it, all the gifts and miracles of God's love flow into the lives of people. The negative consequences of not forgiving have been documented in studies that show that it can lead to **emotional pain of anger, hate, hurt, resentment, bitterness** and so on and as a consequence can create health issues, affect relationships and stop us from experiencing the freedom that forgiveness enables.

Based on review of literature, the following conceptual model is designed



Propositions

The following propositions are formulated, based on review of secondary literature

1. Purity of the mind is attained when the mind is free from negative emotions.
2. Emotional honesty allows people to be intimate and connect deeply with other persons.
3. Humble person doesn't waste his time in complaining about bad things that has happened to them.
4. The person with proactive behaviour anticipates problems and seeks new solutions.
5. A person will be happy when, what he thinks, what he says, and what he does are in harmony.

Implications of the study

Swami Vivekananda is a powerful change agent and his ideologies are absolutely essential to meet the challenges of the changing environment. For instance, the ideologies of swami Vivekananda teaches us that a controlled mind acts as our friend and helps us to lead a peaceful and moral life. An uncontrolled mind, on the other hand, is our enemy and acts against our interests.

Proactive people like Swamiji strongly believed that accepting and respecting the cultural values of other parties is very important, as it will assist to produce RAMs i.e Responsibility, Accountability and Maturity. For instance, Eye contact is the form of nonverbal communication. In U.S., eye contact is a good thing and is seen as a reflection of honesty and straightforwardness. However, in some Asian and Middle Eastern cultures, prolonged eye contact can be seen as rude or aggressive in many situations. Women may need to avoid it altogether because lingering eye contact can be viewed as a sign of sexual interest.

Accepting a business card from a Japanese businessperson is more ceremonial in Japanese culture than it is in American culture. When accepting a business card, the person receiving it in Japan is expected to take it with both hands and review it to show respect. The person presenting the card will bow and present the card with both hands. This may seem strange in the United States, as cards are usually exchanged freely. Understanding this can help Japanese business people not to feel disrespected, if their American counterparts are less ceremonial about taking their business cards. Again, A golf ball manufacturing company packaged golf balls in packs of four to market their product in Japan. Unfortunately, the pronunciation of the word "four" in Japanese sounds like the word "death", and thus items which are packaged in "fours" could not be sold in Japan⁷. So, Swamiji conveyed to the mankind that for the growth human personality, the development of pure mind and the refinement of the heart are essential.

In this paper, authors have drawn insights from secondary literature. In view of this, it would be worthwhile to conduct empirical studies by taking a large sample, as such kind of studies may throw new light on the growth of human personality.

REFERENCES

1. Swami Satprakashnanda (1978). Vivekananda's Contribution to the Present Age, December. Kolkata & USA: Vedanta Society of Louis , p. 135
2. The Complete Works of Swami Vivekananda (1963). (hereafter cited as C.W.S.), Vol. 2, Seventh edition . Calcutta: Advaita Asharam ,p.15 C.W.S., Vol. 1, p. 364
3. Ranganathananda, Swami (1963). "Swami Vivekananda the Spiritual Teacher of Modern India" in Prabuddha Bharata, May, p. 35 C.W.S., Vol. III, p 3 0 2
4. Ibid ., Vol. VIII, p. 47
5. Ibid., Vol. V, p. 418
6. Ibid., Vol. V, p. 418
7. Ibid., Vol. V, p. 57
8. Rgveda, 1.89.10 C.W.S., Vol. VI p. 448
9. Merina Islam & Desh Raj Sirswal (2018), Philosophy of Swami Vivekananda, CPPIS, Pehowa.
10. Anupamananda, Swami (2018), Swami Vivekananda and Value Education, Milestone Education Review, Year 04, No.1, April 2013, pp.14-15.
11. Rangachari, D. (2011), Swami Vivekananda a man with a vision. United Kingdom: Penguin Publication.
12. Swami Vivekananda (1946), Teachings of Swami Vivekananda. Ramakrishna Math, Howrah, (Kolkata): Ashrama Vedanta Press.
13. Mohapatra, K. (1996), Rebuild India, First Edition. Ramakrishna Math, Howrah, (Kolkata): Advaita Ashrama Publication.
14. Bharatbhai, J. R. (2018). Views of Swami Vivekananda for a Better Parameter of Human Life, Indian Journal of Research Periapex, Volume No. 2, Issue: 8, ISSN2250-1991.
15. A Compilation. (2015), Vivekananda as the Turning Point; The rise of a new Spiritual Wave. Kolkata: Advaita Ashrama Publication.
16. Arrington, Robert L.; Chakrabarti, Tapan Kumar (2019), "Swami Vivekananda", A Companion to the Philosophers, Blackwell Publishing, ISBN 978-0-631-22957-4
17. Adiswarananda, Swami, ed. (2016), Vivekananda, world teacher: his teachings on the spiritual unity of humankind, Woodstock, Vermont: Skylight Paths Pub, ISBN 1-59473-210-8
18. Badrinath, Chaturvedi (2016), Swami Vivekananda, the Living Vedanta. Penguin Books India. ISBN 978-0-14- 306209-7.
19. Banhatti, G.S. (1995), Life and Philosophy of Swami Vivekananda, Atlantic Publishers & Distributors, p. 276, ISBN 978-81-7156-291-6

INFLUENCE OF PATENTS ON SALES IN AUTOMOBILE COMPANIES

Shashidhar Yadav J, Research Scholar, REVA University, Bengaluru, Karnataka, India,
Dr. Subramanyam Mutyala, Associate Professor, REVA University, Bengaluru, Karnataka, India
Manjunath G, Asst. Professor, Seshadripuram Academy of Business Studies, Kengeri, Bengaluru

Abstract

The Patents are integral part of innovation in every organization it Protect the invention and benefit with commercial activities. This unique invention in business organization provides the platform in increasing sales. The primary aim of this study is to analyze impact of patents on sales in Automobile industries. Patents and sales information were confined from published financial statement of companies. Data collected were analyzed through regression and found the impact of patents on sales in the organization. The result of the study stated that there is impact on sales from patents. Further study also suggested the importance of patents on sales in organization. Study is helpful in understanding relationship of patents and sales.

Keywords: Innovation; Patents; Automobile; Regression; Organization

Introduction:

In 2019, India surpassed Germany for the fourth position in the commercial and passenger automotive sector, which is expelling Germany by approximately 3.99 million units. According to market research, India is projected to overtake Japan as the third-biggest car market for new vehicle sales by 2022. With a large middle class as well as a youthful population, two-wheelers have a larger percentage of the global market. Furthermore, the rising industry presence in rural areas accelerated the sector to grow. The country aspires to become a leading automotive supplier in the long term. Several measures by both the Indian government and the government are expected to propel the market into a global leader of two-including four-wheeler industries through 2021.

Market Size of Auto Industry

CAGR of 2.36% per year and 26.36 million units produced in the country from FY16 to FY20 Sales of domestic vehicles grew at a compound annual growth rate of 1.29% between FY16 and FY20. 21.55 million were sold in FY20 More than half of all passenger vehicles in India are two-wheelers. For the most part, small and medium passenger vehicles will dominate the market in 2012. Bikes and passenger vehicles made up about 80.8% of the sales and sold across 20.1 million in FY 2012, for a total of about 20.1 million. Overall, automotive exports grew at a CAGR of 6.94% in FY 16-FY20 to a total of 4.77 million automobiles. UBC Footnote: 73.9% of the vehicles exported were made up of two-wheelers, 14.2% were passenger vehicles, and 10.5% were passenger cars. In FY 20 EV sales except for E-rickshicks, India saw a rise of about 20% and 1.56K units due to two motor vehicles. Indonesia registered a seven-fold impact on domestic selling of luxury motorcycles, with 13,298 units sold during the first three months of the year. Luxury car sales are in the 15,000 to 17,000 range in the first half of 2019.

Indian Patent scenario

International applicants influence patent submissions and subsidies in India: those who filed two-thirds of patent applications and received four-fifths of grants in 2018-19, as per the Desk of the Controller General of Patents, Design Features, and Trade Marks. In the meantime, TVS Group, Tata Motors, and M & M have been among the top Indian patent applications. Worldwide, however, the 10 largest innovators are influenced by Japanese automakers, with Honda and Toyota featuring prominently. In the meantime, the same number of patents granted to such Indian car manufacturers has also risen significantly over the last decade. The majority of Indian patent applications filed by auto makers will be in the field of manufacturing, specifically in the sectors of agreement or mounting of propellant components, transmissions, measuring instruments for automobiles, cooperative control of drive components, and agreements for cooling, inlet, gas combustion, or fuel sources for propellant components in automobiles. The strongest section worldwide is connected to automobiles, connectivity, entertainment, and security, all of which contribute to the ultimate objective of a self-driving vehicle. Indian companies are also investing in connected cars, though their presence is much narrower in those aspects.

Literature review

A patent is a legal document that grants inventors an exclusive entitlement to use it and leverage their discoveries for just a specified time period. Intellectual property information had also frequently been used in scientific literature (e.g., Griliches, 1990; Harhoff et al., 2003; Lanjouw and Schankerman, 2004) to proxy innovation and, as a result, to test the relationship among advancements and firm financial and monetary performance.

The distinction between innovation is that even the refers to the application of a concept or technique, whereas for last one extra directly to the development of a concept or technique. A most significant benefits of just using data sets seem to be their impartial (in that they have been processed and validated by examiners), their own general populace accessibility, but also, eventually, the information given (Greenhalgh and Longland, 2005; Belderbos et al., 2010).

The research on this topic is extensive, but also numerous metrics were used to quantify the impact of patent protection on firms' financial and economic achievement. According to a few researches, patent rights have really no impact on return on assets (ROA), sales growth, or market value (Griliches et al., 1991; Rivette and Kline, 2000; Kretschmer and Soetendorp, 2001), or that they have a negative effect on ROA (Artz et al., 2010). Rather than that, a large number of studies discovered a positive relation among patent applications but also sales, market price, and market return, either exclusively for larger companies or without regard for company size (Ernst, 1995, 2001; Deng et al. 1999; Bosworth and Rogers, 2001; Arora et al. 2003; Hall et al., 2005; Bessler and Bittelmeyer, 2007; Chen and Chang, 2010; Chen, 2011; Cheng et al., 2012).

Several of these authors narrowed their assessments to particular countries and industries in order to improve the viewpoint of the relationship among patent applications and company financial and economic achievement, taking into account the possibility that industry - level and great nation information could impact data sets (Ernst, 2001). To our understanding, the United States, the United Kingdom, and Germany were the most investigated thoroughly countries, with the drug companies

being the most frequently examined company (Narin et al., 1987; Chen, 2011; Cheng et al., 2012; Demirel and Mazzucato, 2012).

Several studies have concentrated on the manufacturing procedure, such as Rothwell (1979), who investigated the association among R&D information and financial and economic performance, but also Ernst (1995, 2001), who examined the impact of patent applications on sales numbers, but using a sample of large and medium firms. Ernst (2001) discovered evidence of significant selling in a sample of 50 medium-sized German industrial machinery makers between 1984 and 1992, with such a lag time of 2 - 3 years following the prioritized year.

Objective of the study

To determine the impact and relationship of patent on Indian automobile industry sales.

Research Problem and Methodology adopted for the study

Patents are the integral part of automobile sector. Design and engine mechanism were highly patented by Indian automobile industry. Research expenditure are also on spike but companies profit maximization goal can be accomplished on their sales. So, this study is conducted to determine the relationship of patents on Indian automobile industry.

The study considered Indian automobile industries listed on Nifty50 companies. Patents information were collected from financial statement of the select companies from 2017 - 2021. In absence of patent information in financial statement were not considered for the study. Classified data of sales and patents were analyzed with the linear regression to identify the impact of patents on sales in automobile sector. Regression equation: $Y = \alpha + \beta x$, was used to study the impact. Hypothesis was framed and relevant hypothesis were selected based on P-value in study.

Table: 1 – Net sales and patents of Automobile industries.

| Automobile Company | | 2021 | 2020 | 2019 | 2018 | 2017 |
|--------------------|-----------|------------|------------|------------|------------|------------|
| Eicher motors | Net Sales | 8,661.56 | 9,073.55 | 9,714.44 | 8,920.86 | 7,003.01 |
| | Patents | 1 | 1 | 0 | 1 | 0 |
| Hero motors | Net Sales | 30,959.19 | 29,253.97 | 33,970.82 | 32,458.37 | 28,584.96 |
| | Patents | 31 | 50 | 70 | 94 | 102 |
| Maruti | Net Sales | 66,571.80 | 71,704.80 | 83,038.50 | 78,117.10 | 66,924.70 |
| | Patents | 0 | 3 | 12 | 11 | 31 |
| M&M | Net Sales | 74,277.78 | 95,179.09 | 104,720.68 | 92,093.95 | 83,773.05 |
| | Patents | 1 | 5 | 13 | 50 | 77 |
| Tata Motors | Net Sales | 246,972.17 | 258,594.36 | 299,190.59 | 288,596.09 | 265,498.47 |
| | Patents | 22 | 80 | 104 | 178 | 79 |

Source: Researcher Compilation. Net sales - Value of net sales

Table-1 depicts that Eicher motors net sales were 9,714.44 in 2019 compared with 7,003.01 in 2017.

Whereas, Hero motors net sales were 33,970 with 70 patents in 2019 compared with 28,584.96 with 102 patents in 2017. However, Maruti ltd. Net sales were 83,038.50 with 12 patents in 2019 compared with 66,571.80 in 2021. Similarly, Mahindra and Mahindra ltd. Net sales were 1,04,720.6 with 13

patents in 2019 compared with net sales of 74,277.78 with 1 in 2021. Likewise, Tata motors net sales were 2,99,190.59 with 178 patents in 2019 compared with 2,46,972.17 with 22 patents in 2021.

H_{0a} : There is no significant relationship between sales and patents acquiring in Eicher Motors.

H_1 : There is significant relationship between sales and patents acquiring in Eicher Motors.

| Multiple R | R Square | Adjusted R Square | Standard Error | Observations |
|-------------|-------------|-------------------|----------------|--------------|
| 0.285048658 | 0.081252737 | -0.22499635 | 1119.923879 | 5 |

Regression equation: $Y = \alpha + \beta X$

Where Significance F = 0.642041403 and P - Value = 0.001816407

Therefore, $Y = 0.642 + 0.00181X$

The P-value of 0.0018 is less than 0.05, a significant level of study and Because of the positive correlation, the null hypothesis is rejected, and the alternative hypothesis is accepted, revealing that there is a significant relationship between sales and patent acquisition at Eicher Motors. As a result, when a company acquires a greater number of patents, their sales increase, in turn which has a positive effect on market position, resulting in the profit maximization and company's wealth. The key vehicle of the Eicher Group in India, formed in 1982, is the leading player in the industry's 50-50 percent joint venture with Volvo, VE passenger vehicles Exclusive designs, produces, and markets high-high-quality commercial fuel-economy vehicles of advanced technology. These famous Enfield motorcycles are manufactured and marketed by Eicher Motors. In 2010, revenue was approximately \$1 billion for Eicher Motors. As a result of the acquisition, the Eicher Group now also comprises Eicher Earth Partners in non-automotive spheres of industry. Eicher Publishing and the good-branded Eher Maps are components of Eicher Goodearth Pvt Limited.

H_{0b} : There is no significant relationship between sales and patents acquiring in Hero Motors.

H_2 : There is significant relationship between sales and patents acquiring in Hero Motors.

| Multiple R | R Square | Adjusted R Square | Standard Error | Observations |
|-------------|-------------|-------------------|----------------|--------------|
| 0.021321643 | 0.000454612 | -0.332727183 | 2570.082508 | 5 |

Where, Significance F = 0.972854498 and P - Value = 0.00234148

Therefore $Y = 0.972 + 0.0023 X$

The P-value of 0.0023 is less than 0.05, a significant level of study and Because of the positive correlation, the null hypothesis is rejected, and the alternative hypothesis is accepted, revealing that there is a significant relationship between sales and patent acquisition at Hero Motors. As a result, when a company acquires a greater number of patents, their sales increase, in turn which has a positive effect on market position, resulting in the profit maximization and company's wealth. It is one of the world's leading manufacturers of bicycles. It is widely distributed in South Asia, Africa, Latin America, and the Middle East. He was just the first Indian motorcycle manufacturer to build a plant in Latin America. Key items include 350cc or smaller two-wheelers including spare parts. They have a goal of increasing their global presence to 50 markets by 2020. It has budgeted an amount of Rs 10 billion (over \$1.4 billion) in the next five years.

H_{0c} : There is no significant relationship between sales and patents acquiring in Maruti Suzuki India Ltd.

H_{1c} : There is significant relationship between sales and patents acquiring in Maruti Suzuki India Ltd.

| Multiple R | R Square | Adjusted R Square | Standard Error | Observations |
|-------------|-------------|-------------------|----------------|--------------|
| 0.089000031 | 0.007921005 | -0.322771993 | 8263.592185 | 5 |

Where, Significance F = 0.886831419 and P - Value = 0.000830604

Therefore $Y = 0.886 + 0.00083 X$

The P-value of 0.00083 is less than 0.05, a significant level of study and Because of the positive correlation, the null hypothesis is rejected, and the alternative hypothesis is accepted, revealing that there is a significant relationship between sales and patent acquisition at Maruti Suzuki India Ltd. As a result, when a company acquires a greater number of patents, their sales increase, in turn which has a positive effect on market position, resulting in the profit maximization and company's wealth. The subsidiary of Suzuki Corporation of Japan, which has a greater than 51% market share in the passenger vehicle category, has an industry dominance of about to surpass in FY 20 in India.

H_{0d} : There is no significant relationship between sales and patents acquiring in M&M Ltd.

H_{1d} : There is significant relationship between sales and patents acquiring in M&M Ltd.

| Multiple R | R Square | Adjusted R Square | Standard Error | Observations |
|-------------|-------------|-------------------|----------------|--------------|
| 0.114389401 | 0.013084935 | -0.315886753 | 13252.46006 | 5 |

Where, Significance F = 0.854673143 and P - Value = 0.001635093

Therefore $Y = 0.854 + 0.0016 X$

The P-value of 0.00163 is less than 0.05, a significant level of study and Because of the positive correlation, the null hypothesis is rejected, and the alternative hypothesis is accepted, revealing that there is a significant relationship between sales and patent acquisition at M&M Ltd. As a result, when a company acquires a greater number of patents, their sales increase, in turn which has a positive effect on market position, resulting in the profit maximization and company's wealth. Mahindra and Mahindra, set up as a steel trading firm in 1945, brought the famous Willys Jeep to the Indian market in 1947. The company has diversified into new products over the years to outperform the customers' changing needs. M & M is now India's utility with over 65 years of service. Additionally, Mahindra manufactures sporty, all-utility, high-energy, fuel-sipping, and non-polluting vehicles such as sports cars, trucks, and passenger vans. Loyalty to clients is the key to Mahindra's longevity. The firm provides customers with state-of-the-art architecture, fine-grade manufacturing, as well as superior service.

H_{0e} : There is no significant relationship between sales and patents acquiring in Tata Motors.

H_{1e} : There is significant relationship between sales and patents acquiring in Tata Motors.

| Multiple R | R Square | Adjusted R Square | Standard Error | Observations |
|-------------|-------------|-------------------|----------------|--------------|
| 0.769745427 | 0.592508023 | 0.456677364 | 15907.061 | 5 |

Where Significance F = 0.127951864 and P - Value = 0.000488254
Therefore $Y = 0.1279 + 0.00048X$

The P-value of 0.00048 is less than 0.05, a significant level of study and because of the high level of positive correlation, the null hypothesis is rejected, and the alternative hypothesis is accepted, revealing that there is a significant relationship between sales and patent acquisition at Tata Motors. As a result, when a company acquires a patent, their sales increase, which has a positive effect on business profit, resulting in the maximizing of the company's wealth. The Tata Motors Company is India's largest vehicle producer, founded in 1945, the Indian subsidiary of Ford (or The Tata Motors Group, the largest car manufacturer in India) with over 60,000 employees. The business is a major player in all three segments: it is competitive in the automobile industry, but also ranks first for SUVs and also takes first place for both class and customer car models. In the year 2000, it was the fifth-largest truck maker and fourth in the bus manufacturing group. Tata Motors has long operated in foreign markets, making exports a cornerstone of its long-brand presence since 1961. In 2004, this business became listed on the New York Stock Exchange and has since got considerable attention from foreign investors. Most of the corporation's a passenger and commercial vehicles are already exported to the countries of Europe, Africa, the Middle East, South Asia, Central Asia, the former Soviet Union (or Russian) republics, as well as the South American continent, as well as this same CIS. In addition to the producer manufacturing plants in Bangladesh and Ukraine, the company also has franchisee/joint venture operations in Senegal.

Conclusion

The study examined the impact of patent on sales in Indian automobile industry. Data was confined from the published financial statement of the organization. Where, Tata motors net sales found to be 299,190.59 highest among auto sector in India compared with other automobile sector companies in 5-year sales. Tata motors and Mahindra and Mahindra company have shown consistent growth in net sales. Further, Tata motors patents published were 178 patents in 2019 company have shown consistent growth in patent published compared with other Indian automobile sector companies in 5 years. Data was analyzed with regression and the positive correlation was found among the select auto sector companies. The study indicates that there is impact of patents on sales in automobile sector companies. So, Companies should increase their research expenditure in view of protecting their innovation and to have strong research and development team to meet the present competition in the market. Strong research and development in organization leads to increase in sales and profit maximization.

References

1. Arora, A., Ceccagnoli, M., and Cohen, W. M. (2003), "R&D and the Patent Premium", NBER Working Paper No. 9431.
2. Artz, K.W., Norman, P.M., Hatfield, D.E. and Cardinal, L.B., (2010). "A longitudinal study of the impact of R&D, patents, and product innovation on firm performance", *Journal of Product Innovation Management*, Vol. 27, pp. 725-740.

21. Lanjouw, J. and Schankerman, M. (1997), "Stylised facts of patent litigation: Value, scope and ownership", NBER Working Paper No. 6297.
22. Lanjouw, J. O. and Schankerman, M. (2001), "Characteristics of patent litigation: A window on competition", *RAND Journal of Economics*, Vol. 32 No. 1, pp. 129-151.
23. Lanjouw, J. O. and Schankerman, M. (2004), "Patent quality and research productivity: measuring innovation with multiple indicators", *The Economic Journal*, Vol. 114, pp. 441-465.
24. Rivette, K. and Kline, D. (2000), *Rembrandts in the Attic: Unlocking the Hidden Value of Patents*, Harvard Business School Press, Boston.
25. Rothwell, R. (1979), "The relationship between technical change and economic performance in mechanical engineering: some evidence", in: Baker, M.J. (Ed), *Industrial Innovation: Technology, Policy Diffusion*, MacMillan, London.



SARDAR PATEL INSTITUTE OF
ECONOMIC AND SOCIAL RESEARCH

anveshak

CERTIFICATE OF PUBLICATION

This is to certify that the paper entitled

INFLUENCE OF PATENTS ON SALES IN AUTOMOBILE COMPANIES



Authored By

Shashidhar Yadav J

Research Scholar, REVA University, Bengaluru, Karnataka, India

Published In

Anveshak, ISSN : 0378 – 4568

Vol. 51, No. 02(VI) : July – December 2021

UGC Care Group – 1, Peer Reviewed, bi-annual Journal



ISSN : 0022 - 3301

THE JOURNAL OF
ORIENTAL RESEARCH
MADRAS

(Founded by Mm. Prof. S. Kuppuswami Sastri)



2021

XCII

तमसो मा ज्योतिर्गमय

THE KUPPUSWAMI SASTRI RESEARCH INSTITUTE

MADRAS - 600 004

| | | |
|----|---|-----|
| | Ashok Kumar | |
| 43 | TRANSITION TO SOCIAL MEDIA FROM TRADITIONAL MEDIA: A REVIEW ON ONLINE ADVERTISING K. C Lalramchuan | 339 |
| 44 | TRACTIAL RESPONSE TO COVID-19 PANDEMIC WITH REFERENCES TO HUMANRESOURCE MANAGEMENT IN IT Pratima Singh | 350 |
| 45 | SWOT ANAYLSIS ON "MERGER & ACQUISITION OF NATIONALIZED BANK":A CASE STUDY OF INDIAN BANK & ALLAHABAD BANK Vijay laxmigupta | 256 |
| 46 | SUSTAINABLE E-LEARNING METHODOLOGIES – PERSPECTIVE OFMANAGEMENT STUDENTS Dr. Vinita Sharma | 364 |
| 47 | AN ANALYSIS OF TOURISTS PERCEPTION TOWARD E-TOURISM: THEFUTURE OF TOURISM INDUSTRY Dr. Sunil | 376 |
| 48 | MANAGING DISTRACTIONS AFFECTING EMPLOYEES' PRODUCTIVITYWHILE WORKING FROM HOME DrMadhu Gupta | 392 |
| 49 | ROBOTIC PROCESS AUTOMATION IN STATE ROAD TRANSPORTATIONUNDERTAKINGS: A CONCEPTUAL STUDY MsRanuPareek | 399 |
| 50 | CRUDE OIL PRICE PREDICTION USING AUTO REGRESSIVE TOOLS – INDIANSCENARIO SandeshRamakantBhat | 409 |

Sandesh Ramakant Bhat, Research Scholar, Lingaya's Vidyapeeth, Nachauli, Jasana Road,
Old Faridabad, Haryana.

Dr. K.K. Garg, Professor and Research Guide, Lingaya's Vidyapeeth, Nachauli, Jasana Road,
Old Faridabad, Haryana.

Dr V Somanath, Co-guide and Professor Emeritus, Bengaluru.

Abstract

Energy is the key member of financial turn of events and is basic for the food of a economy. Money related acceptability basically depends upon the somewhat long availability of fuel from sources that are sensible, accessible and environment very much arranged. Compelling usage of resources and long stretch acceptability in its utilization is of prime importance for money related new development import. Monetary pointers help to know the development of the economy, in this study it has been explored how the expansion in Indian bin cost of Crude, because of raise in worldwide unrefined petroleum costs sway the financial markets like Indices, gold cost, Exchange rates (US\$), CPI, for financial maintainability in India. The concentrate likewise centers around Crude oil expectations utilizing Univariate examination.

Key words: monetary pointers, crude oil, economic Indicators, Univariate analysis

INTRODUCTION

Energy is the central player of monetary development and is fundamental for the food of a cutting-edge economy. Monetary supportability essentially relies upon the drawn-out accessibility of fuel from sources that are reasonable, available and climate well disposed. Effective utilization of assets and long-haul supportability in its use is of prime significance for monetary turn of events. India meets almost 82% of its all-out energy prerequisites through imports.

Oil is a crucial contribution to deliver a wide scope of labor and products, since it is utilized for transportation in business, all things considered. Higher oil costs subsequently increment the expense of information sources; and eventual outcome cost expands impacts on the financial development of the country. A monetary pointer is a measurement used to survey measure, assess, and judge the general condition of strength of the economy.

Financial pointers are frequently gathered by an administration office or personal business knowledge association as an evaluation or study, which is then examined further to produce a monetary marker. Monetary markers are key details about the economy. It assists with understanding the stream and forecasts of the market, just as other significant monetary variables. Monetary experts and financial backers monitor macroeconomic pointers on the

grounds that the is a wellspring of orderly danger that influences the development or decay, all things considered, and organizations.

Unrefined petroleum is a normally happening substance found in specific stone arrangements in the earth and this is combination of mud and by natural material is wealthy in hydrogen and carbon. North of millions of years this layer of natural rich mud becomes covered a great many feet somewhere down in the earth and temperature of the earth becomes more sultry as you go further into the earth. The mix of expanding temperature and tension on the natural bleed causes changes into raw petroleum.

Unrefined petroleum is the subsequent significant wellspring of essential business energy in India later coal. India is one of the nations that is exceptionally subject to oil imports. India imports raw petroleum from association of petrol sending out nations (OPEC), Saudi Arabia, Kuwait, UAE, Iran, Iraq. Effect of oil costs impact the strength of the economy. Notwithstanding its fall keeps on playing a huge part in molding economies worldwide. Unrefined petroleum is a world economy principal wellspring of energy and is vital to monetary development. The costs of raw petroleum market are chiefly because of the stockpile and demand from the countries that are not self-reliant to produce more and are dependent on other nation for more crude.

Unrefined oil is a value determinant among different products since rise or fall in cost will straightforwardly affect cost of different wares and society all in all. India, the third biggest unrefined petroleum shipper and customer, the necessity of unrefined petroleum has been expanding at a fast speed which has made India subject to raw petroleum imports. Unrefined petroleum costs assume an exceptionally urgent part on the financial development of any country. India imports over 70% of its unrefined petroleum prerequisite.

Oil or oil is characterized in a combination of ways. Subsequently, there is no normalization of the reality how raw petroleum was shaped. The two words Latin terms Petra implies rock and oleum implies oil, which is oil, likewise called as 'rock oil' or 'raw petroleum'. It is a vague term packaging a wide scope of substances. Normally blending atoms of carbon and hydrogen are contained in hydrocarbons. India is reliant upon oil creating nations; India sends out refined items and not rough. India imports practically greatest million metric huge loads of its unrefined petroleum and flammable gas from Middle East and presently additionally from USA.

Raw petroleum cost is a significant boundary for oil bringing in country like India; it has bearing on economy, since unrefined petroleum is the natural substance for treatment facility. The homegrown creation represents simply 24 to 26% of complete country's raw petroleum interest; rest is to be met by bringing in the rough. India's colossal reliance on imported unrefined petroleum makes it powerless because of the shocks and disturbances in the worldwide oil market.

REVIEW OF LITERATURE

Habeeb Ur Rahiman; Dr. Rashmi Kodikal (2019) The study was undertaken in an Indian oil refinery, Mangalore refinery petrochemical limited (MRPL). The paper considered crude oil

Significance F =

0.00986

P-value

3.1E-05

Regression equation: $Y = \alpha + \beta x$ Therefore, here $Y = 0.00003100 + 0.0098x$

Interpretation:

By the above Linear regression study can interpret the Crude oil impact on Sensex. Here Study Rejects Null hypothesis and accept the Alternate Hypothesis

Regression of Crude oil and Nifty:

| | |
|-------------------|-------------|
| Multiple R | 0.796907351 |
| R Square | 0.635061326 |
| Adjusted R Square | 0.589443992 |
| Standard Error | 1659.108792 |
| Observations | 10 |

Significance F

0.005778195

P-value

2.01359E-05

0.00577x

Interpretation:

By the above Linear regression study can interpret the Crude oil impact on Nifty. Here Study Rejects Null hypothesis and accept the Alternate Hypothesis.

Regression of Crude oil and US Dollar:

| Regression Statistics | |
|-----------------------|-------------|
| Multiple R | 0.870097553 |
| R Square | 0.757069752 |
| Adjusted R Square | 0.726703471 |
| Standard Error | 3.979635022 |

Regression equation: $Y = \alpha + \beta x$ Therefore, here $Y = 0.0000201 +$

Significance F
0.0000061915
2.65825E-08

| | |
|--------------|----|
| Observations | 10 |
|--------------|----|

Therefore, here $Y = 0.000026 + 0.00106x$

Regression equation: $Y = \alpha + \beta x$

Interpretation:

By the above Linear regression study can interpret the Crude oil impact on US Dollar. Here Study Rejects Null hypothesis and accept the Alternate Hypothesis.

Regression on Gold Rate and Crude oil Price:

| Regression Statistics | |
|-----------------------|-------------|
| Multiple R | 0.378819064 |
| R Square | 0.143503883 |
| Adjusted R Square | 0.036441869 |
| Standard Error | 6447.216535 |
| Observations | 10 |

P-Value 0.000253

Significance F

0.280361008

Regression equation: $Y = \alpha + \beta x$

Therefore, here $Y = 0.2803 + 0.000253x$

Interpretation:

By the above Linear regression study can interpret the Crude oil impact on Gold Rates. Here Study Rejects Null hypothesis and accept the Alternate Hypothesis.

Augmented Dickey fuller test:

The Augmented Dickey-Fuller test allows for higher-order autoregressive processes by including $\Delta y_t - p\Delta y_t - p$ in the model.

Data should be stationery to conduct ARIMA.

if $\gamma=0$; $\Delta y_t = \alpha + \beta t + \gamma y_{t-1} + \delta_1 \Delta y_{t-1} + \delta_2 \Delta y_{t-2} + \dots$
 $\Delta y_t = \alpha + \beta t + \gamma y_{t-1} + \delta_1 \Delta y_{t-1} + \delta_2 \Delta y_{t-2} + \dots$

The null hypothesis for both tests is that the data are non-stationary. Study wants to REJECT the null hypothesis for this test, so we want a p-value of less than 0.05 (or smaller).

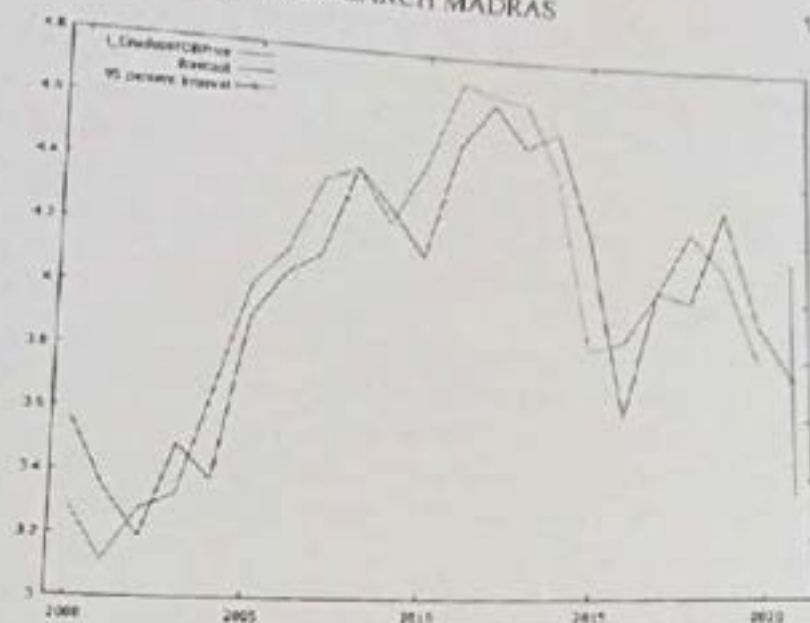
H_0 : Data is non-stationery

H_1 : Data is stationery

Crude oil data (FOB Price) from 2000-2001 to 2020-21 has been considered for interpretation purpose. Log of Crude oil data has been considered to avoid external influence of the data into the study.

| | | | | |
|---------|----------|----------|-------|---------------|
| const | 3.92571 | 0.257404 | 15.25 | 1.62e-052 *** |
| phi_1 | 0.751836 | 0.151114 | 4.975 | 6.52e-07 *** |
| theta_1 | 0.630905 | 0.223162 | 2.827 | 0.0047 *** |

| Year | Actual value | Predicted Value | Std error | 95% Interval |
|------|--------------|-----------------|-----------|--------------------|
| 2000 | 3.292639 | 3.565123 | | |
| 2001 | 3.115291 | 3.341625 | | |
| 2002 | 3.283511 | 3.196468 | | |
| 2003 | 3.330765 | 3.492470 | | |
| 2004 | 3.669138 | 3.380103 | | |
| 2005 | 4.019255 | 3.914217 | | |
| 2006 | 4.133703 | 4.062210 | | |
| 2007 | 4.375356 | 4.127249 | | |
| 2008 | 4.415369 | 4.420237 | | |
| 2009 | 4.243186 | 4.290781 | | |
| 2010 | 4.443317 | 4.134384 | | |
| 2011 | 4.717269 | 4.509772 | | |
| 2012 | 4.682386 | 4.651744 | | |
| 2013 | 4.658702 | 4.513940 | | |
| 2014 | 4.433218 | 4.568132 | | |
| 2015 | 3.832719 | 4.222157 | | |
| 2016 | 3.862637 | 3.610099 | | |
| 2017 | 4.032302 | 4.037618 | | |
| 2018 | 4.243699 | 4.002497 | | |
| 2019 | 4.105563 | 4.316962 | | |
| 2020 | 3.796634 | 3.927559 | | |
| 2021 | | 3.746066 | 0.199618 | 3.354821 - 4.13731 |



At 95% level of confidence log crude oil price has been predicted using ARIMA and the table shows both actual value and predicted value from 2000-2020 and 2021 year has been predicted with an error factor of 0.199. Therefore, it can be understood that Crude oil price has been predicted after getting the log value of the same which also gives the stationarity of the data.

Conclusion:

By the above study it can be understood that, Crude oil has a strong influence on Economic indicators, which has been proved by Linear Regression and further Univariate test has been done by using Log Crude oil value from 2000 to 2020 as a single variable, and prediction was done. By the analysed data it can be understood that ARIMA gives prediction with some error factors which can be minimized further by using Multivariate analysis (considering economic indicators as well) The study has scope of further analysis using Vector Autoregressive Model and LSTM.

Bibliography

1. Abdalla, I.S. and V. Murinde, 1997. Exchange rate and stock price interactions in emerging financial markets: Evidence on India, Korea, Pakistan and the Philippines. *Applied Financial Economics*, 7(1): 25-35. Available at: <https://doi.org/10.1080/096031097333826>.
2. Aloui, C., D.K. Nguyen and H. Njeh, 2012. Assessing the impacts of oil price fluctuations on stock returns in emerging markets. *Economic Modelling*, 29(6): 2686-2695. Available at: <https://doi.org/10.1016/j.econmod.2012.08.010>.

3. Arouri, M.E.H., 2011. Does crude oil move stock markets in Europe? A sector investigation. *Economic Modelling*, 28(4): 1716-1725. Available at: <https://doi.org/10.1016/j.econmod.2011.02.039>.
4. Ayub, A., 2018. Volatility transmission from oil prices to agriculture commodity and stock market in Pakistan. Doctoral Dissertation, Capital University.
5. Guo H, Kliesen KL. Oil price volatility and US macroeconomic activity. *Review-Federal Reserve Bank of St. Louis* 2005;57(6):669-83.
6. Brown SPA, Yücel MK. Energy prices and aggregate economic activity: an interpretative survey. *Quarterly Review of Economics and Finance* 2002;42:193-208.
7. Rafiq R, Salim R, Bloch H. Impact of crude oil price volatility on economic activities: an empirical investigation in the Thai economy. *Resources Policy* 2009;34(3):121-32.
8. Zhou S. The response of real exchange rates to various economic shocks. *Southern Journal of Economics* 1995;61(4):936-54.
9. Tuo, J, and Yanbing. "Summary of World Oil Price Forecasting Model." In. *IEEE Knowledge Acquisition and Modeling (KAM)*, 2011 Fourth International Symposium on, pp. 327-330, 2011.
10. www.suite101.com/article/oils.Importance-to-the-world-economy.
11. Lin, A. "Prediction of international crude oil futures price based on GM (1, 1)." In *Grey Systems and Intelligent Services, . GSIS . IEEE International Conference on*, pp. 692- 696. IEEE, 2009.

ISSN : 0378 4568

anveṣak

A bi-annual journal

VOL. 51, No.2 (VI) July - December 2021



Sardar Patel Institute of Economic and Social Research

Thaltej Road, Ahmedabad- 380 054. India

| | | | |
|----|---|-----------------------|----------------|
| 18 | CHARACTERIZATION OF INDIVIDUAL IMAGE USING EP CAPTURES FOR MRI BASED BRAIN TUMOR DETECTION BY CNN CLASSIFIER | B.Mahender Reddy | 130-138 |
| 19 | TASK SCHEDULING IN CLOUD COMPUTING USING CREDIT BASED VARIANT OF TIME DEPENDENT TIME MINIMIZATION ASSIGNMENT PROBLEM | P.Raghu | 139-144 |
| 20 | ANALYSIS ON THE PREDICTION OF HEART DISEASE USING CLASSIFICATION MODEL ALGORITHMS | T.Yogeshwari | 145-148 |
| 21 | DESIGN AND IMPLEMENTATION OF ADVANCED TRAFFIC LIGHT CONTROLLER SYSTEM USING FPGA | R. Suneetha | 149-155 |
| 22 | FACE RECOGNITION USING MANHATTAN DISTANCE CORRELATION ALGORITHM | Dr. V. Bhagya raju | 156-160 |
| 23 | NON-LINEAR FREQUENCY MODULATED NESTED BARKER CODES WITH IMPROVED RANGE RESOLUTION | Dr. G. Sai Kumar | 161-167 |
| 24 | DESIGN AND SIMULATION OF PIFA FOR BANDWIDTH ENHANCEMENT IN MOBILE APPLICATIONS | B. Rahul | 168-174 |
| 25 | ANALYSIS ON EXHIBITING RECEPTIVE POWER CONTROL STRATEGY FOR SINGLE STAGE PHOTOVOLTAIC INVERTER USING FUZZY LOGIC CONTROLLER | Dr.A.Sateesh Kumar | 175-182 |
| 26 | ACHIEVING ALL MODES OF ZETA-SEPIC FUZZY LOGIC CONTROLLERS USING SWITCHING PULSE GENERATORS FOR PLUG IN ELECTRIC VEHICLES | Dr.N.Srinivasa Rao | 183-191 |
| 27 | IMPLEMENTATION OF SECOND GENERATION SINGLE PHASE ELECTRIC SPRINGS USING ACTIVE AND REACTIVE POWER CONTROL FUZZY LOGIC CONTROLLERS | Dr.A.Sateesh Kumar | 192-201 |
| 28 | CRUDE OIL PRICE PREDICTION POSSIBILITIES USING UNIVARIATE ANALYSIS. – INDIA SCENARIO | Sandesh Ramakant Bhat | 202-211 |
| 29 | INFLUENCE OF PATENTS ON SALES IN AUTOMOBILE COMPANIES | Shashidhar Yadav J | 212-219 |
| 30 | A STUDY ON CONSUMER AWARENESS TOWARDS ORGANIC FOODS IN TUMAKURU REGION | Lakshminarayana MP | 220-228 |

CRUDE OIL PRICE PREDICTION POSSIBILITIES USING UNIVARIATE ANALYSIS. – INDIA SCENARIO

Sandesh Ramakant Bhat, Research Scholar, Lingaya's Vidyapeeth, Nachauli, Jasana Road, Old Faridabad, Haryana.

Dr. K.K. Garg, Professor and Research Guide, Lingaya's Vidyapeeth, Nachauli, Jasana Road, Old Faridabad, Haryana

Dr V Somanath, Co-guide and Professor Emeritus, Bengaluru

Abstract

Indian is a country which is influenced and impacted highly on Crude oil prices and its impact on Economic Indicators. Crude oil price fluctuation directly or indirectly effects on consumer product prices. Crude oil prices have both short time and long-term effect on the economy. CPI, WPI, IIP have its direct impact on crude oil price fluctuation. This study tries to bring out positive relationship between Economic indicators and Crude oil Prices and predicts Crude oil Prices using Univariate analysis (ARIMA). The data considered for predicting the prices is considered from Petroleum Planning and Analysis Cell and monthly data is considered for analysis. The result rendered shows that there is a significant impact of Economic indicators on Crude oil Prices.

Key words: crude oil, prediction, ARIMA, economic Indicators.

Introduction

"Financial development" – most discussed theme today in India is this word. Financial development of the nation relies upon factors like financial strategy and money related arrangement.

Monetary approach

Monetary approach alludes to the utilization of government spending and duty strategies to impact financial conditions, particularly macroeconomic conditions, including total interest for labor and products, business, expansion, and financial development. (Investopedia).

Financial strategy

Financial arrangement, the interest side of monetary strategy, alludes to the activities embraced by a country's national bank to control cash supply and accomplish macroeconomic objectives that advance feasible monetary development. (Investopedia) It is apparent that financial approach and money related strategies are significant variables in choosing the development of the economy.

As it tends to be perceived that financial strategy and money related arrangement goes connected at the hip, these approaches are affected by the monetary conduct of the country. Financial conduct relies upon request and supply of labor and products and in view of the pay level of the shoppers of these labor and products. Pay level and buying power relies upon the valuing of labor and products.

Valuing of labor and products relies upon different inside and outer elements, similar to government choices, market vacillations, Imports and commodities and changes in the financial pointers. Monetary

markers enormously affect valuing choice of purchaser merchandise and different labor and products, these financial pointers are significantly impacted by International raw petroleum costs.

As India is one of the significant import subordinate Nation with regards to Crude oil, it impacts straightforwardly towards changes in the monetary markers just as it is the significant wellspring of energy for transportation, power and so on, Its effect on expansion is extraordinary as it affects CPI and WPI.

Raw petroleum Industry:

The cutting-edge oil industry can follow its beginnings to Baku in 1837, where the principal business petroleum processing plant was set up to distil oil into paraffin (utilized as light and warming oil). This was trailed by the primary current oil well in 1846, which arrived at a profundity of 21 meters. Right now, a solitary oil field in Baku represented more than 90% of the world's oil creation, generally going to Persia (presently Iran).

Business oil wells before long continued in Bobrka, Poland (1854), Bucharest, Romania (1857), Ontario, Canada (1858) and Pennsylvania, USA (1859), starting a 'dark dash for unheard of wealth' in a few of these districts. Pennsylvania was the unmistakable victor and inside several years was delivering close to half of the world's oil. Costs rose rapidly – from generally \$0.49 a barrel in 1861 to \$6.59 a barrel in 1865.

In 1870, John D. Rockefeller consolidated Standard Oil Co. in Ohio. The organization immediately arose as the predominant player, driving costs down and purchasing up rivalry, Standard Oil extended the nation over and started sending out to abroad business sectors including China. It was extremely fruitful that by 1890, it controlled almost 90% of refined oil in the US. Costs fell universally from \$2.56 a barrel in 1876 to \$0.56 in 1892, as creation extended in both the US and Russia. Yet, with the principal business vehicles dispatching in Germany and the US in 1896, a mechanical upheaval had begun that would before long fuel worldwide interest for oil.

A large number of the significant oil organizations that are conspicuous today can likewise follow their starting points to occasions that happened throughout the following decade:

- Bay Oil and Texaco were set up in 1901, following the disclosure of oil at Spindletop, Texas,
- Illustrious Dutch and Shell converged in 1907 to shape Royal Dutch/Shell, determined to stay cutthroat even with expanded value contest from US firms
- The Anglo-Persian Oil Company (presently BP) was framed in 1908, following the revelation of oil in Iran.
- Chevron, Exxon and Mobil (presently Exxon Mobil) were framed in 1911 when Standard Oil was separated by the Supreme Court of the United States because of antitrust infringement

These worldwide oil organizations (IOCs) – BP, Chevron, Exxon, Gulf Oil, Mobil, Royal Dutch/Shell and Texaco - would become known as the 'seven sisters' and proceeded to control 85% of the world's oil saves at their top in the mid-1970s. (<https://www.ig.com>).

Raw petroleum is a normally happening, raw oil based good made out of hydrocarbon stores in regular underground pools or repositories and stays fluid at climatic strain and temperature.

In spite of the fact that it is regularly called "dark gold," raw petroleum has a wide-running thickness and can change in shading to different shades of dark and yellow contingent upon its hydrocarbon

Notwithstanding, the primary very much dove at Digboi field in Assam in September 1889 and finished in November 1890 at profundity of 662 feet by Assam Railways and Trading Company Limited (AR&T Co. Ltd.), enlisted at London, is viewed as the main monetarily effective oil revelation (200 gallons each day). To add tone to geologic thinking legend was made that during the development of a rail line by AR&T, in the year 1867, a group of logging elephants got back to camp with their feet canvassed in oil later an evening time journey to track down food and water This drove men to trail to the salt lick where leakages were productive.

By 1948, GSI has begun geophysical study in Cambay region. The first oil disclosure in quite a while was made by AOC in 1953 in Nahorkatia and afterward in Moran in 1956 both in Upper Assam. The oil business, later autonomy, remained worked by unfamiliar organization for an impressive period. Burma Oil Company (BOC) stayed with its situation as biggest in India till end of its activity.

Review of Literature

Exchange rates, oil prices and world stock returns – André Varella Mollicka , Hamid Sakaki. This study examines the responses of 14 major currency/USD pairs to two global factors (oil and world equity returns) from January 1999 to July 2017, a period comprising the global financial crisis and oil price boom and collapse. With global equity markets advancing, risk tolerance increases and oil and stock markets impact currencies under two methodologies: transmission of shocks and mean-variance approaches. Vector auto-regressions (VARs) suggest large and statistically significant responses: commodity currencies strongly appreciate following positive oil price shocks and depreciate with positive global equity shocks. GARCH models provide similar qualitative results with coefficients typically larger for global equity returns than for oil returns. Emerging market currencies and subsamples for the crisis period are also discussed.

Forecasting volatility in oil prices with a class of nonlinear volatility models: smooth transition RBF and MLP neural networks augmented GARCH approach – Melike Bildirici, Ozgur Ersin This study investigates the forecasting capabilities of a new class of nonlinear econometric models, namely, the LSTAR-LST-GARCH-RBF and MLP models are evaluated. The models are utilized to model and to forecast the daily returns of crude oil prices. Many financial time series are subjected to leptokurtic distribution, heavy tails, and nonlinear conditional volatility. This characteristic feature leads to deterioration in the forecast capabilities of traditional models such as the ARCH and GARCH models. According to the empirical findings, the oil prices and their daily returns could be classified as possessing nonlinearity in the conditional mean and conditional variance processes. Several model groups are evaluated: (i) the models proposed in the first group are the LSTAR-LST-GARCH models that are augmented with fractional integration and asymmetric power terms (FIGARCH, APGARCH, and FIAPGARCH); (ii) the models proposed in the second group are the LSTAR-LST-GARCH models further augmented with MLP and RBF type neural networks. The models are compared in terms of MSE, RMSE, and MAE criteria for in-sample and out-of-sample forecast capabilities. The results show that the LSTAR based and neural network augmented models provide important gains over the single-regime baseline GARCH models, followed by the LSTAR-LST-GARCH type models in terms of modelling and forecasting volatility in crude oil prices.

DEA Models Incorporating Uncertain Future Performance – Tsung-Sheng Chang, Kaoru Tone, Chen-Hui Wu, This study examines the Conventional data envelopment analysis (DEA) models are designed for measuring the productive efficiency of decision making units (DMUs) based merely on historical

data. However, in many practical applications, such past results are not sufficient for evaluating a DMU's performance in highly volatile operating environments, such as those with highly volatile crude oil prices and currency exchange rates. That is, in such environments, a DMU's whole performance may be seriously distorted if its future performance, which is sensitive to crude oil price volatility and/or currency fluctuations, is ignored in the evaluation process. However, despite its importance, to our knowledge, there are no DEA models proposed in the literature that explicitly take future performance volatility into account. Hence, this research aims at developing a new system of DEA models that incorporate a DMU's uncertain future performance, and thus can be applied to fully measure their efficiency.

Pricing of long-dated commodity derivatives: Do stochastic interest rates matter? Benjamin Chenga, Christina Sklibosios Nikitopouloa, Erik Schlogla, This study examines the empirical pricing performance of these models on pricing long-dated crude oil derivatives. Estimating the model parameters from historical crude oil futures prices and option prices, we find that stochastic interest rate models improve pricing performance on long-dated crude oil derivatives, when the interest rate volatility is relatively high. Furthermore, increasing the model dimensionality does not tend to improve the pricing performance on long-dated crude oil option prices, but it matters for long-dated futures prices. We also find empirical evidence for a negative correlation between crude oil futures prices and interest rates that contribute to improving fit to long-dated oil option prices.

Performance evaluation of competing forecasting models: A multidimensional framework based on MCDA - Bing Xu, Jamal Ouenniche, this study examines the Multi-Criteria Decision Analysis (MCDA) based framework and discusses how one might adapt it to address the problem of relative performance evaluation of competing forecasting models. Three outranking methods have been used in our empirical experiments to rank order competing forecasting models of crude oil prices; namely, ELECTRE III, PROM-ETHEE I, and PROMETHEE II. Our empirical results reveal that the multidimensional framework provides a valuable tool to apprehend the true nature of the relative performance of competing forecasting models. In addition, as far as the evaluation of the relative performance of the forecasting models considered in this study is concerned, the rankings of the best and the worst performing models do not seem to be sensitive to the choice of importance weights or outranking methods, which suggest that the ranks of these models are robust.

Objectives

- To assess impact of economic indicators on Crude oil Prices.
- To predict the future fluctuations in crude oil market
- To measure impact of crude oil pricing forecasting on the Indian economy.

Summary Statistics of the Variables:

Summary Statistics, using the observations 2000:04 - 2021:03

| Variable | Mean | Median | Minimum | Maximum |
|----------------------|--------|--------|---------|---------|
| Crude Oil Price | 63.224 | 60.440 | 18.240 | 132.47 |
| Price equals | 54.158 | 48.690 | 39.195 | 75.590 |
| Gram price in INR | 1870.5 | 1989.6 | 386.30 | 4726.1 |

| | Coefficient | Std. Error | Z | p-value | |
|---------|-------------|------------|-------|---------|-----|
| const | 54.8833 | 15.3292 | 3.580 | 0.0003 | *** |
| phi_1 | 0.972855 | 0.0145931 | 66.67 | <0.0001 | *** |
| theta_1 | 0.358850 | 0.0522749 | 6.865 | <0.0001 | *** |

| | | | |
|---------------------|-----------|---------------------|----------|
| Mean dependent var | 64.15792 | S.D. dependent var | 29.15433 |
| Mean of innovations | 0.177976 | S.D. of innovations | 5.232423 |
| R-squared | 0.967695 | Adjusted R-squared | 0.967559 |
| Log-likelihood | -739.5470 | Akaike criterion | 1487.094 |
| Schwarz criterion | 1501.017 | Hannan-Quinn | 1492.704 |

| | Real | Imaginary | Modulus | Frequency |
|--------|---------|-----------|---------|-----------|
| AR | | | | |
| Root 1 | 1.0279 | 0.0000 | 1.0279 | 0.0000 |
| MA | | | | |
| Root 1 | -2.7867 | 0.0000 | 2.7867 | 0.5000 |

Interpretation:

$\phi(L)y_t = \theta(L)\epsilon_t$, where $\phi(L)$, and $\theta(L)$ are polynomials in the lag operator, L , defined such that $L^{nxt} = xt-n$, and t is a white noise process. The exact content of y_t , of the AR polynomial $\phi()$, and of the MA polynomial $\theta()$.

“regression model with ARMA errors” we can represent it using two equations: $y_t = xt\beta + ut$ $\phi(L)ut = \theta(L)\epsilon_t$.

From the above table it can be understood that at lag 1 of Auto regression and 1 lag of Moving average the Model is Significant in nature.

Prediction of Crude oil Price using Univariate Time series analysis (ARMA):

| Year | Crude Oil Price | prediction | std. error | 95% interval |
|---------|-----------------|------------|------------|---------------|
| 2020:04 | 19.90 | 27.45 | 5.232 | 17.20 - 37.71 |
| 2020:05 | 30.61 | 28.20 | 8.714 | 11.12 - 45.28 |
| 2020:06 | 40.63 | 28.92 | 11.040 | 7.28 - 50.56 |
| 2020:07 | 43.35 | 29.63 | 12.860 | 4.42 - 54.83 |
| 2020:08 | 44.19 | 30.31 | 14.372 | 2.14 - 58.48 |
| 2020:09 | 41.35 | 30.98 | 15.668 | 0.27 - 61.69 |
| 2020:10 | 40.66 | 31.63 | 16.804 | -1.31 - 64.56 |
| 2020:11 | 43.34 | 32.26 | 17.812 | -2.65 - 67.17 |
| 2020:12 | 49.84 | 32.87 | 18.716 | -3.81 - 69.56 |
| 2021:01 | 54.79 | 33.47 | 19.534 | -4.81 - 71.76 |
| 2021:02 | 61.22 | 34.05 | 20.277 | -5.69 - 73.79 |
| 2021:03 | 64.73 | 34.62 | 20.956 | -6.45 - 75.69 |

Forecast evaluation statistics using 12 observations

- By considering the real time crude oil prices with predicted values it can be understood that ARIMA is one of the good models fit to predict Crude oil Prices.

Conclusion:

India is an economy which is influenced largely by economic indicators. Majorly by Crude oil prices, being crude oil price importer most of the consumer commodity prices are dependent on crude oil price fluctuations.

In this study crude oil prices are considered after removing market influence affected on them (Non stationarity data to Stationary data). The data is then checked for the relationship with economic indicators (Gold Prices, US Exchange rate, SENSEX and NIFTY) which proved positive impact of them on Crude oil prices.

Further after deriving significant relationship between them ARIMA model has been used to predict the data. At 95% significance level data was predicted and when compared with actual values, data seems to be positively predicted. Prediction of Crude oil prices helps the Nation to be prepared for the future uncertainties in turn helps to build a strong and sustainable economy.

Bibliography

1. Abdalla, I.S. and V. Murinde, 1997. Exchange rate and stock price interactions in emerging financial markets: Evidence on India, Korea, Pakistan and the Philippines. *Applied Financial Economics*, 7(1): 25-35. Available at: <https://doi.org/10.1080/096031097333826>.
2. Aloui, C., D.K. Nguyen and H. Njeh, 2012. Assessing the impacts of oil price fluctuations on stock returns in emerging markets. *Economic Modelling*, 29(6): 2686-2695. Available at: <https://doi.org/10.1016/j.econmod.2012.08.010>.
3. Arouri, M.E.H., 2011. Does crude oil move stock markets in Europe? A sector investigation. *Economic Modelling*, 28(4): 1716- 1725. Available at: <https://doi.org/10.1016/j.econmod.2011.02.039>.
4. Ayub, A., 2018. Volatility transmission from oil prices to agriculture commodity and stock market in Pakistan. Doctoral Dissertation, Capital University.
5. Guo H, Kliesen KL. Oil price volatility and US macroeconomic activity. *Review-Federal Reserve Bank of St. Louis* 2005;57(6):669–83.
6. Brown SPA, Yücel MK. Energy prices and aggregate economic activity: an interpretative survey. *Quarterly Review of Economics and Finance* 2002;42:193–208.
7. Rafiq R, Salim R, Bloch H. Impact of crude oil price volatility on economic activities: an empirical investigation in the Thai economy. *Resources Policy* 2009;34(3):121–32.
8. Zhou S. The response of real exchange rates to various economic shocks. *Southern Journal of Economics* 1995;61(4):936–54.
9. Tuo, J, and Yanbing. "Summary of World Oil Price Forecasting Model." In. *IEEE Knowledge Acquisition and Modeling (KAM)*, 2011 Fourth International Symposium on, pp. 327-330, 2011.
10. www.suite101.com/article/oils.Importance-to-the-world -economy.
11. Lin, A. "Prediction of international crude oil futures price based on GM (1, 1)." In *Grey Systems and Intelligent Services, . GSIS . IEEE International Conference on*, pp. 692- 696. IEEE, 2009.