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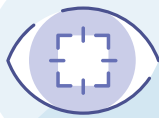


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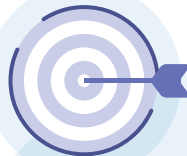


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Editorial

Greetings to Readers !!! Once again it is a pleasure to present before you the new issue of SMTR. This issue too, like others, offers you the pleasant experience of reading variety of articles in the areas of finance, banking, economy, marketing, HR and use ICT with innovative pedagogy.

The development of Tribal region of India is an important objective of Government to have balanced regional development of India. The paper titled Demystifying the asymmetric nexus between processing and working marketing challenges faced by Bhotiya tribe: Empirical evidences from Garhwal region of Uttarakhand, helps in achieving the same objective. To boost women entrepreneurship an attempt is made to study determinants of entrepreneurial intention of new generation women.

Human Resource Management is a challenge before the world ,a research paper titled H R Slack and Innovation Strategy: Evidence from Indian Companies addresses the innovations strategies implemented by Indian companies. The work life balance is a challenge before Indian women, an attempt is made to study the working women's perception for work-life balance with reference to Anand city. The issue also presents a bibliometric analysis of peer reviewed literature on entrepreneurship and digital economy. An overview of the Tourism Industry of Assam and Its Future prospects gives an idea about Assam Tourism prospects and challenges.

Post COVID is a time for revamping of industries where marketing plays a pivotal role. A Strategy to achieve circularity in supply chain consumer perception about refurbishment is presented in this issue. For the growth and development of economy rural savings are important. The paper on Study on Savings Behaviour and Preferences of rural consumers towards selected Post Office Schemes in Nashik District enhances reader's understanding. This issue also includes a study of customer preference towards various OTT players in Ahmedabad.

The issue presents research deliberations on Capital Structure of agro based industries and Financial Risk tolerance of Investor. Another study on whether narrow banking resolve the NPA issue, gives better insight to readers and investors. The Banking system is considered as barometer of a country. To analyze the perception of bank professionals on factor like pressure encourage employees' intention to commit fraud is also addressed in this issue.

This issue also contains paper on study of the added economic value of selected Indian Pharma Industries.

We hope readers have enjoyable reading experience. We wish the readers academically enriching experience. Keep researching !

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Demystifying the asymmetric nexus between processing and working marketing challenges faced by bhotiya tribe: Empirical evidences from Garhwal region of Uttarakhand, India

Dr. Surendra Kumar

Abstract

The present research study has investigated the asymmetric nexus between processing and working marketing challenges faced by bhotiya tribe in context to Garhwal region of Uttarakhand, India. In this regard, a standardized questionnaire or tool; Perception and Satisfaction Measurement Scale (PSMS) has been constructed in order to measure the measure the perception and satisfaction level of the bhotiya tribe about the marketing challenges are being faced by them in processes and working with traditional textile industry, present market structure for tribal woollen textiles and suggestions to overcome the marketing challenges in the study area. For that sample 1000 bhotiya tribe manufacturers, working in different locations of Garhwal region of Uttarakhand was collected. Moreover, we have employed 'Pearson Correlation Coefficient' to examine the relationship between processing and working marketing challenges faced by bhotiya tribe in context to Garhwal region. Estimations suggested that there is low but positive association been found between processing and working marketing challenges faced by bhotiya tribe in context to Garhwal region of Uttarakhand, India. On the basis of research findings, recommendations to policy makers, industry professionals, academicians, and stakeholders are being suggested in order to improve the product' productivity, quality and economic benefits to the local communities.

Keywords: Processing Challenges, Marketing segmentation, Traditional textile, Bhotiya Tribe, Garhwal, Uttarakhand

Introduction

The people of this region are dependent on woollen clothing to cope up with very cold climate. Bhotiya tribes started woollen trade with Tibet since ancient period and accepted the industry as an essential part of their livelihood in their villages. For many centuries women of the tribes have been moving the small "pithachan". The Ptdu, thulma, carpets, blanket, chutka, lava, shawl, asan, gudma, and pankhi etc. are crafted very artistically. The bond between the Bhotia and Tibetans were very close for centuries across the mountains. Every Bhotia of the community went through few ceremonies with their Tibetan counterpart enjoining exclusive and permanent trade on both ends, a pledge that they would be mittars (eternal friends) forever. (Chatopadhyaya-1953) "Gamyā" is referred to as the trade agreement between two and was formalized at their ceremony called "search-mulchhu" (gold and silver). The Ceremony was directed by taking water from the Mansarovar Lake with powdered gold and silver. Both of the parties drank this water and after taking an oath to be faithful to each other (Chawala, 1996). Bhotias had to travel through distant hills and valleys during trade with Tibet. After many months of travel on these paths, Bhotiyas would reach wholesale markets in Tibet. Probably, this difficult and long journey may be the reason behind Bhotiyas are courageous, hardworking and mountaineer merchant. Hard geographical conditions and limited transportation facilities helped them to maintain a monopoly in this trade, there was no competition in this trade. So they could bring gold, borax, salt, animal skin, wool, mules, sheep and goats from Tibet and India. They carried food grain, rice, cloth oil, jaggery, tobacco, iron, saffron, coarse shawls, pankhis (large woollen shawl), ponies, gudma and different types of jari-buties (medicinal plants) etc. Their trade was traditionally involved bartering system between sellers and buyers. They sold their goods through agents and their trade relation continued from generation to generation. In 1962 China attacked India and after that, the best quality wool has stopped coming from the region. That was a great setback to wool industry of Bhotiya.

Review of Literature

The Indian fabric producing industry, subsequently, has a substantial occurrence in the Indian economy just like the external global whole fabric producing industry. Its commitment to the Indian economy is showed in rapports of its involvement to the level of manufacturing fabrication, create occupation and increase foreign exchanges for the country (Mohan & Chatterjee 1993). Uchikawa said that India is currently a fast-developing business economy creeping to reach at a large portion of a billion of middle-income salaried population by the year 2030. These factors are very useful specifically for the Indian Fabric producing Manufacturing from the long run perspective. Despite the fact that the worldwide financial emergencies are intensifying day by day, but in spite of, the economies are rising and developing particularly in South and South East Asia. Fabric producing Industry is here to develop given it pays attention to coopetition and technology advancement. In fifth initiation workshop on Strategies and readiness on exchange and globalization in India for Fabric producing and garment's part, held on 27 December 2005 (conducted by Fabric producing Committee as a team with United Nations Conference on Trade

and Development), Shri. Nayanbhai C. Parikh, Chairman, Fabric producing Committee, Mumbai remarked that in the post quota system, the performance of Indian Fabric producing industries was satisfactory and in international market the Indian fabric producing and clothing industries were holding a good position, (Tiwari 2008). The focus made on the barriers which were charged at the time of movement of the products from one country to another has been freed up, (Confederation of Indian Fabric producing Industry). In the primeval period humans first took in the bending of grass parts and tried to create ropes, copying the winding of plants around the parts of trees, shrubberies. From that start, human refined to contort, or divert the strands got from inside the stalks of flax and fiber layers of sheep and goats, (Amsden and Alice 2001).

Estimations and Results

In order to measure the relationship between processing and working marketing challenges being faced by the traditional textile manufactures of Uttarakhand, following research objective and hypothesis have been formulated;

1. To measure the relationship between processing and working marketing challenge faced by tribal woollen textile manufactures of Uttarakhand.

➤ **H₀1** There is no significant relationship between processing and working marketing challenge faced by tribal woollen textile manufactures of Uttarakhand.

For testing the proposed null hypothesis “**H₀1** There is no significant relationship between processing and working marketing challenge faced by tribal woollen textile manufactures of Uttarakhand” and for achieving its corresponding objective “To measure the relationship between processing and working marketing challenge faced by tribal woollen textile manufactures of Uttarakhand”, Researcher has conducted Pearson correlation coefficient, Coefficient of determination R² and Share of independent were calculated to see the significant relation between marketing challenge faced by tribal woollen textile manufactures of Uttarakhand while processes and working with traditional textile industry and results are computed in table 1.

Table 1 Summary Statistics of Co-efficient of Correlation between marketing challenges faced by tribal woollen textile manufactures of Uttarakhand while processes and working with traditional textile industry

Group	Independent Variable	Dependent Variable	Correlation	Coefficient of Determination R ²	Share of I.V
Manufacturers	Processing challenges	Working Challenges	0.106**	0.011	1.1%

****Significant at 0.01 level**

Primary Data

The Pearson correlation coefficient “r” between marketing challenge being faced by tribal woollen textile manufactures of Uttarakhand while processes and working with traditional textile industry has been calculated (N=1000) in the study area and presented in Table 1.1 as it depicts that value of Co-efficient of correlation, r=0.106, between perception and satisfaction of manufacturers towards marketing challenge faced by them while processes and working with traditional textile industry in Uttarakhand which is significant at 0.01 level of significance. The table 1.1 also shows the coefficient of determination, R²=0.011 (Square of correlation coefficient, r) tells the amount of variability in the marketing challenges being faced by textile manufactures while processing and working with traditional textile industry in Uttarakhand and after converting this value into percentage we can say that marketing challenges related to process of manufacturing cause only 1.1% variance in marketing challenges related to working in traditional textile industry in Uttarakhand.

Therefore, the proposed null hypothesis “**H₀1** There is no significant relationship between processing and working marketing challenge faced by tribal woollen textile manufactures of Uttarakhand” has been **rejected** and its corresponding objective “To measure the relationship between processing and working marketing challenge faced by tribal woollen textile manufactures of Uttarakhand” was also **achieved**.

India has been notable for her fabric producing products meanwhile exceptionally from primeval times. The outmoded fabric producing industry of India was essentially rotted throughout the British colonial system, (Rao & Das 1993). In any case, the contemporary fabric producing industry appropriated birth in India in the mid nineteenth century when the main fabric producing plant in the nation was set up at post gloster area which was close to Calcutta in 1818. Both processing and marketing challenges are important to understand the overall challenges being faced by the industry.

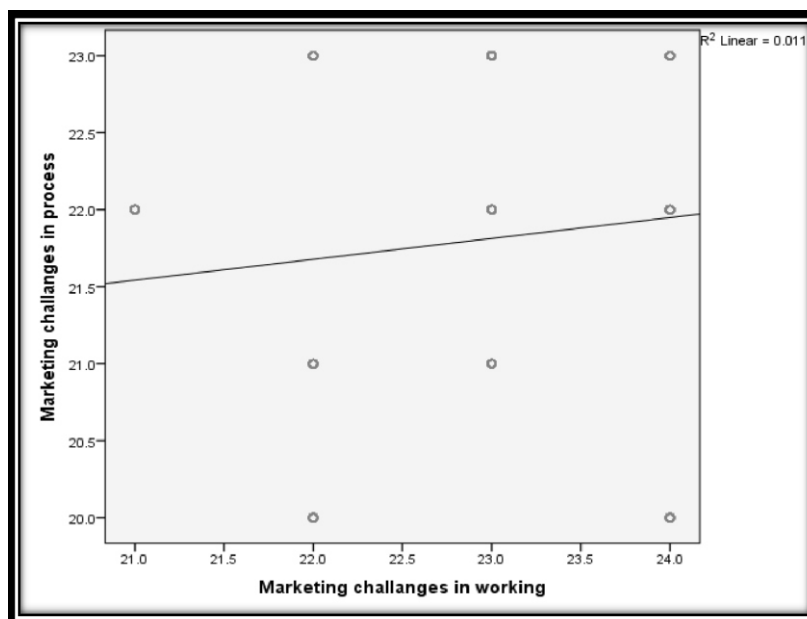


Figure 1 Scatter plot of manufacturer's perception and satisfaction towards marketing challenges related to processing and working with tribal textile industry

From the figure 1 it is clear that there is very low positive correlation between processing and working marketing challenges are being faced by the traditional tribal manufacturers of Uttarakhand. As both the challenges are related to different areas of the industry.

Conclusion and Recommendations

Traditional textile of bhotiya tribe always been Centre of attraction of the tourists and retailers from different parts of India and Globe (Andersen, et al., 2014). Moreover, traditional textile manufacturers are facing challenges in processing and marketing the products and same has been noticed in the present study, that correlation of coefficient between working and processing marketing challenges being faced by traditional tribal textile manufacturers of Uttarakhand was 0.106 and share of processing marketing challenges in working marketing challenges was 1.1 percentage which is significant at 0.001 level of significance. Therefore, it is concluded that there is very low positive correlation exit between processing and working marketing challenges being faced by the textile manufacturers of Uttarakhand. This further, shows that if working marketing challenges increases then processing marketing challenges would also get increase by 1.1 percentage and vise-versa. Although there is very low positive correlation between processing and working marketing challenges, but both are very important and impact significantly on each other all along processing and working of textile manufacturers.

Furthermore, over the year due to lack of technological support and financial assistance, local manufacturers are shifting their nature of jobs and

going out of Uttarakhand in search of job. On the basis of findings, it is recommended to State Government, Non-Government Organizations (NGOs) and other associated stakeholders with traditional textile manufacturing industry of Garhwal Uttarakhand, that they must focus on minimize either processing or working marketing challenges. As if one gets minimize, another would get also automatically. In order to protect and promote the local textile products, there is need of proper marketing channels and structure in the study area, so that local manufacturers can sell their products easily and conveniently. The State Government need to provide financial and technological assistance to all the local manufacturers of textile, as while conducting the study researcher has come to know that due to financial problems and unavailability of resources, local manufacturers are changing their jobs and migrating towards plain areas. Teaching, training and workshop would also be organized at the regular intervals for the traditional manufacturers in view of enhancing their knowledge and integrating traditional skills with modern manufacturing skills. This is also necessary to ensure active participation of local residents in traditional textile industry of Garhwal Uttarakhand through employment, entrepreneurship and economic motivation. There is enormous scope for Research and Development about traditional textile industry of Uttarakhand. Therefore, researchers would encourage towards the same.

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Determinants of Entrepreneurial Intention of New Generation Women: A Perceptual Study

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Abstract

The ever-increasing participation of women in business across the nations of the world has changed the economic and social power structure in favour of women though not percolated to all the strata of the society especially in developing countries like India. The growth of women owned enterprises in north eastern states of India has not been encouraging like other parts of India and this may be attributed to numerous personal and family factors in addition to macro social environment. It cannot be denied that women entrepreneurship is relatively low in North Eastern States of India as compared to advanced states of India. But the intention among the new generation female students towards entrepreneurship as a career is not totally bleak. There are large number of determinants of entrepreneurial intention but the present study makes an assessment of the perception of female students of undergraduate courses about the personal and family factors capable of influencing their entrepreneurial intention. Need for achievement and risk bearing capacity are found to be the important determinants influencing entrepreneurial intention among the female students of different colleges of Silchar town of Assam.

Keywords: Creativity, Family Support, Need for Achievement, Risk Bearing Capacity.

Introduction

Entrepreneurship has been playing a vital role in the growth and development of a country. In a developing nation like India, where the rising population is a matter of concern, catering to the needs of each and every citizen may be a great problem for the government. In such a scenario, entrepreneurship development may be considered as a viable alternative and arise as a relief to the society. It is a significant source of employment generation facilitating innovation and economic growth of the country. Policyholders, government and other authorities recognizing its potential continuously put emphasis on entrepreneurship development. Campaigns like Startup India, Skill India, Make in India were launched to boost entrepreneurs and entrepreneurship in the country. Encouragement of entrepreneurship is a precondition to put the nation into growth trajectory (Denanyoh, et al, 2015).

In order to have a greater participation in entrepreneurship, the young generation is to be encouraged. As academic institutions are significantly related to fostering entrepreneurial spirit and culture among students, it may generate entrepreneurial intent among the young generation. Identifying and developing entrepreneurial traits among the students will encourage to launch their own venture in future (Saeed, et al., 2015). This belief which can form a concept of making entrepreneurship as a career choice is entrepreneurial intention (Rai, Prasad and Murthy, 2017).

Intentions are said to be the best predictor of individual behavior (Krueger and Brazeal, 1994). Thus, identifying the factors that are capable of generating or influencing entrepreneurial intentions, will encourage individuals to become entrepreneurs. This will not only boost entrepreneurship but will also develop the region as a whole. The importance of various determinants of entrepreneurial intentions varies across countries and states. In north eastern states, where people belong to low income group and government sector jobs attract considerable number of youths, entrepreneurial culture could hardly be seen. Especially female entrepreneurs are rarely found in this area. Although the upcoming generation is seen to be more innovative and creative, more participation of girls can be expected in the coming years.

Several researches have been conducted on determinants of entrepreneurial intention. Personality characteristics are considered to be one of the most influential factors of generating entrepreneurial intentions among individuals. Psychological characteristics or traits of a person definitely have a huge bearing on the mindset and thinking process of an individual as these relate to the reaction and behavior of individuals towards a stimulus. Another important factor that also influences the intention of creating a new venture, are the family factors. These factors include emotional, financial and intellectual support that an individual receives from various members of the family which may encourage to start an entrepreneurial venture.

Review of Literature

A large number of literatures have been referred which outlines various personal as well as family factors that influences entrepreneurial intention among students.

Several entrepreneurial intention models were based on Theory of Perceived Behaviour also called behavioral approach depicting the influence of Personal Attitude and Subjective Norms on Perceived Behavioral Control (Ajzen, 1991). Taha, Ramlan and Noor (2017) found strong relationship of entrepreneurial intention with attitude, subjective norm, behaviour control and entrepreneurship education.

Shapero and Sokol (1982) also developed a theory of entrepreneurial events which described that the factors 'perceived desirability', 'feasibility' and 'propensity to act' control entrepreneurial intention. Both the theories were proved to be equally useful in understanding the influence of the factors on entrepreneurial intentionality. Yamina & Mohammed (2019) identified positive influence of Perceived Desirability and Feasibility on entrepreneurial intention. Desire to work i.e., propensity to act also contributed towards building entrepreneurial intention.

However, another theory of entrepreneurial intention also emerged which was based on psychological characteristics or traits of individual. The personality factors of an individual also influence the intention of a person to pursue entrepreneurship as a career (Thompson, 2009). This theory includes locus of control, self-confidence, need for achievement, risk taking capacity, innovativeness and tolerance of ambiguity as the psychological factors which influences the entrepreneurial intentions of an individual (Ferreira, 2012). Gurol and Atsan (2006) used trait model to find that students with entrepreneurial intentions were innovative, risk takers, have inner control and need for achievement. It was also suggested that entrepreneurial education increases the inclination towards entrepreneurship among students. Tan, Pham and Bui (2021) identified general entrepreneurial traits and social entrepreneurial traits that effect social entrepreneurial intention. It was found using partial least squares structural equation modelling (PLS-SEM) that risk taking propensity and need for achievement does not affect social entrepreneurial intention. However,

innovativeness plays an active role in social entrepreneurship. Uddin and Bose (2012) revealed that personal factors risk taking, need for achievement and favourable environment was positively correlated with entrepreneurial intention. Owoseni (2014) and Ismail, Ahmad and Gadar (2012) found that need for achievement and self-efficacy influenced entrepreneurial intention. It was also found that cultural factors also influenced entrepreneurial intentions.

Khan et al. (2021) posited that internal or personality factors had positive but significant impact over success of women entrepreneurs. Extrenal factors which includes societal structure and background of the family positively influence the success of entrepreneurs. Herdjiono, et al. (2017) revealed that family environment had significant and positive influence on entrepreneurial intention of children. Osorio, Settles and Shen (2017) also stated that family support in the form of emotional, intellectual and economic support influenced the intention of starting a new venture.

Objectives of the Study

1. To study the select determinants of entrepreneurial intention as perceived by female students pursuing undergraduate courses in Silchar town of Assam.
2. To compare the perception of female students under consideration over the select determinants of entrepreneurial intention across their select demographic background.

Hypotheses of the Study

The perception of female students varies significantly over the select determinants of entrepreneurial intention across their stream of education, religion, type of schooling and father's occupation.

Research Methodology

To attain the objectives formulated for the study, various literatures have been reviewed and some determinants (personal and family) of entrepreneurial intention of female students pursuing college education have been identified and selected. A total of 18 components influencing the entrepreneurial intention have been identified which are then grouped under six (6) factors. Table 1 reveals the factors so selected.

Table 1: Select determinants of entrepreneurial intention

Nature of Determinants	Determinants	Previous Researches
Personal	Need for Achievement	Rasli, Khan and Malekifar (2013); Dzomonda, Fatoki and Oni (2015); Vodă and Florea (2021), Entrialgo, Fernández, & Vázquez (2000)
	Risk Bearing Capacity	Herdjiono, et al. (2017); Yasir, Liren and Mehmood (2019); Asamani and Mensah (2013)
	Creativity	Amofah, Saladrighes and Akwaa-Sekyi (2020); Chaudhary (2017); Karabulut (2016)
Family	Emotional support from family members	Altinay, Madanoglu and Danielelea (2012); Turker and Selcuk (2009); Adil and Chakranarayan (2020)
	Financial support from family members	Talas et.al (2013); Benzing, Chu and Kara (2009); Manolova, Brush and Edelman (2008)
	Background of family	Khan et al. (2021); Fatoki (2014); Lindquist, et al. (2015)

Source: Extracted by Researchers from Literature

The requisite data has been collected using survey method. A structured questionnaire has been drafted with eighteen number of components capable of influencing entrepreneurial intention and a five-point rating scale has been employed. Population includes female students of colleges located at Silchar town of Assam pursuing undergraduate courses. A total of 100 respondents has been surveyed of which 78 respondents have been considered for this study after preliminary screening of the responses and this may be considered as the effective sample size for the present study.

Mean and standard deviation have been applied to assess the determining factors of entrepreneurial intention of female students under consideration. Apart from these, several other statistical tools like

independent two sample t-test and one-way ANOVA have been employed to analyze the procured data.

Scope of the Study

1. The study focuses only the female students pursuing undergraduate courses in the colleges located in Silchar town of Assam.
2. The study is based only on select personal and family factors capable of influencing intention of female students with respect to entrepreneurship as career.

Limitations of the Study

1. The data is based on sample survey and thus sampling error cannot be completely ignored.
2. The findings are based on the perception of respondents and hence the study is subject to all the limitations inherent in perception based study.

Results and Discussion

Table 2: Profile of Respondents

Stream	Frequency	Percent
Arts	23	29.5
Commerce	29	37.2
Science	26	33.3
Total	78	100.0
Religion	Frequency	Percent
Hinduism	64	82.1
Islam	14	17.9
Total	78	100.0
Schooling	Frequency	Percent
Govt. School	32	41.0
Private School	46	59.0
Total	78	100.0
Father's Occupation	Frequency	Percent
Business	40	51.3
Service	38	48.7
Total	78	100.0

Source: Field Survey

Table 2 portrays the profile of respondents categorized on the ground of stream, religion, schooling and father's occupation. A total of 78 respondents has been surveyed. Stream wise, 29.5 percent respondents belong from Arts stream, 37.2 percent from Commerce and 33.3 percent from Science stream. Religion wise, 64 respondents follow Hinduism constituting 82.1 percent while only 14 respondents

follow Islam which covered 17.9 percent of the respondents. On the basis of Schooling of the respondents, 41 percent completed their schooling from Government Schools while 59 percent studied in Private Schools. Also, 51 percent female students' fathers are engaged in business while remaining 48.7 percent come from business family.

Table 3: Determinants of Entrepreneurial Intention of Female Students

Determinants	Mean	Rank	Std. Deviation
Need for Achievement	4.047	1	0.534
Risk Bearing Capacity	3.992	2	0.571
Creativity	3.953	3	0.550
Emotional support from family members	3.885	4	0.615
Financial support from family members	3.577	6	0.812
Background of family	3.671	5	0.614

Table 3 depicts the mean and SD of responses obtained for the personal and family factors or determinants of entrepreneurial intention of female students. From the mean values, it can be seen that 'Need for Achievement' is the most rated factor followed by 'Risk Bearing Capacity' and 'Creativity'. 'Financial support from family members' is the least rated factor followed by 'Background of family'. The values of standard deviation show least deviation for 'Need for Achievement' depicting consistency in the responses while highest deviation is seen for 'Financial support from family members'.

Table 4 illustrates the value of mean and SD of stream wise perception of female students over the influence of the factors on entrepreneurial intention. It is seen that in case of students studying arts stream, the mean value of 'Risk bearing capacity' is the highest while

'Financial support from family members' is the lowest. While in case of commerce students, mean value of 'Need for Achievement' is the highest and lowest for 'Financial support from family members' and 'Background of family'. In case of science stream students, 'Creativity' has the highest mean, while 'Financial support from family members' the lowest.

One way ANOVA have been employed to test the hypothesis if perception on factors influencing entrepreneurial intention varies across the stream. Table 4 clearly portrays that p-value of all the variables except the factor 'Creativity' is more than 0.05 at 5 percent significance level which implies that the perception of female students does not vary significantly over all the factor. While significant difference can be found in case of the factor 'Creativity' only.

Table 4: Stream wise perceived influence of select determinants on entrepreneurial intention

Determinants	Stream	Mean	Std. Deviation	F Value	p Value
Need for Achievement	Arts	3.884	0.608	1.690	0.191
	Commerce	4.150	0.442		
	Science	4.077	0.544		
Risk Bearing Capacity	Arts	3.986	0.486	0.527	0.593
	Commerce	4.069	0.402		
	Science	3.910	0.775		
Creativity	Arts	3.972	0.635	3.813	0.026
	Commerce	3.759	0.511		
	Science	4.154	0.444		
Emotional support from family members	Arts	3.855	0.658	0.720	0.490
	Commerce	3.805	0.652		
	Science	3.999	0.534		
Financial support from family members	Arts	3.608	0.924	0.024	0.977
	Commerce	3.564	0.798		
	Science	3.564	0.753		
Background of family	Arts	3.870	0.626	1.786	0.175
	Commerce	3.564	0.577		
	Science	3.616	0.630		

Source: Field Survey

Table 5 illustrates the value of mean and SD of religion wise perception of female students over the influence of the determinants of entrepreneurial intention.

Table 5: Religion wise perceived influence of select determinants on entrepreneurial intention

Determinants	Religion	Mean	Std. Deviation	t value	p value
Need for Achievement	Hinduism	4.052	0.535	0.179	0.860
	Islam	4.024	0.546		
Risk Bearing Capacity	Hinduism	4.032	0.459	0.868	0.400
	Islam	3.810	0.931		
Creativity	Hinduism	3.943	0.568	-0.393	0.698
	Islam	4.000	0.472		
Emotional support from family members	Hinduism	3.906	0.605	0.613	0.548
	Islam	3.786	0.674		
Financial support from family members	Hinduism	3.568	0.852	-0.261	0.796
	Islam	3.619	0.625		
Background of family	Hinduism	3.709	0.556	0.890	0.387
	Islam	3.501	0.835		

Source: Field Survey

It is seen that in case of students following Hinduism, the mean value of 'Need for Achievement' is the highest while 'Financial support from family members' is the lowest. In case of students following Islam, mean value of 'Need for Achievement' is the highest and lowest for 'Background of family'.

To test the hypothesis, if perception on factors influencing entrepreneurial intention varies across religion, two sample t-test have been used. Results portrayed in table 5 clearly point towards no significant difference over all the factors influencing entrepreneurial intention across gender.

Table 6: Schooling wise perceived influence of select determinants on entrepreneurial intention

Determinants	Schooling	Mean	Std. Deviation	t value	p value
Need for Achievement	Govt. School	3.896	0.643	-1.979	0.053
	Private School	4.152	0.419		
Risk Bearing Capacity	Govt. School	3.750	0.693	-3.018	0.004
	Private School	4.160	0.395		
Creativity	Govt. School	3.720	0.550	-3.264	0.002
	Private School	4.116	0.493		
Emotional support from family members	Govt. School	3.708	0.527	-2.249	0.027
	Private School	4.008	0.646		
Financial support from family members	Govt. School	3.500	0.864	-0.685	0.496
	Private School	3.631	0.780		
Background of family	Govt. School	3.521	0.682	-1.755	0.085
	Private School	3.776	0.545		

Source: Field Survey

Table 6 illustrates the value of mean and SD of type of schooling wise perception of female students over the influence of the determinants on entrepreneurial intention. The mean value of 'Need for Achievement' is the highest while 'Financial support from family members' is the lowest for students from Government School. In case of students from private school, mean value of 'Risk Bearing Capacity' is the highest and lowest for 'Financial support from family members'.

To test the hypothesis, if perception on factors influencing entrepreneurial intention varies across schooling of students, two sample t-test have been used. Table 6 clearly portrays significant difference over the factors 'Risk bearing capacity', 'Creativity' and 'Emotional support from family members' since the p-value is less than 0.05, while no significant difference has been observed for all the other factors.

Table 7: Father's occupation wise perceived influence of select determinants on entrepreneurial intention

Determinants	Father's occupation	Mean	Std. Deviation	t value	p value
Need for Achievement	Business	4.059	0.483	0.190	0.850
	Service	4.035	0.589		
Risk Bearing Capacity	Business	4.142	0.361	2.425	0.019
	Service	3.834	0.700		
Creativity	Business	3.917	0.493	-0.593	0.555
	Service	3.992	0.608		
Emotional support from family members	Business	3.883	0.558	-0.020	0.984
	Service	3.886	0.677		
Financial support from family members	Business	3.550	0.842	-0.299	0.766
	Service	3.605	0.790		
Background of family	Business	3.700	0.627	0.426	0.672
	Service	3.641	0.607		

Source: Field Survey

Table 7 elucidates the value of mean and SD of father's occupation wise perception of female students over the determinants of the factors on entrepreneurial intention. The mean value of 'Risk bearing capacity' is the highest while 'Financial support from family members' is the lowest for the students whose fathers has business as occupation. In case of students whose fathers are employed in service sector, mean value of 'Need for Achievement' is the highest and lowest for 'Financial support from family members'.

Independent two sample t-test has been used to test the hypothesis i.e., if perception on factors influencing entrepreneurial intention varies across father's occupation. Table 7 portrays significant difference over the factors 'Risk bearing capacity' since p-value is less than 0.05 at 5 percent level of significance, while no significant difference has been observed in all the other factors.

Conclusion

The study is based on the perception of females studying undergraduate courses in colleges of Silchar town of Assam. According to their perception, the most influential determinant among personal factors is 'Need for Achievement' followed by 'Risk bearing capacity'. Among the family factors, 'Emotional support from family members' is considered the most influential determinant of entrepreneurial intention followed by 'Background of family members'. It has been revealed in the study that the perception of female students over all the select factors do not vary significantly across their religious beliefs. However, it has also been found that entrepreneurial intention do not vary significantly across their stream, schooling and father's occupation except for the determinants 'Creativity', 'Risk bearing capacity' and 'Emotional

support from family members'. Although the government has announced various schemes for encouraging entrepreneurship especially for women which will provide a boost in unveiling the unexplored potentials. Adequate training and financial support from various sources and proper entrepreneurial education is the need of the hour for encouraging congenial environment for growth and foster of entrepreneurial culture.

Scope for future research

1. Research may be conducted in future by considering additional factors influencing the micro social environment of the respondents.
2. Researchers in future may also be conducted by increasing the sample size of various strata and covering both rural and urban areas.
3. Similar type of research work may be conducted by including additional demographic factors.

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Human Resource Slack and Innovation Strategy: Evidence from Indian Companies

Deepak Kumar, Rajiv Behl

Abstract:

For boosting innovations within the organisations, it is the 'innovation strategy' which is of utmost importance. Innovation strategy targets for finding something novel in the business on continuous basis. There are plenty of studies on innovation strategy, but, most of the studies are focused only on external environment factors impacting innovation strategy. Few studies have been found to examine the resource-based view regarding innovation strategy. One of the most important resources for an organization is human resources. The strategy literature has scaled excess human resources as human resource slack (HR Slack). There is almost non-existence of studies in India, which has operationalize HR slack for measuring its impact on innovation strategy. We explore how human resource slack can play a significant role in development of an Innovation strategy. The study has taken sample of top 200 BSE companies as on April 1, 2021 from the year 2014 to 2021. After running panel data analysis, Random effect model (REM) is found more appropriate and it is concluded that HR slack has positive impact on innovation strategy in selected companies. This study guides organisations regarding the optimum utilization of surplus resources especially human resources for developing and successfully implementing innovation strategy.

Keywords: Innovation Strategy, Human Resource Slack, R&D Intensity, Human Resources, Panel Data, Random Effect Model

Introduction

India has been ranked 40 and topped in the central and southern Asia region in the Global innovation index (GII), according to the World Intellectual Property Organization (WIPO, 2022). Not only in 2022, but ranking of India has been 57 in year 2018 followed by 52, 48 and 46 in the years 2019, 2020 and 2021 respectively. It is India's consistent improvement in this domain that fetches the focus towards the innovations within the organizations. To boost innovations within the organizations, it is the 'innovation strategy' which is of the utmost importance. Innovation strategy aims for continuously finding something novel in the business in the form of new product or improved processes and can also ensure competitive advantage for a reasonable period of time. Nevertheless, innovation is always treated as a two-edged sword, that it may result in immense profits or in the form of delayed return, which is also uncertain (Mata & Woerter, 2013). There are ample studies on innovation strategy, but most of the studies are biased upon the 'market pull' the external environmental impact on innovation strategies. Few studies have been found to examine the resource-based view regarding innovation strategy. Barrett & Sexton (2006) claimed that it is the firm's resources which induce innovation within an organization along with market demand. These resources can be in the form of financial resources or in the form of skill set the company's employees possess (Seth & Thomas, 1994). Moreover, Employees play an important part in influencing the successful implementation of innovation strategy (Hittmár et. al. 2014). Employees may prove very useful for a firm in developing a successful and sustainable innovation strategy because competitors cannot have the same level of human resource as a firm holds and they may not be able to copy the firm innovation strategy as in the same manner (Barney, 1991). Excess human resources within an organization are operationalized by Human resource slack (HR Slack) (Nohria & Gulati 1996). According to best of our knowledge, no study was found which specifically examined the impact of human resource slack on innovation strategy in Indian companies. Thereupon, the relationship between all two domains; Human resource slack and innovation strategy becomes important to explore. This study may prove to be one of its kinds in a developing country like India, & may prove in highlighting the importance of Human resources for innovation strategy within the organization.

Literature Review

The objective of the study is to examine the impact of human resource slack on innovation strategy. Financial and human resource slack differ when it comes to their stickiness in form of divisibility and fungibility of resources. Penrose & Penrose (2009) describe stickiness as the level to which slack resources can be swiftly and smoothly applied for the firm expansion. Moreover, Divisibility signifies whether a given resource can be allocated to meet a particular circumstantial demand and fungibility implies the level to which a particular resource can be used for multiple purposes. Therefore, the stickies resources are hard to divert to other ventures compared to liquid resources, because they are already employed in a particular venture. They may find it very difficult to get used to some new tasks (Mishina, Pollock & Porac, 2004). Similarly, Cetina, 1999 provided that Human knowledge and skill level are already entrenched in a particular task. Besides, a particular expertise leads to limited knowledge domain and this expertise cannot be utilized in another situation or job easily (Chi, Glaser & Farr,

2014). Human resources being stickier, still has influence on commitment towards innovation strategy at least in part of firm specific domain (David, 1985). Moreover, Nahapiet and Ghoshal (1998) provided the Intellectual capital and social capital are the primary resources for organizational innovation. Both intellectual and social capital are possible only due to availability of a greater number of employees, represented by human resource slack. The existing literature has some evidence about the relationship between HR slack and innovation strategy. Poynter & White (1984) claimed in their study that excess human resources are very useful for organization to adjust to sudden external environment changes and also very helpful for innovation within a company. Nohria & Gulati (1996) advocated that Human resource slack allows a firm to invest and to give priority to innovation-oriented activities for business expansion. Meyer & Leitner (2018) conducted a study in NPO's and found out that HR slack has positive relationship with innovation as well. Adomako & Nguyen (2020) found out that HR slack has positive relationship with sustainable innovation within organization. Zhanga, Li, Hu, Song, Jiang & Ding (2020) took research professionals as HR slack and found out that there is a positive linear relation between HR slack and R&D performance of the sampled companies. Amoah & Adomako (2021) claimed in their study that HR slack facilitates growth strategies because employees hold prior knowledge and by having HR slack a company can go for identifying and exploding new opportunities continuously. But Sgourev & Lent (2017) concluded in their study that HR slack are more beneficial for short term firm objectives to long term firm objectives. As results of innovations' initiatives can be seen in long run, the finding of this study indirectly indicate HR Slack are less useful in innovation activities of a firm. While talking about measurement of innovation strategy the research will take the definition given by Strecker (2009) which is, "innovation strategy is the sum of strategic choices a firm makes regarding its innovation activity. Innovation goals (ends) are not included - only means". One of the means for innovation strategy is R&D intensity, which has remained popular among

scholars for measuring innovation strategy. As Guo, Perez-Castrillo & Toldra-Simats (2019) claimed that cutting R&D expenditure denotes lack of resources allocated for innovation strategy, which further has negative impact on innovation output. Similarly, Mousa & Chowdhury (2014) has proved in their study that both financial and human slack impact firm R&D spending. Moreover, R&D expenditures can also be classified on the basis for longevity. The R&D expenditure incurred for long term project are classified as R&D Capital expenditure and expenses incurred on maintenance of these projects are known as R&D current expenditure. Researchers have tendencies to conduct studies by bifurcating between both of these variables (Suri & Banerji, 2016). On the basis of these arguments, we are purposing following hypothesis:

H1: Human Resource slack has significant positive impact on R&D Intensity (measured by Capital Expenditure).

H2: Human Resource slack has significant positive impact on R&D intensity (measured by Capital Expenditure).

Research Methodology

Nature of the study: This study is descriptive in nature. This study has taken panel data to explain the behavior of different observations under consideration.

Variables Description: On the basis of secondary data, most suitable measure to proxy innovation strategy is R&D intensity. Most studies had measured R&D intensity by dividing R&D expenses to annual turnover (Hitt, Hoskisson, Ireland & Harrison, 1991). In this study innovation strategy will be proxied by R&D Current expenditure as well as by R&D Capital expenditure, both divided by annual sales of that year. Human Resource slack will be measured as done by Mishina, Pollock & Porac (2004) in their study, which is the ratio of the available employees relative to that year's sales. As taken in previous literature certain variables like Previous Year profitability Leverage, firm size and firm age are taken as control variables for the study.

TABLE NO.1 Variable Description

Variable	Acronym	Description & Measurement
R&D Intensity (scaled with R&D Capital expenses)	RDCap	Research & Development capital expenses divided by sales for that year.
R&D Intensity (scaled with R&D current expenses)	RDCur	Research & Development current expenses divided by sales for that year.
Human resource slack	HRS	Total number of employees divided by sales for that year.
Previous year Profitability	pROA	Return on Assets (ROA) for previous year.
Leverage	LV	Long Term Debts divided by total assets.
Firm Size	FS	Natural logarithm of firm's total assets.
Firm Age	FA	Natural logarithm of years counted from firm's incorporation to till date.

Research Models

Model 1

$$\text{R\&D intensity (Cap. Exp.)} = \beta_0 + \beta_1 \text{Human Resource slack} + \beta_2 \text{Previous Year Profitability} + \beta_3 \text{Leverage} + \beta_4 \text{Firm Size} + \beta_5 \text{Firm Age} + \text{Error}$$

Model 2

$$\text{R\&D intensity (Cur. Exp.)} = \beta_0 + \beta_1 \text{Human Resource slack} + \beta_2 \text{Previous Year Profitability} + \beta_3 \text{Leverage} + \beta_4 \text{Firm Size} + \beta_5 \text{Firm Age} + \text{Error}$$

Population and Sample: The population for the study is the listed companies in Bombay Stock Exchange (BSE). For this particular study, top S & P BSE 200 companies as on April 1, 2021 are selected as sample. The period of the study is from 2014 to 2021. Secondary data have been used for conducting this study. The data are available in the financial statements of the company. The financial statements

of the companies are taken from CMIE database Prowess. It is worth mentioning that all 200 companies are not part of the final sample. After excluding Banking companies, financial companies and companies with non-availability of data, the final observations which has data available for all variables are 665.

Table No. 2 Descriptive Statistics of Research Variables

Variable	Obs.	Mean	Standard Deviation	Minimum	Maximum
R&D Intensity (scaled with R&D Capital expenses)	710	0.364157	0.735368	0.000000	5.754800
R&D Intensity (scaled with R&D Current expenses)	810	1.854983	3.633794	0.000000	35.91640
HR Slack	842	0.186309	0.642399	0.000800	15.55960
Prev. Year Profitability	893	11.02080	8.681040	-8.780000	73.79000
Leverage	886	0.150644	0.1401547	0.000400	0.739500
Firm Size	895	5.127633	0.642122	1.017000	6.987700
Firm Age	895	0.706355	0.057221	0.007300	0.844300

Panel Data Estimation Model: The most popular and commonly used models are: Common effect Model, Fixed effect model and Random effect model. The most suitable model is selected in the following manner (Purba & Bimantara 2020) using EViews 11.

- 1) Chow test: This method indicates, which model is to be preferred amongst Common effect model (CEM) and the Fixed Effect Model (FEM). FEM will be more appropriate compared to CEM if the p value is less than 5% significant level or vice versa.
- 2) Hausman test: This method indicates, which model is to be preferred amongst the Fixed Effect Model (FEM) and the Random Effect Model (REM). FEM will be more appropriate compared to REM if the p value is less than 5% significant level or vice versa.
- 3) Lagrange multiplier test: This method indicates, which model is to be preferred amongst Common Effect Model (CEM) and Random Effect Model (REM). If probability Breusch – Pagan is less than 5% significant

level, then REM is more appropriate or vice versa.

Model Building And Analysis

Model 1

Initially, the data were analyzed with the help of all three models. Human resource slack (HRS) do have significant positive impact on R&D intensity measured by capital expenditure (RDCap). While talking about previous year profitability (pROA), it is quite evident that according to all three models, previous year profitability has significant positive impact on R&D intensity (RDCap) of sample companies. On the other hand, leverage (LV) has significant positive impact on R&D intensity (RDCap) only according to CEM (0.0450), but not according to FEM (0.6683) and REM (0.4214). Firm size (FS) has significant negative impact on R&D intensity (RDCap) according to CEM (0.0151) only not in accordance with FEM (0.9860) and REM (0.3365). Similarly Firm Age (FA) has significant positive impact on R&D intensity (RDCap) according to CEM (0.0095) only but not in accordance with FEM (0.8439) and REM (0.2387).

Table No. 3 Chow Test (R&D intensity -Cap. Exp)

Effects Test	Statistics	Degree of freedom	Probability
Cross-section F	10.098820	(99,568)	0.0000
Cross-section Chi-square	683.294537	99	0.0000

The Probability value in the Chi Square cross-section is 0.0000, so the more appropriate model is Fixed Effect Model.

Table No. 4 Hausman Test (R&D intensity -Cap. Exp.)

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	5.283000	5	0.3823

The Probability value is greater than the significance value, which is 0.3823. So, the more appropriate model is the Random Effect Model (REM).

In accordance with the Chow Test, fixed effect model (FEM) is more appropriate. While the Hausman Test

indicates Random effect model (REM) to be more suitable compared to Fixed effect model. Therefore, it is proved that Random effect model (REM) is more suitable and best model for this data and Lagrange Multiplier Test need not be applied any longer.

Random Effect Model

Table No. 5 The valuation of perimeters with Random effect model

Variable	Coefficient	St. Error	t_Statistic	Prob.
C	-4.761477	3.109265	-1.531383	0.1261
HR Slack (HRS)	1.156001	0.153390	7.536359	0.0000
P.Y.Profitability (pROA)	0.020350	0.004816	4.225227	0.0000
Leverage (LV)	0.249229	0.309829	0.804409	0.4214
Firm Size (FS)	-0.941106	0.978571	-0.961715	0.3365
Firm Age (FA)	13.48120	11.43054	1.179402	0.2387
R-squared	0.108076	Mean dependent var		0.112629
Adjusted R-squared	0.101390	S.D. dependent var		0.487473
S.E. of regression	0.461632	Sum squared resid.		142.1403
F-statistic	16.16439	Durbin-Watson stat		1.415413
Prob(F-statistic)	0.000000			

The model is good, which is evidenced from value of F Statistics- 16.16439 with Prob (F-statistic) 0.0000. The equation can be written as:

$$\text{RDCap} = -4.761477 + 1.156001 \text{ HRS} + 0.020350 \text{ pROA} + 0.249229 \text{ LV} + (-0.941106 \text{ FS} + 13.48120 \text{ FA})^{**}$$

HR Slack has significant positive impact on the R&D intensity (RDCap) with a parameter coefficient of 1.156001. Hypothesis testing results indicate that HR slack positively impact R&D intensity (RDCap) as probability value is less than 0.05. Thus, our first hypothesis is accepted. Controlling for Previous year profitability, Leverage, Firm Size and Firm age, the results also indicates that only Previous year profitability has significant positive impact on R&D intensity (RDCap) with coefficient value of 0.020350 (0.0000), whereas leverage, firm size and firm age do not have any significant impact on R&D intensity (RDCap) of selected companies.

Model 2

The results by all three models are same in relation to Human resource slack (HRS). It is quite evident that the probability value is 0.000 in all three models, which clearly denotes that HR slack has significant positive impact on the R&D intensity, measured by current expenditure (RDCur). But the outcomes in context to previous year profitability(pROA) shows significant positive impact in FEM (0.0152) and REM (0.0306) but insignificant impact in case of CEM (0.7328). The results for leverage (LV) are same in all three models which show insignificant impact of leverage on R&D intensity (RDCur). When we talk about firm size (FS) in CEM (0.0000) and REM (0.0167) the firm size has significant negative impact, but not according to FEM (0.1466). Firm Age (FA) has significant positive impact in case of CEM (0.0000) and REM (0.0167) with the probability value less than 5% but when we talk about FEM (0.0909) if we take the significant level at 10% then we can say that firm age has significant positive impact.

Table No. 6- Chow Test (R&D intensity -Cur. Exp)

Effects Test	Statistics	Degree of Freedom	Probability
Cross-section F	39.670468	(106,661)	0.0000
Cross-section Chi-square	1543.130610	106	0.0000

The Probability value in the Chi Square cross-section is 0.0000, so the more appropriate model is Fixed Effect Model.

Table No. 7- Hausman Test (R&D intensity -Cur. Exp)

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.387949	5	0.7933

The Probability value is greater than the significance value, which is 0.7933. So, the more appropriate model is the Random Effect Model (REM).

Therefore, it becomes quite clear that Random effect model (REM) is more suitable and best model for this data. So, Lagrange Multiplier Test need not be applied any longer.

Random Effect Model

Table No. 8 The estimation of perimeters with Random effect model

Variable	Coefficient	Std. Error	t_Statistic	Prob.
C	-24.75378	8.720414	-2.838602	0.0047
HR Slack (HRS)	13.53775	0.375291	36.07265	0.0000
P.Y.Profitability (pROA)	0.026947	0.012440	2.166190	0.0306
Leverage (LV)	-0.639167	0.769665	-0.830448	0.4065
Firm Size (FS)	-6.201673	2.898756	-2.139425	0.0327
Firm Age (FA)	79.43335	33.12950	2.397662	0.0167
R-squared	0.636605	Mean dependent var		0.280347
Adjusted R-squared	0.634237	S.D. dependent var		1.894956
S.E. of regression	1.145938	Sum squared resid		1007.205
F-statistic	268.7307	Durbin-Watson stat		0.923755
Prob(F-statistic)	0.000000			

The model is good, which is evidenced from value of F Statistics 268.7307 with Prob (F-statistic) 0.0000. The equation can be written as:

$$\text{RDCur} = -24.75378 + 13.53775 \text{ HRS} + 0.026947 \text{ pROA} + (-)0.639167 \text{ LV} + (-)6.201673 \text{ FS} + 79.43335 \text{ FA}^{**}$$

HR Slack has significant positive impact on the R&D intensity ((RDCur) with a parameter coefficient of 13.53775. Hypothesis testing results indicate that HR slack positively impact R&D intensity (RDCur) as probability value is less than 0.05. Thus, our second hypothesis is also accepted. Controlling for variables, the results also indicates that except leverage, all three other control variables previous year profitability, firm size and firm age significantly impact the R&D intensity ((RDCur) of selected companies. Where firm size has negative impact with coefficient value of (-)6.201673 (0.0327), previous year profitability and firm age has positive impact with coefficient value of 0.026947(0.0306) and 79.43335 (0.0167) respectively.

Conclusion

The study confirms that the panel data analysis is superior than multiple regression analysis, when it comes to acquiring more accurate and reliable results. In multiple regression analysis only one single model is tested, but in panel data analysis we have multiple models to choose from. In our study we determined that the best model for our penal data is the Random Effect Model, with the help of Chow and Hausman Test.

This study examines how Human resource slack (independent variable) influence the innovation strategy (dependent variable) of Indian companies. Moreover, both of our hypotheses measuring the impact of HR Slack on R&D intensity scaled by Capital Expenditure and by Current Expenditure respectively are accepted. Therefore, it can be concluded that having more employees working in an organization, leads to more R&D expenditures which

in turn leads to a more proactive innovation strategy. The results of our study are in accordance with the findings of Meyer & Leitner (2018), Adomako & Nguyen (2020) and Zhanga et. al. (2020).

Moreover, previous year profitability definitely impacts the innovation strategy of a company as profit is the main motivator for initiating innovative activities. Firm size has negative impact on innovation strategy in case of R&D intensity measured by current expenditures. Firm age has significant positive impact but only in the case of R&D intensity measured by current expenditures. Leverage hasn't been found significantly impacting innovation strategy in the selected companies.

Implications

This study provides additional knowledge to existing literature on the importance of resource-based view regarding the development of innovation strategy in an organisation. Moreover, this research examines the role of excess human resources in fostering the innovation strategy, guiding the organisations regarding the optimum utilization of surplus resources especially human resources.

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A Bibliometric Analysis of Peer Reviewed Literature on Entrepreneurship and Digital Economy

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Abstract:

The advent of the digital economy has led to the emergence of new forms of entrepreneurship, which are quite distinct from the traditional entrepreneurial ecosystem. To understand how researchers around the globe have established evidence in entrepreneurship and the digital economy, a bibliometric analysis of these publications was conducted. This article used the Web of Science database to analyse articles published in all years in the database under the topics "entrepreneurship" and "digital economy." A total of 293 documents were retrieved from the database and, after refining them for language and type of document, 220 documents were published in 128 journals. The first publication integrating entrepreneurship and digital economy was in the year 1997 and the highest citations (395) were received for the paper authored by Alex Rosenblat and L Stark on Algorithmic Labor and Information Asymmetries: A Case Study of Uber's Drivers, published in 2016. Nodes and linkages between authors, citations, keywords, and co-citations were created using VOSviewer. This study provides a better understanding of the field of research in the digital economy and entrepreneurship, and based on these results, outlines the path for future research.

Keywords: entrepreneurship, digital economy, bibliometric analysis, VOSviewer

Introduction

Entrepreneurship aims at creating value either by innovation or risk-bearing and has evolved over the years. The rapid advancement of ICT and digital technologies has revolutionised the entrepreneurial ecosystem. The digital economy is characterised by industries and enterprises that use the internet and related technologies for their business. The increased adoption of digital tools in business models is challenging the traditional forms of entrepreneurship (Orlando, B. 2020).

Studies regarding the diffusion of the digital economy and entrepreneurs have captured the interest of many scholars, particularly in entrepreneurship research, and it has been recognised that entrepreneurship in the digital economy will play a prominent role in economic growth (Zhao, F., & Collier, A. 2016; Rybakova, E. V., & Nazarov, M. A. 2021; Yuldashevich, U. I., & Mukhammadeldor, R. 2021).

This article has adopted a bibliometric approach to study entrepreneurship in the context of the digital economy and identified the state of research, trends, and other relevant indicators in this research area. Using VOSviewer software, a network of authors, journals, and countries is also created. Based on a content analysis of recent publications, this article identifies gaps and opportunities for entrepreneurship research in the digital economy. Section 2 explains the methodology used to retrieve the data. Section 3 discusses the results, followed by discussion of the results along with the future scope for research. in Section 4.

Data Source and Methodology

Bibliometric analysis is a quantitative method for reviewing and describing published articles, which is useful for researchers to evaluate scholarly research in an area of focus (Rey-Marti, 2016; Small, 1973). This bibliometric analysis has been done using a two-step approach; first being selection of database and next being the search methodology. The two most prominent bibliographic databases are Scopus and Web of Science. Web of Science has more than 193 million records from over 34,000 journals (Clarivate, 2022) and provides vast options for advanced search using keywords, authors and journals. It also provides an option to analyse the results and create citation reports and therefore is the reason that Web of Science was chosen for the purpose of this study.

The second step of was of literature search using advanced search feature of Web of Science and specific search strategies for the same are listed below:

Search date: 29th July, 2022.

Topics: TS=(entrepreneu*) AND TS=(digital economy)

Languages = 'All languages'

Document types = 'All document types'

Timespan = 'All years (1989 - 2022)'

Databases = 'WoS Core Collection'

Results obtained: 297 documents

Refined for type of documents to include Articles, Early access and proceedings only: 276 documents

Exclude: Language other than English: 271 documents

Exclude: irrelevant to the current analysis

Total documents: 220

Query link: <https://www.webofscience.com/wos/woscc/summary/5858c181-d242-4d9b-b708-1b2ef00b58e4-442c4b77/relevance/1>

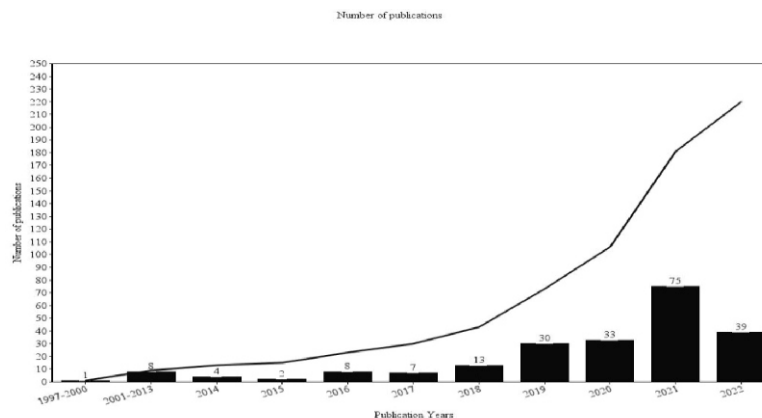
Network analysis: VOS viewer software was used to quantitatively and visually analyze the records obtained from the above listed search strategy.

Analysis of Results

Publication metric analysis: The first publication on entrepreneurship and digital economy indexed in the Web of Science was in 1997 titled, “The future of work in the digital diaspora: Economic restructuring and education” authored by Cooper, D.N. The author discussed the impact of digital technologies on business processes, along with the need of

collaboration between education and business to unleash the entrepreneurial and intrapreneurial skills. Since 2018, there has been growing interest of researchers in how digital economy can be either a catalyst or a product of entrepreneurship. As per the search criteria given in Section 2 of this paper, a total of 220 publications have been published since 1997 to 2022. An accelerated growth of these publications is noted during 2018 and 2022, with 190 publications out of 220 in these five years (Figure 1). Seeing the trend in the growth of number of publication which can be attributed to expansion of Industrial Revolution 4.0 and the pandemic of 2020 and post pandemic when the world is experiencing digitalization of most of businesses, more such research in this subject area is anticipated.

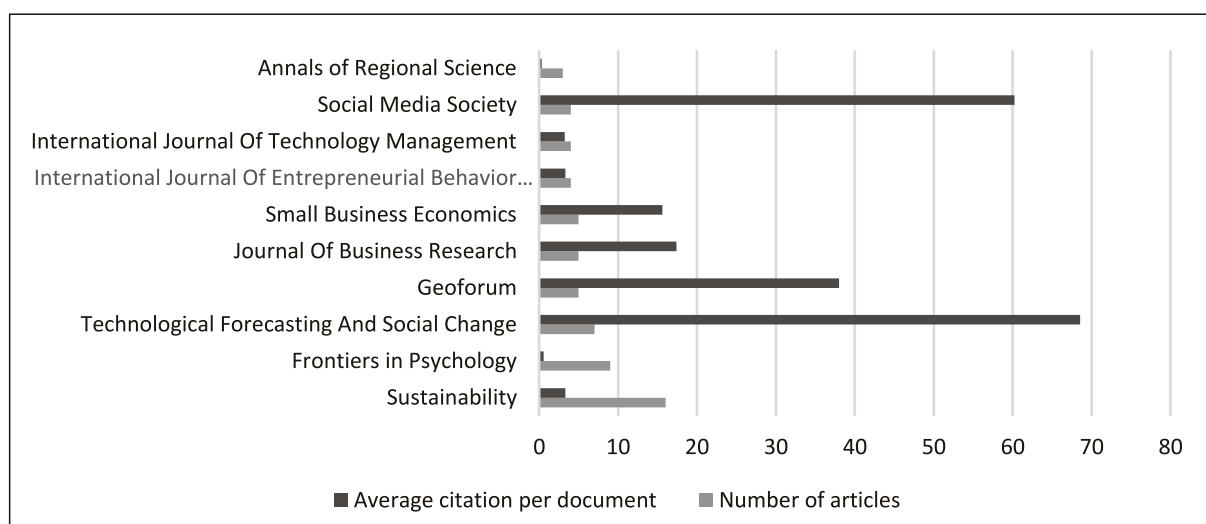
Figure 1: Number and Cumulative Growth of publications since 1997



Analysis by Publications and citations: These 220 articles have been published in 128 journals. Out of these 128 journals, 88 journals (68.75%) have published only one article on the researched topic. In total, 62 articles have been in the top ten active

journals accounting for 28 percent of the total publication on the researched topic and six journals have published more than five articles. The top ten journals with the highest number of papers are given in Figure 2.

Figure 2: Top 10 most productive journals



Sustainability, which is an open access journal published semimonthly by MDPI, contributes 16 papers of the 220 papers. The second most publishing journals of these papers are in the Frontiers in Psychology and the third place is taken by Technological Forecasting and Social Change in publishing the articles in the researched area.

The citations received by the articles published in these journals suggest the quality of articles being published in it. The most cited journal is Technological Forecasting and Social Change with seven articles/

documents cited 480 times with an average citation per document being 69. It can be interpreted from the above analysis that the quality of articles published by Technological Forecasting and Social Change is much better than those published in Sustainability journal, which is publishing the highest number of articles in the researched area but has a lower citation per document.

The top ten most cited authors related to entrepreneurship and digital economy in the Web of Science database are given in Table 2.

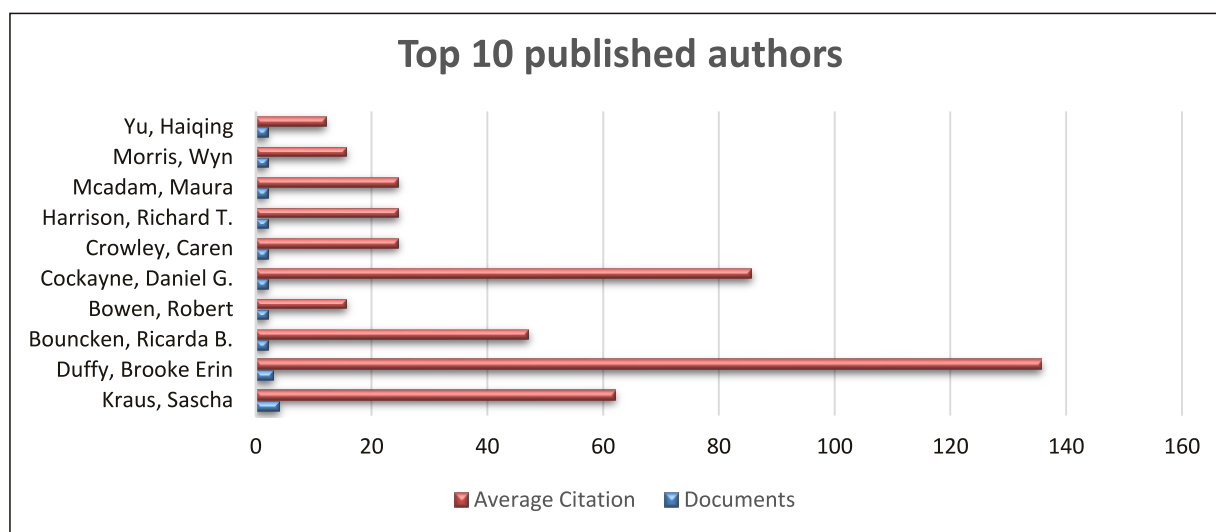
Table 2: Top 10 authors by citations

Rank	Author	Document	Citations
1	Rosenblat, A and Stark, L (2016)	Algorithmic Labor and Information Asymmetries: A Case Study of Uber's Drivers	380
2	Li, L (2018)	China's manufacturing locus in 2025: With a comparison of "Made-in-China 2025" and "Industry 4.0"	337
3	Duffy, BE and Hund, E (2015)	"Having it All" on Social Media: Entrepreneurial Femininity and Self-Branding Among Fashion Bloggers	187
4	Duffy, BE (2016)	The romance of work: Gender and aspirational labour in the digital culture industries	167
5	Carayannis,EG and von Zedtwitz, M (2005)	Architecting gloCal (global-local), real-virtual incubator networks (G-RVNs) as catalysts and accelerators of entrepreneurship in transitioning and developing economies: lessons learned and best practices from current development and business incubation practices	150
6	Cockayne, DG (2016a)	Sharing and neoliberal discourse: The economic function of sharing in the digital on-demand economy	136
7	Scuotto, V; Del Giudice, M and Carayannis, EG (2017)	The effect of social networking sites and absorptive capacity on SMES' innovation performance	131
8	Burtch, G; Carnahan, S and Greenwood, BN (2018)	Can You Gig It? An Empirical Examination of the Gig Economy and Entrepreneurial Activity	126
9	Richter,C; Kraus, S; (...); Giselsbrecht,C (2017)	Digital entrepreneurship: Innovative business models for the sharing economy	108
10	Gandini, A (2016)	Digital work: Self-branding and social capital in the freelance knowledge economy	86

Sascha Kraus, Professor in Economics & Management, Free University of Bozen-Bolzano, and Italy is the most prolific author with four documents on the researched topic and with an average 62

citations per document. The most influential author is Brooke Erin Duffy affiliated to Cornell University, having published 3 documents with an average 135 citations per document (Figure 3).

Figure 3: Top 10 published authors



Authors of 56 countries have published in these two hundred and twenty articles. USA has topped the most number of documents. Top 10 countries and

organizations which have published articles on the researched topics of entrepreneurship and digital economy are given in Table 3.

Table 3: Top 10 countries and organizations of Entrepreneurship and digital economy publications

Top 10 countries				
Rank	Country	Documents	Citations	Average Citations Per Document
1	USA	58	2263	39.02
2	Peoples R China	42	212	5.05
3	England	37	530	14.32
4	Italy	19	332	17.47
5	Australia	14	176	12.57
6	Spain	13	134	10.31
7	France	12	173	14.42
8	Germany	11	280	25.45
9	Netherlands	9	137	15.22
10	Romania	9	26	2.89
Top 10 organizations				
Rank	Organization	Documents	Citations	Average Citation Per Document
1	Durham University	5	152	30.4
2	University of North Carolina	5	158	31.6
3	L'IPAG Business School	4	70	17.5
4	ESIC Business & Marketing School	3	79	26.33
5	Jilin University	3	2	0.67
6	Renmin University of China	3	17	5.67
7	Temple University	3	401	133.67
8	The University of Bayreuth	3	140	46.67
9	The University of Birmingham	3	25	8.33
10	The University of California, Berkeley	3	16	5.33

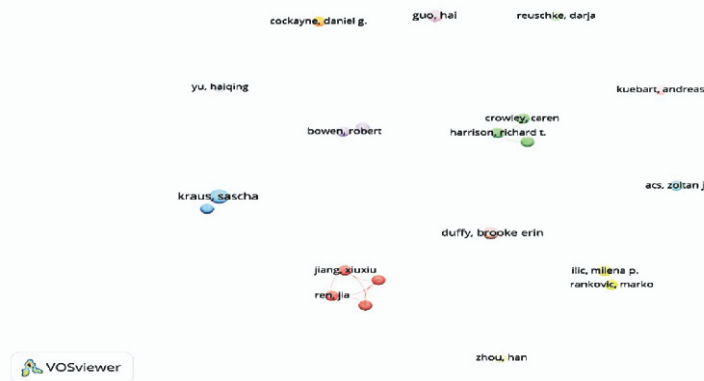
Bibliometric analysis of Co-authorship: Co-authorship analysis helps to understand the extent of collaboration between the authors as well as countries.

VOS viewer is used to create network where each node indicates the number of documents by the authors and the clusters are created by closely related nodes.

In order to get effective results for the network analysis of co-authorship in this study, Price Law is used for the calculation of the threshold of the number of publications. The most prolific author on the researched topic is Sascha Kraus who contributed 4 articles. Therefore threshold of 2 documents was kept

and out of 607 authors, 21 authors were identified as core authors with at least one citation. The network analysis resulted in a total of 21 authors grouped under 13 clusters each cluster being represented by different colors (Figure 3).

Figure 3: Co-authorship network of authors



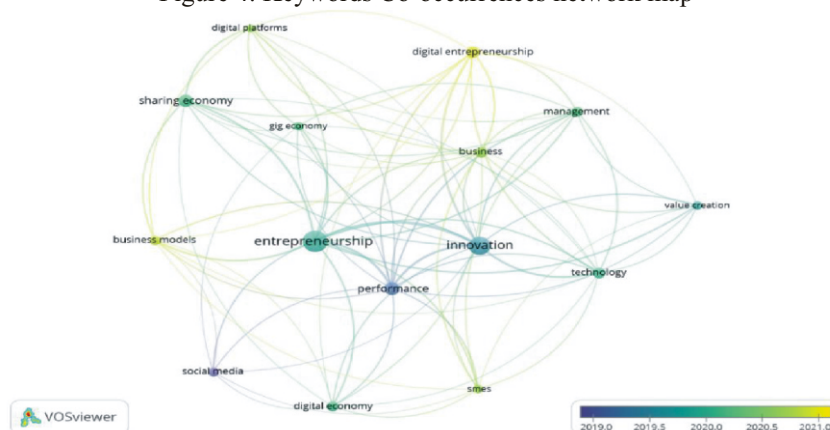
The largest connected network of co authorship is of Jiang Xiuxiu, Xia Wang, Ren Jie and Xie, Zhimin from China with total link strength of 24 with 2 co-authored documents in Digital economy and entrepreneurship. The second cluster comprises of 3 co-authors with two documents of McAdam, Maura ; Crowley, C ; Harrison, RT who have published articles on women digital entrepreneurship in emerging economies. The third cluster is of two authors Bouncken, RB ; Kraus, S who have worked on digital business models in sharing economy.

Bibliometric analysis of Keyword Co-occurrence: Keyword co- occurrence analysis is considered as an effective method of grouping documents having similar research objectives. The keyword co-occurrences is generated using VOS viewer suggested keywords on the basis of their occurrence in the documents retrieved from the database and author supplied keyword. There are total 1361 keywords and with a threshold of minimum 10 occurrences of keyword led to selection of 31 keywords. These 31

keywords were filtered to generate network for only those keywords which are relevant for the analysis and 15 keywords were analysed for network analysis.

The top five most common keywords ranked by number of occurrences are: Entrepreneurship (72 occurrences), innovation (52 occurrences), performance (27 occurrences), 'sharing economy' (22 occurrences), and 'digital entrepreneurship' (21 occurrences). These 15 keywords were classified into three clusters: (1) Business, digital entrepreneurship, innovation, management, technology and value creation; (2) Business models, digital economy, entrepreneurship, performance, social media and smes; (3) Digital platforms, gig economy and sharing economy (Figure 4). A look at these three clusters of keywords can help us to draw preliminary conclusions that the first cluster represents innovation and value creation, second cluster is about entrepreneurship with new business models and the third cluster is about the sharing and gig economy.

Figure 4: Keywords Co-occurrences network map

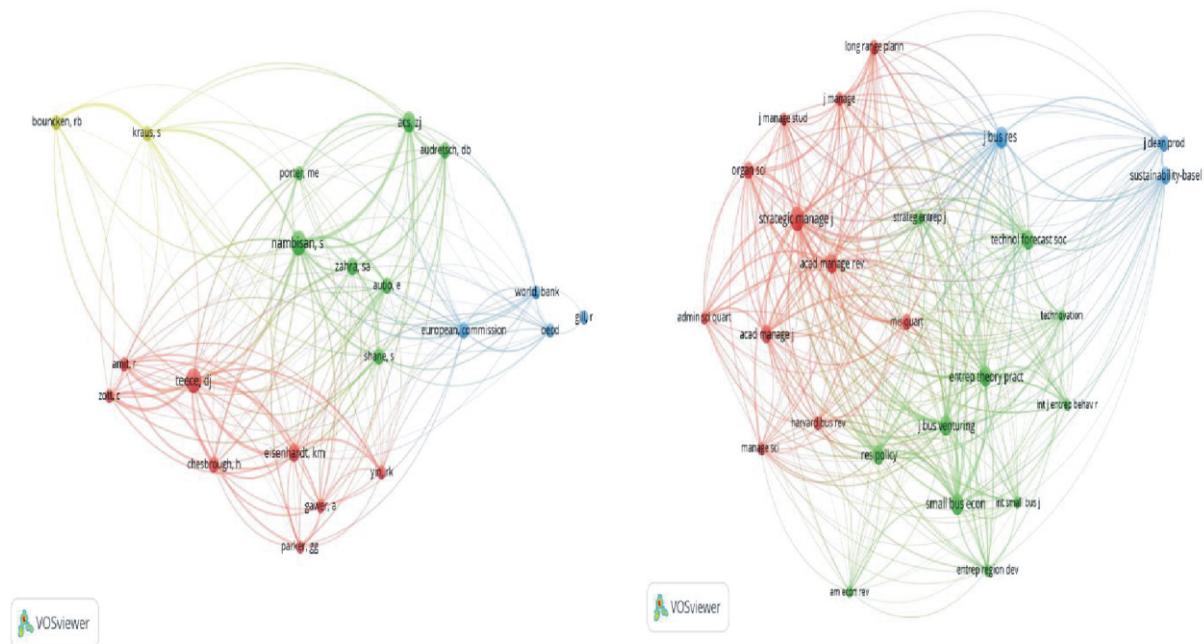


The overlay visualisation as shown in Figure 4 of these keywords also shows that more recent research has been focussing on digital entrepreneurship, digital platforms and business models associated with digital economy.

Bibliometric analysis of co-citation analysis: Co-citation analysis examines how closely authors, journals and articles are cited together. This type of analysis provides insight into the extent to which they have shaped and influenced academic debates about our interests. Co-cited papers within these clusters tend to share common themes. The co-citation analysis began by looking at all the references cited in the 220 papers in our dataset with 10544 authors. Minimum 20 citations of authors are considered to derive the network analysis. The sample was declined to a new sample which contains 21 authors, and have 698 citations in total. 21 authors sample was drawn with the top ten authors with highest linkage given in Table 9. The top 3 cited authors are Teece, DJ (72 citations), Nambisan S (73 citations) and Acs, Z (49 citations).

A network map of the 21 authors consisting of four clusters by co-citation analysis of authors is given in Figure 5(a). Each node is given weight according to citation receives by the author in the co-citation analysis. Cluster 1 in red is made on network of those seven authors who have published work on innovation in entrepreneurship building, Cluster 2 represented in green comprises on authors who have published on various aspects and role of entrepreneurship. Cluster 3 in yellow comprising of co-citation of those authors who are working on the contemporary area of digital entrepreneurship and digital innovation in new ventures. Cluster 4 in blue comprises on international organizations which through their research are focus on the opportunities and changes in entrepreneurship and the technological progress across the globe.

Figure 5 (a) and (b): Network of co-citation analysis of authors and co-cited journals



As per Co-citation analysis of journals the Top 3 journals are Strategic Management Journal (287 citations), Small Business Economics (206 citations) and Journal of Business Research (202 citations). The top 25 journals were classified into 3 clusters where Cluster 1 in red comprises those journals which have focus area of management, Cluster 2 in green are those that publish research related to entrepreneurship and Cluster 3 comprises of three journals which focus on the subject area of sustainability (Figure 5(b)).

Discussion & Conclusion

The present research aims to understand the state of research in the areas of entrepreneurship and the digital economy. This study has observed that: (i) literature on entrepreneurship in the digital economy

has been growing, particularly since 2019; (ii) the top 5 articles have been cited 1221 times, and there are several prolific authors in the making; (iii) the USA has the highest number of publications and citations, but China is fast closing this gap; and (iii) keyword analysis showed that the focal point of entrepreneurship research is shifting from innovation and ICT to digital entrepreneurship and sharing, as well as the gig economy.

The results obtained indicate a clear trend that, due to the widespread adoption of ICT and the innovations brought by the Industrial Revolution, business models are changing. The research articles have traced the origin and growth of global digital platforms (Acs, Z.J., Song, A.K., Szerb, L. et al. (2021); Sahut, J.M.,

Iandoli, L. & Teulon, F. (2021)) and also identified the hindrances and enablers of the entrepreneurial ecosystem in the digitalized world (Yin (2019); Raut et al. (2021; Chaudhari (2022)). New technologies like AI and machine learning have created boundary-less entrepreneurial opportunities in the form of a gig economy and sharing economy. The impact of these ventures on the circular economy and labour markets has attracted the attention of researchers (Cockayne (2016a); Rosenblat (2016); Richter (2017); Burtch (2018)).

The digital economy has also proved to be an enabler for women to create a value chain from their passionate activities in creative industries like fashion, beauty, and retail (Duffy (2015, 2016 & 2017); Lin & Di Kloet (2019); O'Connell (2020)). The entrepreneurial ecosystem facilitated by the digital economy has also been identified as a driver of sustainable development by reducing poverty, increasing job opportunities, and reducing gender and income inequalities (Bellasia et al. (2019); Mcadam (2020); Si (2020); Hermen (2022)). The platform economy has also had an impact on business models, labour markets and wages, workspaces, and organisational structures (Cutolo (2021); Huang (2021); Leick et al. (2022); Zhnag(2022c)). Social media platforms like Facebook are seen to have played a vibrant role in the development of the digital entrepreneurial ecosystem, providing economic, relational, and hedonic benefits, particularly to low-income digital entrepreneurs (Delacroix, E. Parguel & B. Benoit-Moreau, F., 2019).

The study identified the expanding research scope and future research areas, which include sustainability through entrepreneurship in the digital economy; the impact of the boundary world on entrepreneurship and labour markets; and the effectiveness of artificial intelligence and machine learning on emerging business models. This article can henceforth act as a ready reckoner for literature review for the scholars working in entrepreneurship and digital economy.

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An Overview of the Tourism Industry of Assam and Its Future Prospects

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Abstract

Tourism is one of the world's fastest expanding industries. It is widely acknowledged that tourism is one of the few sectors that can generate substantial economic growth without causing considerable regional or economic imbalance. The state of Assam is known for its red rivers and blue hills. This article aims to provide an overview of the potential and challenges that tourism service providers in Assam confront, while keeping in mind the current situation, which has seen an increase in visitor traffic in recent years. During the research, it was discovered that service providers face a variety of social, marketing, technical, and financial obstacles. As a result, the paper makes recommendations for marketing various tourism services in the tourism market.

Key words: tourism, services, entrepreneurship, marketing.

Introduction

Assam is one of India's 29 states and is noted for its culture, tradition, history, and natural resources. It is in northeast India, south of the eastern Himalayas, along the Brahmaputra and Barak Valley. The state has a total area of 78,550 square kilometres and a population of 31,169,272. Assam tea and silk are two of the state's most well-known products. It was here when Asia's first oil well was dug. Human settlements from all periods of the Stone Age have been found in Assam and the surrounding areas.

Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura, and Meghalaya are the other Six Sister States that surround Assam. These states are linked to the rest of India by the Siliguri Corridor, sometimes known as the "Chicken's Neck," which runs through West Bengal. Bhutan and Bangladesh share international borders with Assam. Dispur is the state capital of Assam. Assamese and Bodo are the two official languages of Assam. Bengali, Nepali, Mising, Karbi, and Dimas are some of the other languages spoken in the state. The state enjoys a high quality of life in the county, with good physical infrastructure and a literacy rate of 73.18 percent. Assam has the potential to become one of India's most well-liked tourist destinations owing to its magnificent tourism offerings, which also include exotic wildlife, impressive scenic beauty, colourful fairs and festivals, primitive historical monuments, lush green tea gardens, golf courses, and the enormous river Brahmaputra and its tributaries. The expansion of the tourism sector in Assam has already been haphazard and unplanned. Furthermore, due to the limited government finances available to the tourism sector and the private sector's hesitancy to invest due to a variety of challenges, tourism promotion and marketing efforts have always taken a second seat.

The purpose of this paper is to present an overview of the opportunities and challenges those tourist service providers in Assam face, while taking into account the current scenario, which has experienced an increase in visitor traffic in recent years. During the investigation, it was determined that service providers face a wide range of social, marketing, technical, and financial challenges. As a result, the paper offers marketing suggestions for various tourism services in the tourism sector. To promote tourism in Assam, sufficient infrastructure facilities, skilled tourist guides, as well as proper collaboration and assistance from the public, commercial, and non-governmental sectors are required.

Assam's tourism industry has grown in a haphazard and unplanned manner. Owing to the limited governmental funding available to the tourism sector and the private sector's unwillingness to contribute due to various challenges, tourism promotion and marketing activities has traditionally been a rear burner. Due to a lack of resources, both financial and human, the public sector tourist industry is generally operating in the shadows and at a subpar level. Furthermore, the business sector believes that the government does not fully assist them. It is frequently not enough to simply have the proper product; there is a perceived need for the Owing to the limited governmental funding available to the tourism sector and the private sector's inability to engage due to various challenges, tourism promotion and marketing activities have historically been a rear burner.

Due to a lack of resource, both monetary and human, the government sector tourism industry is generally working in the dark and at a substandard level. Communication between local communities and the government should be fostered, and community associations should collaborate inside an umbrella organization to make product branding and marketing easier and more sustainable.

Public-private collaborations were emphasized in the state's first tourism policy, which was released in (2008) and has greatly increased the number of tourists that visit the region. In (2014), Assam welcomed 20,000 foreign visitors and about 45,000 domestic visitors. By expanding visitor arrivals by at least two to three times over the course of the following five years, this tourism road map seeks to create a legislative framework that will assist Assam in transforming the tourism sector into a massive financial sector. Assam has a lot to offer, but it has to put in place the right structure in order to reap the rewards. This policy will be active through (March 31, 2022), and may be extended if necessary.

Review of Literature

Today, a lot of nations rely largely on tourism as a financial source. It is a service industry with both physical and intangible components. Examples of intangible events include leisure time, cultural interactions, and adventures. The tangible event includes travel by air, land, train, and sea as well as hospitality, accommodation, refreshments, tours, and other related activities. However, the economic, social, and political advantages of tourism are frequently difficult to quantify, just as the costs Richter (1989). As a result, estimating the extent of tourism in a particular region is challenging. But a review of the literature has showed us that the SWOT analysis is an approach that can be implemented to comprehend the extent of tourism in a region. A lot of research work has proposed that SWOT analysis can be an effective tool in analysing the constraints of tourism industry which will better promote the sustainable development of the sector Anczyk et. al. (2017); Liu et. al (2019); Shao et. al. (2020), Zhang et. al. (2022). Few research works has also looked at how trade and liberalisation in the tourist industry affects whether or not sustainable development is facilitated. Employing SWOT analysis, he looked at the potential and challenges associated with achieving sustainability through commerce and tourism sector in the context of Agra and Varanasi, two well-known tourist sites in India Singh (2007). Despite being one of the top ten destinations for tourism around the world, the Northeast region of India—which includes Assam—plays a very little part in the overall

percentage of tourists who visit the country Neog et. al. (2011). Assam is renowned for its unspoiled beautiful nature, variety of animals, tea farms, and friendly locals. For many centuries, individuals from all cultural, religious, and ethnic backgrounds have been drawn to the verdant river valleys of Assam and have come to consider them their home. The Assamese people are an amalgamation of various civilizations. Assam is home to 20 Wildlife and Bird Sanctuaries, seven national parks, including the World Heritage Sites of Kaziranga and Manas. The enormous Indian one-horned rhinoceros is among Assam's most notable wildlife Rimi et. al (2020). It emphasised the hazards of the region turning into an isolated in a sea of development in addition to significant issues and long-term difficulties impeding its development into a significant tourism destination. A study on problems and prospects of tourism in Assam stated that despite its negative effects, tourism has been embraced voluntarily in many rural regions since the money from it is significantly larger than what rural residents can make from agriculture Chutia (2015). The researcher pointed out that it is commonly acknowledged that these detrimental effects on rural areas have intensified, and that rural tourism has to be changed to benefit rural residents. The said research work also stated that rural tourism will teach the locals about contemporary culture. They will learn to respect and adhere to their traditional ideas and traditions. They will accept new modern-day social norms. A research work on prospects of Virtual Tourism in Assam suggested that by providing incentives, steps may be done to draw domestic and foreign filmmakers to produce films Rahman et. al (2016). Additionally, since Assamese films haven't been able to pique people's curiosity or inspire a desire to travel outside the state or the nation despite the fact that the state's film industry is over 80 years old, local filmmakers may also be inspired to produce films promoting the state's tourism potential. Despite Assam's presence on a variety of ICT platforms, the state's consumer communication is restricted to mere presence Rahman (2017). The advantages and usefulness of ICT and Internet-based solutions for Assam's successful customer communication as a travel destination are still being realised. It is clear from the aforementioned literature that Assam is a state with possibilities for many forms of tourism. The researchers of this article would like to draw attention to a vacuum in the literature about the study of Assam's tourism potential using SWOT analysis.

Objectives of the Study

To learn about the numerous tourism services available in Assam.

To conduct a SWOT analysis of the tourism industry in Assam.

To propose suggestive measures for the development of the Assam tourism industry.

Data Source and Methodology

This research paper is descriptive as well as explanatory in nature and the study is a qualitative study. The study is based on Secondary Data available in various journals, books, websites, and annual reports. The study is qualitative in nature. To achieve the objectives of the study the researchers have done intensive literature has been done. From the secondary sources, the researchers intended to provide an overview of the Tourism Industry in Assam, its current scenario also the future prospects of it.

Tourism Services

Assam serves as a gateway to the states in the North East. Geographically and culturally, the states are inextricably linked. A complete Northeast approach in tourism planning, where each state's strengths complement one another, benefits everyone and is a positive step forward for tourism marketing. Assam will take the lead in developing such a broad approach of tourism promotion by collaborating with other states to create zonal and regional circuits.

• Wildlife Tourism

One of Assam's forests' most appealing features is the diverse wildlife that inhabits them. Some of the species are unique to this planet. Assam's unique selling point is its one-horned rhinoceros, which it is noted for in addition to its biodiversity.

The government will build infrastructure around specific wildlife sanctuaries throughout Assam, such as Manas, Pabitora, Orang, Pani Dihing, Barail, and Nameri in Dibru-Saikhowa, to accommodate tourists and will also turn to heavy advertising to position Assam as a wildlife conservation destination, despite the fact that the majority of domestic and foreign visitors are drawn to Kaziranga and this historical landmark has the best tourist facilities thanks to private investment.

• Spiritual Tourism

Pilgrim tourists flock to Assam for a variety of reasons, including wildlife and spiritual tourism. The most well-known Shakti-Peeth, the Kamakhya Temple on top of Nilachal Hill Top in Guwahati City, can turn Assam into a significant spiritual tourist attraction in the nation. Pilgrims and domestic tourists alike view Assam as a wonderland rich with Mayong black magic, mythology, tantric practise, Shaktipooja, and mysticism, with Kamakhya serving as its center. With the correct actions, this advantage can be turned

into an income generator and a source of local employment.

The gorgeous Nilachal Hill in the heart of the city is home to Kamakhya Temple, which is flanked by other lesser temples. The Nilachal Hill attracts hundreds of pilgrim pilgrims due to its unique position in Indian mythology and handy geographical location. As a result, over the following five years, a brand Nilachal would be built in an integrated manner using monies from the Government of India's PRASAD scheme. The government would make every effort to assist in the implementation of optimal management practises for the Temple.

• Ethnic Tourism

For its cultural and ethnic diversity, Assam has been a one-of-a-kind region on the planet. Various ethnic tribes and groups call the state home, each with their distinct cultural heritage. Each of these tribes has its own set of customs, religious beliefs, language, culture, clothes, and style of life, as well as festivals, food habits, songs, and dances that are distinct from those of other tribes.

To attract travellers from all over the world, ethnic tourist circuits will be built. Ethnic socio-cultural and religious festivals will be held, with the major attractions being songs and dances, the display of colourful costumes, and the taste of several vegetarian and non-vegetarian delicacies.

• Tea & Golf Tourism

Since the introduction of tea in 1823, tea gardens have influenced Assam's landscape in a substantial way. Each of Assam's tens of thousands of verdant tea gardens is a great source of unique natural beauty, equipped with dynamic individuals and their mesmerizing songs and dances, enormous bungalows, and residential services. There seem to be golf courses and polo fields at a number of these tea gardens. The administration of the tea garden takes after up to thirty helipads and landing strips. Popular tourism package may include these attractions.

• River Tourism

There are a massive number of rivers in the State of Assam. The Brahmaputra is essential to Assamese sociocultural life. The prospect for river tourism and water recreation in Assam is immense. Colourful canal barges, boating, luxury cruisers, motor boats, dolphin shows, underwater theme parks, water sports and lighters, parasailing, river rafting, water attractions, and more. In Assam, river ecotourism may be a wonderful way to spend a vacation. An important feature in enhancing Assam's local and foreign tourist traffic can be found in the international quality of luxury cruises.

- **Transit Tourism**

Guwahati is regarded by many tourists, especially foreign ones, as more than just a vacation destination but also as a stopping point or the gateway to the North-Eastern states. It is a metropolis from which one can travel to and from the northeast or to other districts of Assam. The two days that a visitor typically spends traveling might be used to promote Guwahati City-based tourism under the slogans "One day in Guwahati" or "Two days in Guwahati."

- **Adventure Tourism**

Assam's gorgeous blue hills and swift rivers offer a tonne of potential for the development of water-based adventure tourism. The Tourism Department has recently begun to promote adventure sports like rock climbing, trekking, parasailing, water sports, river rafting, and fishing. To develop a variety of exciting activities at tourist destinations specifically for tourists, the tourism department will collaborate with the adventure institute of sports department. For local youth, this will lead to numerous employment opportunities.

- **Monsoon & Leisure Tourism**

Assam experiences the monsoon season earlier than the mass of other regions of India, where it often doesn't start until late June or early July. In contrary to the vast majority of western India, which swelters in a series of heat waves with rising temperatures as high as 38–45 degrees, the maximum daytime temperatures remain at a moderate 27–34 degrees centigrade with lots of rain. Assam has a significant advantage in luring domestic travellers thanks to its considerably milder climate, heavy rains, and other regions of the country's summer vacations. The moniker "The Monsoon Country," closeness to the wettest area on earth, luxury hotel discounts, cottage and homestay specials, and huts on stilts will eliminate the seasonality of Assam tourism and increase revenue all year round.

- **Eco Tourism**

Assam experiences the monsoon season earlier than the majority of other regions of India, where it frequently doesn't start until late June or early July. In contrast to the overwhelming majority of western India, which swelters in a series of heat waves with rising temperatures as high as 38–45 degrees, the maximum daytime temperatures remain at a moderate 27–34 degrees centigrade with lots of rain. Assam has a strong benefit in luring domestic travellers thanks to its considerably milder climate, heavy rains, and other regions of the country's summer vacations. The moniker "The Monsoon Country," closeness to the wettest area on earth, luxury hotel discounts, cottage

and homestay specials, and huts on stilts will eliminate the seasonality of Assam tourism and increase revenue all year round.

- **Medical Tourism**

The state's capital Guwahati's fast expanding healthcare industry has gradually begun to draw patients from abroad, both from close neighbours like Nepal, Bhutan, and Bangladesh as well as from far-off countries, particularly African nations. Since a decade ago, domestic patients from other North Eastern states have been pouring into Guwahati. The city has evolved from a location of primary healthcare centres, dispensaries, and clinics into a hub of critical care, multi-specialty, and super-specialty centres. Health sector analysts attribute this new tendency to affordable medical care, a good healthcare system, and a supply of qualified physicians.

Guwahati is quickly becoming into a desirable location for domestic and international patients thanks to the abundance of super-specialty hospitals in both the public and commercial sectors. In this new environment, the State can anticipate a consistent influx of foreign patients.

- **Mining Tourism**

The ancient Assam Railway and Trading Company started operating coal mines in Assam in the late nineteenth century (AR&T). Tourists from many countries, including Switzerland, the United States, Chile, and Brazil, appreciate mining tourism. In the eastern coal and oil sectors of the state, Assam will also promote mine tourism.

Community Involvement in Tourism

The key to successful tourism is community participation and acceptance. Any destination's tourism growth should start with enhancing the economic and social standing of the neighbourhood. The economic goal of the tourism sector is essentially to create jobs for the local community. Increased revenues will enable the community to live in harmony with its environment by enabling locals to enjoy a better level of living.

With the support of Local Management Committees, the Department will carry out awareness programs on responsible tourism among the local population.

To promote local entrepreneurs, the Department will also support the Employment Generation Mission (EGM) and the Entrepreneurship Development Programme (EDP) through IIE.

Swot Analysis Tourism Industry of Assam

Assam is the land of all season tourism. The state is regarded as the gateway of north east India. Tourism is a very lucrative sector for economic and social

development of Assam lot of constructive planning for strengthening tourism has been initiated; below we have tried to conduct a SWOT analysis to understand Assam Tourism in a redefined way.

Strength

Assam is considered a green paradise and numerable attractions that make it a world-class tourist destination and has amazing diversity to offer to tourists. The major strengths can be highlighted as under a) Assam has a rich culture, customs, and handicrafts. It also has a beautiful terrain with lagoons that are in their original state, and it is encircled by mountains. Well connected to rest of India and easy accessibility by all modes of transport. b) Major draws include the presence of world-famous wildlife refuges like Kaziranga National Park, Manas National Park, and Orange National Park. Pilgrimage destinations such as Kamakhya, Hajo, Nabagraha Temple add to the glory of the state. c) The mighty Brahmaputra River flowing across the state and numerous tea gardens and estate are enough to make tourists adore Assam. d) Well-developed tourism-related infrastructure and services and fairly pleasant climate throughout the year.

Weakness

Tourism sector of Assam is mainly taken care by the Government and as such like many other public sector tourism more action needs to be taken. Government is also not very keen to allow private sectors to invest much in this industry for reasons best known to them. With regard to all of its tourist-related sectors, namely tourism destinations, health tourism, educational tourism, business tourism, entertainment tourism, adventure tourism, and cultural tourism, Assam has enormous potential. But, it has not made able to make an exclusive destination image itself, in order to set guarantee of success.

Opportunities

Assam is a lesser explored tourist destination for the whole of India. Tourist will find here, plains and river valleys nestled in between mountains. However a destination's attractiveness for tourism is related to many other factors apart from its aesthetic appeal, such as cultural heritage, tourism facilities as in built in features, infrastructure, welcoming environment by the locals etc which makes it a total tourist product offering full satisfaction to its targeted market. These attributes are plus points over which the state can capitalize and as such can be treated as opportunities. The current article has tried to identify new areas which if taken care of can go a long way in the development of Tourism in Assam. In terms of heritage tourism, health tourism, academic tourism,

business tourism, entertainment tourism, adventure tourism, and cultural tourism, Assam possesses all of these characteristics and has tremendous potential for future growth. These tourism-related activities reflect the most recent changes in both domestic and international travellers. The State has a lot of potentials to increase domestic tourism and draw in a lot more tourists from abroad in light of the aforementioned considerations.

Threats

In spite of all the strong factors that make Assam a perfect destination for tourist, there are challenges in the way of development of tourism in Assam. Compared to other famous destinations, the development in Assam is slow and the initiatives taken by the Government are less and not aggressive to withstand tough competition from states like Rajasthan, Maharashtra etc. Lack of direct communication to many parts of the country, and long distance to be travelled sometimes becomes a negative factor for the travellers which lead to geographical isolation of the region. Social problems like ethnic clashes and stories of insurgency still create a bad image in the minds of the mainland tourist. Lack of entrepreneurial efforts among the local youth is also hampering the bright future of Assam tourism. All as whole there is lack of awareness among general public and educating them about the positive aspects of tourism industry for social and economic development can go a long way in strengthening the sector.

Findings of the Study

It was found that Assam has huge scope in the field of Tourism. The development of the tourism industry in Assam largely depends upon the formulation of a proper tourism development policy and people's cooperation and consciousness. From the study, the researchers have identified that tourism has a great potential for generating income and employment opportunities in Assam. Although, Assam has not seen any perceptible change in the tourism sector of the economy due to some problems. Researchers have identified a few constraints which create challenges for the tourism industry in Assam. The common problems which have been identified by the researchers from the secondary data are: (a) Lack of infrastructure, (b) Communication bottlenecks, (c) Geographical isolation, (d) Ethnic clashes leading to political instability, (e) Growth of insurgent activities (f) Lack of fund (g) Absence of leadership and entrepreneurship ability, (h) Indifferent attitude of the Government both at State and Central level (i) Defective socio-economic and political set up (j) Lack of a proper tourism development policy of the Government (k) Lack of people's co-operation and

consciousness, (l) Lack of proper friendly investment atmosphere (m) Absence of congenial atmosphere to attract the tourists and such many other factors. Moreover, an honest and strong will of the government coupled with people's hearty cooperation will definitely boost up the tourism industry in Assam in near future.

Conclusion

The present study concludes that with the great potentialities of the tourism sector in Assam, it can contribute various economic benefits to the economy of Assam. The employment creation through the tourism sector in Assam is not so satisfactory and the revenue earnings from the Indian as well as foreign tourists are also not encouraging. For the development of the tourism sector in Assam, the challenges should be totally removed.

Suggestions

The tourist sector in Assam still has a bright future in spite of the aforementioned challenges. However, there are a few immediate as well as long-term therapies that must be used, as described below.

Strong political will and all-out efforts, including political dialogue with the various insurgent groups operating in Assam, to redress their grievances within the framework of the Indian constitution in a democratic manner, are required for the restoration of peace and political stability in the region. The government should invest heavily to lessen Assam's geographic isolation and address communication barriers.

The government must perform a comprehensive survey in the state to design a proper tourism development policy.

Keeping a friendly investment climate is essential for attracting both foreign investors and tourists. International and national confidence must be restored in order to attract both local and foreign tourists.

To improve Assam's socioeconomic and political circumstances, the government would take long-term, carefully thought-out actions.

Above all, it is crucial that people understand the importance of expanding the tourism sector in order to revitalise their communities.

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Consumer Perception About Refurbishment: A Strategy to Achieve Circularity in Supply Chain

Anjali Upadhyay, A.C Shukla

Abstract:

There are so many inherent issues with linear model i.e, taking, making and disposing. Circular model is a step ahead towards saving our planet by closing the loop either by technical cycle or biological cycle. To achieve circularity in technical cycle we need to employ circular strategies i.e, Reduce, Reuse, Repair, Refurbish and Recycle. Refurbishment is a significant strategy to achieve circularity in supply chain of e-products. There are not only environmental issues behind e-waste dumping but human health and economic issues are also there. The percentage of recycled e-waste is very less as compared with the e-waste generation and also e-waste recycling practice needs to be well organized because unorganized recycling leads to create so many ecological, environmental, social and economical issues. Refurbishing is better way to minimize e-waste and to attain sustainability. Good refurbishing practices can delay recycling of e-waste to better extent. Our research aims to increase consumer awareness of e-waste, refurbishment, and their willingness to accept refurbished e-products. For this we attempted a questionnaire survey to know the consumer perception about refurbished e-products.

Keywords: Keywords: e-waste, refurbished, sustainability, consumer perception, and environment.

Introduction:

Everything that is linked with electronics and power is termed as Electronic and electrical equipment (EEE). In the present scenario our life depends on this EEE and with rapid technical interventions, replacement and mortality of this EEE, waste electronic and electrical equipment (WEEE) increases that is also referred as e-waste or electronic waste. Dumping of e-waste is not only hazardous to the environment but also a risk for human health. Improper dumping of e-waste can contaminate our ecosystem to a great extent and its recycling is also very dangerous as it contains harmful chemicals. EEE consumption annually increases by 2.5 Mt. and ultimately with higher disposal and replacement rate, e-waste increases with extremely high pace.

As per Global e-waste monitor 2020, globally generated e-waste in 2014 was 44.6 million metric ton (MT) and in 2019 it reached 53.6 MT. out of that only 17.4 % recycled in an environmentally friendly manner and formally documented. It is estimated that generation of global e-waste by 2030 will reach 74.7 MT almost equal to 9 kg per capita. E-waste recycling is lower than the e-waste generation.

India being producer and receiver of e-waste lies under World's top five e-waste producer country with China, U.S, Japan and Germany. Contribution of India in e-waste generation is about 3 million tons annually and it will be 5.2 MT per annum by 2021.

EEE needs to flow in a circular economy to decrease the ecological harm. Consumers play an important role in keeping the environment safe and with better consumer awareness; we can definitely find a way to shorten loss of sustainability by e-wastes. Sustainability can be achieved by proper balance of economical, environmental and social factors. By e-waste improper dumping and bad recycling practice, we are ultimately keeping the sustainability factors under crisis. While concerning about e-waste management we have to think on following points about recycling and refurbishing:

- In recycling metals/substances extracted from e-waste and then reused. In refurbishing a new product is made up of used product's working parts, components or accessories.
- In recycling there are extractions of only valuable materials from e-trash and residues just land-filled while in refurbishing valuable components and working parts are reused and that leads to decrease in e-waste landfills.
- Dumped residual e-wastes lead to worsen ecology while in refurbishing the trash is treated as treasure.
- Materials extraction process from e-waste leads to environmental pollution while in refurbishing there is no environmental pollution.
- Sorting of e-waste for recycling is hazardous to human health. Refurbishing has no effect on human health. People involved in e-waste sorting, dumping and recycling are at extreme health risks.
- Refurbishing is economical than recycling as there is reuse of

working components that leads to cost effective new products that are featured loaded and also checked for quality.

- In recycling, extracting metal increases carbon footprints. While refurbishing decreases carbon footprint generation as already manufactured parts are reused.
- Recycling is a difficult process while refurbishing, reusing working parts in assembly is easy.

Refurbishing e-products is more beneficial on the societal, economical and environmental plane than recycling. So we can say that refurbishing works better than recycling in the e-market for sustainable practice. But there are so many illusions and also lack of knowledge and awareness about refurbished e-products. Consumers like to adopt new one rather than refurbished products without knowing the effect of replacement and dumping the old one.

Literature Review:

E-waste disposal is affecting our ecology and increasing danger for human health (Dixit et al., 2016). Improper e-waste handling results in adverse impact on health and environment and to incorporate with e-waste management electronics value chain stakeholders need to be aware about the hazards by e-waste (Senophiyah et al., 2016).

E-waste landfill is dangerous and contains toxic materials like arsenic, chromium, lead, cadmium, mercury etc and improper disposal affect overall ecology (Man et al., 2013). Abdulrahman et al., (2014) and Jiménez-Parra et al., (2014) argued that by closing the loop of the supply chain this environment impact can be controlled.

Consumers and producers both are equally responsible for the growth of e-waste as one seeks better and other wants to create better in this technology driven scenario (Gurauskienė, 2008, Kochan et al., 2016).

Low citizen awareness is the biggest challenge in e-waste management (Otiano et al. 2015). Consumer plays an important part in deciding about product's destination after reaching shelf life (Bovea et al., 2018).

A. Nazmi et al. (2019) illustrate that manufacturer strategies are responsible for reversing the product from consumers when they reach mortality and for this he addressed several influencing factors to make the reverse nature on priority.

With the increasing e-waste and decreasing span of useful life of e-products, producers and government need to take steps towards proper e-waste

management and awareness about the e-waste cause and effects (Borthakur et al. 2020). End of life e-products risk awareness and knowledge about 3R and ecology affect consumers' return behavior (Kianpour et al., 2017). Kumar (2019) argued that individual responsibility is more important in e-waste management than awareness.

Leclerc et al. (2020) argued about the transparency and monitoring methods of EPR programs and also showed concern about measuring methods of EPR performance. Tasaki et al. (2019) studied stakeholder's perception on EPR and PS policies for waste management.

Obsolescence rate of electronic products and collected e-waste volume can be used as a monitoring method for e-waste generation (Andrade et al. 2019). Kamigaki et al. (2017) argued that for sustainable production-consumption and for achieving circular economy it is important to propose refurbishing and remanufacturing systems.

Resmi et al. (2017) proposed the EMARP model (e-waste management and refurbishment predictions model). This green model is simulation based and able to accommodate real world scenarios.

Zang B. et al. (2018) performed a survey in China to know e-waste holders' perception on e-waste recycling using e-commerce and this study also addressed barriers associated with e-waste recycling by e-commerce platforms.

The review has revealed that the availability of literature in context of e-waste management in India is relatively less as compared to other countries. Also e-products refurbishment is rarely acknowledged in available literature.. Further, awareness and acceptance level for refurbished e-products and its significance is not yet studied. Consumers being e-waste creators and holders must be considered as main stakeholders in the e-waste management and achieving circularity in e-products supply chain. Hence, the aim of our study is to fulfill the gap in literature by acknowledging consumers' perception about refurbished e-products.

Methodology:

After understanding the concept and thorough literature review a questionnaire survey is prepared to know the awareness and acceptance level of consumers. The Awareness section covers questions about e-waste, e-waste recycling and refurbishing which is followed by demographic details of respondents. In the last section Acceptance level for refurbished e-products were addressed. All the closed ended questions were estimated on Likert's 5 point scale (Likert & Rensis, 1932) to measure the

perception of consumers about refurbished e-products. Sample size was taken as per standard criteria (Babbie, 2004).

Data Collection:

Questionnaire preparation begins with extensive literature review. A pilot study was conducted at the research centre with the help of research supervisor, peers and experts and suggested modifications were incorporated. Questionnaire was prepared using Google form and shared among 1000 people and out of that 250 fully filled questionnaires were received. The

questions comprises of three sections:

- Demographic Details
- Awareness about e-waste, e-waste hazards, e-waste recycling and e-products refurbishment
- Acceptance level for refurbished e-products and preferable refurbished e-products.

Demographic details consist of gender, occupation, residential background, income range, age and qualifications. How people treat their obsolete e-product and e-waste is also acknowledged.

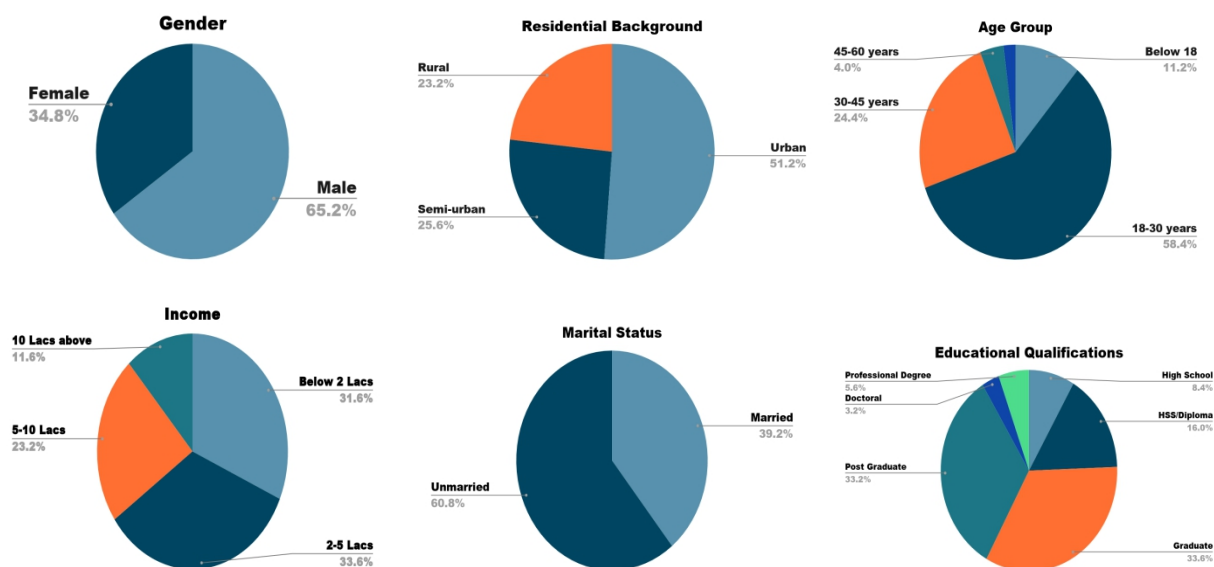


Fig. 1 Spectrum of Respondents on the Basis of Demographic Classification

Table 1: Reliability Analysis

S.No.	Dimension	No. of Questions	Cronbach's Alpha
1.	Awareness	14	.827
2.	Acceptance Level	14	.813
3.	Awareness & Acceptance Level	28	.866

The result shows the alpha value greater than 0.8. Hence, internal consistency among the group items is good. Our instrument is adequately reliable. Descriptive statistics of respondents is shown in Table 2, which shows the awareness and acceptance level

towards refurbished e-products. Demographic backgrounds also affect consumers' perception. Hence, the responses were analyzed on the basis of demographic background as well which is depicted in Table 3.

Table 2: Descriptive Statistics

Dimensions	Awareness			Acceptance Level		
	Mean	Standard Deviation	Variance	Mean	Standard Deviation	Variance
Results	3.440	.617	.382	3.856	.549	.302

Table 3: Analysis on the Basis of Demographic Background

Demographic Classification (N=No. of respondents)		Mean	Standard Deviation	Variance	Mean	Standard Deviation	Variance
Gender	Male(N=163)	3.423	.626	.391	3.8295	.553	.305
	Female(N=87)	3.472	.604	.364	3.9056	.541	.292
Residential Background	Urban(N=128)	3.518	.598	.357	3.887	.465	.216
	Semi-urban(N=64)	3.487	.601	.361	3.942	.520	.270
	Rural(N=58)	3.218	.638	.407	3.692	.707	.499
Marital Status	Married (N=98)	3.505	.606	.367	3.955	.464	.215
	Unmarried (N=152)	3.399	.623	.388	3.791	.590	.348
Income	Below 2 Lacs (N=79)	3.291	.716	.513	3.681	.647	.419
	2-5 Lacs (N=84)	3.496	.540	.292	3.890	.453	.206
	5-10 Lacs (N=58)	3.492	.617	.381	3.987	.447	.201
	10 Lacs above (N=29)	3.583	.475	.226	3.968	.601	.362
Age	Below 18 (N=28)	3.211	.606	.367	3.604	.689	.474
	18-30 years (N=146)	3.453	.624	.389	3.859	.570	.324
	30-45 years (N=61)	3.491	.642	.412	3.954	.405	.164
	45-60 years (N=10)	3.578	.384	.147	3.792	.513	.269
	60 years above (N=5)	3.457	.376	.141	4.085	.228	.052
Educational Qualifications	High School (N=21)	2.9898	.831	.690	3.564	.867	.751
	HSS/Diploma (N=40)	3.225	.467	.218	3.8260	.511	.261
	Graduate (N=84)	3.518	.621	.385	3.900	.482	.232
	Post Graduate(N=83)	3.526	.584	.341	3.848	.529	.281
	Doctoral (N=8)	3.660	.421	.177	4.15	.230	.053
	Professional (N=14)	3.632	.504	.254	3.984	.546	.299

Results & Discussions:

Conventional method of recycling also does not work well with E-products due to the presence heavy toxic metals and high proportion of non-recyclable waste material hence the most suitable method in order to deal with it, is the **Refurbishment**.

The pursuit of this research was to check the acceptability and awareness level among the user about the refurbished goods as it cannot be achieved without the co-operation of users. The survey question which was strictly framed after through literature review, based on Likert's 5 point scale shows very good internal consistency of results as the split half correlation of data reaches near to 0.9 which is considered as very good. However, the result is not very satisfactory as the both Awareness and

Acceptance Level among the user was found to be less than 4.

If the awareness translated as responsibility than the acceptance level will definitely grow. Planned obsolescence results in very large volume of e-waste that can be avoided by involving producers in reverse movement of e-products when they reach to end of life. Extended producer responsibility (EPR) and E-waste Management Rules should be implemented for refurbished e-products to achieve ecological balance and overall sustainability. E-products refurbishment should be the central idea behind circularity in supply chain in the age of circular economy.

Table 1 shows the difference between recycling and refurbishing of e-products.

Table 1: Recycling v/s Refurbishing of e-products

S.No.	Recycling	Refurbishing
1.	Metals/substances extracted from e-waste and then reused.	A new product is made up of used product's working parts.
2.	Only valuable materials extracted from e-trash and residues just land-filled.	Valuable components and working parts are reused and hence decreased landfills.
3.	Dumped residual e-wastes lead to worsen ecology.	In refurbishing the trash is treated as treasure.

4.	Environmental pollution in extraction.	Very less environmental pollution.
5.	Hazardous to human health	No effect on human health.
6.	Increases carbon footprints.	Decreases carbon footprints.
7.	Difficult	Easy
8.	More cost involved.	Less cost involved.

The data analysis shows that the respondents' awareness and acceptance level towards refurbished e-products in Madhya Pradesh are satisfactory but not very satisfactory i.e., **3.440** and **3.856** respectively with very less variation in responses (Table 2).

There are significant differences in different demographic groups as shown in (Table 3).

- There is very little difference in acceptance level and awareness about refurbished e-products among male and female respondents.
- Married respondents are more aware about refurbished e-products with better awareness level as compared with unmarried respondents.
- Respondents from urban background are more aware followed by semi-urban and rural background respondents but the acceptance level of semi-urban respondents are more followed by urban and rural respondents.
- Educational qualifications have significant impact on consumers' perception that is clearly depicted in Table 3.
- In context with age, the awareness level of 45-60 year age group is more and acceptance level of 18-30 year old respondents is better than other four age groups.
- The respondents below 2 Lacs income have least awareness and acceptance level than other 3 income groups.

Conclusion:

In last 5 years (2014-2019), World Population has risen by 5.77% as per the data of World Bank whereas as per the report published in 2020 by Global E-Waste Monitor, the amount of E-waste during the same time span got increased by 20%. It has also been forecasted that the amount of E-waste will get increased by 39.36% by the year 2030 with respect to 2019 which will be around 74.7 MT. The rate of increase in E-waste is quite apparent hence to handle this waste is also another challenge. The elements used in electronic gadgets like Arsenic, Chromium, Lead, Cadmium and mercury etc. has very adverse effect on the health of living beings and the ample literatures are available in order to understand the carcinogenic and mutagenic properties of these heavy toxic metals. India being among top five producer of E-waste in the

World needs to pay proper attention towards it but ironically very less research has been done in order to resolve this unavoidable trouble and refurbishment is rarely acknowledged by researchers..

Our study had some limitations. First, only internet users can participate in Google form questionnaire survey. Second, only two dimensions were acknowledged. Third, only English language is used. So in future research we will think to prepare survey in regional language as well and the construct will be improved by introducing new dimensions for refurbishment. Fourth, a generalized e-products study was carried out. Specific refurbished e-product study will be carried out in future research.

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Study on Savings Behaviour and Preferences of rural consumers towards selected Post Office Schemes in Nashik District

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Abstract:

Indians are well-known for their culture of practicing small savings behaviour from their tradition itself, and it is not new to them. Due to changes in financial inclusion in recent times, people's savings and investment patterns also evolved with numerous innovative financial products. There are different avenues of trim savings options available to Indian households like:

- *Bank deposits.*
- *Insurance products.*
- *Investments in treasury bonds.*
- *Stakes in public limited companies.*
- *Non-banking company's financial products.*
- *Post office savings schemes.*

Post office savings account plays a vital role in collecting funds from lower-income segments in both rural and urban regions. Now a day's, Indian Post-offices offer numerous benefits with attractive schemes to their account holders.

Keywords: *Post Office Scheme, Consumer Behaviour, Consumer Preference, Saving Behaviour*

Introduction:

It has been notified that since 2015, small savings made by individuals, families, trusts, and private business houses (in total households) have been linked with the market rate. As per the recent changes for every three months, the interest rate on small savings is expected based on Government Securities yields. Moreover, from 1st October 2019, the Reserve bank of India provided guidelines to all the Scheduled Commercial banks functioning in India to link all their saving, personal lending rates, and retail loan interest rates to the new floating interest rate norms. In spite of the changes in the interest rate fixation norms, interest offering on the post office deposits remained unchanged and have retained the small saver's sentiments on the post-office bank saving schemes¹. Saving in the post office is considered secure by millions of rural and urban people living in India; changes in interest rates and small savings are classified as fixed and flexible interest rate products.

Post office deposits are considered safe and secure savings since they are controlled by the Government of India. It offers a specified return on investment and is preferred by limited-income earners and senior citizens who want risk-free assets. It is most prevalent in rural and semi-urban areas. With all the structural changes happening in the Indian economy towards mobilization of funds, the financial institutions have influenced the small savings to account holders by providing a variety of productive savings /investment avenues, especially after the announcement of the demonetization of currency on 8th November 2016.

Post-office savings schemes benefits to both fixed-income earners and low-income daily earners. The small savings schemes of the post office is well-designed in such a way to cater to the needs of low-income earners, whose income are sparse and limited, having basic financial commitments namely ensuring secure life for their children, tuition fees, medical and social expenses, building home and to meet marriage expenses. At the same time, National Savings Certificate schemes are designed to meet the fixed income group, who wants to save for investments and tax gains. Except for a few long-term investment bonds, all post office savings schemes are designed to save and invest for five years or less, except Sukanya Samriddhi Account and Public Provident Fund Account.

Small savings schemes of India Post are a more suitable investment for risk-averse individuals. Post office savings are a risk-free investment option since they are safe and secure and provide capital gains as a source of tax exemption. Various savings and investment opportunities are provided as per customers' needs. The above-placed discussion raises the curiosity of the researcher to assess the common man's preferences for postal savings. Considering this, the present study is deemed as more significant during the period.

Literature Review:

A research study was conducted by Singh (2018) in Himachal Pradesh among 140 small savers to assess their perceptions of post office savings schemes. The study evidenced that fixed income and salaried class households showed more interest in investing in post office savings schemes, as they felt it was safe, operated by the Government of India, and ensured guaranteed returns. Mostly, friends, relatives and colleagues recommended them to invest in post offices.

Krishnan (2019) commented in his article published in "The Hindu" that Indian households expressed a very low level of financial literacy, and they have doubts about safe and secure investment avenues. Moreover, the small investors with Lack knowledge in assessing the risk attached to the investment. Lack of awareness of savings and investment avenues influences individuals to choose post-office savings schemes.

Dhawan (2020), in his article "Financial Express," article mentioned that small savers prefer to save in post office savings schemes as they expect to reap more benefits than the fixed deposits made in Commercial banks. Moreover, it was also reported that cutting down the interest rate on bank deposits by the Reserve bank of India also influenced middle-income people to migrate in search of small savings facilities offered by the post office.

Patnaik and Pandey (2019) provided a comprehensive report to NIPeF on the importance of savings for economic growth. The report stated that an increase in individual savings and a rise in capital formation is essential for nation's economic growth. At the same time, the majority of household savings are channeled through the banking sector. Savings in banks are less suitable for financial infrastructure development funding and for promoting MSMEs (Micro, Small, and Medium Scale Entrepreneurs). Thus, the Government of India has been making all possible attempts to deviate the small savings in the form of investment in bonds and encouraged the entry of private micro non-bank finance. Through the financial agencies, it was encouraged to develop a deep and liquid corporate bond market to ensure adequate funding for the needed infrastructure development. At the same time, the Government of India also aims to minimize banking practices, privatization of public sector banks, and merger of less profit banking banks.

Sinha (2020) reported in "Business Line" that nearly 12 savings schemes are currently functioning in India operated by the scheduled commercial banks and Post offices. In India, bank savings are found to be a desirable mode of savings as it offers assured interest rates and security. The Government of India has been announcing changes in interest rates paid on Government Securities (G-Sec, treasury bills). At the same time, the government encourages the common person to use electronic fund transfers (ETFs).

Statement of problem:

Mobilization of domestic financial resources has remained a significant concern in many developing countries. In India, domestic savings originate from three principal sectors, namely the household sector (individual, non-corporate business, private), the private corporate sector (Joint stock companies, cooperative institutions, and the Public sector (central

and state government, local authorities). Household sector savings provides the bulk of national savings. Despite the variety of vehicles that are intended to mobilize and allocate financial resources, only very few offer small savings schemes.

Among all other available investment avenues, Post Office Savings account schemes play a vital role next to commercial banks since it is a traditional investment well known to the general public. With the advent of digitalization, the central Government introduced digital technology in post office transactions, and India post is continuously performing with the highest number of branches across the country. The current study is mainly focused on the post office account holder's behavior and preferences in selecting the different schemes.

In this context, it can be referred to that a post office savings bank account acts as an alternative medium of savings and accepts deposits in a secure form, whereas ordinary commercial bank has failed to reach the remote login population or unbanked population. The present study analyzes the savings behavior and preferences of select post office schemes across the Nashik district.

Objectives of the study:

1. To measure the respondent's awareness of various post-office savings schemes and procedures.
2. To assess the account holders' Savings behaviour towards select savings schemes.
3. To identify the account holders' level of perception and satisfaction towards select postal savings schemes.
4. To identify the major difficulties the respondents faced with selecting post office schemes while making transactions in post-office.

Research Methodology:

The empirical research study effectively uses qualitative and quantitative research techniques.

Sampling Framework

Researchers selected post office schemes as per the review of literature selected post offices and those who hold the select nine popular savings account schemes. A total of 200 Samples is chosen for the study. Primary data were collected through convenience sampling, and secondary data were collected through various journals, magazines, dissertations, and theses.

1. The post office schemes are selected for study are 1. Regular savings account, 2.Recurring deposit account (RD), 3.Time Deposit Account (TD), 4. Monthly Income Deposit account (MIS), 5.Senior citizen savings scheme, 6.Public Provident Fund Account (PPF), 7. National Savings Certificate (5 years NSC-VIII issue), 8. Kisan Vikas Patra account (KVP), 9.Sukanya Samriddhi Yojana Account (SSY).

Data Analysis and Interpretation:

Table No 1: Select post office savings scheme's time period

Time Period	No. of Respondents	Percentage
Less than 2 Years	13	6.5
2-5 Years	35	17.5
5-8 Years	88	44
8 Years & More	64	32
Total	200	100

It is evident that 44 per cent of the respondents selected the post office savings account between five to eight years and 17.5 per cent of the account holders select their savings account 2-5 years

Table No 2: Account holders' monthly savings amount

Monthly Deposit	No. of Respondents	Percentage
Less than Rs. 2500	57	28.5
Rs. 2501 - Rs. 5000	67	33.5
Rs.5001 - Rs.7500	43	21.5
Rs.7501 and Above	33	16.5
Total	200	100

It is found that 33.5 per cent of the account holders used to save around Rs. 2501 - rs.5000 per month and 28.5 per cent of the respondents save less than Rs. 2500 per month.

Table No 3: Respondents level of awareness towards various post office savings schemes

Schemes	Very High	High	Moderate	Low	Very Low	Mean
Regular Savings Account	51	97	44	5	3	3.94
Recurring Deposit Account (RD)	57	112	23	8	0	4.09
Time Deposit Account (TD)	17	63	43	55	22	2.99
Monthly Income Deposit Account	28	43	92	34	3	3.30
Senior Citizen Savings Scheme	17	22	87	23	51	2.66
Public Provident Fund Account	54	63	66	17	0	3.77
National Savings Certificates (VIII issue)	24	36	87	28	25	3.03
Kisan Vikas Patra Account (KVP)	18	27	41	59	55	2.47
Sukanya Samriddhi Yojana Account (SSY)	24	35	67	42	32	2.89

From the above table, it has been inferred that most sample respondents are highly aware of Post Office Recurring Deposit Account, followed by Post Office Regular Savings Account. The Kisan Vikas Patra and senior citizen scheme are least aware by the respondents. These schemes are predominantly promoted through agents. Individuals' demographic

and socio-economic status greatly influences their awareness of different savings schemes. Following this alternate hypothesis is framed to measure whether the account holders' awareness of various post-office savings schemes differs according to their demographic and socio-economic status.

Table No 4: Account holders level of awareness towards post office account opening procedures

Scheme Procedures	Very High	High	Moderate	Low	Very Low	Mean
Documents Required (ID Proof)	112	67	16	5	0	4.43
Contribution Period	57	63	37	40	3	3.655
Automatic Renewal/Closer	62	95	32	6	5	4.015
Guaranteed Rate of Interest	37	53	55	33	22	3.25
Tax Exemption Availed	27	37	76	32	28	3.015
Amount Repayable after Maturity	63	78	47	12	0	3.96
Savings /Deposits withdrawals before Completion of the Contribution Period	31	36	86	22	25	3.13
Penalties Charged	34	47	64	34	21	3.195

It has been inferred from the above table that the majority of the sample account holders' are highly aware of the post of savings procedures such as documents required (ID proof), Automatic Renewal/Closer, Amount Repayable after Maturity, Contribution Period, and Guaranteed Rate of Interest. These variables are ranked first, second, third, fourth,

and fifth, respectively. Post office savings accounts can be opened with a minimum balance of Rs. 500 by just submitting any one of the identity card (Aadhaar/Driving license or Voter Identity card), and the minimum amount required for account opening varies from one account to another.

Table No 5: General factors influenced in selection of savings schemes

Motives	Mean	Rank
To Meet Emergency Needs	13.5	3
To Meet the Family Needs in Future	13.7	2
Wellbeing of Children	13.41	4
For Children's Education	11.84	6
Immediate liquidity	12.74	5
To Earn Regular Income	14	1
POS Interest Rates are more than Bank Interest	11.1	8
Savings to make deposits	9.6	12
Retirement Safety	10.93	10
To Reduce Income Tax Burden	9.49	13
Getting Financial Security	11.08	9
Easy Access to Post Office (Through Agents)	10	11
Assured maturity amount	11.67	7

The researcher identified 13 factors that motivated account holders in selecting post office savings schemes. From the analysis, it is found that the majority of the sample account holders' opinions that

they are highly influenced due to earning a regular income, meeting the family needs in the future, to manage Emergency Needs.

Table No 6: Ranking of factors in selection of a particular select post office savings schemes

Primary Criterion	Mean	Rank
Safety of Principal Value	8.88	1
Liquidity	8.87	2
Tax Benefit	7.72	7
Flexible Period of Saving	8.68	5
A special scheme offered	7.71	8
Timely interest accumulation	8.04	6
Simplified Procedures	8.78	3
Minimum Balance Norms	8.77	4
Easy account transfer	6.73	9

It is found from the above table that accounts holders prefer the safety of principal with a mean of 8.88, followed by the liquidity of their amount with a mean of 8.87; from the mean values next ranking factors are

simplified procedures, minimum balance norms, flexible period of savings option schemes and highly influencing factors that are motivated the respondents to open and continue the various post office schemes.

Table No 7: Account holders' opinion on post office savings schemes after attains maturity

Options	No. of Respondents	Percentage
Renew the Savings in the Same Scheme	44	22
Invest in Alternative POS Schemes	23	11.5
Invest in Other Avenues	54	27
Withdraw maturity amount	79	39.5
Total	200	100

The above table explains the account holders' opinion on their post office savings schemes after maturity. About 39.5 percent opinioned that they withdraw the

maturity amount and utilize it for the purpose they have invested, whereas 27 percent of respondents revealed that they would invest in other avenues.

Table No 8: Account holders' level of perception towards select post office savings schemes

Aspects	Excellent	Good	Fair	Poor	Very Poor	Mean
Maturity amount	60	53	56	24	7	3.675
Documents submitted to open account	87	78	23	7	5	4.175
Withdrawal Facility (Partial)	53	67	56	17	7	3.71
Variety of Schemes	23	63	66	33	15	3.23
Prompt Payment of Interest	47	63	57	26	7	3.585
Prompt in Maturity Payment	27	36	89	23	25	3.085
Safety of the Principal Amount	34	43	87	23	13	3.31
Fair Interest rate	23	46	87	21	23	3.125
Long-Lasting Relationship with Agents	17	61	87	27	8	3.26
Transparency in Operations	27	32	77	41	23	2.995

The above table inferred their level of perception towards procedures followed by the Post Office. Most of the account holders' perceptions are highly relevant

to documents submitted while opening an account, followed by favorably perceived with the partial withdrawal facility and maturity amount.

Table No 9: Account holders' level of satisfaction towards post office savings

Aspects	Highly Satisfied	Satisfied	Neutral	Dissatisfied	Dissatisfied Highly	Mean
Safety of Principal Value	63	93	23	15	5	3.95
Tax Benefit	23	43	88	26	20	3.11
Proximity of Post Office	17	53	73	32	25	3.02
Flexible Period of Savings	43	54	63	23	17	3.41
Post Offices Interest Rates are more Than Banks	53	43	63	29	12	3.48
Simplified Procedures	58	68	53	13	8	3.77
Minimum Balance Norms	23	11	113	38	15	2.94
Role of agents	24	34	63	54	25	2.89

From the above table, it has been inferred that the sample account holders' expressed a very high degree of satisfaction with the following factors i.e., Safety of principal value, Simplified Procedures, Interest Rates more than Banks, and Flexible Period of Savings. The satisfaction variables are ranked first to fourth place.

Conclusion:

The emerging era for Post Office is highly competitive, and it has to change its old pattern of working. Today the focus is on modernization and innovation of services of the post. E-post and value-added services like speed post and business post etc. It is also engaged in providing E-governance to customers. It deals in providing various postal services, non-postal services, and financial services like E-post, E-billing, media post, mutual funds, insurance products western money transfers etc. It plays a divergent role in the socio-economic development of the country. At present, the changing and transforming role of the Department of Post has been undertaken. The network of the post office is very

strong as it spreads all over India, It is cost-effective, and Reliability, safety, and security is a key elements of their services. This Strength of Postal services makes it vital in serving millions of people.

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Capital Structure of Agro Based Industries: An Analytical Study of its Determinants

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Abstract

The current study attempts to analyse the capital structure determinants in the context of agro based industries in Haryana. Agro based industries plays an important role in the context of overall economy. Capital structure decisions are important managerial decisions for any industry. While taking the decisions regarding capital structure of the industry factors like profitability, tangibility, size, age, liquidity etc. are taken into consideration. Therefore, the present study examine the relationship of these industry-specific variables with leverage of the firm. In this study, leverage is the dependent variable while the independent variables are profitability, tangibility, liquidity, size, age, and NDTs. Data is taken from the prowess database for the period of 2011-21. In panel data, GMM technique has been used to analyse the data. Major findings of this study reveals that tangibility, profitability, liquidity size, age, and non-debt tax shield are having a statistically significant relationship with leverage of agro based industries in Haryana.

Key words: Agro-Based Industries, Capital Structure, NDTs, GMM

JEL Classification: C-33, G-32

1. Introduction

Agriculture and industry are the two important sectors of the Indian economy as well as for the economy of Haryana. In terms of their characteristics and contributions to economic growth, these two sectors have traditionally been seen as distinct entities. Agriculture and industry work together to create a sector of the economy that adds value. Agriculture has traditionally been seen as the initial stage of development, while industrialization has been seen as the most relevant indicator of a nation's progress. In short run, industries and agriculture remains competitive but in the long run they turn out to be complementary. As agricultural production rises, there is increase in demand and necessity of agro processing activity. New agro processing activities can create new opportunities to farmers and generate additional revenues for them. These agro based industries plays a major role in rural industrialisation. The scope of agro based industries includes the preparation of agricultural production for intermediate and final consumption as well as their processing and preservation. Senior level policy makers and business leaders need to address the relationship between agriculture and industry because these agro-based industries have a positive development impact on the nation's overall economic growth.

Capital structure decision is one of the most critical management decisions in any type of industry. These decisions affect not only the risks and returns for shareholders but also the share's market value. A company's assets and operations are financed through its capital structure, which combines debt and equity. To increase its market value, an industry can use alternative types of capital structures. Overall cost of capital is affected by leverage ratios, then what should be the firm's target capital structure is a decision that must be made carefully. If there should be a mix, what should that mix be? Should it be all debt, all equity, or a combination of the two? Optimal capital structure is a blend of debt and equity that enables a company to maximise its market value. Due to the different characteristics of various industries, the amount of debt that is risk-free in one industry may not be risk-free in another. To find out the main determinants of capital structure we carried out an extensive literature review so that we can finalize our independent variables as well as measure of dependent variable.

2. Review of Literature

Alipour M. *et. al.* (2015) suggested that all measures of leverage of companies in Iran were influenced by industry-specific factors like profitability, liquidity, firm size, financial flexibility, asset structure, growth, risk, and state ownership. Daskalakis N. and Psillaki M. (2005) proposed that the firm's profitability and asset structure have a negative relationship with its leverage, whereas the firm's growth and size have a positive relationship with its debt ratio. They also concluded that there were significant similarities in the capital structure determinants of SMEs in Greece and France. Abor and Biekpe (2009) indicated that short term debts were used more than long term debts by SMEs in Ghana. They also found a positive relationship of firm' size and age of the firm with debt ratio. In Ghana, SMEs tried to finance their fixed assets with long-term debt and current assets with short-term debt. Ohman and Yazdanfar (2017) studied capital structure determinants in the context of SMEs of Sweden and concluded that there is a positive relationship of growth and size of the

firm with short-term debt. Short term debt was negatively related with profitability, age of the firm, tangibility of asset and liquidity. They also concluded that long-term debt is positively related to tangibility of asset and growth, and negatively related to profitability, size of the firm, liquidity and NDTs. According to Benkraiem and Gurau (2013), the size of the firm is positively correlated with long-term debt and negatively correlated with short-term and total debt in France, where large firms have more leverage than small firms. Long-term debt was used by high-growth businesses while the profitable businesses used less debt than the lower-profit businesses. In comparison to companies with fewer fixed assets, those with more fixed assets can use more long-term debt. Abor (2007) revealed that pharmaceutical, medical and agriculture industries, in comparison to the manufacturing sector rely more on long- and short-term debt. More short-term credit was used by the information and communication, wholesale and retail trade, and manufacturing sectors. The findings also revealed that while the hotel and hospitality sectors depended more on long-term debt than the mining and construction sectors did. In Spain, Sogorb-Mira (2005) found a negative correlation between SME leverage, firm profitability and non-debt tax shields. Factors such as growth, firm's size and structure of the asset affect the capital structure of the SMEs positively. Caneghem and Campenhout (2012) concluded that in Belgium, structure of asset and growth are positively affected and profitability and age of firm are negatively affected by leverage. Bhaird and Lucey (2010) revealed that firm's size and assets structure positively affect the usage of long-term debt financing whereas the age of the firm negatively influences the use of long-term financing in Ireland. Proenca *et. al.* (2014) examined that structure of the asset, liquidity and profitability of the firm are major determinants that influence the capital structure of the SMEs in Portugal. Palacin-Sanchez *et. al.* (2013) found that the determinants of firm such as profitability, size, structure of assets, growth affect the capital structure differently in different regions of Spain. Menike (2015) examined the determinants of capital structure in Sri Lanka and indicated that size of the firm, age of the firm, structure of ownership, assets structure, and information asymmetry are main elements of the SME's capital structure. Rao *et. al.* (2019) reported that the capital structure decision of small and medium businesses in India is largely determined by factors like the tangibility of the assets, profitability, age of the firm, liquidity, firm's size, NDTs, growth of the firm, return on equity and ratio of cash flow. Mukherjee S. and Mahakud J. (2010)

studied the factors affecting capital structure in the context of Indian manufacturing firms. They came to the conclusion that factors unique to the industry, such as profitability, tangibility, scale, and market to book ratio, were considered to be the most important factors in identifying the ideal capital structure. For India's manufacturing industries, the rate of adjustment to target leverage was determined by elements such as growth potential, company size, and the gap between target and observed leverage.

After review of above studies, it is determined that across various industries, profitability, growth, tangibility, firm size and age of the company were the most often studied variables. However, relatively few studies have also looked at how different forms of leverage relate to liquidity and non-debt tax shield. Because of data unavailability of financial information, cash flow was the least investigated variable. Leverage is the dependent variable in this study, while the independent variables are tangibility, liquidity, profitability, age, size, and NDTs.

Justification of the Study

Abor (2007) clearly indicated that the industry effect becomes more important while explaining the capital structure. After that review, it is observed that we should conduct a study of determinants of capital structure of specific industries. That's the reason that this study is conducted on agro based industries. Agro based industries are those industries which are used agricultural products as their raw material for example rice mills, sugar mills, dal mills, cotton mills, food processing and beverages etc. These agro based industries contributed significantly in the overall economy of Haryana. Haryana state has been identified for the present study because it has a huge potential for agro based industries as its produce a great production of food grains, fruits and vegetables.

3. Research Methodology

The data regarding firm-specific variables and leverage ratios has been extracted from the PROWESS database, for the time-period of 2011-2021. The sample has been chosen from the list of agro based industries (which were identified as per the list of industries given on the official website of haryanaindustries.gov.in). After excluding missing values, 50 agro based industries which were registered in Haryana, are taken into consideration for this study.

Leverage is taken as dependent variable and the independent variables of the present study are profitability, liquidity, tangibility, size, age and non-debt tax shield. Measures of these firm-specific variables used in this study are given below:

Table 1: Description of the Variables		
Symbol of Variable (Nature)	Measures of given Variables	Explanation and Data Source
Lev (Dependent)	Total Debt /Total Assets	Total debt is calculated by adding long term debt* and short term debt** divided by total assets*** of the company
LIQ (Independent)	Current Assets/ Current Liabilities	Cash, debtor, inventory, and all other marketable securities are included in current assets. Creditor, short-term loan, and other obligations with a maturity of less than a year are all considered current liabilities.
NDTS (Independent)	Depreciation/Total Assets	Extracted from the database (PROWESS)
PROF (Independent)	PBDITA/Total Assets	Extracted from the database (PROWESS)
TANG (Independent)	Fixed Assets/Total Assets	Extracted from the database (PROWESS)
AGE (Independent)	Log of the year of incorporation	Extracted from the database (PROWESS)
SIZE (Independent)	Log of Sales	Extracted from the database (PROWESS)

Note: *LTD comprise “secured and unsecured borrowings from banks and financial institutions, borrowings through central and state government, debentures and bonds, fixed deposits and hire purchase loan” **STD includes “account payables, secured and unsecured borrowings from banks, inter-company loans, commercial papers funds”.
 ***Total assets comprise both current assets and fixed assets.

The dynamic panel data technique is used in the present study to analyse the firm's specific variables affecting the firm's leverage. When using a dynamic panel, we can only use the Generalized Method of Moments when the lag of dependent variable is treated as an independent variable because fixed and random effects are no longer relevant (Arellano & Bond, 1991).

4. Results and Discussion

Table 2 show the values of mean, median, standard deviation (descriptive statistics) of the variables. When we examine the leverage ratio it has been found

that mean leverage ratio (Lev) for agro based industries are 0.7293. It shows that the main source of funding for these industries is debt. Moving on to the descriptive statistics of predictor variables, it is discovered that the average liquidity ratio for agro-based industries is 1.2172, while the profitability of the firms is extremely low (mean PROF=0.0099). It has been discovered that the mean for tangibility is 0.2354, which represents the ratio of fixed assets to the firm's total assets. Additionally, for agro-based industries in Haryana, the means of NDTS, SIZE, and AGE are 0.2089, 3.9521, and 2.6536, respectively.

Table 2: Descriptive Statistics of Variables							
	LEV.	LIQ.	NDTS	PROF.	SIZE	TANG.	AGE
Mean	0.729277	1.217161	0.208946	0.009955	3.952096	0.235354	2.653638
Median	0.213879	1.000842	0.086171	0.051270	4.817091	0.164673	2.970086
Std. Dev.	4.730398	1.898092	0.427595	0.362164	3.035478	0.232600	0.983745
Total Obs.	500	500	500	500	500	500	500

The multi co-linearity is the main concern when we deal with multivariate analysis. The Variance Inflation Factor (VIF) test is conducted to check the problem of multi co-linearity. The inclusion of all independent variables in the same model would not create any issue

of multi co-linearity if value of each independent variable is less than 10. The values of VIF given in table 3 indicates that there is no multi co-linearity and all independent variables can be analysed in the same model without any difficulty.

Table 3: Variance Inflation Factors of Independent Variables			
	Coefficient Variance	Uncenterd VIF	Centered VIF
LIQUIDITY	0.012849	1.468483	1.039979
NDTS	0.323753	1.648019	1.329841
PROFITABILITY	0.356717	1.051921	1.051125
SIZE	0.005881	3.285318	1.217452
TANGIBILITY	1.125568	2.771562	1.368082
AGE	0.058267	10.50313	1.266809
C	0.408803	9.202453	NA

Before estimating the model, the unit root test is the first step in the analysis to determine whether the data is stationary. In this study, the unit root is tested using the Levin, Lin, and Chu test, 2002 (Westerlund, 2008). Table 3 displays the results of unit roots test at the level

for each variable of agro-based industries in Haryana. The unit roots of the variables at level are rejected by the p value, indicating that the data are stationary and that the co-integration test is not necessary.

Table 4: Unit Root Test							
	LEV.	AGE	LIQ.	NDTS	PROF.	SIZE	TANG.
LLC* statistics	-7.52576	-19.7052	-17.7782	2.74342	-10.5390	8.9459	6.58584
p value	0.0000	0.0000	0.0000	0.0070	0.0000	0.0000	0.0000

Note: * LLC- Levin Lin and Chu Test.

Table 5 indicate the outcomes of the two step GMM estimation technique for the model using measure of leverage and other independent variables. In panel data, Sargan test (J statistics) is used to address the problem of endogeneity. This test is used to determine whether the restrictions can be identified. The null hypothesis of this test assumes that restrictions are

over identified. By accepting the null hypothesis, it is implied that this assumption is true and that the instruments used in the model do not need to be re-evaluated. The test statistics for first and second order serial correlation demonstrate that the model is specified, hence there is no first or second order serial correlation. The model for this study is as follow:

$$LEV_{it} = \alpha + f(LEV_{it-1}, Prof_{it}, Tang_{it}, Size_{it}, Liq_{it}, Age_{it}, NDTS_{it}) + n_i + n_t + e_{it} \text{ (eq.1)}$$

Where LEV_{it} the firm's leverage is in year (t), n_i is the unobserved company particular effects, n_t is the time-specific effects and e_{it} is the error term.

Table 5: Two Step GMM Estimation for the Model		
Variable	Coefficient	p value
LEV(-1)	2.952556	0.0000
AGE	0.857882	0.0000
LIQUIDITY	-0.606851	0.0000
NDTS	0.687933	0.0248
PROFITABILITY	-2.307369	0.0000
SIZE	0.538835	0.0000
TANGIBILITY	0.857882	0.0000

Table 6: Residual Diagnostics of GMM Results		
	Statistics	p value
J Statistics	29.12600	0.458518
AR(1)	-1.113054	0.2657
AR(2)	1.121123	0.2622

Starts with the interpretation of the outcomes of independent variables Lagged leverage is discovered to be statistically significant at the 1% level, it demonstrates the significance of historical leverage in shaping the current capital structure. The study also shows a statistically significant and positive relationship between age and leverage. Statistics show that liquidity and leverage are inversely correlated. At the 5% level of significance, NDTS is significant and

positively correlated with leverage. Leverage is found to be inversely correlated with profitability and significant at the 1% level of significance. Size and leverage have a documented positive relationship in this scenario. Additionally, tangibility has a positive and statistically significant correlation with leverage. The relationship between the dependent and independent variables is summarised in Table 7 for the model applied to agro based industries of Haryana.

Table 7 : Summary of Relationship			
Predictor Variable	Empirical Relationship from this study	POT for all Firms	TOT for all Firms
LEV(-1)	+		+
AGE	+	-	+
LIQUIDITY	-	-	-
NDTS	+	+	-
PROFITABILITY	-	-	+
SIZE	+	+	+
TANGIBILITY	+	+	+

Note: (+) represent positive relationship, (-) represent inverse relationship.

Table 7 represents the independent variables which are affecting the overall capital structure. In this model, lagged leverage, age, NDTs, size and tangibility are found to be statistically significant and displays positive relationship with leverage. On the other hand, profitability and liquidity also statistically significant but negatively associated with the leverage. These findings are in consistent with the (Rao, P. 2019), (Daskalakis N. and Psillaki M. 2005) and Sogorb-Mira (2005).

5. Conclusion

This study deals with the major determinants and their relationship with capital structure of agro based industries of Haryana. Every possible efforts have been made to cover relevant points associated with the capital structure of agro based industries which were registered in Haryana. The earlier studies exhibit the problems and issues of financing but not discussed the related factors. This study highlights key factors influencing the capital structure of agro-based industries, directing managers and owners to keep these factors in mind when choosing a capital structure. The first aspect of this study looks at the variables influencing capital structure. On the other hand, the second aspect helps management build knowledge about future planning of the whole financial structure. To understand the role of industry-specific variables in capital structure decisions and outlining the position of agro-based industries in terms of their leverage are the main takeaways from this study. The current study assists emerging industries in comprehending how total debt affects the overall capital structure of agriculture-based industries. The scope of this study is limited to agro based industries in Haryana and sample size is relatively smaller, therefore it is recommended that conceptions should be drawn carefully. Since this study only uses secondary data, its analysis is restricted to agro-based industries whose financial information is available in the PROWESS database. However, a distinctive feature of this study is the application of the GMM (Generalized Method of Moments) technique to the data analysis of capital structure determinants.

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Demographic Characteristics of Investor and Financial Risk Tolerance: An Empirical Study

Ved Prakash, K. Padmasree

Abstract

The present study examines the various demographic characteristics that largely influence retail investors' investment decisions. The data for the study purpose was collected with the help of a questionnaire from the respondents of Muzaffarpur district, Bihar, India. The research examines investors' characteristics and financial risk tolerance (FRT). The study uses the chi-square test to analyse the association between financial risk tolerance and demographic variables. The result suggests that gender, education, and occupation significantly affect FRT. The young investors' risk tolerance behaviour is categorised as conservative, moderate and aggressive based on their risk tolerance score. Investment decision-makers would benefit greatly from the conclusion of this study. This study will help financial institutions, investment businesses, and brokerage firms in helping them treat investors in a way that increases their potential for accepting risk, which in turn helps the economy expand and progress.

Keywords: Financial Risk tolerance, Demographic variables, Risk-taking capacity, Decision making, Investment risk

1. Introduction

Financial risk tolerance (FRT) is the utmost level of volatility that an investor is ready to accept when making a financial choice. Risk tolerance can be described broadly as an individual's willingness to engage in financial activity that has a desirable outcome. However, achieving the goal is unpredictable and comes with the risk of failure. Risk is an essential part of both natural investments and financial ones. When making sound investment decisions, individual and institutional investors look at the potential rate of return and level of risk. (Lampenius et al., 2010). Risk tolerance is the opposite of risk aversion when it comes to money. This economic term describes a person's reluctance to choose with an uncertain outcome when they have a choice with a known outcome (Kannadhasan, 2015). In the world of investing, how willing you are to take risks is an essential factor. People need to figure out if they can and are willing to deal with the ups and downs of their investments. Risk tolerance is a person's ability to make unsuccessful investment decisions and wait for the value of the investment to go up. Investors with a low-risk tolerance are afraid to take a risk and have the chance that their investments may lose value (Bashir et al., 2014).

According to (Is & Feature, 2010), an individual's willingness to engage in financial activity with an uncertain outcome is their financial risk tolerance. Individual investors' financial risk tolerance significantly affects how people choose their savings and financial assets in the financial markets. As a result, this element is essential for investors' portfolio optimisation and personal financial planning. Recognising that an investor's risk tolerance is a multi-faceted mentality is essential. There are four facets: economic, physical, social, and ethical (Sulaiman, 2012).

Risk tolerance is vital when making decisions about savings and investments for investment and family goals. This study investigates the impact of demography on financial decision-making and risk tolerance. The investing ability of an investor is determined by demographic factors such as gender, age, marital status, education level, employment, income, time spent on investment activities, portfolio size, and financial knowledge. Materialism, youth, and masculine gender influence risk tolerance. Materialism, age, gender, and wage-to-family-member ratio affect individual investors' risk tolerance (Bayar et al., 2020). The objective of financial investments is to generate big returns in the near future. The difference between a person's perceived and real returns exist. The problem is how people make decisions, which depends on how much risk they are willing to take. Individuals are different from one another; thus, their perceptual thinking and analytical skills. Previous studies show that investors frequently overestimate their true degree of risk tolerance since they want to seem socially acceptable. (Chavali & Mohanraj, 2016).

Several research and polls in India show that the stock market attracts a tiny percentage of the Indian population owing to its risk and volatility. Countries with matured stock markets, on the other hand, have 50% participation (Board, 2015). The Indian territory is divided into four zones: east, west, north, and south. According to the SIS 2015 statistics, numerous underlying characteristics such as income, education, and employment influence investing behaviour and investment instrument selection.

According to the report, the cultural effect is one of the most important elements driving investment decisions. In India, 50% of investors reside in the west zone, 26.5% in the north, 15.2% in the east and 7.2% in the south.

The present study focuses on one of India's fastest-growing and emerging states, Bihar. It is a service-oriented, agricultural, and small-scale industrial state. Patna, Muzaffarpur, and Bhagalpur are Bihar's three most important districts. These districts contribute significantly to Bihar's GDP. This study is carried out in the Muzaffarpur district to understand the investor's demographic and FRT towards the capital market. We have come all the mile studying various investing behaviour in major cities of India and the world. Several authors have opined that the research should be carried out in small towns and cities to get the clarity of these small-town investors (Chhapra et al., 2018; Rupinder Kaur Gill, Rubeena Bajwa, 2018). This paper fulfils that gap and adds one more city's investor financial risk tolerance.

2. Review of Literature

Over the three decades, the securities market in India has transformed a lot and has gone under several structural changes. A plethora of investment opportunities have been thrown open to the investor community. The retail investor community's expansion of various investment opportunities has grown manifold in recent years. They choose investment from many available options based on their risk tolerance capacity. In recent times financial advisors, policymakers and researchers have shown their keen interest in identifying the different determinants of an individual to suggest a suitable investment to their clients. (John Grable et al., 2010; Kannadhasan, 2015; Riley & Chow, 1992). Other financial risk tolerance elements include financial concerns, financial liquidity, income security, personal aspects such as financial literacy, and demographic characteristics such as age, gender, education, and income levels (Bayar et al., 2020). Financial risk tolerance is generally defined within financial decision-making as the maximum risk a person is prepared to take when choosing their finances and investments (J. E. Grable et al., 2009).

(Bashir et al., 2014) investigated how income, age, education level, and gender affected risk among salaried people. According to their findings, women are more risk-averse than men. Younger and more educated individuals are willing to take more risks, but they are apprehensive about doing so due to a lack of resources, investment capital, and knowledge. The study shows a linkage between gambling and risk-taking when making economic decisions in a bad

economy. The higher the risk tolerance of an investor, the good portfolio and investment decision-maker he becomes. Thus, risk tolerance influences investors' investing decisions and defines the composition of various assets in their portfolios. Individual investors' risk tolerance may alter due to exogenous factors such as key life experiences. (Chavali & Mohanraj, 2016) investigates the elements that impact investment risk tolerance and decision-making. Investors who invest regularly are the target clients. Age, gender, occupation, and yearly income were used to categorise these respondents. (Hallahan et al., 2003) Their study investigates the link between a psychometrically generated measure of subjective financial risk tolerance and a number of demographic traits frequently utilised as the foundation for estimations of investors' attitudes toward financial risk that are derived heuristically. They found that risk tolerance displays concavity with respect to income across all age groups and regardless of gender. Interestingly, their study did not find any significant relationships between education, marital status, or dependents, which were previously found to be significant drivers of an individual's attitude toward risk.

Individual investors make investments based on their risk tolerance. Before performing an investment transaction, risk-averse investors weigh many criteria and seek diverse information. This study reveals that the age and gender of investors impact their risk tolerance ability. Investors will always be impacted by their risk tolerance when investing, as each investor has a unique risk tolerance. Using logistic regression, (Chaulk et al., 2003) discovered that financial risk tolerance and risk-taking behaviour are influenced by gender, marital status, academic achievement, and income level and found no correlation between age and risk tolerance.

This paper studies the investor's psyche, which influences his investment decisions and patterns. This study is aimed to establish the connection between demographic characteristics and investment decisions. We also assessed individual investors' financial risk tolerance in the Muzaffarpur district. Risk tolerance can be summarised as the level of comfort and uncertainty an investor can tolerate in the stock market. It is often understood that risk tolerance changes with age, gender, education and occupation. Risk tolerance in this study is determined with the help of a well-developed questionnaire.

3. Objectives of this study

1. To investigate the relationship between demographic characteristics and the financial risk tolerance of individual investors.

2. To study the risk attitude of the Investors using the Grable Lytton scale.

3.1 Hypotheses for the study

- H₀, There is no association between gender and financial risk tolerance.
- H₀₂, There is no association between occupation and financial risk tolerance.
- H₀₃, There is no association between marital status and financial risk tolerance.
- H₀₄, There is no association between income and financial risk tolerance.
- H₀₅, There is no association between family size and financial risk tolerance.
- H₀₆, There is no association between education and financial risk tolerance.

4. Research Methodology

4.1 Data and Sample

This study employs a questionnaire survey method. The data was collected from the retail investors of Muzaffarpur district (urban), Bihar, India. The study was conducted in December 2019-2020 with 150 retail investors in the age group of 18-30 with various demographic factors and levels of investment experience. The purposive sampling technique was adopted in this investigation to accommodate all of the survey's respondents. Out of the 150 questionnaires used by different broking houses and surveys, 119 were present while finalising the data set. The responses were collected with the help of various investors' friend circles and Stockbrokers in the Muzaffarpur district. A 13-point scale questionnaire developed by (John Grable et al., 2010) was used to study investor respondents' risk profiles.

4.2 Variables used in the study

Figure 1. Research model

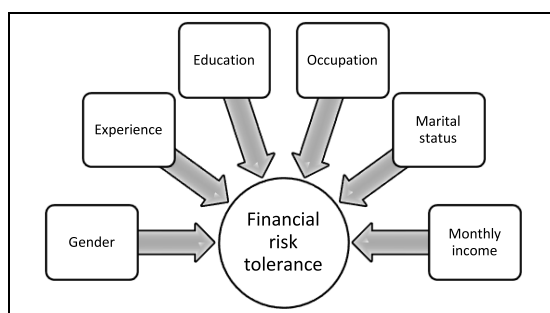


Table 1. Respondents' risk profile

Financial risk tolerance profile	Risk score range	Number of respondents	Percent %
Low-risk tolerance group (Conservative investors)	0-17	8	6.7226
Below-average risk tolerance	18 to 21	22	18.4874
Average risk tolerance (Moderate investors)	22 to 27	59	49.5798
Above-average risk tolerance	28 to 31	25	2.0084
High-risk tolerance (Aggressive investors)	32 to 46	5	4.2016
Total	25.09244	119	100

Source: Primary data

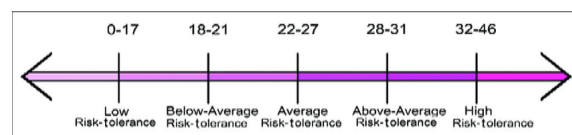
This study uses six demographic features of respondents: namely gender, education, occupation, experience, marital status, and income. These are used as the independent variable with the FRT. The dependent variable Financial risk tolerance is measured with the help of the FRT tool developed by (John Grable et al., 2010). A descriptive analysis of the independent variable is displayed in Table no. 2. Further respondents were classified into five risk profile categories based on their replies and scores: the risk tolerance profiles include low-risk tolerance, below-average risk tolerance, medium risk tolerance, above-average risk tolerance, and high-risk tolerance.

5. Data analysis

The analysis of this study was carried out in two phases. In the first phase, the demographic variables and financial risk tolerance were tested with the help of chi-square and hypothesis testing. In the study's second phase, we analyse Muzaffarpur respondents' risk tolerance ability. The questions asked to assess the FRT of respondents are adopted from (J Grable, 1999). The questionnaire's first dimension is the prospect theory which is given by (Kahneman & Tversky, 1979). This theory is also known as loss aversion, and it explains people's perceptions of gains and losses and the risk behaviour of an investor. Prospect theory evaluates investors' choices regarding gains and losses (Shefrin & Statman, 1993). In different sections of the questionnaire, investors are asked about Guaranteed vs likely gambles, general risk choice, choosing between definite loss and gain, risk in relation to experience and knowledge, risk as a degree of comfort, speculative risk, prospect theory, and investment risk are all elements of financial risk tolerance tested by the questionnaire.

5.1 Financial risk tolerance score

Figure 2. Grable and Lytton financial risk tolerance scale



Source: Grable and Lytton

In figure no. 2, Grable and Lytton's risk profile system or the financial risk tolerance categorises individuals into five risk tolerant groups based on risk scores ranging between 0 - 46, categorising from risk-avoiding to risk-seeking. The risk groups are rearranged in this study, conveniently dividing them into three categories: conservative, moderate, and aggressive. To put it another way, low, medium, and high-risk groups can exist alongside one another without impacting the risk tolerance limits of Grable and Lytton's risk profile system. Table no. 1 illustrates that the investors of the Muzaffarpur district come under the moderate investor category. A large percentage (49.5798) of the population falls under the average risk tolerance category, while the second large percentage (21.0084) falls above-average risk tolerance. The third large percentage (18.4874) tends to be below-average risk tolerance, followed by low-risk tolerance (6.7226) and high-risk tolerance (4.2016). The study's findings suggest that the age

group 18-30 (young) in the district is well-to-do in stock market investing and a participating population in the capital market. The young population's risk-taking capacity motivates them to take risks and generate income. The study shows that the average risk tolerance score of young investors in the Muzaffarpur district is 25.09244, which is the average risk tolerance group. The findings suggest that these investors know the market and risk involved in it. Hence, we can conclude that young investors of Muzaffarpur tend to take risks as we see that nearly 25% of the population comes under the aggressive investor category. The advantage young investors possess is that they have new investment insights and have the time to cope even when they lose. It is always suggested in the investment arena that the capital market is subject to market risk, and one should be very careful before investing in it. Therefore, early bird investors must exercise discipline while investing.

5.2 Demographic variables and Financial Risk Tolerance

Table 2. Demographic profile of the surveyed investors with risk tolerant score

Variables	Frequency	Percent	Risk Tolerance
Gender			
Male	87	73.1	25.9540
Female	32	26.9	22.75
Experience			
Less than 3 years	60	50.4	25.0333
3-5 years	9	16	26.2631
More than 5 years	40	33.6	24.875
Education			
High school	53	10.1	26
Graduate	265	68.9	25.2073
Post Graduate	99	21	24.28
Occupation			
Government employee	17	13.4	23
Private employee	54	45.4	25.0926
Businessman	8	10.9	26.3846
Self-employed	23	12.6	24.8
Student	16	12.6	28.0667
Home Maker	5	5	21.1667
Marital status			
Married	49	41.2	24.7143
Single	70	58.82	25.3571
Monthly income			
Less than 25k	42	35.3	25.80952
25k-50k	68	57.1	24.79412
More than 50k	09	7.6	25.11111

Source: Primary data

Table no. 2 describes the entire data set of investors of Muzaffarpur district falling in the age group of 18-30 with their FRT score. The average risk-tolerant score

of Muzaffarpur is 25.0924. Risk tolerance varies from investor to investor based on several demographic factors. From the table above, we observe gender and

FRT, where male respondents are more risk tolerant than female respondents. According to (Barber & Odean, 2001), male investors are more confident and risk-tolerant than female investors. Experience plays an essential role in the investor's performance. It is evident from the table that experienced investors have excellent FRT scores. Education is considered one of the benchmarks to becoming a successful investor.

Interestingly it is worth noting that the risk tolerance of a high school-passed respondent involved in the business activity has high FRT score than the graduates and post-graduate respondents. The respondent's risk tolerance is based on their profession also affect their risk tolerance. The above table illustrates that government employees are less risk-tolerant than their private sector counterparts. We notice that those Investors who are actively involved

in the business have higher FRT than self-employed individuals. The student community in recent days has been investing rigorously. The FRT score of the students' investors is the highest among all, whereas the homemaker's FRT is the minimum compared to all investors. Young married investors are marginally behind single investors. The above table shows that married investors are willing to take risks and invest. Finance is considered a vital component in any business and investment. Income is the primary source for investment activities; therefore, investors with high-income show high-risk tolerance and those with low-risk tolerance have lower incomes. In order to ascertain and validate the FRT score with demographic variables for the population, we used the chi-square test. The association of the independent variable with FRT is discussed in table no. 3.

Table 3. Association between demographics and Financial risk tolerance

	Chi-square test results	Value	df	Asymptotic Significance (2-sided)	Result
Gender and FRT	Pearson Chi-Square	18.16	2	0.000	Reject H0
	Likelihood Ratio	18.181	2	0	
	Linear-by-Linear Association	11.581	1	0.001	
	N of Valid Cases	119			
	a. 0 cells (0.0%) have an expected count of less than 5. The minimum expected count is 9.68.				
Experience and FRT	Pearson Chi-Square	8.309	4	0.081	Accept H0
	Likelihood Ratio	8.332	4	0.080	
	Linear-by-Linear Association	0.310	1	0.578	
	N of Valid Cases	119			
	a. 0 cells (0.0%) have an expected count of less than 5. The minimum expected count is 5.75.				
Education and FRT	Pearson Chi-Square	8.999	4	0.061	Accept H0
	Likelihood Ratio	10.457	4	0.033	
	Linear-by-Linear Association	5.012	1	0.025	
	N of Valid Cases	119			
	a. 3 cells (33.3%) have an expected count of less than 5. The minimum expected count is 3.63.				
Occupation and FRT	Pearson Chi-Square	29.69	10	0.001	Reject H0
	Likelihood Ratio	34.046	10	0	
	Linear-by-Linear Association	5.358	1	0.021	
	N of Valid Cases	119			
	a. 11 cells (61.1%) have an expected count of less than 5. The minimum expected count is 1.82.				
Marital status and FRT	Pearson Chi-Square	.933	2	0.627	Accept H0
	Likelihood Ratio	0.93	2	0.628	
	Linear-by-Linear Association	0.553	1	0.457	
	N of Valid Cases	119			
	a. 0 cells (0.0%) have an expected count of less than 5. The minimum expected count is 14.82.				
Income and FRT	Pearson Chi-Square	17.15	6	0.009	Reject H0
	Likelihood Ratio	19.855	6	0.003	
	Linear-by-Linear Association	0.231	1	0.631	
	N of Valid Cases	119			
	a. 6 cells (50.0%) have an expected count of less than 5. The minimum expected count is 30.				

Source: Primary data analysis using SPSS 26

Table no. 3 shows the results for the significance test – The chi-square test is discussed. Chi-square values for the Gender and FRT are 0.000, which is less than 0.05. Therefore, we conclude that there is a gender-specific association between gender and financial risk tolerance rejecting the null hypothesis, i.e., no association between gender and FRT. We accept the alternative hypothesis indicating a relationship between gender and financial risk tolerance. (Chavali & Mohanraj, 2016) in their study finds that in comparison to male and female investors, male investors tend to exhibit higher risk tolerance than female investors. The Chi-square value for Occupation and FRT is 0.001, which is less than 0.05; We found a significant p-value; therefore, we determine that occupation and FRT are significantly related by rejecting the null hypothesis. The Chi-square value for marital status and FRT is 0.627, which is greater than 0.05, which means that the p-value is greater than .05; therefore, we accept the null hypothesis and come to the conclusion that there is no meaningful association between marital status and FRT. When chi-square is calculated for Income and FRT, the resulting value comes to 0.009, less than 0.05.

As a result, we find that there is a significant association between income and FRT; hence we reject the null hypothesis. It implies that their risk tolerance will increase as an investor's income level rises. The Chi-square value for education and FRT is 0.061, which exceeds 0.05. It suggests accepting the null hypothesis and concluding that there is no conclusive relationship between education and financial risk tolerance. The result throws a perspective that even an investor who is not educated can be good at investing and become a good investor. Daily trading (intraday) can be kept as an exemption from this finding.

5.3 Prospect of Risk attitude assessed in the questionnaire

This section of the study covers a few behavioural topics, including selecting between guaranteed and likely bets, choosing between likely losses and gains, choosing between known risks, the relationship between experience and knowledge and risk, risk as a measure of comfort, speculative risk, prospect theory, and investment risk. The following tables demonstrate the outcomes of the young investors' behavioural attitude.

Table 4. In addition to what you have, you've been granted 1,000. Now choose from the following.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A sure gain of ₹ 500	99	83.2	83.2	83.2
	A 50% chance of gaining ₹ 1,000 and a 50% chance of gaining nothing	20	16.8	16.8	100.0
	Total	119	100.0	100.0	

Source- Primary data

Prospect theory is discussed in terms of gains in table 4. 83.2% of the people surveyed preferred a sure gain of Rs. 500, whereas only 16.8% are ready to take some risk for Rs. 1000 in a 50-50 probability. Prospect

theory states that people choose a definite reward over a moderately uncertain choice. However, as can be seen from the comments of the respondents, they may find the unsure alternative profitable.

Table 5. In addition to what you have, you have been granted ₹ 2,000. Now choose in between.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A sure loss of ₹ 500	57	47.9	47.9	47.9
	A 50% chance of losing ₹ 1,000 and a 50% chance of losing nothing	62	52.1	52.1	100.0
	Total	119	100.0	100.0	

Source- Primary data

Prospect theory in terms of losses is discussed in the table above. According to the prospect hypothesis, individuals favour small losses that are unclear over substantial losses because people tend to be risk-averse when it comes to guaranteed loss. In the case of an additional Rs. 2000, 52.1% would choose a specific loss of Rs. 500, while 47.9% would have taken a chance and chosen a 50% chance of losing Rs. 1000

and a 50% chance of losing nothing. Only 47.9% of respondents selected a guaranteed loss of Rs. 500 because, in general, people avoid losses. Based on the replies in Tables 4 and 5, we may draw the conclusion that the certainty effect makes risk-averse people choose a definite benefit over one that might be greater but is more likely. People prefer larger, likely losses to smaller, assured losses.

Table 6. Which investment options would you prefer if you had 20,000 to invest?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Invest 60% in low-risk investments, 30% in medium-risk investments, 10% in high-risk investments.	26	21.8	21.8	21.8
	Invest 30% in low-risk investments, 40% in medium-risk investments, 30% in high-risk investments.	76	63.9	63.9	85.7
	Invest 10% in low-risk investments, 40% in medium-risk investments, 50% in high-risk investments.	17	14.3	14.3	100.0
	Total	119	100.0	100.0	

Source- Primary data

Table 6 describes the risk as the level of confidence in the investment. Around 21.8 per cent of respondents are risk-averse and prefer to invest 60% of their total funds in 10% in high-risk securities, 30% in medium-risk securities, and 60% in low-risk securities. 63.9 % of the respondents advocate allocating the first 30% of their 100% capital to a low-risk investment, the second 40% to medium-risk investment and the final 30% in high-risk assets, and 14.3% of respondents preferred investing as 10% of investments are low-risk, 40% are

medium-risk, and 50% are high-risk. The young respondents show risk-taking behaviour as moderate because most of them chose to invest in the second option. This discomfort of the respondent experiencing a complete loss is greater than the discomfort of receiving an equal absolute gain. This effect is loss aversion bias, which causes investors to fear capital preservation (Tversky, A. Kahneman, 1979).

Table 7. How would your best friend describe you as a risk-taker?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	As a real risk avoider	8	6.7	6.7	6.7
	As a Cautious	25	21	21	27.7
	Who is willing to take risks after doing adequate research	60	50.4	50.4	78.2
	A real gambler	26	21.8	21.8	100
	Total	119	100	100	

Source- Primary data

Table 7 suggests that most of the respondents are willing to take risks having done adequate research to gain adequate returns on their capital invested. They form 50.4% of the total respondents. Generally, the majority of Indians are risk averse. In the youth population, 21.8% said their best friend described them as real gamblers and risk takers. Only 6.7% of the

population is risk-averse and unwilling to accept any chances. Those who view themselves as competent and experienced are more risk-seekers than others. 50.4% of investors believe that they can take risks shows the aggressive nature of an investor, which is a long-term concern for an investor.

Table 8. You are on a TV game show, and you need to pick one of the following. What would you choose?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	₹ 1,000 in cash	43	36.1	36.1	36.1
	A 50% chance of winning ₹ 5,000	44	37.0	37.0	73.1
	A 25% chance of winning ₹ 10,000	20	16.8	16.8	89.9
	A 5% chance of winning ₹ 100,000	12	10.1	10.1	100.0
	Total	119	100.0	100.0	

Source- Primary data

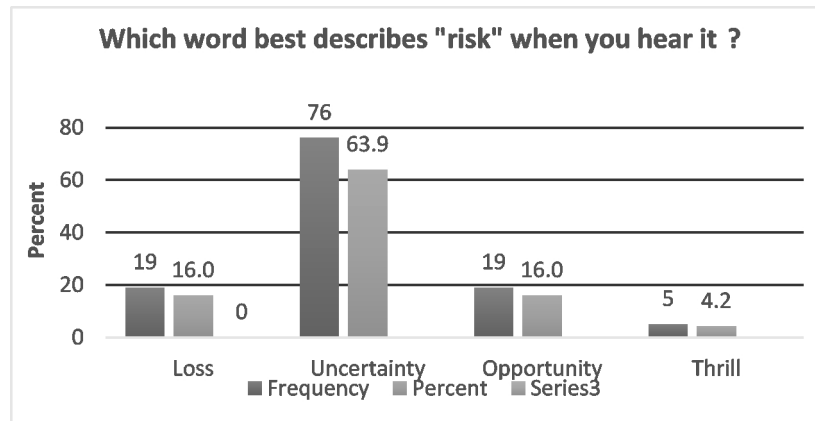
Speculation is considered an essential element of risk tolerance. The speculative behaviour of an investor signifies his attitude toward risk-taking ability

(Lampenius & Zickar, 2005). Table 8 measures respondents who tend to be speculative and risk-tolerant when considering their money. 36.1% of the

young population turns out to be risk takers, as 37%, 16.8%, and 10.1% of respondents consider taking the risk to increase their chance of winning more money. They select from the available option of a 50% chance of winning 5000, 25% chance of winning ₹ 10000, and even speculate on winning ₹ 100000, for which the

probability of winning is only 5%. Only 36.1% of the population surveyed chose to be risk-averse and preferred ₹1000 in cash. The findings suggest that investors in Muzaffarpur have mixed responses to their speculative behaviour.

Figure 3. Investors' choice when they hear the word 'RISK.'



Source- Primary data

(Bernstein, n.d.) Investors who regard risk as synonymous with loss and uncertainty tend to be risk-averse (conservative investors). Those who consider the term risk as an opportunity and thrill are risk takers (aggressive investors). In the figure above, around 63.9% of the respondents treat the word risk as uncertainty, and 16% consider it a loss. 16% of young investors regard risk as an opportunity, and only 4.2% of the population treats risk as a thrill and enjoys taking a risk.

7. Conclusion

Studying investors' investment patterns and financial decision-making has attracted and intrigued many academicians, financial service providers, financial planners, and investors. Demographic characteristics and financial risk tolerance impact individual investing patterns and decision-making. This current paper finds out these issues by using Grable and Lytton scale to measure the risk tolerance of individual investors. In this study, individual investors' anticipated demographic or socio-economic variables have mixed responses. The study finds that gender, occupation and income have a significant association with the FRT, and the variables such as experience, education, and marital status have no association with financial risk tolerance. This study was conducted on young investors to understand their investment preferences and risk tolerance in their age group. The study concludes that the youth investors 18- 30 of Muzaffarpur have average risk tolerance and average control of their investment behaviour. Education has no impact on investment, but income has. It is suggested that they should understand the stock market first and then adequately invest and trade.

The future study could also focus on the investor's

characteristics which are less touched; on home ownership, religiosity, locus of control, the mood of the investor and Ethnicity, to better understand the risk tolerance behaviour of an investor.

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The Dynamics Between Mutual Fund Flows and Stock Returns: An Empirical Analysis in Presence of Structural Breaks

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Abstract

The study investigates the dynamic relationship between mutual fund flows and stock returns with special reference to Indian stock market using monthly data over the period of January, 2006 to December, 2020. The study has been conducted using the Maki cointegration test to analyse the long run equilibrium relationship; DOLS-FMOLS-CCR cointegration regressions have been used to investigate the long run coefficients; ARDL ECM for estimating short run coefficients and Granger causality test for short run causal relationship between variables. The impact of structural breaks on the model has been incorporated by using dummies. The results reveal that the stock returns have positive relationship with mutual fund inflows. In other words, mutual funds inflows increase with positive returns in stock market. The causality test also reveals that the stock returns cause mutual funds to invest more.

Key words: Stock returns, Mutual funds, Maki Cointegration Test, ARDL, Structural break

Introduction

Determinants of flows into Mutual funds have been analysed through micro level as well as macro level studies. Micro level studies consider fund flow into an Asset management company (AMC) and the returns that the AMC provided. Macro level studies (Warther, 1995; Oh & Parwada, 2007) started with taking aggregate fund flows into mutual funds industry as mutual fund flows and its relation with market wide returns i.e. stock returns. Further some studies (Mishra, 2011; Thiripalraju & Acharya, 2013; Arora, 2016) changed the proxy of mutual fund flows as they started considering the aggregate flows invested by all mutual fund managers into stock market and their relationship with stock returns or stock price movements. These studies were further improved by incorporating information of macroeconomic variables. Here, the problem to be faced can be proper identification of the variables to be included. The inclusion of variables can be justified by referring different existing research papers or referring theories that support the inclusion of those variables. Another major issue is to model the unexpected changes in the economy like war or pandemic and see if they make drastic and abrupt changes in the series. It is called structural break. Studies generally forgot to consider the impact of the breaks in the individual series and also in the model which may lead to unreliable modeling and produce unreliable results. Hence, the study endeavors to provide fresh evidence on the relationship between mutual fund flows and stock returns in presence of structural breaks.

The literature dealing with relationship between mutual funds and stock returns explains different aspects of it through one or more of the three hypotheses i.e. Feedback trading hypothesis, Price pressure hypothesis and Information revelation hypothesis. The feedback trading hypothesis and price pressure hypothesis are theories explained through behavioral finance. Feedback trading hypothesis explains how the increase or decrease in stock prices leads to more fund inflows or outflows and price pressure hypothesis explains how the increase and decrease in fund flows exert pressure on stock prices and market is affected. The information revelation hypothesis suggests that market prices carry fundamental information with them. So the expectations for increase or decrease in prices are rational and not affected by the demand of stocks unrelated to fundamental news. The studies show mixed results in case of Indian stock market.

Literature Review

The dynamics between mutual fund flows and stock market has been first investigated by Warther (1995) with the objective to investigate association between aggregate fund flows and market wide price fluctuations. The study has employed correlation analysis between aggregate mutual fund flows into mutual fund industry and market returns. The conclusion of the study indicates that expected and unexpected net flows behave differently. Unexpected flows were found to be associated with concurrent security returns while expected stock returns were not associated with the returns. Also, the study found no evidence of feedback strategies. However, the study hints about the presence of either the price pressure hypothesis or the information effect hypothesis as mutual fund flows and security returns were found to be moving together. Taking

instance from the study, Oh & Parwada (2007) tried to examine the dynamics between stock market returns and mutual fund flows with special reference to Korea. The study has considered sales, purchases and net flows into mutual funds, stock returns and employed VAR analysis in presence of different macroeconomic variables. The conclusion of the study suggests that fund flows into mutual funds impact stock returns. Also, the fund inflows have more impact on stock returns in comparison to the outflows. Burucu & Contuk (2011) empirically analysed the dynamics between mutual fund flows and stock returns in case of Turkey. The study employed Joahansen cointegration test and granger causality and found no short run causality between the variables. However, long run relationship was found to exist between the two. All these studies provided a base for investigating the relationship between stock returns and mutual fund flows and were based on the data considering the fund flows into mutual fund industry. Mishra (2011) used mutual funds investment in stock market as fund flows data and analysed the relationship between stock returns and fund flows. The study employed Toda Yamamoto causality test and found that stock returns cause mutual funds investment. Arora (2016) investigated the relation between investment of Domestic and Foreign institutional investors and stock returns in India. For the purpose, the study employed Correlation, Granger causality and VAR analysis to conclude that investment behavior of both the institutional investors are opposite to each other. Qureshi (2019) investigated the relationship with special reference to the ASIAN developing countries with quarterly data from the year 2001 to 2007. By employing Panel VAR, the study found that market returns, money supply, investment growth rate, GDP, unemployment rate, deficit significantly impact the fund flows into equity mutual funds. Lobao & Levi (2016) employed VAR and Granger causality and found positive comovements between mutual fund flows and stock returns in case of Portugal stock

market. Kopsch et al. (2015) investigated the determinants of mutual fund flows in Sweden stock market through VAR and Granger causality. The study rejects the feedback trading hypothesis and price pressure hypothesis for Sweden market. Thiripalraju & Acharya (2013) examined the relationship between net investments by mutual funds and stock returns through VAR modeling and causality analysis. The study found that mutual fund flows have a negative relationship with lagged stock returns. Also, the study commented that the relationship between the two is period specific.

The brief literature survey describes how the research on the area has provide evidences using different methodologies i.e. first started with correlation, then OLS regression, Granger causality test. Also the studies differentiated between stationary and nonstationary variables and employed VAR modeling, Johansen Co-integration test, Toda Yamamoto causality test based on the statistical properties of data. But none of the studies provided evidence after considering structural breaks in the variables. Modeling the variables in absence of structural breaks can produce distorted results. Hence, the present study endeavors to consider structural breaks while modeling the mutual fund flows and stock returns in an equation. Taking instance from the findings of Oh & Parwada (2007) that the purchases show more strong relationship than sales, the study has considered purchases by mutual funds representing mutual fund flows and stock returns of BSE 500 for analysis.

Data and Methodology

Data

The objective of the study is to empirically explore the relationship between mutual fund inflows and stock returns in Indian stock market. For the purpose, the study has used secondary data from January, 2006 to December, 2020 with monthly frequency. A brief description of all the variables has been provided in the following table.

Table 1: Brief description of the variables

Variables	Proxy	Description	Data Source
Mutual fund flows	Purchases by mutual funds	Gross purchases by mutual funds in Indian stock market (<i>lnmfp</i>)	sebi.gov.in
Stock returns	BSE 500 index	First difference of log series of BSE Sensex (<i>ret</i>)	in.finance.yahoo.com

Methodology

The major issues that decide the methodology to be used for modelling time series variables are the unit root problem and presence of structural break in the variables. When a time series abruptly changes at a point in time, it is called a structural break. The present

study has employed Bai and Perron multiple structural break test that considers presence of maximum 5 structural breaks in the variables. Methods which work well with the variables without structural breaks can provide unreliable results with the variables having structural breaks. Hence, it is of vital

importance to check for the presence of structural breaks first and then choose the appropriate test for checking the presence of unit root. Traditionally the unit root properties of time series variables are checked through ADF, PP or KPSS tests. These tests do not take into account the presence of structural breaks. Hence, the study has employed Zivot and Andrews unit root test to check the stationarity status of the variables. The test allows presence of one structural break. To perform this test, we have considered all the three models of the test: model 1 considers break only in the intercept, model 2 considers break only in trend while model 3 considers break in both trend and intercept. The null hypothesis of the test assumes that the series has a unit root in presence of one structural break. Variables that doesn't contain unit root are said to be stationary while the

variables with unit root are nonstationary variables. Stationary variables can be modelled through OLS regression or through VAR specification. The mean and variance of non-stationary variables are not constant over time. So these variables can only be modelled if they have a long run equilibrium relationship. It is checked through cointegration tests. If the variables are found to be cointegrated, they can be modelled in an equation and then their long run and short run coefficients are estimated. If the variables are found to be integrated at I(1) Johansen cointegration test can be applied. But Johansen & Juselius test don't consider structural breaks while searching for cointegrating vector. Hence the study has applied Maki (2012) cointegration test which considers maximum 5 structural breaks while searching for cointegration among the variables.

Maki (2012) cointegration test allows for unknown multiple breaks considering the following regression models:

$$y_t = \mu + \sum_{i=1}^k \mu_i D_{i,t} + \beta' x_t + u_t \quad (1)$$

$$y_t = \mu + \sum_{i=1}^k \mu_i D_{i,t} + \beta' x_t + \sum_{i=1}^k \beta'_i x_t D_{i,t} + u_t \quad (2)$$

$$y_t = \mu + \sum_{i=1}^k \mu_i D_{i,t} + \gamma t + \beta' x_t + \sum_{i=1}^k \beta'_i x_t D_{i,t} + u_t \quad (3)$$

$$y_t = \mu + \sum_{i=1}^k \mu_i D_{i,t} + \gamma_t + \sum_{i=1}^k \gamma_i t D_{i,t} + \beta' x_t + \sum_{i=1}^k \beta'_i x_t D_{i,t} + u_t \quad (4)$$

Eq. (1) is called the level shift model and allows for breaks in μ only. Eq. (2) is called the regime shift model which allows for breaks in β in addition to μ . Eq. (3) allows the presence of trend in addition to the breaks in β and μ . Eq. (4) allows the presence of breaks in μ , β and trend also. The null hypothesis of the test assumes that there is no cointegration while the alternate hypothesis assumes the presence of cointegration with structural breaks. If the cointegration test ensures the presence of equilibrium relationship between the variables, the long run and short run coefficients are estimated. The study has employed Dynamic OLS cointegration regression to estimate the long run coefficients of the model and also employed the FMOLS and CCR regression to cross check the results. After estimating the long run variables, the study has employed ARDL ECM model for estimating short run coefficients. The coefficient of error correction term as computed through the model should be negative. It indicates that the rate at which the variable converges to its equilibrium level. After estimating the short run coefficients, different diagnostic tests are conducted for ensuring the stability of the model. The Ramsey- Reset test is

employed to check the stability of the model, the ARCH test is employed for checking the heteroskedasticity and Breusch-Godfrey Serial Correlation LM Test is employed to check for the presence of serial correlation. Apart from these diagnostic tests, the study has also derived the CUSUM and CUSUM-SQ plots to check the overall stability and reliability of the model. If the plots lie between the 5% upper and lower bounds, the model is said to be stable and reliable. Next, the Granger causality test has been employed to check the direction of causality between the variables.

Results and Discussion

First the study has analysed the statistical properties of variables through descriptive statistics. Table 1 discloses the descriptive statistics of the variables. It shows the standard deviation of *ret* is less than that of the *lnmfpr*. The skewness value shows that *ret* is negatively skewed while *lnmfpr* is positively skewed. However, since both the values are quite near to zero we can conclude that both the series are fairly symmetrical. The kurtosis value is also near to three for both the variables. The Jarque- Bera test shows that the variables failed to attain normality.

Table 2: Descriptive statistics of the variables

	Mean	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	p-value
<i>ret</i>	9.047	9.8146	8.0808	0.4195	-0.1631	2.1368	6.3860	0.0410
<i>lnmfpr</i>	9.899	11.630	8.6500	0.7050	0.4497	1.9568	14.2286	0.0008

Source: calculated by the Researcher

Apart from analysing the descriptive statistics, the visual observation of the variables help us to detect the presence of structural breaks and trend which may lead

to non-stationarity in these variables. Figure 1 represents the time plots of both the variables.

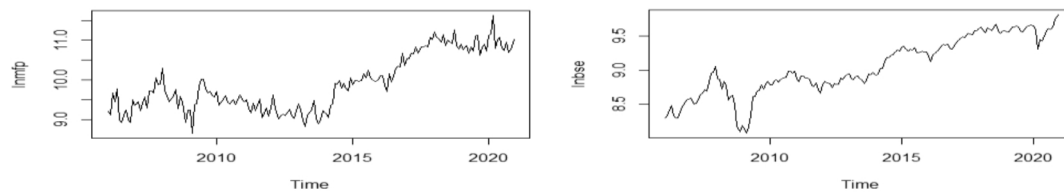


Figure 1: Time plots of the variables

The time plots of *lnmfp* and *ret* shows that the variables possess some sort of trends which make them look nonstationary and they also have some sharp increase or decline moments which may be due to structural breaks. The nonstationarity of variables can be checked through the traditional unit root tests i.e. ADF, PP, KPSS tests but these tests do not consider the presence of structural breaks in the variables. Hence,

studies choose Zivot and Andrews test in the presence of structural break. The study first attempts to check for the presence of structural breaks in the variables by employing Bie- Perron multiple structural breaks test. The following figures show significant break points indicated by the Bai- Perron test. Figure 2 shows the break points in the time plots of the variables.

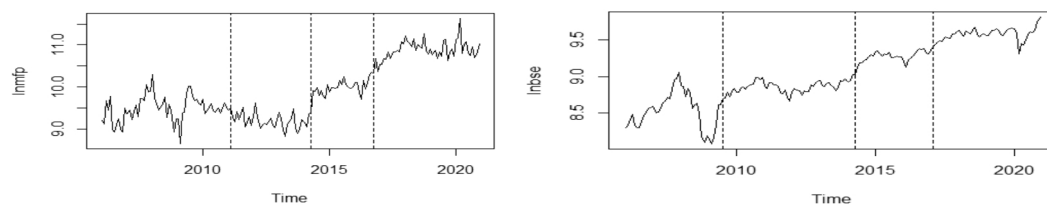


Figure 2: Break points in the time plots of the variables

The test has identified three break points in both the variables. After confirmation of presence of break in the variables, it becomes necessary for us to employ

Zivot and Andrews unit root test. The following table presents the results of unit root test.

Table 3: Zivot and Andrews unit root test

Zivot and Andrews unit root test						
H0: Series has a unit root with a structural break						
Variables	At level			At first difference		
	Intercept	Trend	Both	Intercept	Trend	Both
<i>lnmfp</i>	-3.735946	-3.506293	-4.148684	-13.64258*	-13.47677*	-13.64556*
Break date	2016M05	2012M07	2014M03	2013M05	2017M04	2013M12
<i>ret</i>	-4.784658***	-4.394560***	-4.637933	-12.01773*	-11.86475*	-12.64858*
Break date	2008M08	2008M12	2014M03	2009M03	2008M06	2008M12
Critical values @1%	-5.34	-4.80	-5.57	-5.34	-4.80	-5.57
@5%	-4.93	-4.42	-5.08	-4.93	-4.42	-5.08
@10%	-4.58	-4.11	-4.82	-4.58	-4.11	-4.82

Source: calculated by the Researcher

*p-value <0.01, **p-value <0.05, ***p-value <0.10

The test indicates that all the three models of unit root test suggest that the *lnmfp* is non-stationary at level and becomes stationary after first difference. *ret* shows some sort of stationarity under first two models that too at 10% level of significance only. The third model rejects the stationarity of *ret* at level. The *ret* also becomes stationary after differencing. The study has considered both the variables as integrated of I(1)

since both the variable becomes stationary after first difference even at 1% level of significance. Since the order of integration of the variables is I(1) and the presence of structural break is evident, the study has employed Maki (2012) cointegration test that detects long run equilibrium relationship in the variables under study. The following table presents the result of Maki cointegration test.

Table 4: Maki (2012) cointegration test

Maki(2012) Cointegration test H0: No Cointegration Number of break points (m) ≤ 5					
	Test statistic	Critical Values			Break Points
		@1%	@5%	@10%	
Model 0	-9.730*	-5.959	-5.426	-5.131	2007:07, 2011:02, 2014:04, 2016:08, 2018:04
Model 1	-9.974*	-6.193	-5.699	-5.449	2008:03, 2011:02, 2014:04, 2016:08, 2018:04
Model 2	-9.936*	-6.915	-6.357	-6.057	2009:02, 2011:02, 2013:08, 2015:07, 2017:11
Model 3	-12.371*	-8.004	-7.414	-7.110	2007:10, 2009:08, 2014:02, 2016:02, 2017:11

Source: Source: calculated by the Researcher
*p-value <0.01, **p-value <0.05, ***p-value <0.10

The study has presented results of all the four models for the cointegration analysis. The test rejects the null hypothesis of no cointegration at 1% level of

significance in all the four models. The break dates configured by the cointegration test correspond to the following events:

Table 5: Description of events corresponding to break dates

Break dates	Events
October, 2007 (dv1)	SEBI imposed curbs on P-notes, massive sell off of foreign funds
August, 2009 (dv2)	SEBI abolished entry loads and asked mutual fund distributors to directly charge commissions to the clients which resulted in dropped sales of mutual funds
February, 2014 (dv3)	Low inflation, Higher manufacturing PMI
February, 2016 (dv4)	India overtook China as the fastest growing economy in the world amid a failing global economy
November, 2017 (dv5)	Govt. launched Bharat 22 ETFs, shares worth Rs. 14,500 crores were allotted

Source: compiled by the Researcher

Table 6: Long run coefficients

FMOLS-DOLS-CCR Long run coefficient estimates						
Dependent Variable: <i>lnmfp</i>						
	FMOLS Coefficient	t-statistics	DOLS Coefficient	t-statistics	CCR Coefficient	t-statistics
<i>ret</i>	0.899803*	4.371991	0.982664*	4.200082	0.899444*	4.333376
<i>C</i>	1.686100	0.960571	0.994055	0.498017	1.689422	0.957300
<i>dv1</i>	0.182986	1.526855	0.162991	1.304066	0.182659	1.513554
<i>dv2</i>	-0.528650*	-4.633707	-0.549717*	-4.597365	-0.528471*	-4.655156
<i>dv3</i>	0.236383***	1.926206	0.209266	1.612028	0.236492***	1.914818
<i>dv4</i>	0.412659*	3.441948	0.402949*	3.277500	0.412852*	3.463020
<i>dv5</i>	0.325581*	2.867910	0.305592**	2.603943	0.325562*	2.845093

Source: Source: calculated by the Researcher
*p-value <0.01, **p-value <0.05, ***p-value <0.10

The table reports that the coefficient of *ret* is positive and significant which indicates that *ret* positively affect *lnmfp*. The coefficient of *dv1* which corresponds the break date October, 2007 is positive but statistically insignificant. The coefficient of *dv2* is negative and significant @1% level. The coefficient of *dv3* is significant @10% for both FMOLS and CCR models but DOLS showing an insignificant impact of

dv3 on *lnmfp*. The coefficient of *dv4* is positive and highly significant. It shows that online investment facility as mandated by SEBI led the mutual funds attract more funds from investors. The coefficient of *dv5* is also positive and significant at 1% level. After analysing long run coefficients, the study has examined short run coefficients from ARDL ECM model.

Table 7: Short run dynamics based on ARDL (3, 3) model

Variable	Coefficient	t-statistic	P-value
$\Delta (lnmfp_{t-1})$	-0.305864*	-3.503483	0.0006
$\Delta (lnmfp_{t-2})$	-0.132671	-1.568021	0.1188
$\Delta (lnmfp_{t-3})$	0.026753	0.387952	0.6986
$\Delta (ret_t)$	-0.143831	-0.696217	0.4873
$\Delta (ret_{t-1})$	0.887532*	4.094040	0.0001
$\Delta (ret_{t-2})$	0.502105**	2.223812	0.0275
$\Delta (ret_{t-3})$	0.134843	0.586901	0.5581
$dv1$	0.038215	0.610679	0.5423
$dv2$	-0.051213	-1.039570	0.3001
$dv3$	0.057902	1.206986	0.2292
$dv4$	0.006441	0.113171	0.9100
$dv5$	-0.034526	-0.659190	0.5107
C	-0.015678	-0.334184	0.7387
Ect_{t-1}	-0.349433*	-4.661367	0.0000

Source: Source: calculated by the Researcher

*p-value <0.01, **p-value <0.05, ***p-value <0.10

The short run dynamics shows that the coefficient of $\Delta (lnmfp_{t-1})$ is negative and highly significant. The coefficient of $\Delta (ret_{t-1})$ is positive and significant which indicates that mutual funds purchases are positively affected by the past returns. In other words, increasing returns lead to more inflows by mutual funds and vice-

versa. The error correction term (Ect_{t-1}) is negative and significant which indicates that in short run the series converges about 35% each month. All other coefficients are insignificant. Further, the study has employed the following diagnostic tests to ensure the stability of the short run model.

Table 8: Diagnostic Tests

	Test- statistics	p-value
Ramsey RESET Test (F -statistic)	1.619342	0.2013
Normality Test (Jarque- Berra)	2.276243	0.3204
Heteroscedasticity Test: ARCH	1.453205	0.2297
Breusch-Godfrey Serial Correlation LM Test (F -statistic)	1.840420	0.1420

Source: Source: calculated by the Researcher

*p-value <0.01, **p-value <0.05, ***p-value <0.10

The insignificant value of Ramsey test reveals that the functional form of the model is stable; the normality test ensures that the residuals are normal; ARCH test confirms that the model is free from heteroskedasticity; Serial correlation LM test

confirms that the model is free from serial correlation. The CUSUM and CUSUM-SQ plots also show that the model is stable since both the plots lie between the lower and upper bounds.

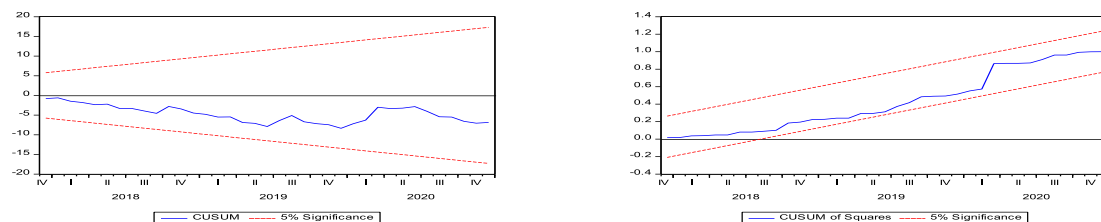


Figure 3: CUSUM and CUSUMSQ plots

Table 9: Pairwise Granger Causality Test

Null Hypothesis	Obs	F-statistics	P-value
$dret$ does not Granger cause $dlnmfp$	177	19.3281*	0.0000
$dlnmfp$ does not Granger cause $dret$		0.21592	0.8060

Source: Source: calculated by the Researcher

*p-value <0.01, **p-value <0.05, ***p-value <0.10

The results from causality test suggest that stock returns are the cause for mutual funds inflows while mutual fund inflows have no causal impact on stock returns.

Conclusion

The empirical study endeavours to investigate the dynamic relationship between mutual fund flows and stock returns. The study has considered purchases by mutual funds and stock returns of BSE 500 index as variables. The result of Bai- Perron test reveals that both the variables were affected by structural breaks and the unit root test suggests the order of integration of variables to be I(1). The Maki (2012) cointegration test found five structural breaks in the cointegrating equation which has been incorporated in the model through dummy variables. The long run coefficients test found that changes in stock returns causes heavy changes in inflows by mutual funds. Both share a positive relationship. The short run coefficients suggests that in short run mutual funds purchases are not significantly affected by concurrent stock returns but they are significantly affected by lagged returns. It indicates the feedback trading behaviour of mutual funds. The negative and significant coefficient of error correction term confirms the short run conversion of the mutual fund series and all other diagnostics tests confirms the reliability and stability of the model estimated. Further, the evidence from Granger causality test suggests that more stock returns causes inflows by mutual funds while inflows into mutual funds seems to have no effect on stock returns. Thus, the study concludes the behaviour of mutual funds as feedback traders according to results obtained in the study. But these results suffer from some limitations as the study has not considered the impact of macroeconomic variables on the relationship between the said variables. The study leaves a research gap that can be considered by further studies on the area.

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Study of customer preference towards various OTT players in Ahmedabad

Nili Shah, Sneha Shukla

Abstract

Purpose- This paper aims to discuss and analyze preference of customer towards choice of OTT platform, time spent over these platforms and impact of demographic variables on use of OTT application

Methodology- Descriptive research methodology of research is used with survey of 100 respondents of Ahmedabad. Data was analyzed using Chi square test statistic.

Findings-

From the study, it was found that Amazon and Hotstar are most preferred OTT platforms with movies and web series being their favorite. Though majority of the people are using OTT platform since 2 years, they are holding at least one OTT subscription and they spend on an average 2 hours on the same. Use of OTT platforms is not dependent on age or gender. Age, gender and Occupation has no significant impact on time spent on OTT platform.

Practical Implications- This paper will guide OTT players regarding choice of people and their preferences. Hence, in the competitive scenario, OTT platforms can take moves in direction with customer's viewing preference.

Keywords- OTT, Impact, Digital, media, theaters

Introduction

Indian OTT-over the top platform is experiencing new entrant and thousands of new users every day. In 2020, there were 29 million subscribers with 53 million Video OTT subscriptions (excluding bundled subscriptions of data plans), which is estimated to hike to 39 million subscribers in 2021 with 71 million subscription. (Jha, livemint, 2021) Covid has drastically impacted few industries by taking away their revenues, profit and making them almost impossible to sustain. Many industries as well as retailers had to shut down the operations. Apart from the companies that fail drastically, there is one industry who has seen highest growth during pandemic and that is digital entertainment industry.

Internet penetration rate of India was just 4% in 2007 which went up to 45% in 2021. Around 50% population that is 1.37 billion people had internet access this year due to which India ranked second in terms of active internet users in the world (Keelery, 2021). India had 1.10 billion mobile connections in January 2021 which is equivalent to 79% of Indian population and it is showing hike of 23 million since January, 2020. In 2016, when Jio entered the market with cheap data plans, the other telecom companies were left with no choice but to cut the rates. With reduced data plans, cheaper smart devices, smart phones as well as large number of internet users, India soon started climbing ladder of digitalization. Indian OTT market was started with entrant BIGFlix in 2008 by Reliance entertainment. With everything available at a click of finger, many of the industries have gone digital and people have welcomed that wholeheartedly and entertainment industry is one such segment. With Covid pandemic when people had to stay home, digital media largely took place of traditional media and few celebrities who were not seen in movies since long due to whatsoever reason, got a chance to prove themselves on OTT platforms. There are few celebrities who stated future of OTT in the interviews with media, Priya Mani is such example when she said 'Digital is future of entertainment' (Suresh, 2021). With expansion of OTT platforms, People now a days have started focusing more on content as well as content appealing shows instead of the shows that had blast just due to celebrities having a huge fan following. Hence, in such a cut throat competition, it's very difficult to survive with creative content in OTT industry.

What is OTT- 'Over the top' refers to media service offered to viewers directly through internet, wherein cable operator has no control over what is consumed by end customers.

Types of content-

Basically there are three types of OTT content

1. **OTT Television-** Examples are Netflix, Disney+ Hotstar, Hulu, Amazon Video, Pluto TV, YouTube Red, Peacock, Curiosity Stream
2. **OTT voice and messaging services-** Examples are Skype, Viber, WhatsApp, Facebook Messenger, WeChat, Line, Telegram and Kik.
3. **OTT audio-** Examples are Spotify, Gaana, SoundCloud,

Hungama, Wynk, Vodafone Music, JioSaavn, Apple Music, Amazon Music, Google Play.

OTT players into consideration

Below are facts of financial breakthrough that few OTT Players have achieved in short passage of time and stood strong in the competition.

Disney+Hotstar started their operations in February 2015 and achieved huge number of 5.36 million subscribers in year 2019 which further shoot up to 18.69 million in year 2020 and Video on demand by Disney+hotstar has touched 25 million subscribers in India by February 2021. (Jha, 2021) Though this platform is able to generate revenue of 5.76 billion Indian rupees in year 2018, 11.23 billion in 2019 and 16.28 in 2020, they are continuously making loss which is 4089, 4890, 3893, 5544 and 3618 millions for the year 2016 to 2020 respectively.

Netflix started its operations in Indian in 2016 with 584 million of total income in year 2018 which jumped up to 4705 million in 2019 and 9237 million in 2020. Netflix India successfully stood up with 89.2 million of profit and 4.6 million subscribers from its Indian operations in year 2020. Talking about another giant Amazon Prime Video had 4.34 million subscribers in 2019 and 5.83 in year 2020 (Biswas, 2021). Sonyliv entered Indian OTT segment in year 2013. Till 2019 they had just 0.65 million subscribers, but due to the pandemic as well as effective management and skills, sonyliv achieved 1.81 million subscribers in year 2020.

Literature Review

(M & Dr.S.DineshBabu, 2021) Business Allocation Act was amended with two more subsections and those are 22A to control audio-visual programs and movies on OTT platforms and 22B to control News and current affairs digitally. Government announced regulation to regulate digital platforms on 25th February, 2021 but before that OTT players of India were free from government intervention but at the same time self-regulation was also maintained by few OTT players to control their own content. Cinematographic act, 1952 and Central Board of Film Certification regulates the content which is released in theaters but as people are gradually moving towards OTT platform, such OTT content cannot be regulated under cinematographic act and censorship problem has raised. The data states that approximately \$55 billion might be generated with the help of entertainment and media industry in India by 2024. Share of OTT video in entertainment and media industry is expected to grow from 2.4% in 2019 to 5.2% by the year 2024. At the same time absence of

regulation also give freedom of innovation and creativity to content creators. Regulation in different countries are carried out by different authorities. OTT platforms of Singapore by Infocomm Media Development Authority (IMDA), Turkey by Radio and Television Supreme Council (RTUK) and Australia by Broadcasting Services Act 1992. As mentioned earlier, in India the new Information Technology rules have 3 tier redressal but the other side of coin states that these laws of censoring the digital content hampers constitutional rights of Indian citizens.

(E & N, 2020) Traditionally, movies were watched in theatres and televisions only but gradually with technological advancement and content getting available on DVDs, fibre optical cables, Blu-rays, video on demand and Direct-to-home (DTH) service. With entry of Jio in telecom industry and introduction of cheap data plans, other existing players were forced to offer cheap data and stand in the competition. Easy availability of smart devices and smart phones. By year 2023 India is expecting active Internet users count to be around 666.4 million number of OTT providers are forecasted to reach to 100. As per available data, customers want to watch content on OTT platforms either for free or at a very low subscription rate, hence OTT platforms instead of charging higher from viewers, have to rely on advertisements and ad revenue. Amazon collaborated with influential filmmakers as well as Indian producers by high amount of investment. OTT segment of India is suffering highly due to illegal downloading and absence of regulation as a result, OTT content is full of nudity, extreme violence as well as strong language. Such content which is easily available over OTT platforms, can have dangerous impact on the mindset of youth and children. Indian OTT industry is witnessing increasing partnership with telecom companies with the help of product bundling. The examples are Vodafone with access to various entertainment platform, Airtel with Netflix and Tata Sky with Amazon.

(Periwal, 2020) In today's digitalization, youth population and diversified content demand have been prime reasons of rise in OTT subscribers. Naming few like YouTube music, Saavn, Voot, Wynk, SonyLiv and Zee 5 are popular OTT platforms in addition to giants like Netflix, Amazon Prime and Disney Hotstar. Partho Dasgupta, CEO of BARC India expressed his opinion of competition in OTT industry that nowadays even broadcasters have started their OTT platforms and compete with independent players. OTT players often face constraints such as cost, the reason being is production cost is generally high and players have no

option than to provide creative content to stand in tough competition. Players like Hotstar captures market with advertisement and win customers by cricket, Netflix and Amazon Prime Video wins heart of people with its creative content, where other players focus on catchup shows. From the sources it was known that Netflix also wants to come up with ads in between episodes of original content to boost revenue but here the biggest threat is customer' reaction as customers paying premium amount might not accept advertisements in their favorite shows. Indian customers also are fond of regional content as data states that roughly 40% viewers on Indian OTT platforms prefer to watch regional content.

(Singla, 2020) OTT platform has always been talk of the town due to its vulgar, nude and violent content in absence of regulation. OTT players deal directly with ultimate users by excluding telecom companies as later do not have any control on content provided by OTT players. Telecom companies' only source of income is data charges but their infrastructure is easily accessed by OTT players and also they also compete with OTT providers. In 1918 after independence, Cinematograph Act was enacted to regulate films and cinemas. Constitution of India which was adopted in 1950, provided freedom of speech as well as expression as fundamental right as a result audio and video content got judicially recognition. Cinematograph act had another regulation in 1952 to regulate as well as censor content but that couldn't regulate OTT content. Technological advancement, cheap smart devices and data plans made people's life smooth but internet is never free from its limitations which involve risk of cybercrimes and criminal activities.

Research Objectives

- To evaluate customer's preference and average time spent by them on OTT platform.
- To know dependence of use of OTT and time spent on demographic variables.
- To identify market leaders of OTT segment in terms of subscriptions.
- To understand factors affecting choice of OTT platforms.

Demographics spread of respondents

Out of surveyed, 84% people were from the age group of 20-40 years. The reason of focusing this age group is this category use OTT platforms most often and they can best represent the data. 54% of respondents are female and rest are male in survey. As per survey, 38% of respondents are salaried employees, 27% are

housewives, 20% are businessmen, 6% are students, 2% are unemployed and 2% are freelancer.

Inferences:

- Nearly 85% of respondents spend up to 2 hours daily on OTT platforms. There are hardly 2% people who spend more than 3 hours on digital platforms.
- Hotstar and Amazon Prime Video are most popular among viewers making them clear leaders. 78% and 82% people out those who use OTT platforms, use Disney+Hotstar and Amazon Prime Video respectively. Market is also captured by Netflix followed by two leaders with 62% viewership.
- Entertainment has been major factor for choosing OTT platform for 87% respondents. Other factors are preferred such as Diversified content, Variety of content, Cost effectiveness and easy to use by 28%, 45%, 24% and 50% respondents respectively.
- In terms of subscription budget, nearly different people have different budgets and diversified responses have been received in terms of spending for subscription.
- Among all, movies and web series are most watched programs over OTT platform. As nearly 88 to 90% people watch movies and web series and roughly 25% people prefer to watch comedy shows and short videos. Survey states that people don't prefer to watch news and catchup shows over OTT platforms.
- English and Hindi are two most preferred languages to watch. Gujarati is least preferred. As the survey is limited to Ahmedabad, none prefers regional language other than Gujarati.
- Nearly 80% of respondents are using OTT platform since two years and rest 20% are using since 2 years or more. It's very clear that people were using OTT platform before the pandemic but it was just an option. After the pandemic, people have hugely bent towards this platform.
- Nearly 50% of respondents holds one or two paid subscriptions. 13% people are enjoying OTT platforms without any subscriptions, it means they might be using subscriptions of their friends or family members or they might be using free access of such platforms.

- Nearly 58% of people watch OTT video content during late night. It's very obvious that morning watcher would be rare and roughly 40% watch during noon or evening at their leisure time.
- Disney Hotstar is subscribed by 65% OTT users. The prime reason of having highest number of subscribers is its Low charge of 1 Re. per day. Amazon Prime Video is subscribed by 60% of OTT viewers standing at second place. The reason is it offers bundled pricing wherein they charge bundled price for free delivery, Amazon music,

audible and few others. Third comes Netflix with 43% subscribers, Netflix focuses on huge library of ad free content and charges higher than above two players.

- A very important question was asked to respondents whether they will still continue using OTT platforms once theaters reopen post pandemic. In response 93% OTT users said yes they will continue using OTT even after theaters reopen. This result shows habit forming and mindset of people that after people gets addicted to certain facility they normally stick to it if not too costly.

Statistical Hypothesis Testing using Chi-square Test

Ho: Use of OTT platforms are independent on Gender

Use of OTT Platforms		
Gender	Yes	No
Male	36	9
Female	44	9

From above table, it was found that Chi-square value is 0.1479 which is more than 0.05 acceptance level. Hence, Null hypothesis is accepted which means use of OTT platforms are not dependent upon gender.

Ho: Use of OTT platforms are independent on age

Use of OTT platforms	Below 20 Years	20-40	40-60	Above 60 Years
Yes	0	71	9	1
No	1	12	4	1

From above table, it was found that Chi-square value is 8.02 which is more than 0.05 acceptance level. Hence, Null hypothesis is accepted which means use of OTT platforms are not dependent upon age.

Ho: Gender and number of hours spent on OTT platform are independent.

	Less than an hour	1-2 hours	2-3 hours	More than 3 Hours
Male	12	19	4	1
Female	14	22	6	1

From above table, it was found that Chi-square value for above statistics is 0.154317 which is more than 0.05, hence Ho is accepted. This states that there is no significant difference between gender and number of hours they spend on OTT platform.

Ho: Occupation and number of hours spent on OTT platform are independent.

Number of hours					
		Less than an hour	1-2 hours	2 to 3 hours	More than 3 hours
Occupation	Businessman	8	10	1	1
	Freelancer	2	0	2	0
	Housewife	7	11	1	1
	Salaried employee	10	19	2	0
	Student	0	2	4	0
	Retired or Unemployed	1	0	0	0

From above table, it was found that Chi-square value for above statistics is 31.5065 which is more than 0.05, hence H_0 is accepted. This states that Occupation and number of hours spent on OTT platform are independent.

H_0 : Age and number of hours spent on OTT platform are independent.

Number of hours					
		Less than an hour	1-2 hours	2 to 3 hours	More than 3 hours
Age	0-20	0	0	0	0
	20-40	24	38	9	1
	40-60	3	4	1	1
	60 and above	1	0	0	0

From above table, it was found that Chi-square value for above statistics is 5.174 which is more than 0.05, hence H_0 is accepted. This states that age and number of hours spent on OTT platform are independent

Conclusion-

From research it was found that people go to the theaters not just for watching content but they love the ambience, they love to be with family or friends and they cheer and applause when they see their favorite cast on big screen with awesome sound system. But at the same times, the fact can't be denied that such all features can be availed by having good music system, having smart devices and projectors, sitting on comfortable couch with family. Hence once theaters are open, they will have to come up with some unique techniques or moves to win back the market share. In addition to that OTT video segment is boomed by many players with huge competition among them. Here to be successful, OTT players should determine their target audience and provide huge library of content at a reasonable price. Subscription can't not be only source of revenue. If players think of other alternative source of revenue they can cut down subscription charges and capture more number of customers without loss of revenue.

Scope of future research

Due to limitation of carrying out survey, research was limited to Ahmedabad only, this research can further be extended to other cities of India.

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A Study on Working Women's Perception for Work-life Balance with Reference to Anand City

Lata Ved, Mayur Rao

Abstract

It is believed that woman is the form of Goddess Durga, who possess many shades. The different forms are depicted in the different phases or circumstances. Today's age is having vast and fast development in terms of technology, environment and competition. Woman doesn't lag behind man in performing the best under this stiff competition. Working women is a new normal for today's age, where they manage work as well as their families. The Present paper is the empirical study conducted at Anand city, wherein the perception of 60 selected working women towards work-life balance is identified via structured questionnaire. The paper covers the work profiles of women, their views on work and life management, their preference on the importance of work-life events in their life and testing the association of their views and their marital status and significant difference between views and their profession as well as marital status. It is found that, selected sample has mixed response towards work- life balance, they enjoy their job, but foresee that their health is utmost priority against work.

Key Words: Working Women, Work-Life Balance, Priorities.

Background of Work- Life Balance

To balance between work life and personal life becomes has always been a challenging task for working women in India, where in the society is addressed as male dominant. The role of women on both the extremes of life way it be work or personal is significant as it is necessary to have trade-off between both the aspects. Needless to say, as compared to the men, women possess surplus house hold chores ultimately making her work life tedious as well.

Review of Literature

Researcher came across many varied papers on the theme of working women and work- life balance. Few ones are described below, who contributed in constructing the framework of the present paper:

1. **Rangarajan R. (2018)** has conducted the study on work life Balance of working women. By analyzing hundred designed questionnaires of working women conditions, the author found that for the women at working place getting less satisfaction and for balancing purpose, sometimes in both the place create conflicting situation.
2. **Pahuja S. (2016)** has examined from the case study on female employees with concentrating work-life balance. The author observed that there is impact of work life balance to female employees personal and professional life. She also added that in work place management has to frame certain special polices for balancing females work and life.
3. **Delina G. and Raya P. (2013)** have focused on various challenges and factor that affects to working women for balancing their personal and professional life. The author concluded from the analyzing descriptive study, to maintaining balance between work and Life was high and it affects negatively to quality of life particularly in Pondicherry District.
4. **K. Thriveni Kumari and Dr. V. Rama Devi., (2013)** have revealed in their article that for women managing home and work place was become quite difficult in 21st century. The authors have found that women are playing different roles at both places which become challenging issue for her. Here, by analyzing various reviews it can be conclude that so many factors were affected to women for balance in work life. Like, Turnover ratio, stress level, Satisfaction of job, balance between job and life and demographic variables.
5. **Shravanthi A., Deshmukh S.,and Deepa N.(2013)** have examined that In India WLBP(work-life balance benefits and programs) approach was offered by various organization and it affects to understand present scenario and future prospects of women. Moreover, From the various literature and analyzing the data it was identified that In India, family friendliness need varies welfare provisions and required pre-determined policy and system for working women for personal and professional growth oriented.

6. **Soi and Massey (2011)** have focused on impact of work life balance on job and productivity of the women. By focusing today's generation the author conclude that maximum no. of women were not satisfied with the situation arises to maintain balance between the work and lives.

Research Methodology

The present paper is empirical in nature, where the descriptive design is used for the study. The data is collected with structure questionnaire using survey method via google form (online mode) from the selected working women from varied demographic profile at Anand city.

The convenient sampling method was adopted for data collection with sample size 60. Researcher has divided the questionnaire into three segments which includes Demographical profile, Nominal Questions and Likert Scale statements.

Data Analysis covers the usage of tools like frequency analysis, rank analysis, likert scale analysis and hypothesis testing using SPSS software.

Objectives of the study

1. To investigate the importance of given by working women to the various work- life events

2. To study the perception of working women towards work- life balance and identify the significant difference between the perception and profession as well as marital status of working women.
3. To analyze the association between views of working woman towards their work – Life Management and their Marital Status

Results and Discussion

Below is the quantitative analysis of the data collected from the Anand City.

1. Demographic Analysis

Out of the total 60 samples, 17 respondents were Academicians, followed by 8 from IT related profiles, 6 were from business background, 5 from health care, 2 were Bankers and rest were from other **profession**. Majority of Respondents i.e 29 fall under the **age group** of 26-30 Years, followed by 13 under 31-35 Years. Considering the **Marital status**, out of 60 samples, 35 were Married. Majority of working women (26) fall under the **income bracket** of 10,000 - 29,999 Rs per month, 27 respondents have **experience** of more than 5 years, followed by 14 samples between 1-3 years, 13 respondents marked Rs. 50,000 and above under their **monthly salary**. 32 Working women lives in **Nuclear family** out of the total 60 sample.

2. Frequency Analysis of Nominal Level questions

Table 1. Frequency Table of general views of working women on work life balance

	Nominal Questions on Work Life	Yes	No	Sometimes	Total
1	Able to Manage the work and personal life	36	7	17	60
2	Work ruining personal time with your loved ones	13	14	33	60
3	Enjoy your work	58	2	**	60
4	Efforts at your work is worth doing in present	47	13	**	60
5	Compromise your health for your work	17	13	30	60
6	Miss your lunch / dinner time due to work sometimes	38	22	**	60

(Source: Author's Compilation from SPSS)

Above table interprets that majority 36 woman were able to manage their work and personal life, while majority i.e 33 woman agreed that, the work ruins their personal time, It is also interpreted from the frequency, that highest 38 woman miss the lunch/ dinner time due to work

3. Rank Analysis

The events of life considering the work and personal commitments needs to be prioritized and so samples were asked to rank the priorities of the same. Below is the table:

Table 2. Rank Analysis of Priorities of events in life

Priorities of events as per the importance in life	FiWi	Ranking Preference After Rank Analysis
Health issue/ illness of your self	142	1
Social function of closed relatives	194	4
Emergency meeting at work	161	2
Family issues or matters	166	3
Most profitable work deal	237	5

From the above table, it can be interpreted that, from the selected sample of Working women gives “Health issues/ illness of yourself” as most important and

“Most profitable work deal ” to be least important in their life.

4. Likert Analysis on perception of Working women towards work -life balance

Table 3. Descriptive Statistics on the perception of Working women towards work life balance				
Sr. No.	Perception of Working women Towards work life balance	N	Mean	Std. Deviation
1	I dont like to stretch my working hours.	60	3.4333	1.18417
2	I take my office work at home	60	3.1500	1.23268
3	I feel social function is waste of time against my work	60	2.5167	1.03321
4	My family time is less important against my Career Goal which secures future	60	2.2000	1.20451
5	I get worried of my health due to work stress	60	3.5500	1.11119
6	I take time for my hobbies and refreshment activities	60	3.4500	1.01556
7	I am not able to reduce my work pressure even though i need to	60	3.4167	1.15409
8	I am failing to spend quality time with my spouses family	60	2.9833	1.17158
9	Forgoing family for career is worth for me at present	60	2.5833	1.25268
10	I regret to choose the profession on the cost of losing my personal life	60	2.3500	1.36326

From the above table, it can be interpreted, that average mean for the perception of working women for the work life balance is more than 2.5 showing the positive side ie. Leading to the agreement, while the standard deviation of statements shows more than 1, which interprets variation from mean.

5. Hypothesis Testing

Below are the three Hypothesis formed for the study. As the data is not normal, non-parametric test is applied to test the hypothesis formed.

Sr. No.	Hypothesis	Test	Sign. Value	Result
H ₁	There is no significant difference in perception towards work life balance of Married working Women and Unmarried working women	Mann- Whitney U test	0.746	Not Rejected
H ₂	There is no association between Marital Status and Views of Working women on ability to manage work and personal life	Chi-Square Test	0.509	Not Rejected
H ₃	There is no significant difference between perception of working women towards work- life balance and their Profession	Kruskal Wallis Test	0.266	Not Rejected

Major Findings

It is found from the **Demographic Analysis** that, Out of the total 60 samples, 17 respondents were Academicians, Majority of Respondents i.e 29 fall under the **age group** of 26-30 Years, Considering the **Marital status**, out of 60 samples, 35 were Married. Majority of working women (26) fall under the **income bracket** of 10,000 -29,999 Rs per month, 13 respondents marked Rs. 50,000 and above under their **monthly salary**.

It is found from **Nominal Level questions Analysis** that, Majority 36 woman were able to manage their work and personal life, while majority i.e 33 woman

agreed that, the work ruins their personal time, highest 38 woman miss the lunch/ dinner time due to work.

Under the **Rank Analysis**, Working women considers “Health issues/ illness of yourself” as most important with RANK 1st and “Most profitable work deal ” to be least important in their life making it RANK 5th.

From the **Likert Analysis**, it is found that average mean for the perception of working women for the work life balance is more than 2.5 showing the positive side ie. Leading to the agreement, while the standard deviation of statements shows more than 1, which interprets variation from mean.

Under the **Hypothesis testing**, all of the hypothesis

were rejected owing to the greater P value against 0.05, interpreting that, no significant difference between Marital Status and Perception, no association between marital status and work life management and no significant difference between Profession and Perception of working women towards work -life balance.

Conclusion

The present study concludes that, selected working women of the Anand city, have described their mixed views on the work- life balance. The findings rejected the hypothesis formed on testing the relationship between the perception and the demographic parameters. From the selected sample, it can also be concluded working women faces hurdles in managing the work and life together, it was found they also miss the lunch timings and compromise the health for work, wherein they given immense importance to health issues of their own (if any).

Scope of further Research

The present study was only confined to 60 samples from Anand city. More samples and varied cities can be added for the research. The hypothesis testing covered use of non-parametric test owing to non-normal data. More higher order statistics can be applied to get new results.

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Can Narrow Banking Resolve The NPA issue? - A Discussion.

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Abstract

With abundance of financial entities emerging like bubbles and increasing multiplicity of banking functions each growing second, there heralds the affair of uncertainty. The financial world becomes more uncertain with every budding expansion in their scope of services. This brings the fright of monetary instability, bankruptcy and the risk of creation of bad loans-NPAs. When all these factors were disheveling the financial system of economies, there arose the idea of limiting their space by introducing "Narrow Banking". Practicing Narrow banking is nothing but restricting the credit activity in order to be totally aloof from formation of NPA. This conceptual paper describes the whole idea of narrow banking, including its history, merits, demerits and its prospects in India along with its criticisms. History is evident with the excellent results derived by banking world on implementing narrow banking. Thus, even after contemplating its criticism well, it can be figured that the present unnerving state of banks calls for the proficient alternative- narrow banking, to be inculcated for safety and security of banks. This could be in fact, an opening for Bank's long term stability, targeting their achievements to resolve the heating issue of NPA.

Keywords: Full- Reserve Bank, Safe Bank, NPA, Fractional-Reserve Bank.

Introduction

The definition of narrow bank can be proclaimed as a banking system where the bank invests in safe assets having a fixed maturity period. This eliminates the issue of mismatching of asset and liability thus maintaining the asset quality and subduing the probability of assets turning into sub-standard assets. Narrow Banking is being narrow in engagement of funds and conducting its other activity full- fledged. Here the banks mobilize their large portion of their funds or deposits in assets which are risk-free such as government securities.

Narrow bank is also called as "safe bank". They are safe because they use their deposits to buy only government bonds which are totally, 100 percent risk-free. These banks carry no credit risk as there is no danger of loans becoming bad or NPA and as such these banks do not require injection of equity capital, as funded by the taxpayers, on frequent basis unlike the traditional or para banks. Moreover, it requires less supervision from the RBI and also needs no deposit insurance. In a narrow sense, narrow banking helps in the reduction of Non-Performing Assets (NPA) as the possibility of the loan assets turning sour is the minimal.

The idea of Narrow banking was introduced by The Tarapore Committee as a remedy to resolve the problem of rising NPAs. It recommended that banks should follow restricted investment policy and only use their funds to anchor in Government securities.

History of Narrow Banking across the globe

The proposal of narrow banking came up in 1980s in the United States as aftermath of episode of financial crisis. It is sometimes called as 100% reserve banking. Even the World Bank in 2001 has recommended the option of 'Narrow Banks' to be adopted by economies in order to address the dilemma of financial crisis.

The phase of Great Depression of 1933 has evidences of advocacy of maintaining 100% reserve as attributed by the then group of economists at the University of Chicago. They also advised the separation of the deposit and lending functions of the commercial banks. In 2018 Switzerland voted to reject the sovereign money system that is the narrow banking. Presently Iceland is the only country in the world that has adopted the concept of full-reserve banking (narrow banking).

Review of Literature

(Mendizábal, 2020) has described deposits as broad money and reserves as the narrow money in his paper. The loan and deposit creation of commercial banks is the outcome of the two layers of liquidity (broad and narrow) to finance the real activity. The study professes that reserves do not compete with the loans and hence they only affect the liquidity provision by the banks impacting the cost of loan and deposit.

(Pera, 2019) stresses that narrow banking is advisable, while attempting to stabilize the banking system, but there are risks associated to it. In total Six such risks are identified and discussed on the low, medium and high levels. Out of these the principal risk results from the partial loss of bank's efficiency, cost involved in deposit insurance, mismatching of assets and liabilities and loans extended to the non-financial sector.

(Wilmarth, 2012) points out that the financial crisis in the United states and the Europe has proved that the crisis is the result of the hazardous operating models followed by the conglomerates in order to gain more interest and undertake undue risk while lending. The author proposes that the subsidiaries of the financial conglomerates to adopt narrow banking which will, to a great extent, curb the unsupervised credit activities to the capital markets.

(Pennacchi, 2012) opines that narrow banking is the only most advantageous alternate to present days financial instability as it controls moral hazard and helps in reducing the overall risk faced by the financial system while dealing with advancing credit.

(Grauwe, 2008) comments that the Basel approach to maintain the CAR, minimize risk, has failed. This approach is unworkable as the risks faced by the universal banks are the 'tail risks' and the only feasible solution to the present instability of the financial market is returning to the narrow banking approach. The banks can either be commercial banks or investment banks.

Research Gap

Narrow banking comprises depths of preventive remedies for ailing banks with the issues of NPA. But it seems likely to be forgotten at much extent, as seldom research studies have been observed related to it in the current times. Hence, this study attempts to re-explore the treasure house termed 'narrow banking', which can act as savior for banks, in these times of distress.

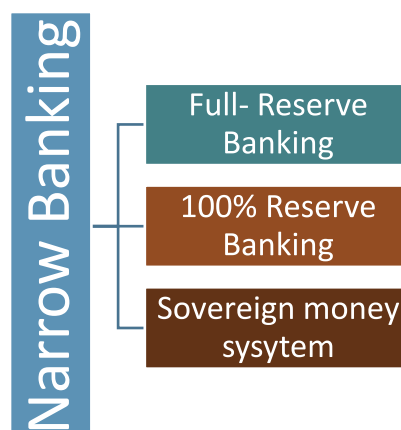
Research Objectives

1. To understand the concept of Narrow banking.
2. To study its viability, the extent of its acceptance in India and its criticism.

Research Methodology

Concept of Narrow Banking

Many a times The antonym of Universal banking is narrow banking. As the large portion of deposits is done in risk free assets. Here the banks collect money only from time deposits and not from demand deposits. Fractional-reserve banking is the opposite of full reserve banking or narrow banking. Following are some of the synonyms of narrow banking.



By not lending, and using their deposits to buy government bonds, they carry virtually no credit risk and hence narrow banks become safe banks.

Research Design

The nature of the study is conceptual and descriptive. It uses Secondary Data and information, which was collected from different sources, like published and unpublished works, online websites, newspapers and other papers of various types to explain the concept of Narrow Banking and its importance in today's instable financial system.

Problem Statement

We have seen in the case of IDBI Bank and Indian Overseas Bank, that close to one in every four rupees, that they lent, had turned into bad loan. There are piles of NPAs and these both entities are under PCA-

Prompt Corrective Action. RBI has placed restrictions on their lending and is also keeping a stringent check on their capital adequacy ratio(CAR) to ensure that it does not plummet. Restricting the lending activity, i.e. giving loans, is in itself practicing of narrow banking. In this way these distresses banks can slowly whittle down their loan books.

Usefulness of the study

The concept of narrow banking is one of the feasible alternatives that are available to address the problem of rising NPA in the banking sector. The present study highlights its implications and merits, as well as critiques, in the light of which, the banks and the stakeholders can take advantage of the narrowing their credit extending activity, and hence put a rein to the occurrence of bad loans.

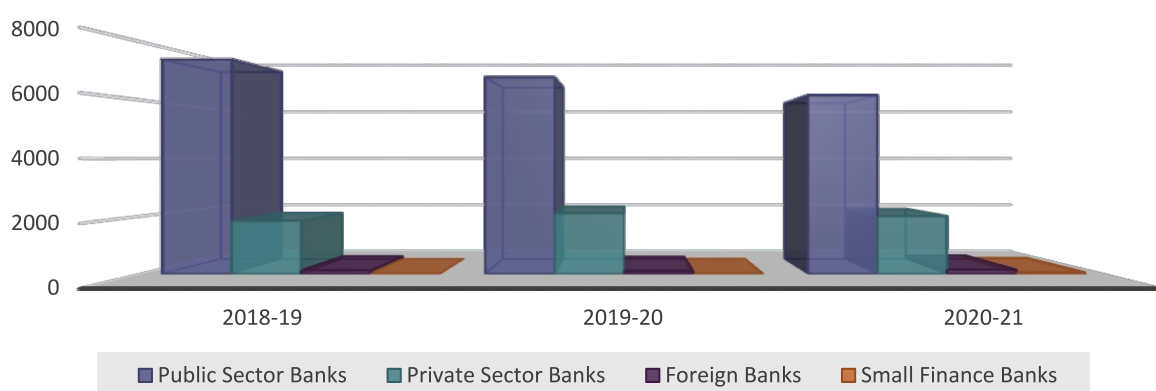
The following table no.1 and chart enumerates the condition of Indian commercial banks with respect of gross NPA reflecting the lending culture of the country

which seems beyond repair if narrow banking approach is not thought of as a better alternative.

Table no. 1: Gross NPA of Scheduled Commercial Banks in India from the year 2018-19 to 2020-21. (Amount in Billion Indian Rupees)

Year	Public Sector Banks	Private Sector Banks	Foreign Banks	Small Finance Banks
2018-19	7395.42	1836.04	122.42	10.87
2019-20	6783.17	2095.68	102.08	17.09
2020-21	6166.16	2001.41	150.44	59.71

GNPA of Scheduled Commercial Banks in India



Source: Statista Research Department, Report published on 21st July 2022.

Interpretation of Table no.1: It is evident from the chart that state-owned banks are the worst suffers when talking about the bad loans, the NPAs, as compared to all its peers in the industry. In wake of finding a solution to these piling of NPAs, several public sector banks have been merged in the past. But the question is what good will it do if the merged bank has to listen to the same finance ministry mandarin pushing for extending a loan to a crony capitalist or some risky sector without proper loan payment evaluation?

Approval of Narrow banking on Indian soil

In India, banks follow the concept of narrow banking partially. The statutory Liquidity Ratio (SLR) as prescribed by RBI is 25% in India, but to be on the safer side, banks invest more in low return, securities of Government. Banks find prudent in investing in these Government Securities as they carry 0% risk weightage. Some of the Government approved securities possess 2.5% risk but they are much secure than the loan assets which has risk weightage of nearly 50 to 75%.

On similar grounds the Narasimham Committee 1991 recommended the adoption of a structure in the

country which would have four lenders as global banks and only 10 nationwide universal banks, besides local banks to tackle the problem of loan turning toxic. The following points highlights the present Indian scenario of narrow banking concept.

- When RBI introduced differentiated licenses it already laid the foundation for the concept of narrow banking in India. It is proposed that if the worst of the state owned commercial banks are made narrow, which won't lend at all, there are enough market players like the small finance banks, private banks, non - banking financial companies (NBFC) that can take care of small borrowers.
- RBI has also advocated and licensed, recently, the peer-to-peer lending companies that will help in financial inclusion as well.
- The central bank, RBI is also moving to a system where it desires large borrowers to shift their incremental borrowings to the bond market. It is presumed that injecting more life into bond market will help in preventing the problems of future bad loans (NPAs) building rather than throwing good

money into weak banks.

Thus is it a fact that adoption of narrow banking has remained patchy and sluggish but in the current context of Indian banking which has repeatedly thrown up crises in state-owned banks, narrow banking may be an idea whose time has come.

Is Narrow Banking Viable?

There exist two prime advantages of narrow banking.

- First, it does not have any problem in meeting any magnitude of withdrawals from depositors as all the money is invested in highly liquid securities which is easily converted into cash with a very low transaction cost.
- Second, narrow banks have no problem of bad debts or NPA for all their investment is in Government bonds. So banks will fail only when government itself fails.

The major Disadvantages of narrow banking.

- The biggest disadvantage is these banks earn less income as the interest on risk free securities is less than other risky portfolios.
- Their depositors have to be satisfied with low interest on deposits as the highly liquid and safe investments demand its own price.

Some criticisms of Narrow Banking

Though the idea of Narrow banking looks like a ray of hope for the NPA laden banks who are distressed and suffering from the financial crisis, there are some major critiques that demands to be discussed as below:

- Critics point out that narrow banking will not fix the problems of financial sector but rather the loans will be pushed into Shadow banks, the NBFC which is harder to regulate than the commercial banks.
- The second critique of narrow banking is, as widely discussed, is that the abolition of fractional-reserve banking will increase the lending rates. The banks that operate on fractional reserve are able to offer low rates. Presently the lending market is already destroyed by not creating true competition among lenders. Hence mutual funds and Peer-to- Peer lending would generate market-determined optimal rates which probably would be higher than the usual rates.

Conclusion

One side of the coin asserts that when the whole world of finance is of the opinion that accepting risk is a part of life, promoting narrow banking is like talking about elementary arithmetic. In today's time big finance

houses believe that adding two and two can make 22 by knowing how to leverage. They profess that where is the fun if at the end of the day you cannot make money out of the thin air? Narrow banking concept must be for lazy people, who do not want to take the risk and chase the high yields.

The other side proposes that narrow banking should be seriously considered to rectify the past mistakes. It will ring-fence the credit extending activity of banks and save them from recurrent failures that necessitate bailouts on grand scale. Although, in the next two years, the Indian Government is planning to infuse Rs.2.1 Trillion in public sector banks, it may fail to address the present polluted credit culture. Will this fund infusion prevent forming of future Non-performing loans?

Rhetorically it goes without saying that, in times of big downfall, we suddenly find much larger audience for narrow banking. Hence, to understand narrow banking, we need to look at the financial world through the eyes of the narrow banker.

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Do Pressure Encourage Employees' Intention to Commit Fraud? : The Perception of Bank Professionals

Dharaben Nileshkumar Mehta, Megha Shah

Abstract

Fraud itself is a negative term in relevance to society at large. It is a caustic and negative phase for organization because it ultimately resulted into loss. This paper explain the highpoint of fraud triangle. Fraud triangle is used as an instrument for preclusion and recognition of fraud. Fraud triangle consist of mainly three components i.e. opportunity, pressure and rationalization. Specifically this study concentrate on pressure component of fraud triangle. Using online questionnaire on 576 bank professionals, this study examine the inspiration of fraudster to commit fraud in perspective of pressure aspect.

Key words: fraud, fraud triangle, pressure, bank professionals, inspiration

1. INTRODUCTION

Fraud has increased extensively in recent times, affecting the interests of both financial organisations and their customers. Fraud has been one of the most negative aspects of a civilization since several years ago. Fraud has undesirable effects on country as it decrease the productivity and government resources. It also adversely effect on income which ultimately turned into slow development. Social securities may damage due to increase in fraudulent activities. Fraud has been done by a fraudster to take advantage of their position. Fraud is deliberated as a subset of internal threat like misappropriation of assets, bribery, exploitation and many other fraudulent activities.

According to ACFE fraud is defined as “the use of one's occupation for personal enrichment through the deliberate misuse or misapplication of the employing organization's resources or assets. “Fraud encompass an array of irregularities and illegal acts characterized by

Intention deception

A representation about material facts, which is false

And made intentionally, knowingly, or recklessly

Which is believed

Any behaviours by which one party expects to gain an unfair advantage over another are termed as fraud. Fraud means any immoral, unauthorized purposeful act who destruct society and human value at large. Fraud initiating financial, ethical value loss.

Fraud also contains embezzlement, theft or any attempt to steal or unlawfully obtained, abuse or harm assets of an organization. Fraud can also be comprehended as falsification or negligence of a truth for the purpose of manipulating the financial account to destruct the organization.

1.1 FRAUD TRIANGLE



Fraud triangle theory is a concept which explain the reasons behind committing fraud by fraudsters. It consists of predominantly three elements. First element is opportunity in which fraudster take advantage of their position or situation. Second one is pressure. Pressure comprises of financial pressure, work pressure, depravity pressure and many others. Last element is rationalization. Rationalization is a condition where fraudster provide justification about fraud. Fraud triangle is an alarming situation which is used by auditors for detection and prevention of fraud.

1.1.1 Pressure:

Pressure is one of the component of fraud triangle theory. Pressure comprises of financial pressure, work pressure, depravity pressure and many others. Employees faces some pressure during their work life. Which motivates fraudsters' to commit fraud. There are many types of pressure facing by person during their entire work life as well as in personal life. Luxurious life style, unexpected needs, gambling habit, family pressure and problems, social pressure, personal debt etc. are the pressure tackled by person in their life. While during work life, they face pressure like job dissatisfaction, greed, little recognition etc. these pressure may motivate fraudster to commit fraud.

2. REVIEW OF LITERATURE

(ABDULLAHI & MANSOR, 2015), this paper described the connections and variances between fraud triangle and fraud diamond theory. Opportunity, pressure and rationalization are the elements of fraud triangle theory whereas one new component added in fraud diamond theory i.e. capability. Both theories are needful and useful for every organization for detection and prevention of fraud.

(Tuan Zainun, Danny Shahmizi, & Ghani, 2019) , determine the employees' intent to constrain fraud in the context of fraud triangle. 158 employees were the respondents of the study. In the study there is an existence of direct positive relationship between pressure and opportunity on employees' target to commit fraud. Study also revealed that the variations in the level of intention to commit fraud is influenced by respondent's perceived pressure.

(Nugraha & Susanto, 2018) , ascertain the fraud behaviour from the view of fraud triangle. Study resolute that if there is a pressure and opportunity exist but not any rationalization in doing fraud, than there is no chances of fraud occurrence. Fraud committer use excuse to commit fraud.

(Rabiu & Mansor, 2018), they made research on fraud. According to study, detection and prevention of is difficult task. Study also revealed that component of

fraud triangle theory has a positive relation with fraud occurrence. Apart from that there is a need of training, conferences and workshop to boost the employee's behaviour.

(Fikes, 2009), this study is based on cresssey's fraud triangle theory in respect of employee dishonesty and theft. Also, the failure of management is also one of the reason behind employee theft. If there is a financial need by fraudster, which affect the fraud occurrence.

3. RESEARCH METHODOLOGY

3.1 Objectives:

1. To study the reason behind fraudster's pressure aspect to commit fraud.
2. To study the association amongst decision making parameters and reason behind fraudster's pressure aspect to commit fraud.

3.2 Scope of research:

This research targets to study the perception of bank professionals in context of reason behind fraudster's pressure aspect to commit fraud. This study is limited to bank professionals of Ahmedabad City.

3.3 Research Instrument:

The research instrument used in this study is questionnaire. Structured Close ended questionnaire tool selected for primary data collection from 576 bank professionals from Ahmedabad city.

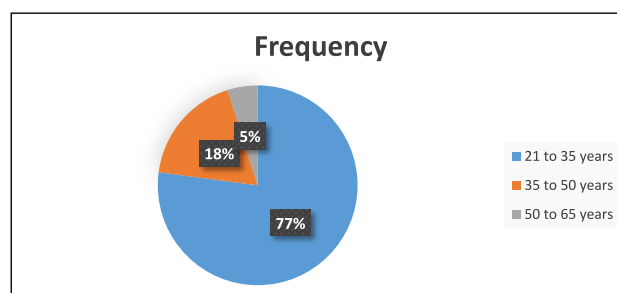
3.4 Data collection Procedure:

Primary data was collected through structured questionnaire, whereas research papers and journals were used for secondary data collection.

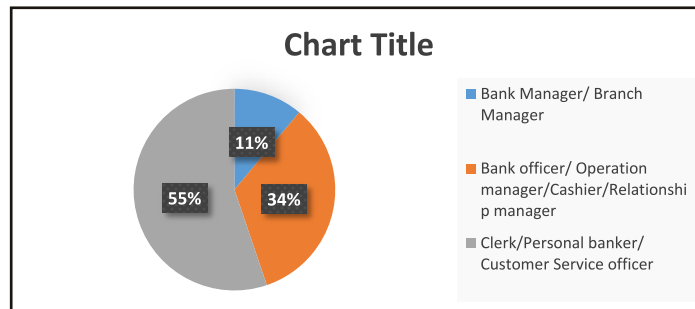
4. RESULT AND DISCUSSION:

The respondent of the study consists of bank professionals from Ahmedabad city. Close ended questionnaire used for data collection. Online questionnaire was filled up by 576 bank professionals. Majority of respondents (444) are in the age group of 21-35 years, 104 respondents derived from the age group of 35-50 years and 28 respondents were from 50-65 years. 363 respondents were male and 213 respondents were female bank professionals. The study analysis and observation are as under:

DEMOGRAPHIC ANALYSIS:



Graph 1: Age groups of Respondents



Graph 2: Designation of the Respondents

Chi Square analysis

H0: There is no association between the second aspect 'Pressure' of the fraud triangle and the bank professionals type [private bank and public bank] who might commit fraud.

H1: There is strong association between the second aspect 'Pressure' of the fraud triangle and the bank professionals type [private bank and public bank] who might commit fraud.

Type of Bank	Greed				
	No	Yes	Total	Chi Square result	Test Status
Private Bank Employees	134	154	288	0.092	Null hypothesis accepted
Public Bank Employees	114	174	288		
Total	248	328	576		

Type of Bank	Personal debt				
	No	Yes	Total	Chi Square result	Test Status
Private Bank Employees	54	234	288	0.073	Null hypothesis accepted
Public Bank Employees	48	240	288		
Total	102	474	576		

Type of Bank	Unexpected needs/ Luxuries life style				
	No	Yes	Total	Chi Square result	Test Status
Private Bank Employees	158	130	288	0.035	Alternative hypothesis accepted
Public Bank Employees	162	126	288		
Total	320	256	576		

Type of Bank	Job dissatisfaction				
	No	Yes	Total	Chi Square result	Test Status
Private Bank Employees	11	277	288	0.912	Null hypothesis accepted
Public Bank Employees	09	279	288		
Total	20	556	576		

Desire for status						
Type of Bank	No	Yes	Total	Chi Square result	Test Status	
Private Bank Employees	134	154	288	0.516	Null hypothesis accepted	
Public Bank Employees	130	158	288			
Total	264	312	576			

Anxiety of losing job						
Type of Bank	No	Yes	Total	Chi Square result	Test Status	
Private Bank Employees	94	194	288	0.094	Null hypothesis accepted	
Public Bank Employees	85	203	288			
Total	179	397	576			

Sensitivity about low paid						
Type of Bank	No	Yes	Total	Chi Square result	Test Status	
Private Bank Employees	100	188	288	0.067	Null hypothesis accepted	
Public Bank Employees	98	190	288			
Total	198	378	576			

Little recognition						
Type of Bank	No	Yes	Total	Chi Square result	Test Status	
Private Bank Employees	99	189	288	0.0841	Null hypothesis accepted	
Public Bank Employees	110	178	288			
Total	209	367	576			

Family problem						
Type of Bank	No	Yes	Total	Chi Square result	Test Status	
Private Bank Employees	172	116	288	0.045	Alternative hypothesis accepted	
Public Bank Employees	180	108	288			
Total	352	224	576			

Social pressure						
Type of Bank	No	Yes	Total	Chi Square result	Test Status	
Private Bank Employees	136	152	288	0.067	Null hypothesis accepted	
Public Bank Employees	121	167	288			
Total	257	319	576			

In this study, we have taken some factors which are related with pressure aspect. Such factors are greed, personal debt, luxurious life style, job dissatisfaction, and desire for status, anxiety of losing job, sensitivity about low paid, little recognition, family problem and social pressure. In this study, chi-square test is applied to find out the co-relation between factors of pressure aspect of fraud triangle and bank professionals who might commit fraud.

Study accepted the alternative hypothesis and reject the null hypothesis for the factors of family problem and unexpected needs. This suggested that if person has family problem, he might commit fraud. As well as, unexpected needs of persons may also leads to commit fraud. Study reject the alternative hypothesis for other factors of pressure and accept the null hypothesis. So there is no relationship between other factors of pressure and bank professionals who might commit fraud.

5. CONCLUSION

The objective of this study is to examine the bank professionals' intention to commit fraud from pressure aspect. This study highlight the motivation of fraudster behind to commit fraud from the pressure aspect. This study targeted the population of bank professionals from banks. 576 bank professionals from Ahmedabad city were the population of the study. Research indicated no relationship between pressure and professionals who might commit fraud.

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Performance Analysis of APMCS of Kheda District

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Abstract

Indian Economy has been heavily dependent on the agricultural activity and Agricultural Produce Market Committee (APMCs) do regulate the agricultural activity. It would be interesting to explore whether APMCs are working efficiently or not. The present study uses descriptive research design based on secondary data using annual reports of selected APMCs. Total 5 APMCs out of 10 APMCs of Kheda district has been selected for the study. It was observed that Mahudha APMC has failed to maintain efficiency as its financial performance is constantly negative during the study period.

Keywords: APMCs, Financial Performance

INTRODUCTION

In India, the agriculture sector performs a major role in the Indian economy and a big part of the Indian population is surviving upon agriculture-based employment and is the producers. The whole economy has been heavily influenced by agriculture. The agriculture sector is the backbone of the Indian economy. Agriculture Produce market committee involves those who become a linkage for maintaining the performance and have established a healthy relationship between the farmer and agriculture market practices. They work for organizing resources like man, material and money. It has been involved into planning, scheduling, guiding supervision, and organizing the resources. APMCs have been established to ensure that the large retailers do not have any chance to misuse the farmer's rights and are also authorized to maintain the price levels of farm products. APMCs are a kind of mechanism which monitors marketing conduct from time to time with several regulations of the APMC Act and the rules & regulation set up by the state Government only. (Government of India, 2019)

REVIEW OF LITERATURE

Present review of literature is based on study conducted in the research area of APMCs and its workings. Upon conducting reviews, it was found that there is a need to conduct research on selected APMCs based in Kheda district.

Yadav et al., (2020) studied the evaluation of e-mandi effectiveness on marketing productivity. The study explained that the platform helps to improve the market performance. It reduces the middle man interference in the exchange process so it results in better gain through this platform. NABARD, (2018) opted for the research based upon the status of marketing infrastructure under electronic national agriculture markets (NAM) in which they suggested that The NAM platform brought many benefits to the both stakeholders farmers and traders with various benefits and suggested to provide better market infrastructure to improve participation. Karahocagil and Ozudogru, (2011) disclosed that the farmers who are the members and dealers too were contented with the agricultural cooperative, the support of the members by distributed information on diverse issues for example; production, input assembly, marketing, etc. Ifeanyi-Obi, et al., (2008) claimed that improving agro products are an indirect way of improving or encouraging more production of agriculture products. It is therefore recommended that agro-industries use promotional practices to raise their sales, thus growing the market for agricultural products. (Ifeanyi-obi, Lemchi, & Isife., 2008)

Research Gap:

After analyzing the various literature we came across studies based on the role of APMCs, factor affecting the development, financial position of a particular region to know the profitability, labor productivity, capital analysis, agriculture produces reached on time, the income and the expenditure study, farmers awareness, trading process, relation between demand and the no. of buyers/sellers, the process to communicate with the farmers, but the researcher did not come across the study of five APMCs of Kheda district in Gujarat. Thus, an attempt has been made to know the financial performance of selected APMCs.

RESEARCH METHODOLOGY

This research focuses upon selected five APMCs situated in Kheda district of Gujarat state with the view to understand its financial performance for the last six-year data from the year 2014-2020.

Research problem: The relationship between the APMCs expenditure and income is affected by each other directly. For example, if the APMCs provides a better platform to the farmers for buying and selling of their produces, better facilities for farmers, good infrastructure, etc. the farmers will be encouraged more to sell it at APMCs rather than in private market. But these facilities will be achieved only if the APMCs are earning well. Thus, the need to understand whether the APMCs are financially performing well or not arises.

Objectives of the study:

1. To understand the overall financial health

including income, expenditure trend, profitability, liquidity and efficiency of the selected APMCs of Kheda district.

The Hypothesis of the study:

H₀₁: There is no significant difference in the income and expenditure trend of the selected APMC's of Kheda district.

H₀₂: There is no significant difference in liquidity of the selected APMC's of Kheda district.

H₀₃: There is no significant difference in the efficiency of the selected APMC's of the Kheda district.

H₀₄: There is no significant difference in the profitability of the selected APMC's of Kheda district.

Period of the study: six years from 2014 to 2020.

Research Design: Descriptive research design based on secondary data from annual reports of selected APMCs.

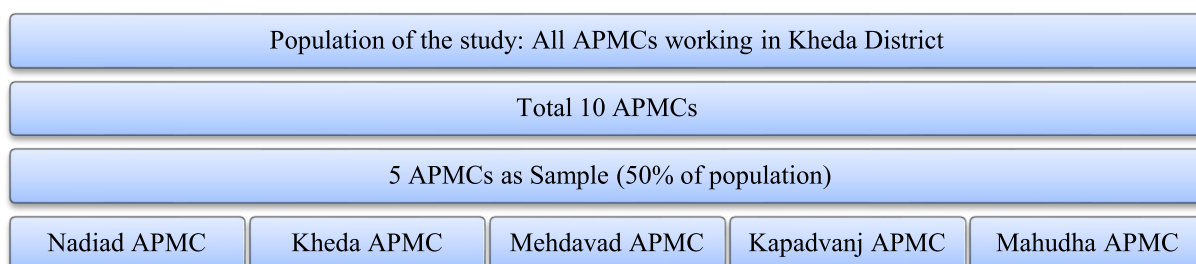
Sample Design and selection:

Figure 1 sample design

Sampling Technique: Non-probability convenience sampling

Collection of Data: As the financial statements were not readily available, the data related to the workings of APMCs were collected personally by contacting the authorized officials in printed form. The data was in

raw form; hence it was further prepared in accordance with the format of balance sheet and statement of profit and loss.

Tools and Techniques: Trend of income and expenditure with following ratios:

Table 1 Ratios selected for the study

	Ratios	Formula
Liquidity Ratio	Quick ratio	$\frac{\text{Current Assets} - \text{Inventory}}{\text{Current Liabilities}}$
	Current Ratio	$\frac{\text{Current Assets}}{\text{Current Liabilities}}$
Activity Ratio	Total Assets Turnover Ratio	$\frac{\text{Total Revenue}}{\text{Total Assets}}$
	Fixed Asset Turnover Ratio	$\frac{\text{Net Revenue}}{(\text{Fixed asset} - \text{Depreciation})}$
	Current Asset Turnover Ratio	$\frac{\text{Net Revenue}}{\text{Current asset}}$
	Operating Expense Ratio	$\frac{\text{Operating Expense}}{\text{Total Revenues}}$
Profitability Ratio	Return on Capital Employed	$\frac{\text{Operating Profit}}{\text{Capital Employed}} \times 100$
	Net Profit Ratio	$\frac{\text{Net Profit}}{\text{Total Revenue}} \times 100$
	Operating Profit Ratio	$\frac{\text{Operating Profit}}{\text{Total Revenue}} \times 100$

(Napier, 1990)

To test the hypotheses, Analysis of Variance (One Way ANOVA) was carried out for hypothesis testing.

Significance of the study: This study is useful to selected five APMCs to evaluate their financial performance and compare them with one another and it is also useful to the other APMCs too for improving their performance. Additionally, it will help the

government to measure the APMCs performance according to their progress and assist to make norms for better workings of APMCs. It is also useful for academicians and scholars to learn and explore workings and efficiency level of APMCs and find further insights into related topics.

DATA ANALYSIS AND INTERPRATION

Income and Expenditure of Selected APMC of Kheda District:

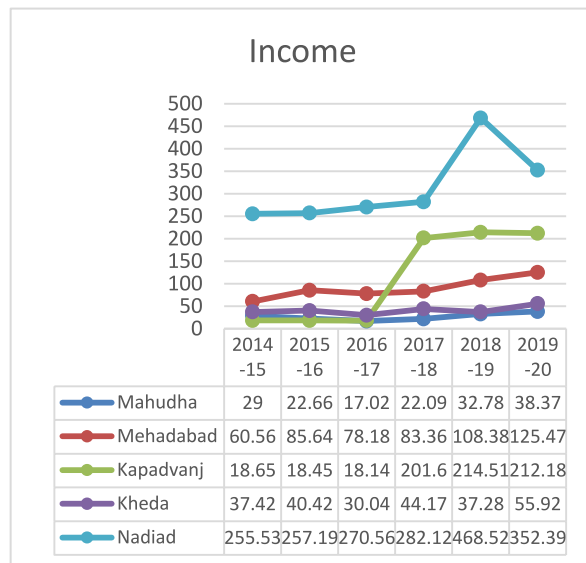


Figure 2 Trend Analysis of Annual Income of selected APMCs (Rs. in Lakhs)

Source: Calculated based on the Annual Report of selected APMCs

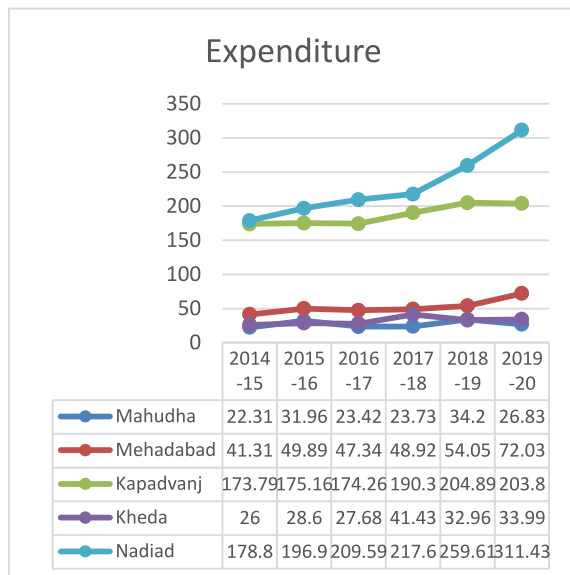


Figure 3 Trend Analysis of Annual Expenses of selected APMCs (Rs. in Lakhs)

Source: Calculated based on the Annual Report of selected APMCs

Ratio analysis of selected APMCs of Kheda district in Gujarat: Quick Ratio

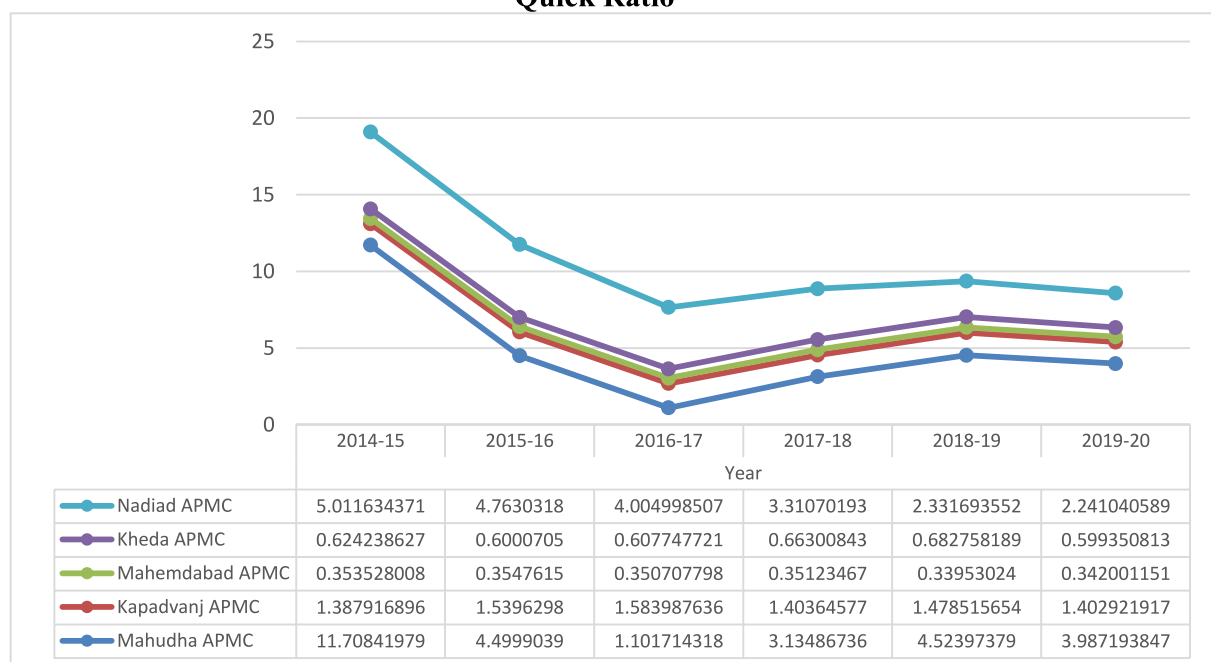


Figure 4 Quick Ratio of selected APMCs

Source: Calculated based on the Annual Report of selected APMCs

Current Ratio

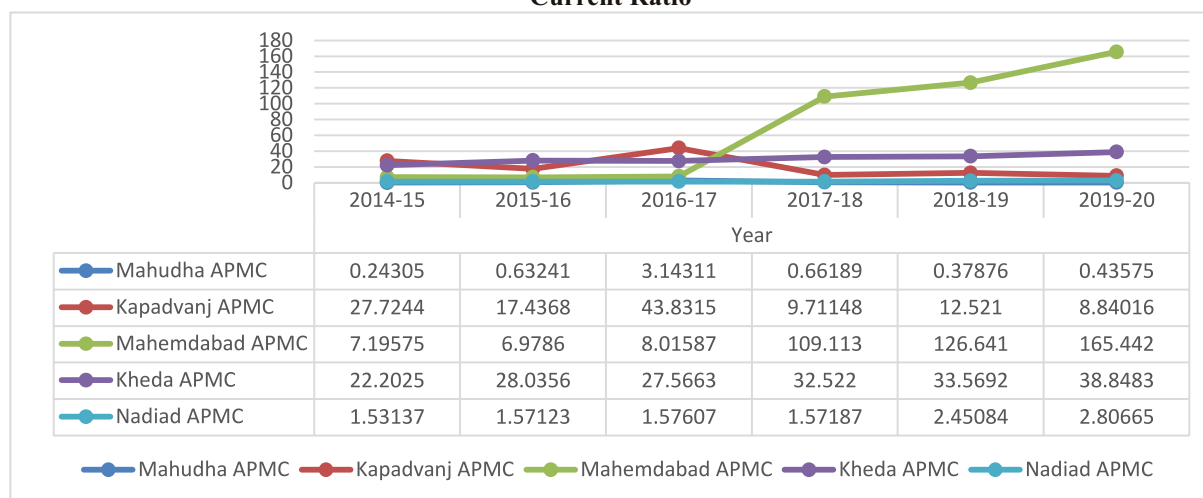


Figure 5 Current Ratio of selected APMCs

Source: Calculated based on the Annual Report of selected APMCs

Total Asset Turnover Ratio

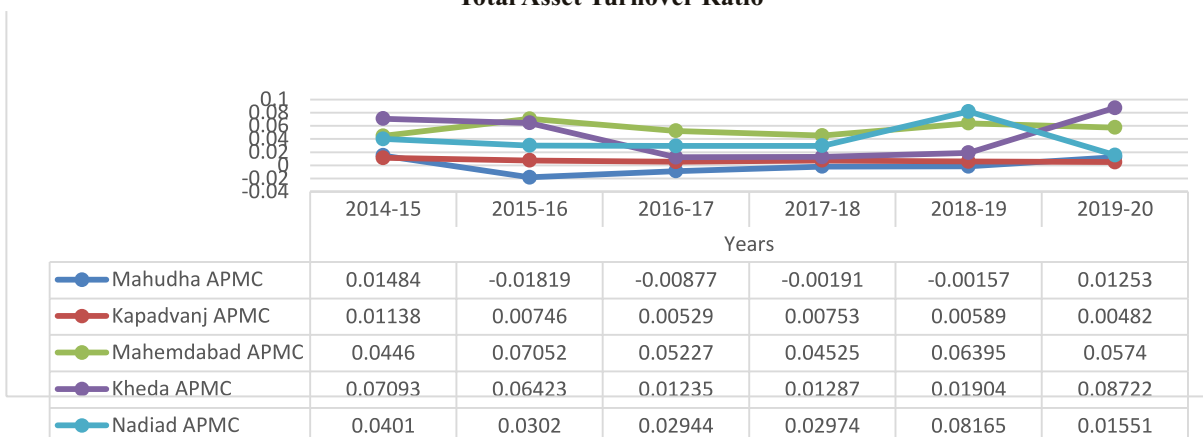


Figure 6 Total Assets Turnover of selected APMCs

Source: Calculated based on the Annual Report of selected APMCs

Fixed Asset Turnover Ratio

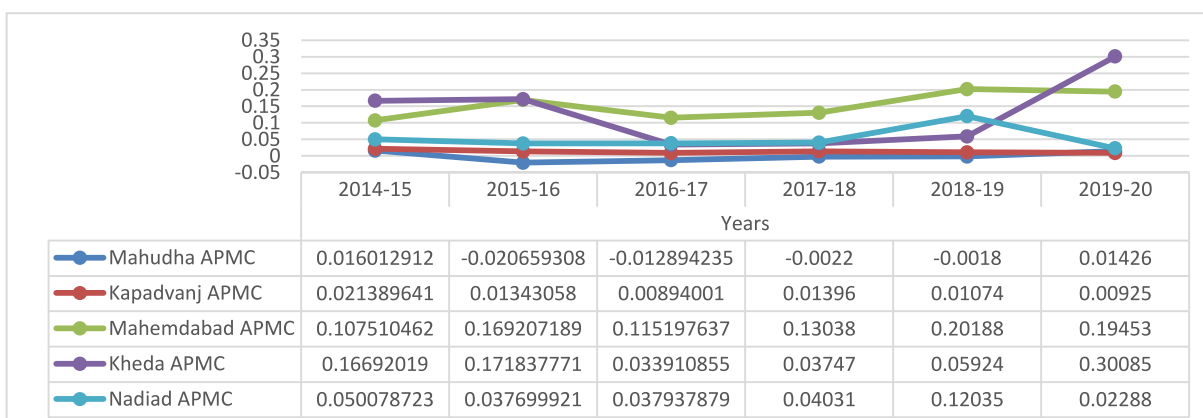


Figure 7 Fixed Assets Turnover of selected APMCs

Source: Calculated based on the Annual Report of selected APMCs

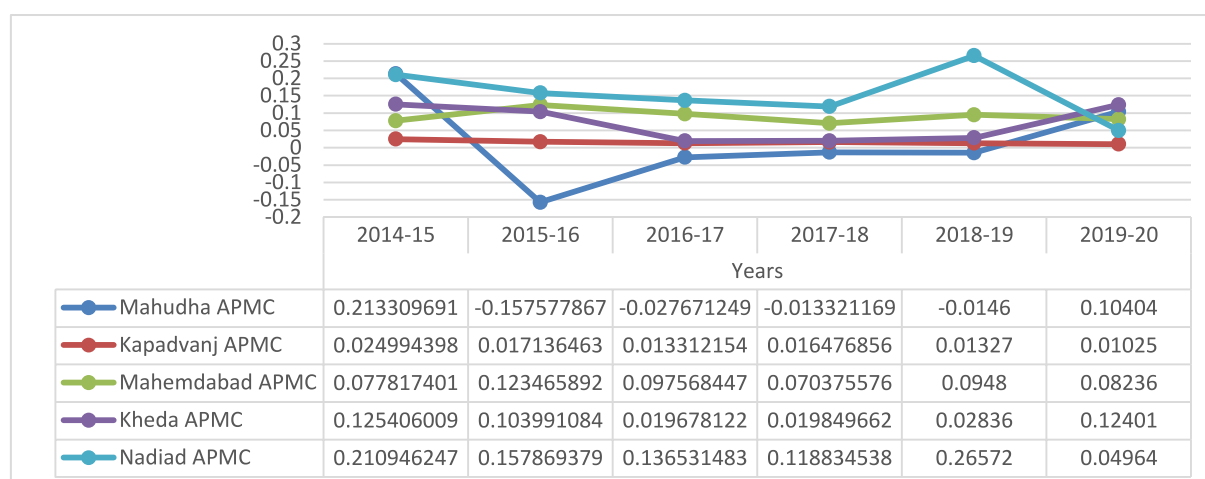
Current Asset Turnover Ratio

Figure 8 Current Assets Turnover Ratio of selected APMCs
Source: Calculated based on the Annual Report of selected APMCs

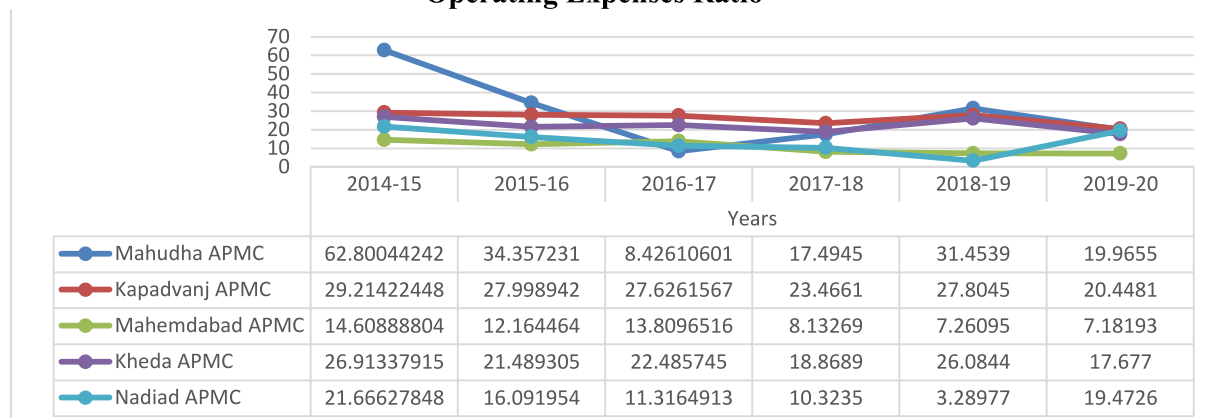
Operating Expenses Ratio

Figure 9 Operating Expense Ratio of selected APMCs
Source: Calculated based on the Annual Report of selected APMCs

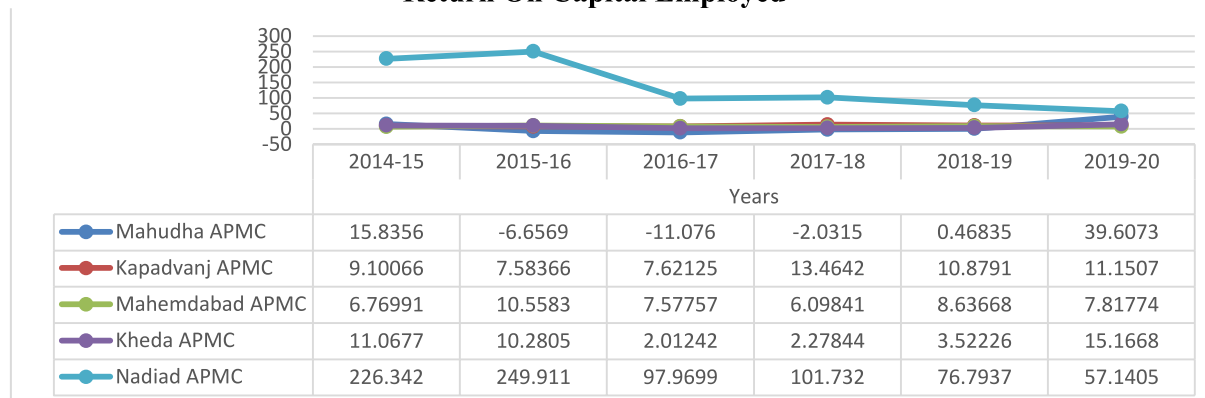
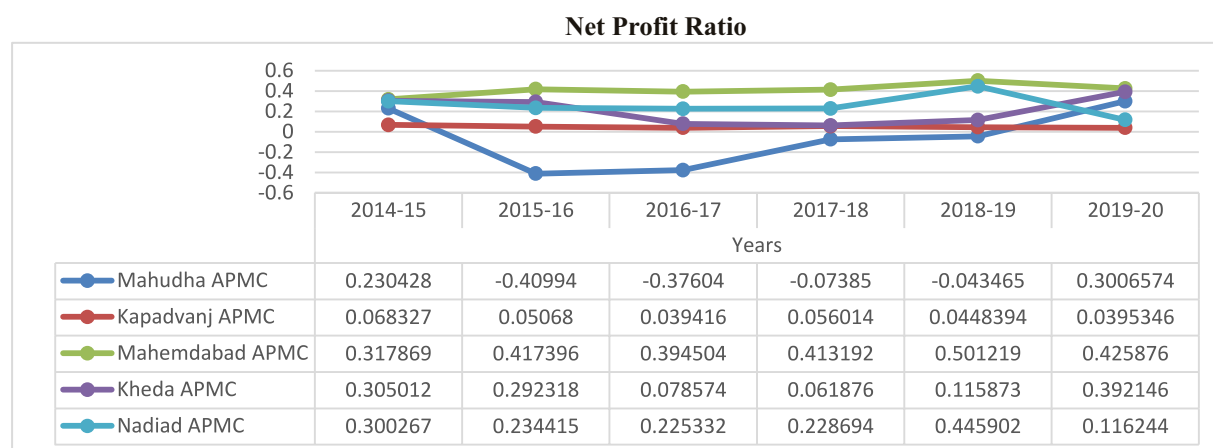
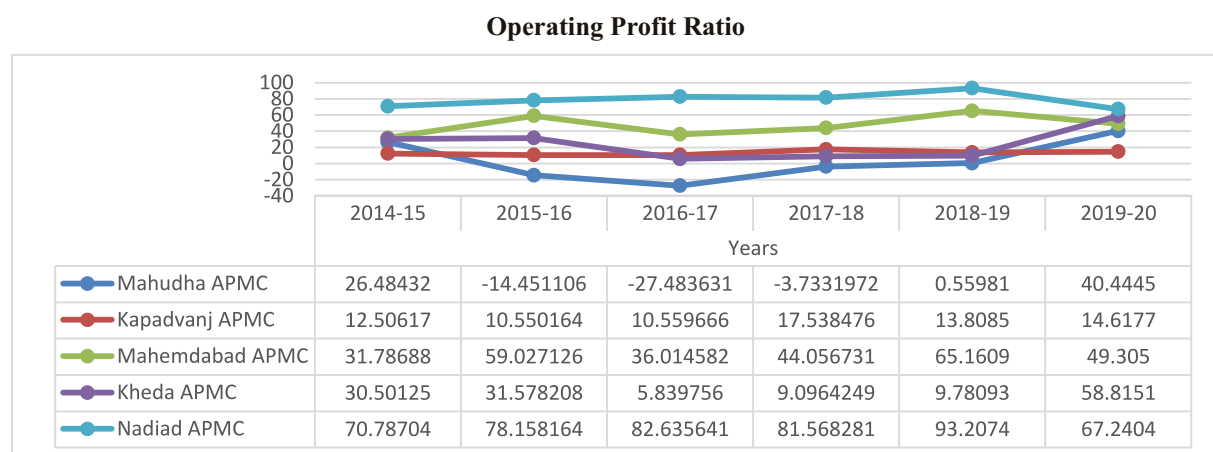
Return On Capital Employed

Figure 10 Return on Capital Employed of selected APMCs
Source: Calculated based on the Annual Report of selected APMCs

**Figure 11 Operating Profit Ratio of selected APMCs**

Source: Calculated based on the Annual Report of selected APMCs

**Figure 12 Operating Profit Ratio of selected APMCs**

Source: Calculated based on the Annual Report of selected APMC

Summarized finding for ratio analysis:**Table 2 summarized findings of ratio analysis**

Financial Ratios		Mahdha APMC	Kapadvanj APMC	Mahemdavad APMC	Kheda APMC	Nadiad APMC
Liquidity Ratio	QR	Fluctuating	High	Low and Ideal	low and Ideal	High
	CR	Low	High	High	High	Near to Ideal
Activity Ratio	TATR	Negative	Low	Low	Low	Low
	FATR	Negative	Low	Low	Low	Low
	CATR	Low	Low	Low	Low	Low
	OER	On an average	Highest	Lowest	On an average	On an average
Profitability Ratio	ROCE	On an average	On an average	On an average	On an average	Highest
	NPR	Negative	Low	Low	Low	Highest
	OPR	Lowest	On an average	On an average	On an average	Highest

Hypothesis testing of selected APMCs of Kheda district in Gujarat**A. Hypotheses testing of total income and expenditure trend of selected APMCs of Kheda district:**

Table 3 ANOVA of income and expenditure trend

H₀₁		Sources of variance	Sum of Squares	D.F.	M.S.S.	F- Value	Sig.	Decision of H₀
Income Expenditure Trend	Total Income Trend	Between Groups	321492.477	4	80373.119	21.587	0.00	Rejected
		Within Groups	93078.63	25	3723.145			
		Total	414571.107	29				
	Total Expenditure Trend	Between Groups	5860.004	5	1172.001	0.125	0.99	Failed to Reject
		Within Groups	225760.545	24	9406.689			
		Total	231620.549	29				

The result of the ANOVA test of total income trend between APMCs groups and within the APMCs groups at a 5% level of significance is shown above. As P-value of the total income trend is less than 0.05 (p-Value < 0.05), it rejects the hypothesis as there is a

significant difference in the income trend of selected APMCs of Kheda district. But in case of total expenditure trend, the null hypothesis is failed to reject as the P-value of ANOVA is 0.99 (p-Value > 0.05).

B. Hypotheses testing of liquidity performance of selected APMCs of Kheda district:

Table 4 ANOVA of liquidity performance

H₀₂		Sources of variance	Sum of Squares	D.F.	M.S.S.	F- Value	Sig.	Decision of H₀
Liquidity	Quick Ratio	Between Groups	91.891	4	22.973	7.967	0.00	Rejected
		Within Groups	72.087	25	2.883			
		Total	163.978	29				
	Current Ratio	Between Groups	19460.177	4	4865.044	4.556	0.01	Rejected
		Within Groups	26698.39	25	1067.936			
		Total	46158.567	29				

The result of the ANOVA test of liquidity performance between APMCs groups and within the APMCs groups at a 5% level of significance is shown above. As P-value of both liquidity performance ratios, quick

ratio and current ratio are less than 0.05 (p-Value < 0.05), it rejects the hypothesis as there is a significant difference in quick ratio and current ratio of selected APMCs of Kheda district.

C. Hypotheses testing of activity performance of selected APMCs of Kheda district:

Table 5 ANOVA of activity performance

H₀₃		Sources of variance	Sum of Squares	D.F.	M.S.S.	F- Value	Sig.	Decision of H₀
Activity	Total Assets Turnover	Between Groups	0.014	4	0.004	9.325	0.00	Rejected
		Within Groups	0.01	25	0			
		Total	0.024	29				
	Fixed Assets Turnover	Between Groups	0.114	4	0.028	10.066	0.00	Rejected
		Within Groups	0.071	25	0.003			
		Total	0.185	29				
	Current Assets Turnover	Between Groups	0.082	4	0.02	4.109	0.01	Rejected
		Within Groups	0.124	25	0.005			
		Total	0.206	29				
	Operating Expenses Ratio	Between Groups	1239865.99	4	309966.5	1.26	0.31	Failed to Reject
		Within Groups	6148524.09	25	245940.96			
		Total	7388390.08	29				

The result of the ANOVA test of activity performance between APMCs groups and within the APMCs groups at a 5% level of significance is shown above. As P-value of three activity ratios, total assets turnover, fixed assets turnover and current assets turnover are less than 0.05 (p-Value < 0.05), it rejects

the hypothesis as there is a significant difference in total assets turnover, fixed assets turnover and current assets of selected APMCs of Kheda district. But in case of operating expenditure ratio, we failed to reject the null hypothesis as the p-value is 0.31.

D. Hypotheses testing of activity performance of selected APMCs of Kheda district:**Table 6 ANOVA of profitability performance**

H₀₄		Sources of variance	Sum of Squares	D.F.	M.S.S.	F- Value	Sig.	Decision of H₀
Profitability	Return on Capital Employed	Between Groups	77661.549	4	19415.387	13.696	0	Rejected
		Within Groups	35439.949	25	1417.598			
		Total	113101.499	29				
	Net Profit Ratio	Between Groups	0.815	4	0.204	8.329	0	Rejected
		Within Groups	0.612	25	0.024			
		Total	1.427	29				
	Operating Profit Ratio	Between Groups	21889.965	4	5472.491	20.716	0	Rejected
		Within Groups	6604.13	25	264.165			
		Total	28494.094	29				

The result of the ANOVA test of profitability performance between APMCs groups and within the APMCs groups at a 5% level of significance is shown in the table above. As P-value of all three profitability ratios, return on capital employed, net profit ratio and operating profit ratio are less than 0.05 (p-Value < 0.05), it rejects the hypothesis as there is a significant difference in return on capital employed, net profit ratio and operating profit ratio of selected APMCs of Kheda district.

FINDINGS, SUGGESTIONS AND CONCLUSION

In Gujarat, around 210 market committees are present and working under the norms of state and central government. These market committees are regulated under the APMC Act of 1963 and the subsequent has been passed after the detailed administration by the committee known as the Agricultural Produce Market Committee (APMC). This committee has operated the market with administrative and financial activities.

Findings based on ratios:**1. Liquidity ratios :****Quick Ratio:**

- Higher quick ratio suggest that the company will have fewer struggles to pay its debt. On the basis of this terminology following observations are made.
- Out of selected APMCs, Nadiad APMC's quick ratio was highest among the sample while Mahudha APMC's had the lowest quick ratio. Overall performance of quick ratio of the selected APMCs had similar trend line with medium volatility.

Current Ratio:

- In case of Current ratio, highest fluctuation amongst the selected APMCs was observed as

three APMCs, Kapadvanj, Mahemdavad and Kheda had struggled to maintain their current ratio mainly due to high volatility in the inventory management of these APMCs.

- While Nadiad and Mahudha APMCs had maintain their current ratio throughout the study period.

2. Activity ratio :**Total Assets Turnover Ratio:**

- The total assets turnover ratio of selected APMCs was also highly volatile as all of them have been seen ups and downs in the ratio throughout the study period.
- Out of all the samples, Kheda APMC saw highest fluctuation in the total assets turnover ratio as the revenue of it was also in fluctuating manner. Similarly Mahemdavad APMC had fluctuating total assets turnover ratio in the study period having fluctuating revenues.
- Mahudh APMC was generating loss from the year 2015-2016 to 2018-2019 hence the total assets turnover ratio was mostly negative during the study period.

Fixed Assets Turnover Ratio:

- Similar to total assets turnover ratio, the fixed assets turnover ratio of selected APMCs was also highly volatile as all of them have been seen ups and downs in the ratio throughout the study period.
- As seen in the total assets turnover ratio, the fixed assets turnover ratio was also high for Kheda and Mahemdavad APMCs while Kapadvanj APMCs had low volatility in the fixed assets turnover ratio during the study period.

- Mahudha APMC was generating loss from 2015-2016 to 2018-2019 hence the fixed assets turnover ratio was mostly negative during the study period.

Current Assets Turnover Ratio:-

- Current Assets turnover ratio of Mahudha APMC was negative from 2015-2016 to 2018-2019 as it was in loss during that time period whereas Kheda and Mahemdavad APMCs' current assets turnover ratio was highly volatile during the study period due to fluctuating revenues during study period.
- Overall other than Kapadvanj APMC, all the APMCs selected for the study were showing higher fluctuation during the study period.

Operating Expense Ratio:

- Out of all five APMCs selected for the study, Mahudha APMC had highest operating expense ratio in the year 2014-2015 but then it drastically decreased in next two years. Then again it increased in the year 2017-2018 and 2018-2019 thus, showing fluctuating trend throughout study period.
- Other than Mahudha APMC, all four APMCs had steady operating expense ratio at the beginning of the study period i.e. 2014-2015 till 2017-2018. But in last two year, the volatility in ratio was high as Mahemdabad APMC's ratio had decreased while other three had increased ratio.

3. Profitability Ratio:

Return on Capital Employed

- Out of all APMCs selected for the study, Nadiad APMC's Return on Capital Employed was highly fluctuating as the capital employed for the operations were very low in the year 2014-2015 and 2015-2016 but then Nadiad APMC invested more in capital in the coming year. Thus, it stabilized the ratio but if we observe its return in following year with its peer group it was still higher.
- In case of Mahudha APMC, the return on capital employed was negative in the year 2015-2016 to 2017-2018. As the APMC failed to earn profit in this years. But in the last two years the APMC earned well resulting positive return on capital employed ratio in it.

Net Profit Margin:

- As Mahudha APMC had loss in the year 2015-2016 till 2017-2018, the net profit ratio was also negative in this year. Then in the year 2019-2020 it generated profit which lead to positive ratio in that year.

- Out of all five APMCs, Mahemdavad APMC had the highest net profit ratio during the study period while Kheda and Mahudha APMCs had the most fluctuating net profit ratio.

Operating Profit Ratio:

- Similar to net profit ratio, the operating profit ratio of Mahudha APMC was negative in the year 2015-2016 till 2017-2018 due to loss while in the year 2019-2020, it generated profit which lead to positive ratio in that year.
- Other four APMCs had positive operating profit ratio as the operating profit of these APMCs were positive during the year but the amount of profit was not constant. Thus, the operating profit ratio was highly volatile during the study period.

Suggestions:

Through the study, it was observed that out of five APMCs selected for the study which includes Mahemdavad APMC, Kapadvanj APMC, Kheda APMC, and Nadiad APMC performed very well. But same was not the case with Mahudha APMC as the APMC failed to generate the profit during the study period. Thus, following suggestion are provided by the researcher to increase the financial performance of it.

- The Mahudha APMC should increase its efficiency towards the betterment of workings of management.
- Mahudha APMC should increase its liquidity so that it can improve the current ratio of APMC which helps to enhance its short term obligations.
- Mahudha APMC should maintain the pace of profit generating capacity from the year 2019-2020 so that it will not struggle in future.

Limitation of the study:

- The study is based on only five APMCs of Kheda district.
- The study examines the financial performance through ratio analysis and trend analysis only.
- The study is based on secondary data obtained from APMCs.
- The study period is of 6 years, i.e. from 2014-2015 to 2019-2020.

Further scope of the study:

- The analysis is based on five APMCs of the Kheda district of Gujarat state. Researchers can opt for this research as a base and refer it to different APMCs from other states also.
- The study examines the financial performance through ratio analysis and trend analysis of APMCs. Hence, researchers can opt for other techniques and can also compare the

performances between APMCs.

- The study is based performance of APMCs for 6 years so the researcher can opt for more years.

Conclusion:

This research helps to improve the financial performance of the APMCs, to provide the economic benefit to the APMCs, and at the same place, the expenditure which has made to hike the profitability is also going to better for the farmer's facilities betterment. That effect shows how APMC can use this study for the enhancement of performance of its workings which directly increases income. And if better facilities are provided by the APMCs to the farmers so the productivity of the buying and selling process will get better as a result of it.

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A Study of the Added Economic Value of Selected Indian Pharma Industries

Khyati Jagatkumar Patel

Abstract:

Maximizing shareholder wealth is now largely regarded as the primary goal of business management. Numerous companies have reaffirmed their dedication to maximizing shareholder value, and several managers have been fired for not placing enough priority on it. Use of the notion of economic profit as a performance indicator is becoming more typical among the businesses that have been most effective at boosting shareholder wealth as indicated by consistent increases in return of the stocks. Economic profit or economic value added (EVA) has gained popularity as the performance indicator and investment decision-making tool for managers. However, in recent years, value-based metrics such as EVA which measures of performance that consider value change have drawn a lot of interest. This research paper will clarify the idea of value addition. This includes the definition, computation, and analysis of EVA with regard to particular Indian pharmaceutical companies. The study is an analytical one in terms of design. This secondary database investigation is being done. The pertinent data is gathered from a variety of sources, including the internet, books, magazines, etc.

Key Words: shareholder wealth, performance indicator, Economic Value Added, pharma industries

Introduction:

External financial disclosure is the deliberate dissemination in a firm through proper or casual channels of any monetary data, quantifiable or non-measurable. As every party aims to maximize their own interests, it is similarly convincing in the direction of anticipate some engagement of interest between superiors and other external events. Therefore, managers might not disclose all of the Economic Value Added (EVA) information they have. Full transparency EVA is not always assured, not even in the reaction of regulation. This is because corporate reporting EVA regulations can give outside inventors as much information as possible to help them make decisions about their performance and investment. In essence, EVA must make the difficult decision of how much information should be made public. EVA doesn't exist. The foundation of the EVA and "residual income" notions is the idea that a company can make money for its shareholders by generating surplus above the cost of all capital that has been put in it. EVA might be able to regain the misplaced emphasis on "fiscal surpluses" from the present concentration on office income. In a humorous manner, it could be claimed that up to Stern Stewart and Company accepted it & re-launched under the name EVA, the idea of residual income had not found a strong sponsor. Technically, EVA is nothing more than the revenue that remains after the Capital Cost is deducted from the Net Operational Profit after Taxes.

Mathematically,

Economic Value Added = (Rate of Return – Cost of Capital) x Capital

Here;

Rate of Return: Net Operating Profit after Tax / Capital

Cost of Capital is calculated as Cost of Equity times Quantity of Equity plus Cost of Dues times Amount of Obligation in the Capital (1-Tax Rate).

India's Context:

Economic Value Added has supporters in India. Journalists and executives in corporate reporting already favor it. However, the majority of them report and compute EVA in a careless manner, lacking in accuracy. In this context, it is essential to look at a study by Economic Times, the most read business newspaper in India, as well as Infosys Technologies Limited's annual report, which has received the prestigious "best presented annual report" award for five years running from the Institute of Chartered Accountants of India (ICAI). Indian businesses have begun utilizing EVA to enhance the internal governance The Tata Iron and Steel Company (TISCO) used the concept of EVA to assess the maneuver of their mines and other business units. The company's managers believe the measure to be very helpful and are very enthusiastic for its use. EVA is anticipated to become more popular as management planning and control tool. The notion of EVA is founded on the good financial theory that firm's value raises only if it can produce an excess over its cost of capital, making it theoretically sound. However, there is a lot of subjectivity in its calculation, which lessens the value of its information. Solid sales of EVA have favorably aided to emphasize the essential fiscal value, which managers have extended since gone. However, it would futile to deliver superior signs to the investment arcade when related to standard bookkeeping

extents like the (ROI) Return on Investments. Companies in India use EVA as a performance metric internally to increase efficiency, which raises shareholder value.

Examining the Literature:

Anna Kijewska and Anna Bluszcz (2016) made an effort to research the factors that influence the economic value added of mining companies. The identification of factors influencing the magnitude of EVA is necessary for the company's strategy, which focuses on the growth of the company as reflected by the economic value added (EVA). To do this, the EVA formula was altered in the study in a way that made the factors influencing its value visible.

In 2016, Naghshbandi Nader, Chouhan Vineet, and Jain Priya conducted research on value-based financial performance measurement. Every business must be extremely careful when choosing its measuring tools because doing so will have a significant impact on the administration's prosperity and each division of business. The idea of a monetary outline is a new technique to assess the company's worth.

Using relation to income, Rogerson P. William (2015) examined the impact of managerial investment incentives and alternative investment. The outcome

demonstrated the existence of effectiveness and encouraged the manager to select the most effective investment level. This allocation rule's new income gauge is typically referred to as left over revenue or Economic Value Added.

Scope of Study:

An objective of the said work is in the direction of explain whether or not it is appropriate to use EVA as a performance indicator for a few Indian pharmaceutical companies in order to gather more empirical data on EVA. By comparing NOPAT values, the current study aims to make prudential conclusions about turnover, business soundness, and company creditworthiness. Utilizing the study's inferences and empirical value, the preferential value of the shareholders will be correctly guided.

Research Methodology:

Sun Pharma, Dr. Reddys', and Cipla were chosen as three pharmaceutical businesses for investigation because they are responsive to changes in the economy, government, and other factors. On the basis of their effective performance, large turnover, and peak share market value throughout the study period, the sample of three companies was taken into consideration. The study's sample spans the years 2014–15 through 2020–21.

EVA (in Rs. Crore)

Company	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Sun Pharma	-59335	-13498	-32039	-47064	-11095	-41901	41603
Dr.Reddys'	-99915	-10219	-20571	-31702	-38381	49752	-55690
Cipla	-71777	-68013	-11033	-20541	-25764	-42008	-93778

Hypothesis Testing:

H0: There is no significant difference among EVA of selected pharma industries.

Single Factor Analysis of Variance

Summary	Computation	Totality	Middling	Change
Collections				
Sun Pharma	7	6148.5	1053.90	414520
Dr.Reddys'	7	5918.6	998.89	403200
Cipla	7	5881.3	981.01	399834

Analysis of Variance

Basis	Sum of Squares (SS)	Degree of Freedom (DF)	Mean Squares (MS)	F Value (F)	P Value	Critical Value of F (F Crit)
Between	3716002	2	3891603	15.358	15.9375	4.6325
Within	3015432	18	252412			
Total	6731434	20				

In this case, the estimated Value of F is higher than the value in the table. H0 will be disregarded at a significance level of 0.05. EVA of a few different pharmaceutical industries varies significantly.

Study Restrictions:

- The study will be based on 10 years' worth of data from chosen companies in the Indian pharmaceutical industry, which is one of the paper's primary restrictions. Therefore, the results won't be applicable to the entire industry for a while, since the sample might not fully represent the universal characteristics.
- Secondary data is the foundation of the essay.
- Statistical tools have their own constraints, which will have an impact on the outcome of the study, therefore the limitations of secondary data may be revealed with this paper.

Culmination:

The study found that EVA of pharmaceutical companies and their relationship in a sample of three businesses from an Indian pharmaceutical industry from 2009 to 2015 were significant. In general, all businesses have increased their shareholders' wealth

or value. The analysis found that the full sample of enterprises always had negative EVA. As a result, the company's operations are generally not producing positive EVA.

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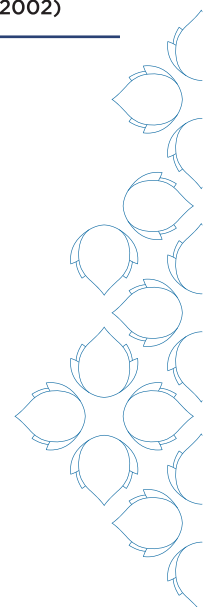
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