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Publication Ethics: A Serious Concern

Publication ethics are not confined to plagiarism, data fabrication or falsification in reporting. It also crossed publication in clone journals. Some grievous incidents have been witnessed in the recent past. Intellectuality have been sold; morality have been auctioned. To get a quick and ease publication, even sub-standard articles are getting a space in highly indexed journals. To find a sort-cut to success, researchers instead of putting dauntless effort are following many unethical practices to grasp category journals. Agencies, in the name of professional firms are encouraging such practices indirectly. U.G., P.G. project reports, dissertations, assignments etc. have been sold in the open market. Plagiarism checking software sometimes failed to hunt an intelligent paraphrasing. The fraudsters club to some extent succeed in attracting a few young researchers. It is observed from social media about vacancy of 1 st or 2 nd author position in an accepted article of a journal which is even indexed in reputed publishers or websites. Indicative conferences are organised by some firms and institutes only to assemble articles and charge different rates for publications in several listed and indexed journals. Dealings are fixed and contract prices are finalised for publication. These activities not only will reduce the sanctity of academic community but also to affect the creative temper of a new and ethical researcher. No specific agency is seriously working to check such practices in India though UGC makes quality assessment of care listed journals at intervals like Scopus. Quality review of print journals must be focussed. Special attention must be diverted for ethical assessment of multidisciplinary journals. Uninterrupted effort and an infinite patience are expected form scholars for ethical publication. The efforts of scholars of central institutes are laudable as far as quality publication are concerned. The Odisha Journal of Commerce and Management encourages ethical publication of quality articles. The editorial committee of this journal have been convening several meetings with authors of submitted articles and helping them in hypothesis development, data analysis, scientific presentation etc. instead of only reviewing the articles. Suggestions if any are most welcome for quality improvement and will be taken care of in the future volume. This special issue of the journal is dedicated to an ethical person Dr Shyama Charan Acharya who selflessly worked for the betterment and development of different government institutions of the state.

Dr. Priyabrata Panda
Assistant Editor

CONTENTS

CUSTOMER PERCEPTION TOWARDS MOBILE BANKING SERVICES IN KEONJHAR DISTRICT OF ODISHA

Manisha Satapathy[1]

Abstract

Mobile banking is the modern era helps to carry out the online financial transaction more easily and quickly. It gives extreme benefits to both the customers and employees. This study is carried out to analyses the perception of customer towards mobile banking services. The study is confined to keonjhar district of Odisha. A total number of 241 respondents are collected through questionnaire. Exploratory factor analysis followed by Mann-Whitney test and Kruskal-Wallis test is applied for data analysis and hypothesis testing. Mobile banking services are represented in four major dimensions they are usefulness, operability. Security and satisfaction. It is found that the customers have different perception based on the selected demographic profile.

Keywords: *Customer perception, Mobile banking, Usefulness, Operability, Security and satisfaction*

JEL Classification: M21, M31 and O31

Introduction

The pervasiveness of technology defining the 21st century is leading banks to adopt a new set of practices. Today the best banks recognize the need to have more complete and up to date services that go beyond Unreasonable offerings. The E banking concept is based on the development design & implementation of financial services that takes place from internet (Anouze & Alamro, 2020). online Banking (internet banking) has emerged as one of the most profitable e- commerce application over last decades (Lee, 2009).E-banking become an essential service to secure client loyalty by ensuring greater customer satisfaction and building stronger ties with them (Liébana-Cabanillas et al., 2013). Digital transformation is revolutionizing service eco system India is ranked second both in terms of number of internet users & mobile phone subscribers. In order to promote digital transactions the Indian govt. has asked all Indian banks to mobile banking facilities to their customers by the end of 2020.Online banking and mobile banking are two prominent digital banking channel that allow banking customer to do the financial transaction at their convenience (Singh & Srivastava, 2020) .Internet based transaction is considered convenient and consumer can transact from the ease of their home (Ahmad et al., 2019). Many researcher and experts mentioned that service quality can be enhanced by using advancement of information & communication technology (ICT) Various studies have confirmed that consumers prefer a technology that provides fast convenient, and useful services of single platform. (Singh et al., 2020).

During the last few decades banking & finance industry has shown a remarkable growth worldwide both in terms of volume & complexity (Leeladhar, 2005).Not just the developed countries but the developing countries have also benefitted from the advancement in information and communication technology (ICT) that has brought a remarkable revolution in the delivery of banking services(Patel & Patel, 2018). Today Mobile banking services along with internet banking services have fundamentally changed the way and methods of doing banking operations by its customers and banks have also used these technology based service delivery channels not only as new way to customer satisfaction but also as a strategy to reduce the cost & increase profitability (Kumar, et al., (2017). More customer will prefer internet banking when the e- Banking services are of high quality and easy to use (Ahmad et al., 2019).

Literature Review

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Jebarajakirthy & Shankar (2021) indicated that access convenience, benefit convenience, transaction convenience, and post benefit convenience have a crucial impact on m- banking adoption intention. Whereas Geebren et al., (2021) reveal that trust has a significant positive impact on customer satisfaction & fully mediate the relationships between service quality, structural assurance and customer satisfaction. Almugari et al., (2020) show that convenience, social influence, privacy & safety, and awareness have a significant impact on the adoption of IoT. Shankar et al., (2020) concluded that high-involved customers prefer positive eWOM with some negative contents in it. Alkhowaiter (2020) provides appropriate strategies to improve the adoption of digital banking. Shankar & Rishi (2020) concluded that transaction convenience and possession convenience predict m-banking adoption intention. Singh et al., (2020) found that ease of use, usefulness, perceived risk, attitude have a significant effect on users' intention, user-perceived satisfaction, and recommendation to use mobile wallet services similarly Rawwash et al., (2020) found that perceived usefulness, ease of use, trust & privacy directly and positively influenced E-banking usages (Anouze & Alamro, 2019). Nazaritehrani & Mashali (2020) showed that the development of 3 banking channels i.e., internet banking, telephone banking, and POS terminals have a significant and positive impact on increasing the bank market share. Singh & Srivastava (2020) found that the adoption factors had a significant impact on customers' behavioral intention to use mobile banking. Payne et al., (2020) concluded that service delivery and customers' role in value co-creation change as AI is introduced into a digital self-service technology channel. Agolla et al (2018) indicate that innovative banks are likely to attract and satisfy their customers. Rao & Rao (2018) concluded that CRM implementation has many benefits like cost reduction, an opportunity to understanding customers, the bank came closer to the customer, etc. Alalwan et al., (2017) shows that behavioural intention is significantly influenced by performance expectancy, effort expectancy, hedonic motivation price value, and perceived risk. Sharma & Govindaluri (2014) analysed that Perceived usefulness, perceived ease of use, social influence & awareness quality of internet connection, and self-efficiency are primary determinants of attitude towards the use of internet banking in urban India. Black et al., (2014) explains that customers who have data, technical skills can easily use the internet banking services, and they will have higher satisfaction levels than others. (Herington & Weaven, 2009; Ho et al., 2012; Li-hua,2012). Cabanillas et al., (2013) analysed the relationship between the proposed variables i.e. accessibility, trust, ease of use & usefulness, and satisfaction with e-banking similarly Juwaheer et al., (2012) showed that perceived ease of use & perceived usefulness has a direct influence on the adoption of internet banking and Kumbhar (2011) concluded that perceived value, brand perception, cost-effectiveness, ease to use, convenience, problem handling, security, and responsiveness are important factors in customer satisfaction in e-banking. Singh & Arora (2011) show that the customer of nationalized banks was not satisfied with the employee behaviour and infrastructure; while respondents of the private and foreign bank were not satisfied with high charges, accessibility, and communication. Lin (2011) indicates that perceived relative advantage, ease of use, compatibility, competence & integrity significantly influencing attitude leads to behaviour intention to adopt mobile banking.

Research gap

A review of various studies on customer perception towards mobile banking services revealed that the research on customer perception towards mobile banking services in the Keonjhar district of Odisha has not yet been attempted. The present study on customer perception towards mobile banking services in the Keonjhar district attempts to fill this research gap. The result of the study is expected to provide a practical contribution to the area of mobile banking services and in understanding customer perception and awareness towards mobile banking services

Social Relevance.

Mobile Banking is a branch of varied innovative developments within the fields of data Technology. it's become very significant within the day-to-day life of the people. The Indian banking system has started making progress in M Banking. Most of the private nationalized and even co-operative banks have entered the technology age and providing various sorts of electronic facilities and services to their customers. But at an equivalent time, it's necessary to understand how the purchasers perceive these facilities and to what extent they're conscious of the M-Banking facilities.

Therefore, the present study is undertaken to focus mainly on the perception and awareness of customers about M-banking facilities and services offered by the banks. The findings of this research will provide empirical evidence and may add new knowledge to the existing literature of business, economics, and banking for understanding the impact of the complex relationship between M Banking services and customers' perception and awareness about it. It also provides useful information regarding knowledge on mobile banking to the state government to undertake necessary programs and campaigns to educate the people on availing them-services. This research work will also help directly or indirectly to various stakeholders of the society like consumers, merchants, business, and government.

Objectives

The objectives of the study are:

1. Examine the awareness level among the people regarding mobile banking services in the keonjhar district of state Odisha and analyse whether there is an association between the demographic profiles of people with the level of mobile banking awareness in Keonjhar District of state Odisha.
2. Understanding the perception of customers about mobile banking services in the Keonjhar district of state Odisha.

List of hypotheses

The various research hypothesis has been developed based on research objectives articulated here above: to identify based on the review of the literature, awareness regarding mobile banking, types of mobile banking awareness, factors affecting mobile banking services and the perception of customer towards mobile banking services. These hypotheses have been empirically tested in later parts.

$H_0 1$: There is no significant difference between demographic profile with awareness regarding mobile banking.

$H_a 1$: There is a significant difference between demographic profile with awareness regarding mobile banking.

$H_0 2$: There is no significant difference between the demographic profile of respondents with perception regarding mobile banking services.

$H_a 2$: There is a significant difference between the demographic profile of respondents with perception regarding mobile banking services.

Research Methodology

It includes research design, sources of data collection, design of the questionnaire, sampling design, various tools and techniques which have been used for the study & various software that has been used for the data interpretation.

Research Design

This research is descriptive. The descriptive study involves the characteristics of the sample i.e., their age group, gender, occupation, income group, and area of residence, etc.

Nature and Sources of Data

The data have been grouped into two main categories i.e., primary and secondary data. The secondary data have been taken from a different newspaper, journals, magazine, weblink, and also from the research paper. The primary data have been collected through a questionnaire with user and non-user of mobile banking basically from a businessman, retired person, servicemen, profession, students, etc. This research is descriptive. The perception towards mobile banking has been collected with the help of the questionnaire method for studying their response on 5 points rating scale i.e., strongly agree, agree, neutral, disagree, and strongly disagree has been prepared. Some collected data are based upon their demographic profile like age, income, occupation, gender, awareness regarding mobile banking, etc.

Design of the questionnaire

The questionnaire is designed with the view to know the customers' perception, awareness, etc towards mobile banking.

A) Personal profile or Demographic profile-

It covers the age of the respondent, gender, the area in which he/she is staying, occupation, income level, and their highest qualification, etc.

B) Awareness regarding mobile banking

It includes whether they are aware of mobile banking, which type of mobile banking services did they aware of, the sources from where they aware about mobile banking services, their bank provides mobile banking services or not, their banking, user or non-user of mobile banking, etc.

a) service quality
   it includes which types of account they have, are they interested in using mobile banking services, banking experience, etc.
b) Analysis of customer perception of mobile banking
   Customer perception is an important area of study. The perception of customers towards mobile banking is analysed. Various questions are asked for such purpose which includes which types of relationship maintained by bank staff, the operation of mobile banking menu is easy, difficult, or moderate, do they aware of fraud, whether their handset cannot use mobile banking? Whether mobile banking is hard for us? Are they comfortable without mobile banking? or any security threat? Etc.
c) Use of scale in the Questionnaire
   The questionnaire which is having a yes/no answer may not satisfy the researcher's need. Thus 5-point rating scale is used to know the perception and awareness of respondents. Whether they are strongly agreed, agree, neutral, disagree, or strongly disagree

Demographic Profile

Table 1: Profile of Respondents

Variables	Frequency	Percentage
	Age (in years)	
Below 17	18	7.5
18-25	105	43.6
26-35	46	19.1
36-50	23	9.5
51-60	26	10.8
Above 60	23	9.5
Total	241	100
	Gender	
Female	121	50.2
Male	120	49.8
Total	241	100
	Area of staying	
Urban	122	50.6
Rural	82	34
Other	37	15.4
Total	241	100

Highest qualification		
Undergraduate	28	11.6
Graduate	41	17
Postgraduate	77	32
Above postgraduate	58	24.1
Others	37	15.4
Total	241	100
Occupation		
Students	82	34
Salaried	47	19.5
Housewife	22	9.1
Agriculture	22	9.1
Business	24	10
Looking for job	24	10
Others	20	8.3
Total	241	100
Income group		
Less than 1 lakh	143	59.3
1-3 lakh	31	12.9
3-5 lakh	34	14.1
More than 5 lakhs	33	13.7
Total	241	100
Awareness regarding mobile banking services		
Yes	169	70.1
No	72	29.9
Total	241	100
User /nonuser of mobile banking services		
User	198	82.2
Nonuser	43	17.8
Total	241	100

Source: Author’s own findings

Reliability of Data

Prior to data analysis, the research instrument was assessed for its reliability as well as construct validity. Reliability co-efficient was measured by Cronbach’s alpha value. (Nur et al., 2014). Reliability study refers to the factors' internal consistency (Chu & Murramann 2016), which is estimated using Cronbach's alpha (Fornell and Larcker 1981; Churchill 1984). Coefficient alpha was estimated for all variables. The values of alpha exceed the minimum 0.7 score (Nunnally, 1978) and 0.6 reported in Garg et al. (2014). Such value is greater than the recommended value.

Table 2: Reliability Test Statistics

Cronbach's Alpha	N of Items
.821	21

Source: Authors own findings.

The reliability statistics in the above table is.821 after considering 241 no. of respondents.

Model and Discussion

Chi-Square Results

To examine whether people of the district are aware of mobile banking services and analyse the association of awareness of mobile banking with demographic features of respondents. According to the Cambridge English dictionary, ‘aware’ means knowing something that already exists. It also means to be concerned and well informed about the particular situation or development. In the current study, respondents were asked whether they are aware of mobile banking services or not and to analyse and examine whether there is an association between demographic features of the people in the district with their awareness level. Respondents are asked whether they are aware of mobile banking, for which they have to respond in yes or no. A score of each respondent is based on his/her ‘yes’ response. Chisqure test and Cramer's v were used to find the association of demographic variables of the people with their awareness of using mobile baking. The demographic variables selected for this were age, gender, area of residence, qualification, occupation, income group and user or nonuser of mobile banking. The finding of the test is presented in the below table as follows.

Table 3: Association of Demographic Variables with the Awareness of Mobile Banking.

Demographic variables	**Association with the Awareness (Chi-Square)**	**Strength of association as per Cramer's v**
Age	$H_0 1$ significant as p-value <.05	0.580(High)
Gender	$H_0 2$ not significant as p value >0.05	0.034(weak)
Area of residence	$H_0 3$ significant as p value <0.05	0.430(High)
Qualification	$H_0 4$ significant as p value <0.05	0.468(High)
Occupation	$H_0 5$ significant as p value < 0.05	0.443(High)
Income	$H_0 6$ significant as p value <0.05	0.273(Medium)
User/nonuser	$H_0 7$ significant as p value < 0.05	0.193(weak)

Source: Authors own findings

Since it was found that there is significant difference exist in awareness of respondents with their demographic variables. Chisquare test indicated the fact that there is variation between demographic features of respondents like age, area of residence, qualification, occupation, income and user or non-user of mobile banking services with the awareness of mobile banking services except gender.

Exploratory Factor Analysis

EFA was directed to check sample adequacy by Kaiser–Meyer–Olkin (KMO) test and convergent validity of the constructs. Panda et al., (2021) followed for EFA analysis. Principal components analysis (PCA) extracted pure and true eigenvalues (Krishna Kishore & Sequeira, 2016). All items come under four factors and loaded on their constructs. KMO test and Bartlett’s test for sample adequacy were significant at 0.835 (Table 5), explaining from four factors. (Gorsuch, 1983) recommended minimum sample size must be 100 for EFA. (Gorsuch, 1983) and (Kline, 1994) suggested sampling at least 100. (Comrey & Lee, 1992) suggested 100 samples are poor for EFA, 200 to 300 are good, 500 are very good, and 1,000 samples are excellent. Here the Sample size 241 which is good for EFA (see Table 6). (Nunnally 1978) recommended sampling at least ten times as many subjects as variables. According to (Hair & Anderson, 1992) variables with factor loadings of greater than 0.3 are considered significant, loadings with greater than 0.4 are important and with loadings greater than 0.5 are considered as very significant. Here we found that as greater than 0.5 which indicates that the minimum factor loadings as suggested by Hair & Anderson (1992) are satisfactorily met. KMO measures the adequacy of the data to run the factor analysis. In this study the KMO shows the measure of 0.835 which is above the lower limit of 0.5, (Kothari, 1985). The value of Bartlett's test is 2741.242 where p-value = .000, which is also acceptable. This confirms that data is appropriate for conducting EFA.

Table 4: KMO and Bartlett's Test Stat.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.835
Bartlett's Test of Sphericity	Approx. Chi-Square	2741.242
	Df	210
	Sig.	.000

Source: Author's own findings

Twenty-one items have been used in this study. The KMO result is nearer to 1 and it is appropriate for the factor analysis.

Table 5: Factor grouping and Reliability Test

Factors Name	Variables	Factor Loadings	Reliability
Usefulness	I have a problem the understanding language used in mobile banking services	.696	.919
	I find mobile banking is cost-effective as compared to visiting banks	.848	
	I am used to mobile banking because of 24*7 availability	.731	
	I am satisfied with the level of data and information security provided by the bank	.817	
	I am completely aware of all mobile banking services.	.900	
	I am comfortable using new technology like mobile banking	.904	
	The use of mobile banking services is beneficial	.825	
Security	Security issue	.617	.878
	I feel mobile banking services are meant for wealthy people	.710	
	I don't use mobile banking because of the possibility of identity, theft, and hacking	.687	
	I feel mobile banking service might not perform well and process payment incorrectly	.830	
	I find it risky to share my private and sensitive information with the bank	.728	
	I am completely aware of mobile banking services	.756	
	I trust the network connectivity while doing the transaction in mobile banking	.628	
Operability	Mobile banking is hard to use	.799	.752
	I am comfortable without mobile banking	.691	
	My handset cannot use mobile banking	.737	
Satisfaction	A relationship maintained by bank staff	.767	.648
	Rate the overall security of mobile banking services	.501	

	Overall opinion regarding mobile banking services	.691	
	I am satisfied with the user interface of mobile banking	.826	

Source: Author's finding

Factor loading explains the strength of items loaded in each factor. The rotated component matrix was applied in the study. The result shows that most of the items load well (>0.5) on four factors of mobile banking services. A value greater than 0.4 is considered significant and it can be concluded that there is a good relationship between factors and variables on these measures.

Mann Whitney U Test Results

Mann Whitney U test to find if the difference is significant:(user/ nonuser of mobile banking with usefulness and satisfaction factor of mobile banking)

Since the data under this section is not normally distributed: we use the Mann Whitney U test which is a nonparametric test that can be used to determine if there are statistically significant difference between two groups of an independent variable (Morgan et.al.,2004; Kothari, 1985) (i.e., user and nonuser of mobile banking) on a continuous or ordinal dependent variable i.e., usefulness and satisfaction factor of mobile banking.

Hypothesis

$H_0$1(Null hypothesis) - There is no significant difference between user and non-user of mobile banking in terms of the usefulness of mobile banking.

H_a1(Alternate hypothesis)-There is a significant difference between user and non-user of mobile banking in terms of the usefulness of mobile banking.

Table 6: Mann Whitney U Test Statistic

(User and nonuser of mobile banking in terms of usefulness)

	user/nonuser of MB	N	Mean Rank	Sum of Ranks	Asymp. Sig. (2-tailed)
USEFULNESS	user	198	126.47	25040.50	.009
	non-user	43	95.83	4120.50	
	Total	241			

Source: Author's own findings

The Mann-Whitney U test shows that there is a statistically significant difference between user and non-user as p .009<.05 with a mean rank of 126.47 for the user and 95.83 for the non-user of mobile banking. Thus, we reject the null hypothesis and accept the alternate hypothesis.

Hypothesis

$H_0$2(Null hypothesis) - There is no significant difference between user and nonuser of mobile banking in terms of the satisfaction factor of mobile banking.

H_a2(Alternate hypothesis) - There is a significant difference between user and non-user of mobile banking in terms of satisfaction of mobile banking.

Table 7: Mann Whitney U Test Statistic

(User and nonuser of mobile banking in terms of satisfaction)

	Are you a user/nonuser of MB	N	Mean Rank	Sum of Ranks	Asymp. Sig. (2-tailed)
SATISFACTION	User	198	126.13	24973.00	.013
	non-user	43	97.40	4188.00	
	Total	241			

Source: Author's finding

The Mann-Whitney U test shows that there is a statistically significant difference between user and non-user as p .013<.05 with a mean rank of 126.13 for the user and 97.40 for the non-use of mobile banking. Thus, we reject the null hypothesis and accept the alternate hypothesis. There is a significant difference between user and non-user of mobile banking in terms of the satisfaction factor of mobile banking.

Kruskal Wallis H Test

Kruskal Wallis tool is applied to find out the association between the selected demographic profile and the perception of customers towards mobile banking services. Since the data under this section are not normally distributed, Kruskal Wallis test is applied. It is a non-parametric test that can be used to determine the statistically significant association between more than two groups of an independent variable on one or more than one continuous or ordinal dependent factors (Morgan et.al.,2004; Kothari, 1985).

For this purpose, the following hypothesis are framed.

$H_0$1: There is no significant difference between the usefulness of mobile banking services for the age of the respondents.

$H_0$2: There is no significant difference between age with operability of mobile banking services.

$H_0$3: There is no significant difference between age with satisfaction of mobile banking services.

$H_0$4: There is no significant difference between the area of staying and the usefulness of mobile banking services.

$H_0$5: There is no significant difference between the area of staying with the satisfaction of mobile banking services.

$H_0$6: There is no significant difference between qualification with the usefulness of mobile banking services.

$H_0$7: There is no significant difference between qualification with the security of mobile banking services.

$H_0$8: There is no significant difference between qualification with the operability of mobile banking services.

$H_0$9: There is no significant difference between qualification with the satisfaction of mobile banking services.

$H_0$10: There is no significant difference between occupation with the usefulness of mobile banking services

$H_0$11: There is no significant difference between occupation with the security of mobile banking services

$H_0$12: There is no significant difference between occupation with the satisfaction of mobile banking services

$H_0$13: There is no significant difference between income with the usefulness of mobile banking services

$H_0$14: There is no significant difference between income with the operability of mobile banking services

$H_0$15: There is no significant difference between income with the satisfaction of mobile banking services.

$H_0$16: There is no significant difference between awareness with the usefulness of mobile banking services

$H_0$17: There is no significant difference between awareness with the satisfaction of mobile banking services

Table 8: Test statistics - Kruskal Wallis H test

Demographic Variables	Factors	Chi-square value	Df	Significance	Hypothesis
Age	Usefulness	69.061	5	.000	$H_0$1: rejected
	Operability	6.306	5	.278	$H_0$2: accepted
	satisfaction	11.356	5	.045	$H_0$3: rejected
Area of residence	Usefulness	21.832	2	.000	$H_0$4: rejected
	Satisfaction	.3.522	2	.172	$H_0$5: accepted
Qualification	Usefulness	31.228	4	.000	$H_0$6: rejected
	Security	10.866	4	.028	$H_0$7: rejected
	Operability	3.090	4	.543	$H_0$8: accepted
	Satisfaction	10.333	4	.035	$H_0$9: rejected
Occupation	Usefulness	59.355	6	.000	$H_0$10: rejected
	Security	4.980	6	.546	$H_0$11: accepted
	Satisfaction	12.859	6	.045	$H_0$12: rejected

Income	Usefulness	9.253	3	.026	$H_0$13: rejected
	Operability	3.756	3	.289	$H_0$14: accepted
	Satisfaction	11.721	3	.008	$H_0$15: rejected
Awareness	Usefulness	35.873	1	.000	$H_0$16: rejected
	Satisfaction	12.924	1	.000	$H_0$17: rejected
M-banking experience	operability	7.972	3	.047	$H_0$18: rejected

Source: Authors own findings

From the above analysis, we may come to know that there is a significant variation between the age of the respondents for usefulness and satisfaction factors of mobile banking except with operability. There is a significant dissimilarity between an area of residence with usefulness except with satisfaction factor. it is also a significant variation among qualifications of respondents with the usefulness, security, and satisfaction factors except with operability of mobile banking services. There is a huge variation in the occupation of respondents with the usefulness and satisfaction factor of mobile banking. In the case of income, there is a significant variation in usefulness and satisfaction. Awareness has also a significant variation in usefulness and satisfaction. User and nonuser of mobile banking have significant dissimilarity with usefulness and satisfaction factor. And lastly, the mobile banking experience has a significant variation with operability.

Conclusion and Implication

It is promising to see that people are gradually discovering the source of mobile banking in the state of Odisha in Keonjhar district to fulfil their banking needs, and a reasonable proportion of the working and trained youth of the district have become active users of mobile banking. However, the awareness of mobile banking and its use is still poor. Significant attempts were made by the district government to achieve digitalization and e-literacy, but the sources were not effectively channelized to educate people about mobile banking. There's no idea about mobile banking types such as USSD and IVR for most people in the district. A significant association with mobile banking awareness has been demonstrated by the demographic characteristics of individuals in the state, such as age, area of residence, occupation, income, mobile banking experience and mobile banking users or non-users. It is found that in the recent past, the majority of mobile banking users only accepted mobile banking service. A good proportion has gained access to knowledge about the use of mobile banking by simply installing the mobile banking app and following the steps mentioned. On the other hand, as some respondents have suggested, bank employees have also contributed to the spreading of knowledge on the use of mobile banking, implying that bank employees remain such a strong and trustworthy source of information on banking items.

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AN ANALYSIS OF PRIORITY SECTOR LENDING PROGRAMME: A CASE STUDY OF SAMBALPUR

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Abstract

The Government of India in coordination with various agencies implements the five year plans for the economy. Some sectors are emphasized for special attention in these plans and are termed as priority sectors. The RBI identifies and updates these sectors and has directed the banks to channelize at least 40 percent of their credit to these sectors to ensure their sustainability. The research portrays the concept of Priority Sector Lending and aims at analyzing the performance of banks in execution of the direction in the context of Sambalpur District of Odisha. An empirical study was constructed to examine the data of the district in contrast with the targets set by the central bank. Data period is taken from 2009 to 2021. Kruskal-Wallis (H) and Mann-Whitney (U) is applied to test hypothesis. From the research it was found that the district has a growing potential for credit towards the MSME sector. The co-operative banks and the regional rural banks have been playing a significant role in disbursement of credit to the priority sectors, out of which the agriculture sector is being given a lion's share, keeping in view RBI's sub-target for the sector as well its importance in the economy of the district.

Keywords: *Priority sector lending, agriculture, MSME, Other Priority Sectors*

JEL Classification: G20, G28, O43

Introduction

India is said to be an agro-based economy. But the contribution of agriculture to Gross Domestic Product (GDP) has been declining from year to year. The data shows that it shares only 15.87% of the total GDP as compared to 29.73% from industrial sector. Indian economy has gone through many changes since independence and the concept of balanced economic growth has been promoted through many policies. However, 'balanced economic growth' has been neglected since long (Sahu and Rajasekhar, 2005; Kumar, 2015). With the rising competition from global market, the economy has been losing interest in agriculture and the traditional small scale industrial practices that ran through families. To revive these sectors and to improve the economic growth of a region, the role of credit cannot be ignored (Singh *et al.*,2016). Thus, to channelize credit to the sectors prioritized through the Five-Year Plans by the Government, Priority Sector Lending concept was introduced. Finance and credit are directed according to these plans to sectors like agriculture, MSME units, and other weaker sections which would have faced challenges in the absence of such arrangement.

With reference to the term 'Priority Sector', it includes those sectors which may not get timely credit in the absence of this special dispensation. The Banking Regulation Act, 1945 has empowered the RBI to control the credit in the economy via quantitative and qualitative measures, the priority sector lending scheme comes under the later. The apex bank, from time to time, identifies these sectors and issues directives to ensure the banks adhere to the objective of the scheme. As per the latest Master Direction FIDD.CO.Plan.1/04.09.01/2016-17 issued by RBI the priority sectors are Agriculture, MSME, Export credit, Education, Housing, Social infrastructure, Renewable energy and Others allied industries.

Reserve Bank of India sets target of such lending which is 40 per cent of the adjusted net bank credit or credit equivalent amount of off-balance sheet exposure to be channelized to the priority sectors. Out of

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which, 18 percent has been set aside for agriculture (8 per cent prescribed for Small and Marginal farmers), 7.5 percent to the MSME and 10 percent to the weaker sections respectively. These targets are to be complied by all domestic commercial banks as well as the foreign banks with 20 branches and above.

Present scenario

The report released by RBI for 2019-20 has exhibited a positive scenario where all the scheduled commercial banks have successfully achieved their priority sector lending targets. However, RBI flagged the issue of regional disparity in flow of agricultural credit which again challenges the whole purpose of the arrangement.

Table: 1 Priority Sector Lending by Scheduled Commercial Banks as on 31.03.2020 (%)

Segment	***Target***	***Public Sector***	***Private Sector***	***Foreign Banks***
Agriculture	18.0	17.23	15.96	18.25
MSME	7.5	7.03	8.03	7.64
Weaker sections	10.0	12.13	10.78	10.56
Bank 's Flexibility of Lending	4.5	4.66	5.55	4.35
Total	**40.0**	**41.05**	**40.32**	**40.80**

Source: RBI Report on Trend and Progress of Banking in India 2019-20

Thus, it is the need of the time to revisit the priority sector guidelines and underline the reasons for such failure even after the intensive policy implements. In this study, an attempt has been made to study the scenario of priority sector lending and analyse the participation of banks in the sustainability of the livelihoods of Sambalpur district of Odisha.

Review of Literatures

Swamy (2010) has made a study on the impact of intervention of Government in the financial development and growth of the priority sectors. The research work shows that the priority sector lending in India has been greatly influenced by the policy approaches of the Government of India and he suggested that there is a need to strengthen this approach. However, he has criticized the government’s policy that allows the failing banks to park their shortfall in Rural Infrastructural Development Fund and said that it has resulted in decrease in PSL over the years. Najmi (2013) made an comparative analysis of Priority Sector Lending by public and private sector banks in India, in her attempt to compare the NPAs in priority sector lending made by public and private sector banks, she concluded that Public Sector Banks have more NPAs as compared to the Private Banks. She opined that this is due the fact that the Public Sector Banks advanced more credit to the priority sector than the private sector banks which preferred to lend mostly to the Non-priority sector. Throve, (2015) in “Analytical study of Priority Sector Lending with reference to nationalized banks in India” underlined that the occurrence of NPA in the Non-priority sector is more compared to priority sector. Both large and small industries are experiencing such NPA problem. Murugapoobathi, (2016) studied the customer’s attitude towards priority sector lending by SBI in Kanyakumari district and found that the customers’s satisfaction on the Priority Sector Lending distributed by SBI is lesser among the rural customers than that among the urban customers. Also, the overall impact of Priority Sector Lending among the urban customers was higher than that among rural customers. Mehta (2017) analysed the lending to Priority Sectors viz. Agriculture, MSMEs and Weaker Sections by Public Sector Banks in India. Further, he examined that the lending behaviour of 20 selected PSBs towards priority sectors and found a significant variation in the level of agricultural advance and advance to MSMEs. However, the banks were indifferent towards the weaker section. Shrivastav (2017) analysed priority sector lending through Micro Finance Institutions and concluded that after RBI updated its PSL norms in 2011, indirect lending via MFIs has been categorized as PSL, capitalizing this guideline, banks have begun meeting PSL norms. This has resulted in decrease in bad loans, reflected in the overall NPAs. Das (2017) conducted a research in the bank lending on the priority sector in the Nagaon district of Assam. He found no significant difference in the procedure of advancing credit to priority and non-priority sector. He also evaluated the utilization of loans by the borrowers, repayment behavior of the beneficiaries, problems faced by the banks as well as the target group. He concluded that the banks officials fairly counseled the target group for productive use of the credit, however a significant amount of advances was being diverted towards unproductive purposes like marriages, celebrations, household expenses and education of children. Sweetline (2017) pointed out that the priority sectors after implementation of these loans, credit facilities and schemes have been largely benefitted and have witnessed immense growth in their contribution to the GDP as well as the bank's credit growth on these sectors have declined. Roy (2017) in his "Study on Access to Farm Credit by the Small and Marginal Farmers in India under the policy of Priority Sector Lending (PSL)" found that nearly 85% of marginal farmers as well as 51.9% of Indian farmers are under the burden of debt. Further, out of the prescribed target of 40% of PSL the credit delivery to the small and marginal farmers have declined from 23% in 2005 to just 4.3% in 2013.Naruka(2018) has made a similar study on the sector-wise implementation of PSL in Jaipur and Alwar districts of Rajasthan. For the purpose she has studied the district credit plan of the lead banks and used Mann Whitney "U" test to compare the two districts for the period 2006 to 2017.

The failure of banks in meeting the prescribed targets for priority sector lending has remained a matter of concern for the economy. The priority sector norms have been set to ensure sufficiency of credit flow into the neglected sectors of the economy. The non-achievement of these targets means a part of the credit remaining unutilized for the desired purpose. Keeping this concern in mind, the study has been carried out to evaluate the status of the programme in Sambalpur district of Odisha.

Objectives of the Study

i. To compare lending by different banks to priority sectors in Sambalpur. To relate the credit disbursement behavior towards the priority sectors by the banks of Sambalpur.
ii. To compare total target and achievement of lending in Sambalpur.

Based upon the above objectives the following hypotheses have been formulated:

H_{01}: There is no difference in lending to priority sectors by different banks of Sambalpur.
H_{02}: There is no relation in credit disbursement among different sectors.
H_{03}: There is no difference between target and achievement in total priority sector lending.

Data and Methodology

The present study is based on secondary data collected from the State Level Bankers' Committee's report on Lead Bank Scheme. The data for 10 years have been considered for the study.
***Research Design*:** The research is descriptive in nature where a detailed analysis of documents and reports has been conducted to get an overview on the arrangement of priority sector lending.

***Nature and Sources of Data*:** The data under study is of secondary nature, which has been collected from reports and publications of State Level Bankers Committee of Odisha and RBI.

***Analytical Tools*:** For the purpose of analysis, the following tools have been used:

- Kruskal-Wallis (H) and Mann-Whitney (U) test has been used for testing the hypothesis.
- Ratios have been calculated to study the proportion of respective advances to total advances.
- Trend analysis has been done to enumerate the trend of growth of credit disbursement over the period of study

***Period of Study*:** The study enumerates the analysis of data collected over the period of 12 years from 2009 to 2021.

***Assumption Testing*:**

Table: 2: Test of Normality

SECTORS	**Kolmogorov-Smirnov**			**Shapiro-Wilk**		
	Statistic	Df	Sig.	Statistic	df	Sig.
AGRICULTURAL SECTOR	.196	11	.200	.916	11	.359
MSME	.209	11	.200	.877	11	.147

OTHER PRIORITY SECTORS	.250	11	.112	.849	11	.073

Source: Data compiled in SPSS

Both the normality tests have failed to reject the null hypothesis regarding normality which is Data is Normal. As the P/Sig. value is more than .05 the null hypothesis is accepted and it can be inferred that the above data is normal. Thus, parametric test can be applied.

Table: 3: Test of Homogeneity of Variances (Levene's Test)

Levene Statistic	df 1	df2	Sig.
15.973	2	24	.000

Source: Data compiled in SPSS

Levene's test is useful when groups are compared with each other. It shows whether the groups homogeneous or not. If groups are not homogeneous, parametric test like t test or Anova cannot be applied. In the above table P/Significant value is less than .05, the null hypothesis for homogeneity which is groups are homogeneous, is rejected at 1% level of significance. Thus, parametric tests in this regard cannot be applied.

Data Analysis

This part attempts to analyze the credit disbursement behavior towards the priority sectors viz. agriculture, MSME, and other sectors. The RBI encourages at least 45% of priority sector lending to agriculture. Similarly, the percentage is 18.75 % and 25% to MSME and Weaker sections respectively.

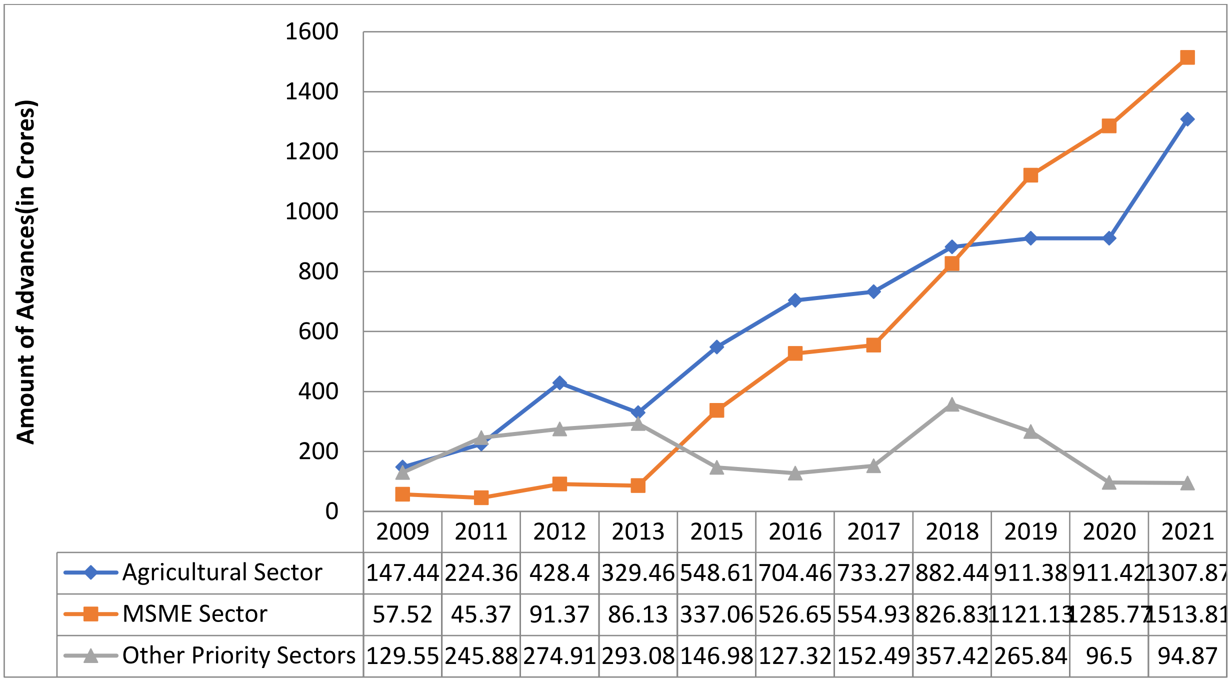
Table: 4: Credit Flow to Priority Sectors in Sambalpur (Rs. In Crore)

YEAR	AGRI_SECTOR	MSME SECTOR	O.P.S	TOTAL ADVANCES
2009	147.44	57.52	129.55	334.52
2011	224.36	45.37	245.88	515.61
2012	428.40	91.37	274.91	794.68
2013	329.46	86.13	293.08	708.67
2015	548.61	337.06	146.98	1032.66
2016	704.46	526.65	127.32	1358.42
2017	733.27	554.93	152.49	1440.68
2018	882.44	826.83	357.42	2066.69
2019	911.38	1121.13	265.84	2298.35

Source: SLBC Odisha

The data shown in Table 4 shows a steady growth in the absolute values of advances to the agricultural and other priority sectors. More amounts of advances are diverted to agriculture sector than MSME and other priority sector.

Figure 1: Trend of Credit to Priority Sector in Sambalpur



Source**:** data compiled

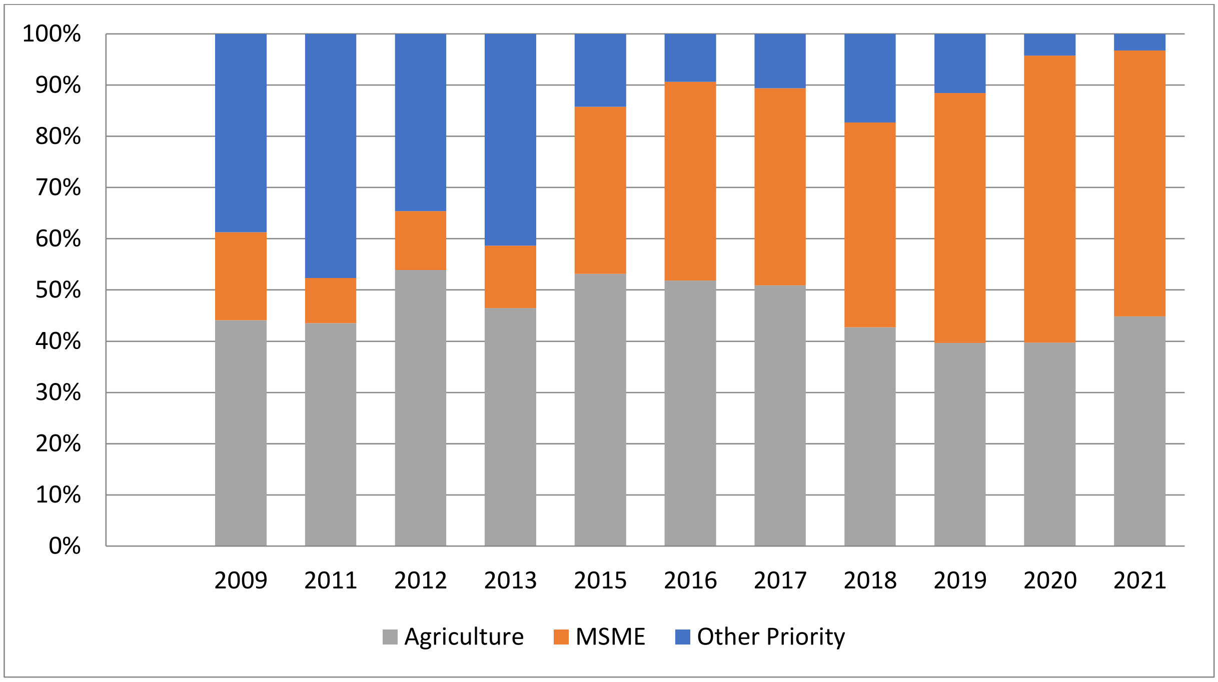
Figure 1 depicts that there is a continuous increase of lending to agricultural sector and MSME from 2013. But the growth of MSME seems to be more than agriculture sector. Lending to other priority sector is not consistent throughout the time period. In the year 2015, 2016 and 2017, lending to other priority sector is minimum, whereas lending to agriculture and MSME was rising at these years.

Table: 5: Sector Wise Lending to Total Lending (%)

Year	Agriculture Sector	MSME Sector	Other Priority Sector
2009	44.08	17.20	38.73
2011	43.51	8.80	47.69
2012	53.91	11.50	34.59
2013	46.49	12.15	41.36
2015	53.13	32.64	14.23
2016	51.86	38.77	9.37
2017	50.90	38.52	10.58
2018	42.70	40.01	17.29
2019	39.65	48.78	11.57
2020	39.73	56.06	4.21
2021	44.85	51.90	3.25
Mean	**46.44**	**32.39**	**21.17**

Source: SLBC Odisha

Figure 2: Comparative Sector-Wise Share in Total PSL (%)



Source: Data Compiled

The mean percentages for the three sectors were 47.35, 27.59, and 25.04 respectively, as shown in Table 5.The flow of credit to the agriculture sector is the highest among the three sectors. Figure 2 depicts that the share of lending to MSME has been increasing constantly from 2013 to 2021. In the same time period, the share of lending to other priority sector has been decreased drastically. The lending to agriculture sector has been decrease marginally from 2015.

Table 6: Sectoral Target and Achievement of Advances. ***(Amount in Crores)***

Source: Data Compiled in Excel

Year	Agriculture Sector			MSME Sector			Other Priority Sector		
	Target	**Achievement**	**%**	**Target**	**Achievement**	**%**	**Target**	**Achievement**	**%**
2008-09	140.43	147.44	104.99	33.97	57.52	169.36	84.40	129.55	153.50
2010-11	218.98	224.36	102.46	98.10	45.37	46.25	247.88	245.88	99.19
2011-12	327.58	428.40	130.77	162.67	91.37	56.17	368.95	274.91	74.51
2012-13	382.64	329.46	86.10	184.18	86.13	46.76	505.20	293.08	58.01
2014-15	688.89	548.61	79.64	228.14	337.06	147.74	603.94	146.98	24.34
2015-16	807.09	704.46	87.28	563.76	526.65	93.42	433.12	127.32	29.40
2016-17	960.39	733.27	76.35	1056.23	554.93	52.54	111.81	152.49	136.38
2017-18	894.26	882.44	98.68	1167.93	826.83	70.79	154.78	357.42	230.93
2018-19	1255.85	911.38	72.57	1176.93	1121.13	95.26	165.10	265.84	161.01
2019-20	1325.80	911.42	68.74	1209.52	1285.77	106.00	183.25	96.50	52.66
2020-21	1397.20	1307.87	93.61	1270.75	1513.81	119.13	216.65	94.87	43.79
Mean	763.56	648.10	91.02	650.20	586.05	91.22	279.55	198.62	96.70
Std Dev	452.03	350.60	17.86	522.81	531.74	41.79	172.29	90.86	65.92

The data shown in above table shows that until 2011-12 the banks were extending more credit than target to the farm sector. However, from 2012 onwards the banks have failed to achieve target assigned for such sector. The average achievement target is 93%. MSME sector witnessed similar trend except for 2008-09 and 2014-15 where achievement is more than target. The average achievement percentage is 86% which is lower than agricultural sector. Lending to other priority sector is not consistent throughout the period. The percentage of achievement is very low in 2014-15 and 2015-16. In the year 2008-09, 2107-18 and 2018-19 the percentage of achieving is much higher than target. The average percentage of achieving is though more than 100 percentage, the standard deviation is also higher than other two sectors which reflects that more volatility of lending to this priority sector.

Table 7: Total Target and Achievement of PSL (Amount in Cr.)

Year	Target	Achievement	%
2008-09	258.80	334.52	129.26
2010-11	564.96	515.61	91.27
2011-12	859.20	794.68	92.49
2012-13	1072.02	708.67	66.11
2014-15	1520.97	1032.66	67.89
2015-16	1803.97	1358.42	75.30
2016-17	2128.43	1440.68	67.69
2017-18	2216.96	2066.69	93.22
2018-19	2597.88	2298.35	88.47
2019-20	2718.58	2293.69	84.37
2020-21	2884.60	2916.55	101.11
Mean	1693.31	1432.77	87.02
Sta. Dev.	905.91	850.79	18.42

Source: SLBC Odisha

Table 7, above, analyses overall advances extended to priority sectors in Sambalpur, it can be said that the banks have remained unsuccessful in achieving the targets set for individual as well as in overall priority sector. Except for the year 2008-09, the percentage achievement is less than the target. The average achievement is 85% with overall variation of 20%.

Hypothesis Testing

The first null hypothesis (H_{O1}) is there is no difference among lending to different priority sectors. As the groups are not homogeneous, non-parametric test i.e. Krusal Wallis test is applied. The test result is given below.

Table 8: Hypothesis Testing (Kruskal-Wallis Test)

Null Hypothesis	Test	Chi-Square	DF	Significance	Remark
There is no difference among different priority sector lending.	Independent Samples Kruskal-Wallis Test	12.617	2	.002	Reject the null hypothesis.

Source: Data compiled in SPSS

A Kruskal-Wallis H test showed that there is a statistically significant difference in the percentage of sector wise advances to total advance, where value of Chi-square=12.617, P value is 0.002.As the mean of agricultural sector is highest it can be inferred that such sector has attracted highest credit, small scale industrial sector being the second in the ranking out of the three sector classes.

The second null hypothesis (H_{O2}) is that there is no relation in lending to different sectors.

Table 9: Correlations Matrix between Priority Sectors

		MSME	OPS	AGRI
MSME	Pearson Correlation	1	-.942**	-.141
	Sig. (2-tailed)		.000	.718
	N	11	11	11
OPS	Pearson Correlation	-.942**	1	-.201
	Sig. (2-tailed)	.000		.605
	N	11	11	11
AGRI	Pearson Correlation	-.141	-.201	1
	Sig. (2-tailed)	.718	.605	
	N	11	11	11

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Data compiled in SPSS

The above table shows that the correlation between the priority sectors. From the table it is clear that MSME and OPS, r is -0.942 with P Value=0.000. So, there is higher degree of negative correlation between MSME and OPS at 1% level of significance. There is no correlation between MSME and Agricultural sector also between other priority sector and agriculture sector which means lending to agriculture sector has not influenced lending to MSME and other priority sector.
The third hypothesis (H_{O3}) narrates that there is no significant difference between total target and achievement in lending. As groups are not homogeneous, non-parametric test i.e. Mann-Whitney (U) test is applied.

Table 10: Test Statistics of U Test

	Target and Achievement
Mann-Whitney (U)	31.000
Asymp. Sig. (2-tailed)	.402

Source: Data Compiled in SPSS

P or Significant value is .402, thus the null hypothesis is accepted. It can be inferred that the difference between target and achievement is not important.

Major Findings

Priority sector lending (PSL) through Lead Bank Scheme is active in Sambalpur. Sambalpur being a district rich in natural resources and artistic values has a great potential of development under the arrangement. After the diagnosis of data of Sambalpur, regarding the sector-wise flow of credit, it was found that, agriculture is given utmost importance in the district with the largest share of 47.35 per cent of the total priority sector advance, followed by MSME sector with 27.59 percent and OPS at 25.04 percent. The growth of credit flow into MSME sector in the district has increased over the period from 2009 to 2021 which shows greater interest of banks in small enterprises as against the assumption of Bhue *et al.* (2019) and Banerjee & Duflo (2014) that small firms disincentivize credit growth under PSL. The flow of credit to other priority sectors has decreased from 38.73% in 2009 to just 3.25% share in 2021. It is observed that average achieving percentage of three sectors from the data period has fallen short from the target. Banks have failed to achieve the target in each sector. The standard deviation in case of other priority sector is high i.e. 68.63 which is higher than other two sectors. Hence there is more variation in lending pattern of banks of Sambalpur to such sector. Average achievement percentage of MSME sector is lower than other two sectors in Sambalpur. Thus, banks have not given full attention for the development of small industries. The total average achievement percentage stands at 87.02% in Sambalpur. It can be inferred that priority sector lending is way back from its achievement. The pattern of priority sectors lending by various banks is different. There is no correlation in advance disbursement between MSME and Agricultural Sector.

Conclusion and Implication

Priority Sectors still plays a crucial role in maintaining the balance within the economy by creating employment, adding income to a major group of population. It has a significant contribution to the GDP and national income of the country. The priority sector lending policy has a positive impact in setting priorities in the credit disbursement by banks. This has played an important role in redirecting the finances to non-profitable sectors that may have remained neglected without the arrangement. In the study, an attempt was made to review the status of priority sector lending in Odisha, with special focus to Sambalpur. It can be concluded from the study that Sambalpur has highly benefitted from the arrangement. The arrangement has helped in maintaining the traditional structure of economy based on agriculture and MSME that promotes the inherent capabilities of its people and culture.

However, on the contrary to the dependence of the district over priority sector lending arrangement, it was seen that the CD ratio of the district, which indicates the proportion of deposits being lent out, stood at only 14 per cent as compared to 76.7 per cent of the economy as a whole. This picture of the economy has remained unchanged even after two decades past the findings of Das and Maiti (1998). Several crucial sectors like renewable energy, housing and infrastructure are lacking sufficient credit flow due to various reasons like rising level of NPA (Gaur *et al.*,2020; Gaur and Mohapatra, 2019; Rahman *et al.*,2017), rise in costs, unavailability of resources (Martinez *et al.,* 2018), financial health, liquidity (Imran and Nishant, 2013) and performance of the banks (Sahoo and Goel, 2020).

The banks should actively participate in the arrangement and try to achieve the set target. The district being in a developing stage, sectors such as infrastructure, housing, and others should be promoted. Relationship banking should be promoted to help the borrowers achieve their targets and properly utilize their credit. This in turn will reduce the risk over the assets of banks. The financial inclusion programme should be strengthened to include more and more people in the organized banking system which in turn will bring more deposits and distribute the risk of forwarding credit to the group. Most of the credit to the sector has been seen to be coming from public sector banks as compared to private sector banks. Thus, the policies which should be made to induce participation of the private banks which in turn should improve their credibility and goodwill.

To conclude, the overall status of Priority Sector Lending is found to be fairly satisfactory. The active participation of its people in entrepreneurial activities on one hand and the pressure of keeping a check on NPA arising from OPS on the other hand are the reasons for shift of priority from OPS to MSME.

Limitations and Scope for Further Research

The present study has been presented with view of the economic and financial characteristics of Sambalpur. The number of districts may be increased to further capture the heterogeneity present in different economies and its impact on directed credit programs. The findings may vary if the window is enhanced by adding more variables and extending the period of study.

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CORPORATE SOCIAL RESPONSIBILITY (CSR) PRACTICES: A COMPARISON BETWEEN SELECT PUBLIC AND PRIVATE SECTOR BANKS IN INDIA

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Abstract

The Indian banking industry plays an important role in promoting economic growth and development of the country. India is the first country to quantify CSR and make it mandatory as per Companies Act 2013. Therefore, the Reserve Bank of India has made it mandatory for every commercial bank operating in India to contribute to CSR. The CSR of the Indian banking sector addresses the financial inclusion, provision of financial services in untapped regions, socio-economic development through poverty eradication, health and medical care, rural area development and self-employment training etc. India is ranked fourth among the Asian countries that pay importance towards corporate social responsibility. This study analyzes the CSR activities carried out by the selected public and private sector banks in India. It also examines the actual, standard and growth of CSR spending of selected private and public sector banks in India. Statistical tools like arithmetic mean, standard deviation, kurtosis, skewness, t-test and ANOVA have been used to analyze the secondary data from the year 2013-14 to 2019-20 collected from different authenticable sources. It is found that performance of private sector banks is better in CSR activities as compared to public sector banks in India. The paper also reveals that though the Indian banks are making efforts in the CSR practices, there is still a requirement for more emphasis on CSR activities in a developing country like India.

Keywords: *CSR Spending, Public and Private Sector Banks.*

JEL Classification: M14, H0, H51

Introduction

Corporate Social Responsibility is defined as the voluntary activities undertaken by a company to operate in an economic, social and environmentally sustainable manner. That Social Responsibility of business refers to what a business does over and above the statutory requirement for the benefit of the society. CSR, also known as Sustainable Responsible Business (SRB), or Corporate Social Performance, is a form of corporate self-regulation integrated into a business model (Dhingra & Mittal, 2014). The word "responsibility" emphasizes that the business has some moral obligations towards the society. The Corporate Social Responsibility development has four stages in India first phase being Philanthropy and charity at the time of industrialization. Second phase: Corporate Social Responsibility was towards social development during the independence struggle. Third phase: Corporate Social Responsibility under the model of "mixed economy". Fourth phase: Corporate Social Responsibility as a sustainable business strategy (Nagwan, 2014). There is an increasing awareness about Corporate Social Responsibility (CSR), Sustainable Development (SD) and Non-Financial Reporting (NFR). The contribution of financial institutions including banks to sustainable development is paramount, considering the crucial role they play in financing the economic and development activities of the world (Chowdary, Das, & Sahoo, 2011).

The commercial banks have to pay special attention towards the integration of social and environment concerns in their business operations to achieve sustainable development. The Reserve Bank of India has also pointed out to start non-financial reporting (NFR) by banks which will cover the work done by banks towards the social, economic and environmental betterment of society (Reserve Bank of India, 2007). India is the second most populated country in the world, and about twenty-two percent of the population is below the poverty line. However, along with growth and development major problems like illiteracy, poverty and lack of healthcare etc. are still exist and the Government has inadequate resources to confront these major

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challenges alone. This condition has paved the way for many areas of the business to play a part towards the social development and their wellbeing (Parthiban R, Aiswarya, & Dinesh, 2018). CSR should be a commitment to improve the wellbeing of the community through ethical business practices and contributions of corporate resources. Corporate Social Responsibility goes beyond the concept of profit-making, which includes protecting and contributing to society in various ways for their development. It has become a vital part of the corporate strategy. CSR aims to have a positive impact on the environment and stakeholders including consumers, employees, investors, communities and others (Lenthe, Szegedi, & Tatay, 2015).

The socio-economic development and social growth of countries basically depend on the Corporate Social Activities and India is the first country in the world which has imposed CSR as a statutory obligation (Subudhi, 2021).The aspects of CSR are mentioned in Section 135 of the Companies Act 2013.(Ministry of Corporate Affairs, GoI, 2013) as per this Act, every company whether public or private whose net worth is Rs. 500 Cr or has the turnover of Rs. 1000Cr or net profit of Rs. 5 Crores must contribute at least 2% of its average net profit as CSR for the preceding three financial years. Furthermore, as per the CSR rules, the CSR provisions are not only related to Indian companies, also relevant to branches and offices of foreign companies in India. As veins promote blood circulation in the human body, the commercial banks pump and circulate money into the economy to promote socio-economic growth. Economic development of a nation can be boost through the proper mobilisation of fund by commercial banks of the respective country. For India, the banking sector is considered as a barometer of the economy (Kewlani & Bhatt, 2019). Although CSR merely means charity or philanthropic approach, CSR of banks should give more focus to the betterment of people in different sections of society by implementing those programmes which in turn sustain their business in the future. (Sharma & Mani, 2013) has opined that the CSR in Indian Banking Sector should aim towards addressing the financial inclusion, providing financial services to the unbanked or untapped areas of the country, the socio-economic development of the country by focusing on the activities like, poverty eradication, health and medical care, rural area development, self-employment training and financial literacy trainings, infrastructure development, education, and environmental protection etc. (Reserve Bank of India, 2007) also instructs the banks to integrate their business operation along with social and environmental aspects. The major key areas of CSR are like, children welfare, community welfare, education, environment, healthcare, poverty eradication, rural development, vocational training, women empowerment, protection of girl child etc. But in recent years an attempt has been initiated to ensure socially responsible behaviour of banking sector in a more organized manner. The financial institutions and banking sector lead to perform compatible trade practices in order to face the competition which is created by the process of globalization. So, to withstand in this competitive world, initiated the banks to divert their activities and perform more social welfare activities through CSR spending (Prabhavathi & Dinesh, 2017). The banking sector in India is witnessing a steady growth in its business and profits. Hence it becomes very imperative for the banks to share part of their profits for the welfare of the society as specified in the provision of the Companies Act 2013. Therefore, it is necessary to examine the CSR performances of the commercial banks in India in terms of their net profits, standard and actual CSR spending utilised over the years.

Review of Literature

Narwal (2007) has studied the highlight of CSR initiatives taken by the Indian banking industry. The study finds that banks have an objective view-point about CSR activities. They are concentrating mainly on education, balanced growth (different strata of society), health, environmental marketing and customer satisfaction as their core CSR activities. Sharma (2011) has made an attempt to analyze CSR practices and CSR reporting in India with special reference to the banking sector and concluded that the banking sector in India is showing interest in integrating sustainability into their business models, but its CSR reporting practices are far away from satisfaction.RBI (2011)on stressing the need for CSR, suggested the banks to pay special attention towards the integration of social and environmental concerns in their business operations to achieve sustainable development. RBI also pointed out to start non-financial reporting (NFR) by the banks which will cover the work done by the banks towards the social, economic and environmental betterment of society.Das (2012) in his study presented that the development of CSR is very slow in India though it was started a long time ago. In his view, CSR has been assuming greater importance in the corporate world, including the banking sector. There is a visible trend in the financial sector of promoting environment-friendly and socially responsible lending and investment practices. Sethi(2013) has opined that how Indian banks and foreign banks disclose CSR information and the effect on the financial performance. The study reveals that banks manipulate their true social performance by not disclosing the required information. Saxena (2016) has made a comparative study of CSR between the private sector and public-sector banks and studies the impact of CSR on society and also how it affects the financial performance of the banks.Nidhi (2016) has explained the different areas focused by different commercial banks in India. The study finds that different banks put different efforts towards the Social Responsibility in India and suggests enhancing and accelerating government's involvement in CSR activities. Shafat (2017) has analyzed the impact of CSR on financial performance of twenty-eight numbers of commercial banks listed in Bombay stock exchange (BSE). The study observes that CSR exerts a positive impact at the financial performance of the Indian commercial banks, more particularly CSR has a positive impact on profitability and stock returns of these banks as per the consideration of financial data from 2007 to 2016.

Objectives of the Study

1. To examine and compare the CSR practices of selected public and private sector banks in India.
2. To analyse the performance of selected public and private sector banks based on the compliance norms.
3. To study the corporate social responsibility spending and activities of public and private sector banks.

Data and Methodology

The descriptive statistics has been used in the present research paper. The study is based on the secondary data which have been collected from the Ministry of Corporate Affairs, Government of India, Annual business responsibility reports of the respective banks and also from some research documents and reports. A comparative analysis based on the desired objectives has been made by random selection of public and private sector banks in India. The CSR score is calculated on the basis of the actual activities performed and disclosed in the annual reports of the banks; accordingly, the banks have been assigned points (Singh, 2020).The statistical devices like arithmetic mean, standard deviation, kurtosis, skewness, t- test and ANOVA are used to examine and compare the performance of public as well as the private sector banks considering the variable net profit, standard and actual CSR spending in the line of study made by(Saxena & Kohli, 2012).

Model and Discussion

Table1: CSR Scores through Spending of Private and Public Sector Banks (2014-20)

PARAMETERS	SBI	PNB	HDFC	ICICI
Education	✓	✓	✓	✓
Health	✓	✓	✓	✓
Skill Enhancement	✓	✓	✓	✓
Livelihood/Finance	✓	✓	✓	✓
Environment	✓	✓	✓	
Women Empowerment		✓	✓	
Disaster Management	✓			✓
Sports		✓		
Poverty/ Rural Development		✓	✓	✓
Others	✓	✓	✓	✓
Total	**7**	**9**	**8**	**7**

Source: Business Responsibility Report of Banks (2013-14 to 2019-20)

As per the CSR score (table 1), public sector banks SBI and PNB utilise CSR fund in more areas as compared to private sector banks HDFC and ICICI. The average CSR score is more in case of public sector banks than private sector banks.

Table 2: Descriptive Statistics

Variables	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
ICICI Net Profit	3363.00	11175.00	8395.42	2651.65	-1.265	1.41
HDFC Net Profit	8478.00	26257.00	15446.60	6434.27	.794	-.50
SBI Net Profit	862.00	14488.00	8704.05	5490.25	-.869	-1.00
PNB Net Profit	-9975.00	3794.00	113.64	4734.37	-2.018	4.56
SBI CSR Actual	6.24	148.00	80.83	62.17	-.222	-2.41
PNB CSR Actual	1.83	29.54	10.98	12.65	1.170	-.89
ICICI CSR Actual	92.20	182.00	148.36	31.18	-.942	.46
HDFC CSR Actual	118.60	535.00	325.31	141.99	-.005	-.51
HDFC Standard CSR	105.46	262.57	175.46	50.63	.537	.67
ICICI Standard CSR	53.80	200.00	149.67	49.55	-1.268	1.97
SBI CSR Standard	8.62	131.02	86.49	53.43	-1.042	-.98
PNB CSR Standard	-99.75	33.60	-5.04	48.99	-1.436	1.69

Source: Authors Own Compilation

So far as CSR actual spending is concern HDFC bank performs much better than PNB, SBI and ICICI bank (as in table 2). The HDFC bank spends more amounts on CSR activities than the prescribed standard CSR amount. The performance of PNB is in lowest ladder in terms of average net profit and spends lowest average amounts on CSR activities during 2013-14 to 2019-2020.

Table 3: Independent Samples t-Test Statistics

Variable	Levene's Test for Equality of Variances	F	Sig.	t	df	Sig. (2-tailed)
Actual CSR	Equal variances assumed	2.440	.144	-6.8	12	.000
	Equal variances not assumed			-6.8	7.86	.000

Source: Authors Own Compilation

The CSR expenditures of the selected public sector and private sector bank is compared in the above table. Both the groups are homogeneous as Levene's statistic is insignificant. Independent t test result shows that there is a difference between public sector bank and private sector bank in actual CSR.As the mean of private sector banks expenditure is greater than public sector banks, it is inferred that private sector bank has expended more in CSR expenditure.

Table 4: Independent Samples t-Test Statistics

Variable	Levene's Test for Equality of Variances	F	Sig.	t	df	Sig. (2-tailed)
Standard CSR	Equal variances assumed	.409	.535	5.737	12	.000
	Equal variances not assumed			5.737	10.981	.000

Source: Authors Own Compilation

Similar results are also witnessed when CSR standard expenditure is compared between select public sector and private sector banks.

Table 5: Comparison of CSR Expenditure of Select Banks with Anova

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	369200.573	3	123066.858	18.797	.000
Within Groups	150587.973	23	6547.303		
Total	519788.546	26			

Source: Authors Own Compilation

The above table compares actual CSR expenditure of ICICI bank, HDFC bank, SBI and PNB. It is found that there is a significant difference in CSR expenditure of all the banks.

Table 6: Multiple Comparisons of CSR Expenditure of Select Banks Tukey HSD

Select Banks	Comparison	Mean Difference (I-J)	Std. Error	Sig.
ICICI Bank	HDFC Bank	-176.95286*	43.25110	.002
	SBI	67.53429	43.25110	.419
	PNB	140.41929*	45.01718	.023
HDFC Bank	ICICI Bank	176.95286*	43.25110	.002
	SBI	244.48714*	43.25110	.000
	PNB	317.37214*	45.01718	.000
SBI	ICICI Bank	-67.53429	43.25110	.419
	HDFC Bank	-244.48714*	43.25110	.000
	PNB	72.88500	45.01718	.388
PNB	ICICI Bank	-140.41929*	45.01718	.023
	HDFC Bank	-317.37214*	45.01718	.000
	SBI	-72.88500	45.01718	.388

Source: Authors Own Compilation

The above table compares CSR expenditure of each bank. It is found that there is no difference in actual CSR expenditure of ICICI bank with SBI and SBI with PNB. There is no difference in CSR expenditure of other banks.

Findings

It is inferred that after the introduction of the new Company Act 2013, banks have positively contributed and participated in the CSR activities. The analysis of the leading banks both in the public and private sector describes that both categories are contributing to CSR practices but this is not yet satisfactory. The private sector banks have higher average contribution as compared to public sector banks. But it has also been noticed that out of the total contribution toward CSR practices the majority of the proportion emphasized on education, rural development and health care, so it is suggested that allow the CSR contributions to be more diversified in practice and the goodwill to be extended among more beneficiaries. The transparency level of the private sector banks is much more than the public sector banks as the reports on CSR are easily available for the private sector as compared to public sector banks. In case of public sector banks, SBI spends much more among the rest of the selected banks. Similarly, in the case of private sector banks HDFC spends more as compared to other private sector banks.

Conclusion

Most of the Indian public sector banks do not mention recent corporate social responsibility activities on their annual reports or on the websites (Mohd & Kaushal, 2019). The commercial banks are allocating two percent of their net profit towards CSR but some of the banks are not utilizing the full amount allocated towards CSR activities. Still there is a gap exist between standard and actual CSR spending on part of some banks. On the other hand, actual CSR spending is more than prescribed standard CSR spending in case of few numbers of banks.

It is to be concluded that both the public and private sector banks under study have contributed to CSR spending during the period 2013-14 to 2019-20 and some of them have significantly leveraged profit also. From this analysis, the particular public and private sector banks adopt CSR practices which include environmental sustainability, education, health and rural development, women empowerment and inclusiveness. Among the public sector banks, SBI spending is more on the CSR activities; similarly, in the case of private banks HDFC is spending much more as compared to other private sector banks. But between the public and private sector banks, the private sector bank has higher contribution as compared to the public sector banks in India. This has also been perceived that there has been positive compliance response as per the

Companies Act, 2013. But the disclosure of the CSR amount is also a major concern. Therefore, non-disclosure of the CSR amount should be subject to some penalty or fine. It is recommended that government of India should amend the Companies Act 2013 and mention strict guide lines for the business sector including banking sectors with exact percentage of CSR amount to be spent in different critical and priority areas.

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PERCEPTION OF HANDLOOM WEAVERS TOWARDS SUSTAINABILITY: A STUDY ON CUTTACK DISTRICT OF ODISHA

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Abstract

Handloom Weavers have unique recognition in the Indian Society for their Artisan Skill and competency (Das, 2015). They have also special recognition in the national and international market for their design and cultural heritage in the handloom products (Grameen Development Services (GDS), November 2004). But, in the technological driven society, these traditional handloom weavers have reluctant for their primary occupation and shifting to other profession since more than three decade (Prusty, 2013). If the process will continue for more a decade, the profession and skill may not sustain in the Society (Hosamari, 2002).Various scholarly researches have been undertaken about handloom Industry and handloom Weavers of Odisha. But, no remarkable studies have conducted in the field of sustainability of handloom weavers in Cuttack as well as Odisha. This is an attempt to study the perception of handloom weavers towards their sustainability in the technological driven Society. . This present study is based on both primary data and secondary data. Primary data have been collected through well-defined questionnaire and direct interviews methods. The sample data size consists of 100 respondents of handloom weavers in the Cuttack District. The secondary data have been collected from various secondary sources like journals, magazines, and from various reputed websites. The collected data have been classified and tabulated according to the requirements of the study. It is concluded that handloom weavers in the Study area are using traditional/out-dated technology in the process of production which lead them to fail in the competition with the machine made and technology based products. They have also insufficient sources of fund to adopt updated technology. These major causes lead to them reluctant for their profession and discharge a question mark for their sustainability.

Keywords: *Handloom Weavers, Cultural Heritage, Sustainability, Shifting of Profession*

JEL Classification: D24, D25, D64, E24, J11, L26, L67, M14, M52

Introduction

Handloom industry is a traditional industry, labour intensive and low capital investment which provides large employment to rural and semi-urban people of India. So, it has the potentiality of employment creation (Lurdhu, 1997). It is the key to economic development in the rural and semi-urban areas. It has unskilled labour and distinct impact on poverty alteration (Pullaiah, 1997). It has national and international market but uses indigenous inputs and technology.

Since the Industrial Revolution and the New Industrial Policy 1991, Indian economy is approaching new height in terms of Economic development. Adoption of Technology in terms of Machinery in place of indigenous technology (handmade / manmade machine i.e. Handloom) is now creating problems for sustainability of the stakeholders of this Industry. The stakeholders of this industry includes Handloom Weavers, Handloom Designer, People involved in ancillaries activities of handloom industry. Handloom Weavers are affected badly by this Technological

Adoption (Meher, 1992). If we will compare, the three Handloom Census conducted by Govt. of India, the no of handloom weavers, handlooms and handloom units are in decreasing tend. During handloom census 1987-88 no of handloom unit was 86,487, no of weavers was 4, 15,000 who have 1, 19,005 handlooms for the production of the handloom product in Odisha. As per handloom census 1995-96, it was 71,885 handloom units which have 2,77,250 handloom weavers and it was consist of 92,869 handloom or looms in Odisha. Similarly, in the handloom census 2009-10, handloom units reduced to 40,683 from 71,885, handloom weavers reduced to 1, 14,106 from 2, 77,250 and lastly the no of looms reduced to 43,652 from 92,869 as compare to handloom census 1995-96 in Odisha. This is scenarios handloom industry in Odisha.

The above mentioned data of handloom census are indicating that, the handloom weavers are reluctant to their primary profession and shifting to other occupation. Various problems lead to their waiving of primary Occupations. Adoption of Technology in handloom industry is one of them. Due to poor financial condition,

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weavers are unable to adopt updated and technology as well as market demands. If this process will continue to one decade more, then this occupation as well as the weaving skill may disappear from the Odisha.

Review of Literature

Mahendra (2010)researched the progress of handloom industry, socio-economic conditions of handloom weavers, adoption of technology, marketing facilities and problems of handloom weavers in AP. Mahendra concluded on his thesis that the handloom industry facing various types of problems related to technology, raw materials, working capital, pre-loom process, competitions from mill and power loom products, and majority of the weavers are getting reasonable remuneration or profits from these professions which lead to commit suicide by the weavers. Prusty, (2013)assessed the socio-economic and political-cultural system in which the modern technology is embedded and understand conflicting interest between two knowledge systems as reflected in the form of technology. Prusty concluded that without proper education and infrastructure lead to conflict in technology and failure of power loom industry. Shamitha and Balasubramanian (2017) studied the problems of handloom society and the socio economic condition of handloom weavers. They concluded that the schemes and programmes may be in workable condition a group effort should be needed, that will highlight production process, ability of the handloom sector and productivity procedure and also increase the earnings and life style of weavers. Export-Import Bank of India (2018) in its working papers no 80 “Indian Handloom Industry: Potential and Prospects” described about the potential and prospects of Indian handloom industry. It concluded that the handloom sector has the potential to generate employment opportunities to thousands of weavers. The development of the wealth of traditional inherent skills and capabilities by encouraging capacity and skill-building coupled with design, quality and marketing intervention would not only ensure the sustainability of this sector but would also help in reviving the dying skills whilst fostering exports. Satapathy and Patra (2018) studied about the customer’s ‟perception towards handloom products in the Cuttack City. They concluded that the perception of customers towards handloom products is almost positive and there is no significant relationship between male and female with regard to their perception towards handloom products in the Cuttack city. FICCI Ladies Organisation (2019) in its paper “Indian Handloom Industry – Position Paper” it studied the handloom industry in India has a long tradition of excellent craftsmanship, representing and preserving the vibrant Indian culture. It concluded that Indian artists are now distinguished worldwide for their hand spinning, weaving and printing elegance. The operations of this industry are primarily household based, wherein various members of the family put in joint efforts for production. These activities are spread across thousands of towns and villages of the country and involve transfer of skills from one generation to the next. Patra (2019) studied the problems and prospectus of handloom products of Cuttack District of Odisha. Patra concluded that in spite of several problems faced by handloom products of Odisha, handloom products have great cultural heritage and calligraphy in the woven designs which give vital scope for demand in the national and international market.

Mahapatra and Dutta (2020) studied the traditional technique of preparing Paata-Sari, inclusion of modern equipment and the changes occurred in its production and artistic excellence and the demand of Paata-clothes in market for this specialty and development of economic life of weavers. They concluded that the Nuapatna weavers have been able to keep intact the ancient and modern designs in tie-&-dye garments. It’s all credit goes to skilled weavers. People’s mindsets have changed over time, therefore the handloom weavers. They used to be traditional, but now they have changed the way they weave. Patra (2021) in the paper entitled “Impact of Covid-19 on the Handloom Industry of Odisha: A Study on Buddhist Handloom Weavers' of Odisha”, studied about the impact of COVID 19 on the Handloom Industry of Odisha as regards to Buddhist Handloom Weavers' of Odisha. Patra Concluded that the Buddhist Handloom weavers are surviving for their cost of living due to COVID19. Patra (2021)in the paper entitled “Role of E-Market in Marketing of Handloom Products: A Study on Cuttack District of Odisha”, studied the role of e-market in marketing of handloom product in Cuttack District of Odisha and during COVID19. Patra concluded that e-market has a visionary role in marketing of handloom products in Cuttack district of Odisha during COVID19. Various scholarly researches have been undertaken about handloom Industry and handloom Weavers of Odisha. But, no remarkable studies have conducted regarding the perception of handloom weavers’ towards sustainability in

Odisha. So, this is an attempt to study the perception of handloom weavers toward the sustainability of their skill and professions.

Objective of the Study

In the technological driven society, traditional handloom weavers in study area are reluctant for their primary occupation and shifting to other profession since more than three decade. So, this is an attempt to study the perception of handloom weavers towards their sustainability in the technology driven Society.

Research Methodology

i) Period of Study: October 2019 to March 2021.

ii) Method of data Collection: This present study is based on both primary data and secondary data. Primary data have been collected through well-defined questionnaire and direct interviews methods.

iii) Sample Size and Sources of Primary Data: The sample data size consists of 100respondents of handloom weavers in the Cuttack District.

iv) Sources of Secondary Data: The secondary data have been collected from various secondary sources like journals, magazines, and from various reputed websites. The collected data have been classified and tabulated according to the requirements of the study.

v) Statistical Tools: There are various statistical tools like mean, Chi-Square Test, t test (used for testing hypothesis), Likert 5 points scale (used to measure the perception of handloom weavers) to measure the causes of shifting occupation have been used for the analysis and interpretation of results.

Hypothesis

H_0: There is a significant relationship between the technological driven society and survival of Buddhist Handloom Weavers in the study area.

H_1: There is no significant relationship between the technological driven society and survival of Buddhist Handloom Weavers in the study area.

Data and Methodology

Profile of handloom Industry in Odisha

Table 1: No. of handloom unit, handloom weavers and handloom in Odisha

(As per handloom census 1987-88, 1995-96, 2009-10 and 2019-20)

Year	No. of Units	No. of Handloom weavers	No. of Looms
1987-88	86487	415000	119005
1995-96	71885	277250	92869
2009-10	40683	114106	43652
2019-20	63223	117836	47625

Sources: National Handloom Census of India 1987-88, 1995-96, 2009-10 and 2019-20

It is evident from the above table no 1 that, during handloom census 1987-88 no of handloom unit was 86487, no of weavers was 415000 who have 119005 handloom for the production of the handloom product in Odisha. As per handloom census 1995-96, it was 71885 handloom units which have 277250 handloom weavers and it was consist of 92869 handloom or looms in Odisha. So, all the figures were decreased as compare to handloom census 1987-88. Similarly, in the handloom census 2009-10, all the above figures were reduced that were handloom units reduced to 40683 from 71885, handloom weavers reduced to 114106 from 277250 and lastly the no of looms reduced to 43652 from 92869 as compare to handloom census 1995-96 in Odisha. So, it was overall overview of handloom industry in Odisha.

Profile of Sample Unit: The Table No. 2 shows the sample unit of 100 respondents (handloom weavers) which consist of weavers involved in Activities like Pre-Looming, Looming, Post Looming and Design Work (Bandha Design) of the Cuttack District of Odisha.

Table 2: Profile of the Sample Weavers

Profile	No. of respondents (N=100)	% to Total	Valid %	Profile	No. of respondents (N=100)	% to Total	Valid %
Gender:				**Age:**			
Male	60	60	60	Up to 25	26	26	26
Female	40	40	40	26-40	47	47	47
Education:				Above 40	27	27	27
Secondary	76	76	76				
Degree	17	17	17	**Activities**			
Above Degree	7	7	7	Pre-Looming	23	23	23
Annual Income:				Looming	37	37	37
Below Rs 1,00,000/-	91	91	91	Post-Looming	19	19	19
Rs. 1,00,000-5,00,000	8	8	8	Design work	21	21	21
Above 5,00,000/-	1	1	1				
Total Sample (=N)	**100**	**100**	**100**	**Total Sample (=N)**	**100**	**100**	**100**

Source: Collected and compiled from Field Study

The Table No. 2 shows that the handloom weavers include 60 no of male weavers and 40 no of female members. So, the ratio between male and female weavers is 60:40. Out of 100 respondent 76% weavers have educational qualification up to secondary level, 17% have educational qualification as bachelor Degree and only 7% have educational qualification above Degree. Out of 100 respondents 91% weavers have up to Rs. 1,00,000 Annual income, 8% weavers have Rs. 1,00,000 to Rs. 5,00,000 and Only 1% have annual income above Rs. 5,00,000/-. It indicates the poor financial conditions of weavers in the Study area. So, they are not able to adopt updated technology to compete with Machine made products available in the Technological driven Era. Out of 100 respondents 26 % have up to 25 years age, 47% have between 26 to 40 years age and 27 % have above 40 years age. Out of 100 respondents 23 % weavers are engaged in Pre-Looming activities, 37% weavers are engaged in Looming activities, 19% weavers are engaged in Post-Looming activities and 21 % weavers are engaged in Design Work (Bandha Design) both for Warp and Weft.

Profile of Sample Weavers' Perception: The table no 3 shows the perceptional attributes of the sample handloom weavers towards Sustainability of handloom industry in the study area.

Table 3: Perceptional Attributes of the Sample Customers

Perceptional Attributes	No of respondents	% to Total	Test Statistics(5 % level of significance)	Perceptional Attributes	No of respondents	% to Total	Test Statistics(5% level of significance)
Technology Used			χ^2= 100 P Value=3.841 d.f= 1	**Sustainability**			
Traditional	100	100		Yes	13	13	χ^2= 170
Updated	0	0		No	85	85	p value=5.991
Reasons for Shifting Occupation				Neutral	2	2	df=2
Low Financial Benefits	37	37		**Corrective Measures**			
Lack of Demand	21	21		Govt. Support to Revive	76	76	
Unable to Use Updated Technology	26	26		Promotional Activities	21	21	χ^2= 124
Unable to Compete with Machine made Products	13	13	χ^2= 28.9 P Value=9.488 d.f= 4	Marketing/Advertisement	3	3	p value=5.991
Others	3	3					df=2
Total Sample(N)	**100**	**100**		**Total Sample(N)**	**100**	**100**	

Source: Collected and compiled from Field Study

The table No 3 shows that, as so far as the weavers' perception towards technology used in production, the test statistics chi-square test show that the null hypothesis there is no significant difference between magnitudes of Technology used in production, is rejected and so, there is significant difference between different magnitudes of technology used in production of handloom products. All the weavers in the study are using outdated technology/ traditional technology in the process of Productions etc. The Weaver's perception towards the reasons for shifting of occupation, the test statistics chi-square test shows that there is no significant difference between various reasons for shifting of occupation from handloom weaving. On Sustainability of handloom industry and their skill or occupation 85% weavers viewed for No, only 02% viewed neutral for their sustainability and only 13% viewed as Yes, on Sustainability of handloom industry and their skill or occupation. It indicates that weavers are not confirmed that they will survive in this profession for long time. On corrective measure for sustainability 76% weavers opined that Government support should be there for their revival, 21% weavers opined those promotional activities should undertake about the handloom industry and excellence of handloom products for their revival. Only 3% weavers viewed that Marketing / Advertisement of their product could gain demand in the market side by side their sustainability.

Ranking of Reasons for Shifting of Occupation by sample Weavers: The table 4 shows the ranking of 5 selected reasons for Shifting of Occupation by sample weavers according to their Sustainability of their occupation. Rank 1 implies 1st reasons for shifting Occupation; rank 2 implies 2nd reasons for shifting Occupation and so on.

Table 4: Ranked of Reasons for Shifting of Occupation by Likert 5 point scale

Rank	1	2	3	4	5	Total	Total Score	Rank
Reasons for Shifting Occupation			No. of respondents					
Low Financial Benefits	74	12	9	4	1	**100**	454	**1**
Lack of Demand	8	10	7	56	19	**100**	232	**4**

Unable to Use Updated Technology	10	67	8	7	8	**100**	364	**2**
Unable to Compete with Machine made Products	5	9	69	12	5	**100**	297	**3**
Others	3	2	7	21	67	**100**	153	**5**
Sample Size (N=100)	**100**	**100**	**100**	**100**	**100**	**1000**	**1500**	

Source: Collected and compiled from Field Study

The table 4 shows that the out of 100 handlooms Weavers 74 i.e., 74% view 1st reasons for shifting occupation to Low Financial Benefits, 67 handloom weavers i.e., 67% view 2nd reasons for shifting occupation to Unable to Use Updated Technology. 69 handloom weavers i.e., 69% view 3rd reasons for shifting occupation to Unable to Compete with Machine made Products, 56% view 4th reasons for shifting occupation to Lack of Market Demand and 67% weavers view 5th reasons for shifting occupation to Other reasons. The Likert Scale indicates that sustainability of handloom industry depends upon more on the financial benefits for the weavers, Use of Technology, and Market demand etc.

Testing of Hypothesis

H_0: There is a significant relationship between the technological driven society and survival of Buddhist Handloom Weavers in the study area.

H_1: There is no significant relationship between the technological driven society and survival of Buddhist Handloom Weavers in the study area.

Table 5: Data for Hypothesis

Sl. No	Parameters	Status up to 2009-10	Status after 2009-10
1	No of National Awardee	9	4
2	Type of Handloom Products Produced	20	15
3	Average Cost of Products	700	900
4	Average Selling Price of Products	900	1000
5	Average Wage Rate	120	150
6	No of Weavers engaged in Weaving	1000	900
7	No of Weavers having their owned loom	800	850
8	No of Weavers having their owned loom shed	800	900
9	No of Educated Weavers	300	500
10	No of Weavers having BPL Card	750	700

Source: Collected and compiled from field study

Table 6: Calculation of t-Test

Mean	**539.9**	**591.9**
Variance	148051.2111	156864.9889
Observations	10	10
Pearson Correlation	0.968005783	
Hypothesized Mean Difference	0	
d.f.	9	
t Stat	**-1.654433416**	
P(T<=t) one-tail	0.066213013	
t Critical one-tail	1.833112933	
P(T<=t) two-tail	0.132426026	
t Critical two-tail	**2.262157163**	

Source: Author’s Calculation on the basis of field study

From the table no. 6, it is clear that the P value of T-test is less than the t Critical or tabulated value. So, Accept H_0 i.e. there is a significant relationship between the technological driven society and survival of Buddhist Handloom Weavers in the study area and Reject H_1 there is no significant relationship between the technological driven society and survival of Buddhist Handloom Weavers in the study area. Hence, it is concluded that there is a significant relationship between the excellence and survival of Buddhist Handloom Weavers in the study area

Findings

Handloom industry and handloom weavers are surviving for the use of Outdated Technology which leads to compete with the machine made products (Prusty, 2013). In the study area, Handloom Weavers are getting low financial benefits from their occupation as compare to other occupation, that why they shifting their occupation to other Occupations. The handloom weavers are unable use updated technology due to poor Financial Position. So, Government Support should be there for advance technology. The Skill and Competency of handloom Weavers are not able to compete with the design and color of Machine. The perceptions of weavers are still positive towards their handloom products as regards to quality and durability.

Conclusion

It may be concluded that handloom weavers in the Study area are using traditional/out-dated technology in the process of production which lead to fail them in the competition with the machine made and technology based products. They have also insufficient sources of fund to adopt updated technology (Mahapatra, and Dutta, (2020). These major causes lead to them reluctant for their profession and discharge a question mark for their sustainability.

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IMPACT OF DISINVESTMENT ON FIRMS' PERFORMANCE

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Abstract

Disinvestment is not a new concept to the Indian economy. It has its roots since the inception of economic reform in 1991. The purpose of the study is to examine the financial implication of disinvestment policy in India. My study focuses on studying the impact of disinvestment on two major companies that is NTPC and NALCO by studying their pre and post disinvestment period. The reason for selecting these two companies is because it got disinvested throughout my study period from 2014-15 to 2018-19. Sample PSUs represent four cognate group that power generation, minerals and metals, petroleum and tech consultant services. The financial ratios used as an indicator are net profit, operating profit, ROTA, RONW, ROCE and current ratio. Using paired sample test to compare the pre and post financial performances of disinvestment companies, researcher have found significant differences in its performances in case of NTPC ignoring ROCE which is found insignificant whereas in case of NALCO it is found insignificant. The study also made an attempt to examine the general public perception on disinvestment/privatization policy by applying chi square and Friedman test.

Keywords: *Disinvestment, Public Sector Enterprise, Financial Performance, Public Perception*

JEL Classification: E5, E6, G28

Introduction

Disinvestment is the process of moving from public sector to private sector in a more sedate way. Disinvestment may not be a new thing but its approach, method and the outlook of the government is keep on changing with time. It can be simply understood by saying that when the government existing shareholding is less than 100 percent but more than 50 percent it is then be called as disinvestment. Government is disinvesting major companies with the motive to meet its fiscal deficit and improve the performance and efficiency of the company by transferring the risk from public sector to private sector. The current NDA government of India has been pushing for privatization so aggressively due to improve the overall efficiency of companies as government management leads to overshadowing economics and corporate interests and the second reason is to plug its deficit. This clearly shows the government intention to involve private sector and global investors to bring efficiency and provide much needed cash to revive the economy. The government is marching towards privatization of public sector enterprises by reducing its shareholding as out of 348 public enterprise only 249 are operating as on 31.03.19 and in the same way in the year 2018-19,the number of profit making CPSEs was 178 with a total profit of ₹ 1,74,587 crore as against 183 CPSEs in 2017-18 (Public Enterprises Survey,2019).The period from 2014-15 to 2018-19 saw disinvestment in major companies such as NTPC, NHPC, NALCO, IOC, EIL and CIL by the process of offer for sale. However, from 2011 onwards, disinvestment activity slowed down considerably .The NDA government has set an aspiring disinvestment target of ₹ 210000 crore. As such, 2020-21 is expected to see some big ticket disinvestment taking place.

Review of Literature

Verma (2020) in her newspaper article "The history of disinvestment in India and political trends" focused on the history of disinvestment in India and determine the political trend of disinvestment in India.it highlighted the reason for recent disinvestment that is to reduce the fiscal deficit and improve the efficiency .this article

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highlighted that the BJP-led government's average annual receipt from disinvestment stands at ₹ 29,010 crores – threefold of Congress-led government's average annual receipts from disinvestment at ₹ 9,820 crores. Koner (2014) in his article named "Disinvestment of Public Sector in India: Concept and Different Issues" discussed about the concept of disinvestment and its various issue arises due to disinvestment. It highlighted that government do not have clear policy on the methodology of disinvestment. The government has adopted two approaches of disinvestment in two similar company. Further it concluded that restructure of PSE is needed before disinvestment which will help in increasing the share value and increase the sale proceeds. Sehgal et.al.,(2014) studied the stock market performances of Indian state owned public sector units which are privatized through initial public offerings. It studied various aspects of PSUs public issue, it tried to figure out whether the stock price differ significantly between IPOs and FPOs by studying it's the impact of disinvestment on stock price in case of FPOs. It also recommended that the disinvestment should be spread over three stages of offerings that is primary issue (IPO), (FPO-1) first stage further offerings and (FPO-2) second stage further offering. Mandiratta & Bhalla (2017) in their titled "Pre and post Disinvestment performance evaluation of Indian CPSEs" the Researcher empirically examined the financial and operating performances of 15 CPSEs disinvested in India through public share offerings mode during 2003-12. To analyze the data traditional pre versus post disinvested privatization companies using estimation technique and panel data estimation technique. It further suggested to bring down the government holding to less than 50% in one stroke instead of selling them in batches as it was also recommended by NITI Ayog. Selvam (2009) in his article titled "privatization in India: is it justified?'' examined various causes for privatization in India. It highlighted that change in political thought, higher fiscal deficit, higher dependency on international organization, poor performance of PSUs in terms of profit and unstable growth are the major causes of privatization. Sane (2020) in her article highlighted the methods adopted for disinvestment of CPSEs since FY2015. In recent years the methods used for disinvestment include: a) Public offer, b) Buybacks, c) Sale to employees, d) Exchange-traded funds (ETFs), and e) CPSE to CPSE sale. Buybacks and ETFs are new ways of divesting a minority stake. Meher (2011) in his article " privatization- A study of private ownership'' explains that under private ownership, public sector enterprise utilizes the resources more efficiently .the study bring out the reason for adopting privatization policy .the major reason for this is the failure of the government to raise the high tax, develop money market and private entrepreneurship. It further analyzed the impact of privatization on the financial performance of para deep phosphates ltd. Mani (2017) studied the efficiency and performance of disinvested government-controlled enterprise and stated that efficiency is a measure of its capacity and here these efficiencies are studied. It further analyses the change in the EPS of some disinvested companies in the post-reform period and also studied the impact of disinvestment on labor productivity. The study recommended that more autonomy should be given to the management and suitable policy measures will improve the efficiency of the execution of the disinvestment process in India.Narang (2018) in her article compared the pre and post disinvestment financial performance for the financial year 2004-05 – 2010-11 by applying pair sample t-test .the result shows that disinvestment improved profitability and liquidity position of NTPC. Suganya (2019) examined the impact of disinvestment on the operating and financial performance of ONGC Ltd in terms of financial strength and corporate liquidity. The author took 3 year pre and 3 year post disinvestment period that is from 2008-09 to 2014-15 .further the data was analyzed by applying mean, standard deviation and paired sample t-test and it is observed that operating performance declined during post disinvestment period.

Patel & Patel (2016) made an attempt to study the impact of profitability, marketability and market returns of the PSEs disinvested which took place from 2009-10 and the data was analyzed by applying ratio analysis, correlation, regression, ANOVA, paired t-test and z score model. The study reveals that company's financial position improved excessively due to disinvestment.Mansouri et.al, (2014) compared the financial performance of state owned enterprises prior and after privatization. The author took four financial variable that is return on equity, net sale growth, net profit growth and ratio of sale to total asset as dependent variable and privatization as independent variable. Further the author examine the effect of privatizing by applying Paired T-Test and regression analysis with indicator variables. The results of the regression revealed that ROE after privatization increased while the rate of NPG with the ratio of sales to total assets decreased.

Research Gap

The researcher has systematically studied and go through all the past studies which has already been undertaken related to disinvestment and privatization since it is not a new reform by the government. Time has changed but the process of disinvesting the public sector is still going on since 1991 thus it provide an platform to do a further research work on this same related topic because it is need of the hour to solve the problem. After reviewing various articles, research work, books, Newspaper, journal it has been found that everyone has made a study on disinvestment and its various issue, its methods, its impact by applying the methodology of panel regression, multiple regression, t-test however, pre and post disinvestment performances of CPSEs through offer for sale and buyback which got disinvested for successively five years during the period from 2014- 15 to 2018-19 was still need to be analyzed. More-ever an attempt is also made to seek the public opinion regarding disinvestment policy.

Objectives of the Study

The main objectives of the study are

i. To examine the financial implication of disinvestment policy in India.

ii. To Analyses the perception of the public towards disinvestment of the public sector undertaking.

Hypothesis

Table 1: Hypothesis

Hypothesis 1	**($H_0$1)**	There is no significant difference in financial performance between pre and post disinvestment period
	($H_1$1)	There is significant difference in financial performance between pre and post disinvestment period
Hypothesis 2	**($H_0$2)**	There is no significant association between age group with respect to opinions on disinvestment
	($H_1$2)	There is significant association between age group with respect to opinions on disinvestment
Hypothesis 3	**($H_0$3)**	There is no significant differences on the opinions of respondent on effect of disinvestment
	($H_1$3)	There is significant differences on the opinions of respondent on effect of disinvestment
Hypothesis 4	**($H_0$4)**	The opinion on category of loss making unit, sick unit, profit making unit for disinvestment are same.
	($H_1$4)	The opinion on category of loss making unit, sick unit, profit making unit for disinvestment are not same

Source: Author's Own compilation

Data & Methodology

Data

The data used for the present study is both primary and secondary in nature. The secondary data encompasses the period from 2008-09 to 2019-20 to do the pre and post disinvestment study on financial performances of two major companies. The secondary data are collected from the websites of public enterprise survey, government of India **(www.dpe.gov.in)** and the primary data were collected from the public to seek their opinion regarding disinvestment and privatization by building questionnaire on five point Richert scale. Further the data on percent of disinvestment of two companies were collected from department of investment and public asset management **(www.dipam.gov.in).**

Sampling Technique: Out of various number of sampling technique, researcher used simple random sampling technique.

Tools for analysis of data: For the purpose of analysis of data and for testing hypothesis various tools and technique have been used for the study. Further the data collected have been analyzed with the help of paired sample t test and non-parametric chi square test and repeated measures Friedman test. All this test have been used as per requirement and availability of data.

Sample of the study

A Sample of 2 disinvested central public sector enterprise in which disinvestment have taken place during the period of my study that is from 2014-15 to 2018-19 have been selected for the purpose of study. The reason for selecting this companies is as these two companies got disinvested successively from the period 2014-15 to 2018-19 through offer for sale.

The sample PSEs selected for the study are as follows.

1. NTPC (National thermal power corporation)

National thermal power corporation is a power generation company established in the year 1975. During the last 5 years from 2014-15 to 2018-19 it was got disinvested successively. 0.04 percent of the share was disinvested in 2014-15, 5 percent share on 2015-16 again in the year 2016-17,

0.22 percent of share got disinvested and 6.75 percent of share got disinvested in the year 2017- 18 and in the same way, 5.86 percent of share got disinvested through an offer for sale and now the current government share-holding is 57.13.

2. NALCO (National Aluminium Company)

National Aluminium Company limited is Navratna Company established in the year 1981. During my period of study the company got disinvested 4 times from 2014-15 to 2018-19.In 2014-15 it got disinvested with 0.13 percent of share through offer for sale again it got disinvested with 6.36 percent of share through buyback methods. In the same way the company got disinvested with 9.61 percent and 1.80 percent in 2017-18 and 2018-19 respectively.

In order to compare the pre and post disinvestment performances of NTPC and NALCO, Various financial ratios are used as indicator like net profit, operating profit, ROTA, RONW, ROCE, Current asset for which six years pre disinvestment period that is from 2008-09 to 2013-14 and six years post disinvestment period that is from 2014-15 to 2019-20 has been taken as the period of study.

Table2: Profile of disinvested of NTPC and NALCO

Name Of Disinvested PSEs	Business Area	Financial Year	% Of Share Disinvested	Method Of Disinvestment	Current GOI Shareholding
		2014-15	0.04	OFS	74.96%
		2015-16	5	OFS	69.96%
NTPC	Power	2016-17	0.22	OFS	69.74%

	Generation	2017-18	6.63	EMP OFS	63.11%
		2017-18	0.12	EMP OFS	62.99%
		2018-19	5.86	EMP OFS	57.13%
NALCO	Minerals And Metals	2014-15	0.13	OFS	80.93%
		2015-16	6.36	BUYBACK	74.57%
		2017-18	9.21	OFS	65.38%
		2017-18	0.4	EMP OFS	64.96%
		2018-19	1.8	BUYBACK	56.77%

Source: Author's Own findings.

Objective 1 - To examine the financial implication of disinvestment policy in India.

Table 3: Paired sample t –statistics of NTPC

Financial Ratios	Pre disinvestment period Period from 2008-9 to 2013-14		Post disinvestment period Period from 2014-15 to 2019-20		t-test	sig. (2 tailed)
	Mean	std.deviation	Mean	std.deviation		
Net profit	17.361	2.083	12.615	1.552	12.902	.000
Operating Profit	23.688	1.816	19.575	1.511	3.692	.014
ROTA	7.220	.742	4.181	.770	17.310	.000
RONW	13.673	1.112	11.268	1.160	7.917	.001
ROCE	8.191	.776	7.038	.908	2.001	.102
CA	2.315	.547	.905	.200	6.651	.001

Source: Author's own findings.

Table 4: paired sample t- test statistic of NALCO

Financial Ratios	pre disinvestment period Period from 2008-9 to 2013-14		post disinvestment period Period from 2014-15 to 2019-20		t-test	sig. (2 tailed)
	Mean	std.deviation	Mean	std.deviation		
Net profit	14.765	5.854	11.516	5.741	1.333	.240
operating Profit	22.155	9.217	16.003	8.578	1.743	.142
ROTA	6.076	2.442	6.508	3.790	-.243	.818

RONW	7.986	2.994	8.916	5.399	-.366	.730
ROCE	7.365	2.833	9.581	6.954	-.677	.529
CA	2.351	.150	2.611	.957	-.647	.546

Source: Author's own findings.

Objective-2- To Analyses the perception of the General public towards disinvestment of the public sector undertaking

Descriptive analysis of the primary data.

The data are collected from general public to seek their opinion on disinvestment and privatization policy. 178 total respondent were given their opinion in the form of five point Likert scale.

Table 5: case processing summary of questionnaire

		N	%
Cases	Valid	178	88.6
	Excluded	23	11.4
	Total	201	100.0

Source: Author's own findings

Table 6: Reliability statistics

Cronbach's alpha	Cronbach's alpha based on Standardized items	No of items
.600	.600	13

Source: Author's own findings.

The above data shows that Cronbach alpha value is 0.600 and N is 13, it indicates that the questionnaire for the study are satisfactory. The standard Cronbach alpha value is .70 if the no of items is more than 10. If the no of items is less than 10 the standard value is .50 and as my no of items is only 13, the Cronbach's alpha value .600 is satisfactory.

Table 7: Chi square test statistics for association between ages with opinion on Disinvestment

Age of public	Opinion on disinvestment					Row Total	Chi square value	P value
	SD	**D**	**N**	**A**	**SA**			
below 25	4 (2.2)	0 (0.0)	1 (0.6)	3 (1.7)	0 (0.0)	8 (4.5)	**58.408**	**.000**
26-35	12 (6.7)	2 (1.1)	2 (1.1)	8 (4.5)	5 (2.8)	29 (16.3)		
36-45	3 (1.7)	4 (2.2)	25 (14.0)	15 (8.4)	2 (1.1)	49 (27.5)		
46-55	10 (1.7)	7 (4.5)	10 (8.4)	40 (22.5)	11 (2.8)	78 (43.8)		
Above 55	5 (2.8)	0 (0.0)	1 (0.6)	5 (2.8)	3 (1.7)	14 (7.9)		
Column total	34 (19.1)	13 (7.3)	39 (21.9)	71 (39.9)	21 (11.8)	178 (100)		

Source: Author's own findings

Note- figures in parenthesis ( ) denotes percentage
SD- strongly disagree **D**: disagree **N**: neutral **A**: Agree **SA**: strongly agree

On applying chi square to test the significant association between age with respect to opinion on disinvestment, the chi square value is found to be 58.408 and p value is .000 at 5% level of significance which is less than 0.05 which reject the null hypothesis and concluded that there is significant association between the ages groups of respondent with opinion on disinvestment. Out of total 78 respondent who belongs to the age group of 46-55, 61 respondent were agree with the disinvestment policy. The table also reveals that age group below 25 age has recorded less response towards disinvestment policy as compare to the higher age groups.

Table 8: Chi square test statistics on effect of disinvestment

Effects of disinvestment	Test statistic		
	Chi square	**Df**	**p- value**
Leads to retrenchment of employees	105.315	4	.000
Leads to unemployment	42.760	4	.000
Leads to voluntary retirement schemes	41.213	4	.000

Source: Authors own findings

On applying chi square test to test the significance difference on opinions, the p value for all the category of effect of disinvestment was .000 at one percent level of significance thus reject our null hypothesis and concluded that there is significant difference in the opinion of respondent on effect of disinvestment.

Table 9: Friedman test for Opinion on category of CPSEs for disinvestment/Privatization

Category of unit to be disinvested/privatized	Mean rank	Chi -square value	P value
Sick units	2.11	7.446	.024
Loss making unit	2.02		
Profit making unit	1.87		

Source: Author's own findings.

The table shows that the calculated p value is 0.024 which is less than 0.05 at 5% level of significance resulting in rejection of null hypothesis. Therefore it is concluded that the opinion of general public on category of unit to be disinvested is not same and there is difference in their opinion. The sick unit was assigned with highest mean rank of 2.11 indicating that sick unit to be privatized.

Major Findings:

On applying paired sample t-test to compare the performances between pre and post disinvestment period of NTPC, it is found that p value of all the financial ratios excluding ROCE is found to be significant at 5 % level of significance. ROCE has p value .102 which is greater than 0.05 hence null hypothesis is accepted and can be inferred that there is no significant difference in ROCE between pre and post disinvestment period with p value .546.

On Applying paired sample t test to compare the performances between the pre and post disinvestment period of NALCO, It is found that the p value of all the financial ratios is found to be more than 0.05 thus null hypothesis is accepted and can be concluded that there is no significant difference in the financial performances of NALCO during the pre and post disinvestment period.

In the table no. 4 on applying chi square test to study the association between ages with opinions on disinvestment, the p value is 0.000 at 5 % level of significance thus reject null hypothesis. Out of total 78 respondent who belongs to the age group of 46-55, 61 respondent were agree with the disinvestment policy thus there is significant association of age with their opinions. $H_0 3$, in the table no 5, on applying chi square test, the p value for all the category of effect of disinvestment was 0.000 at 1 percent level of significance thus reject null hypothesis. $H_0 4$ the table no 8 portrays the perception of respondents on category of unit to be privatized. In that out of 178 total respondent, 36.0% agreed that loss making unit and profit making units should go for privatization. On applying Friedman test, the chi square value is 7.446 with p value 0.024 at 5 % level of significance therefore it is concluded that there is difference in the opinion of public on category of unit to be privatized or disinvested.

Discussion

The present study based on comparing the financial performances of NTPC and NALCO between the pre and post disinvestment period. For the study period, paired sample t-test was used which reveals that there is significant difference in the financial performance of NTPC. However, there is no significant difference in ROCE between the two periods. On contrary to this, in case of NALCO it is revealed from the study that there is no significant difference in the financial performance between the pre and post disinvestment period. Besides, All this when researcher tried to study the public perception it is revealed that age group of 46-55 are agree with disinvestment and also the opinion of respondent on effect of disinvestment and category of PSUs to be disinvestment is different and public are of the opinion that sick unit need to be privatized first so that tax payer money should be invested in other infrastructural development rather than utilizing public money on reviving this sick units as revealed by Friedman test. Thus the study will help the government and the company as well to take decision whether to go for disinvestment and privatization of public enterprises or not.

Conclusion

In times of extreme monetary stress, government have thought of selling off their stake in PSUs to raise funds and meet the gap between its expenses and revenues. Before economic liberalization, such effort to monetize government asset were criticized but during the post liberalization period reducing government stakes in those sectors where government presence is not required, disinvestment is welcomed.

The present article made an attempt to compare the pre and post financial performances of two major disinvested companies from the business of power generation and minerals and metals that is NTPC and NALCO through the process of offer for sale and buyback. Along with this, an attempt is also made to study the perception of general public on disinvestment and privatization policy. In the case of NTPC, On applying Paired sample t-test to study the pre and post disinvestment impact of financial performances, the result reflect that there is a significant change in financial performance between the pre and post disinvestment period.it is revealed from the study that mean of all the financial ratios during the pre-disinvestment period was higher than post disinvestment period thus it can be inferred that NTPC performed well during the pre - disinvestment period. In the same way when paired sample is applied on financial performances of NALCO, it is found that there is no significant differences in financial performances between pre and post disinvestment period as the p value of all the financial ratios is found to be greater than 0.05 thus null hypothesis is accepted. Thus government need to bring changes not only in its shareholdings but it must couple with various other changes like changes in its management efficiency, complete privatization etc. Again after examining the perception of general of general public on disinvestment policy, it has been found that majority of respondent were agree with disinvestment policy but they are in fear that disinvestment / privatization may lead to unemployment and ultimately lead to voluntary retirement scheme thus there concern for jobs must be resolved by the government. They are also of the opinion that loss and sick unit first go for disinvestment and profit making unit must be remained untouched as it must be there to support the economy.

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ANALYSIS OF CORPORATE SOCIAL RESPONSIBILITY (CSR) EXPENDITURE AND ITS EXECUTION FOR WOMEN EMPOWERMENT IN INDIA

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Abstract

Corporate social responsibility (CSR) is a moral obligation as well as responsibility of business sectors towards society. An effective CSR strategy promotes competitiveness of business sectors. Corporate social responsibility produces an overall positive impact on society as well as on business which bridges the gap of social inequality and it contributes to the growth and development of a country. In developing countries like India, there is increasing need of corporate social responsibility. This study examines the extent of CSR expenditure by public sector undertakings as well as non-public sector undertakings and analyses state-wise allocation of CSR expenditure in India. It also studies utilisation of CSR expenditure among different sectors and observes the women empowerment through corporate social responsibility in India. Statistical tools like arithmetic mean, percentage, coefficient of variation (CV), annual growth rate (AGR), analysis of variance (ANOVA) and compound annual growth rate (CAGR) have been used to analyze the secondary data from the year 2014-15 to 2018-19 collected from different authenticable sources. This study finds that CSR spending in India is not evenly distributed among different activities or sectors. There is existence of high degree variation in allocation of CSR expenditures among different states and UTs. Moreover, it is observed that very low percent of total CSR expenditure in India is channelized for women empowerment purpose.

Keywords: *Corporate Social Responsibility, Growth of CSR and Women Empowerment*

JEL Code: **M_{14}**

Introduction

Earlier CSR was a voluntary action of the company towards improvement in the condition of society and environment Mackey, Mackey and Barney (2007). The traditional philanthropy or merchant charity of business in India has changed over time to become social responsibility of business and corporate citizenship Mohan (2001). Corporate social responsibility (CSR) is also known by a number of other names. These include corporate responsibility, corporate accountability, corporate ethics, corporate citizenship or stewardship, responsible entrepreneurship, and "triple bottom line," to name just a few. As CSR issues become increasingly integrated into modern business practices, there is a trend towards referring to it as "responsible competitiveness" or "corporate sustainability" (Hohnen, 2007).The World Business Council for Sustainable Development (1999) uses for CSR the following definition: "Continuing commitment by a company to behave ethically and contribute to economic development while improving the quality of life of its workforce and family members, as well as the local community and society at large". Ministry of Corporate Affairs, Government of India had issued 'Voluntary Guidelines on Corporate Social Responsibility, 2009 as a first step towards mainstreaming the concept of Business Responsibilities. This was further refined subsequently, as 'National Voluntary Guidelines (NVG) on Social, Environmental and Economic Responsibilities of Business, 2011'. This principle of NVG was subsequently translated into a mandatory provision of Corporate Social Responsibility (CSR) in Section 135 of the Companies Act 2013. Companies Act, 2013, has introduced

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several provisions regarding spending on corporate social responsibility activities in India. Every company having net worth of rupees five hundred crore or more, or turnover of rupees one thousand crore or more or a net profit of rupees five crore or more during any financial year shall constitute a Corporate Social Responsibility Committee of the Board consisting of three or more directors, out of which at least one director shall be an independent director. On the basis of CSR provisions it became mandatory for Indian companies to spend a particular amount on CSR activities as well. They have to mention their report regarding CSR activities in a prescribed format in their website. CSR activities specified in Schedule VII are;

1) Eradicating extreme hunger and poverty
2) Promoting of education, gender equality and women empowerment
3) Reducing child mortality and improving maternal health
4) Combating human immunodeficiency virus, acquired immune deficiency syndrome, malaria and other disease
5) Ensuring environmental sustainability
6) Employment enhancing vocational skills
7) Contribution to the Prime Minister's National Relief Fund or any other fund set up by the Central Government or the State Governments for socio-economic development and relief and funds for the welfare of the Scheduled Castes, the Scheduled Tribes, other backward classes, minorities and women; and such other matters.

The Companies Act 2013, in addition to the companies (Corporate Social Responsibility Policy) Rules, 2014 has been a forward-looking move by the Government of India, calling on companies to partner in contributing to the country’s development challenges by unleashing creativity and innovation. Wealth inequality across the world, coupled with an economic slowdown and the existing fractures of caste, religion, region and gender may lead to growing disparity that more thoughtful CSR could help mitigate (Smith, 2020).

Review of Literature

Rai & Bansal (2015) investigate the reasons which determine the CSR expenditure by firms. The study finds that industry types and environmental factors determine the CSR expenditure by firms in India. It also explains the endogenous relationship between CSR expenditure and profitability of firms. Accordingly there is a positive relation between firm size measured by the sales and fixed assets and CSR. Bigger firms have more resources and are able to spend more on CSR activities. Mukherjee & Bird, (2016) have examined the drivers and barriers of corporate social responsibility (CSR) expenditure, determine the attitude of corporates towards CSR activities and the impact of making CSR spending mandatory. The important findings is that the motivating factors for Indian companies spending on CSR vary widely in accordance with company characteristics. Kaur & Tandon (2017) have analysed the role of corporate social responsibilities in India. This paper has examined the reasons for growth of CSR in India and potential benefits of CSR to companies. It is opined that many of the leading corporations across the world had realized the importance of being associated with socially relevant causes as a means of protecting the goodwill and reputation, defending attacks and increasing business competitiveness. The Indian corporate sectors have introduced CSR in the small and medium enterprises (SME) sector to increase its reach in remote areas. Swarnalatha & Anuradha (2017) have studied the need for focus on women empowerment and the role of various corporate sectors in women empowerment through CSR. Empowerment of women needs the contribution of dedicated personals, committed people, generous funding agencies and strong political will. Uvais & Cholasseri (2013) have observed the potential benefits of the business undertaking CSR.The scale and nature of the benefits of CSR for an organization can vary which depends on the nature of the enterprise.Therefore it is difficult to quantify. Verma & Jain (2015) study corporate social responsibility expenditure of the ten largest and most powerful companies in India prior to the implementation of CSR provisions of Companies Act 2013.These companies were selected from the 2013 Forbes Global 2000 list. CSR expenditure by these companies was compared with the provisions of the Companies Act, 2013.This study suggests that large corporations are precursors to CSR commitments in a society and hence, mandatory CSR spending in large companies is likely to positively influence CSR in smaller companies.

Objectives

1. To examine the corporate social responsibility expenditure by PSUs and Non-PSUs in India.
2. To observe the sector-wise allocation of corporate social responsibility expenditure in India.
3. To analyse the state-wise corporate social responsibility expenditure in India.
4. To examine state-wise CSR expenditure on women empowerment activities and to study the promotional women empowerment activities that has been undertaken in India.

Data and Methodology

This study is empirical in view of the desired objectives. Available secondary data (2014-15 to 2018-19) have been used for the study collected from different articles, books, various annual reports and official website of Ministry of Corporate Affairs, Government of India and statical tools like averages, annual growth rate, coefficient of variation (CV), analysis of variance (ANOVA) and Eta squaredhave been applied to analyse the data.

Discussion

A. CSR Expenditure of PSUs and Non-PSUs in India

Table 1: Corporate Social Responsibility Expenditure by PSUs and Non-PSUs in India from 2014-15 to 2018-19

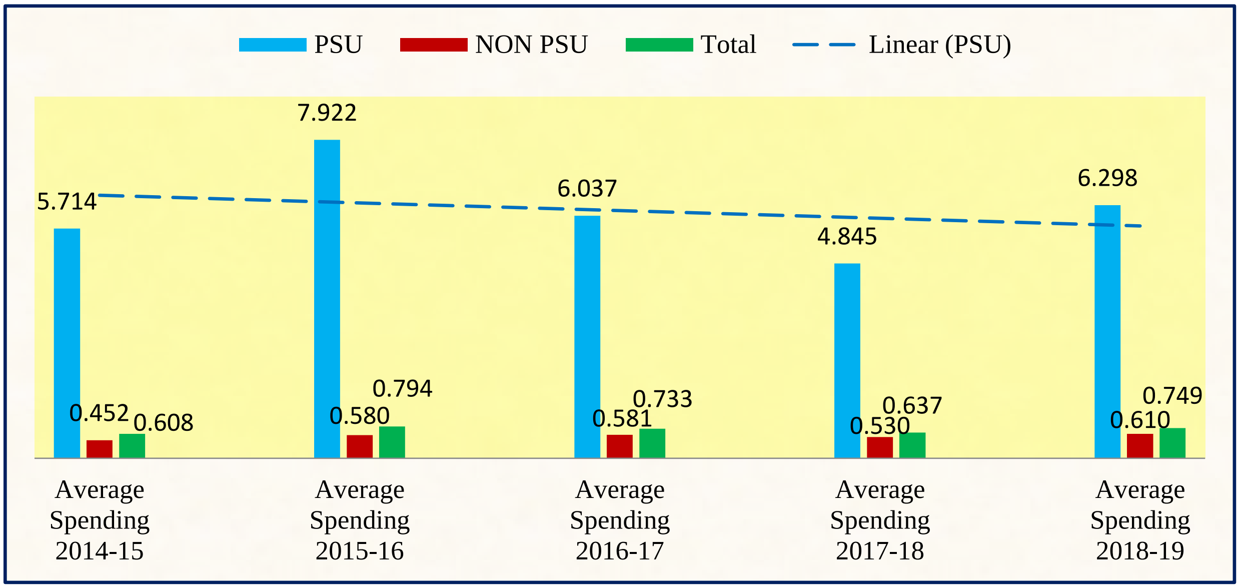
Nature of Company	2014-15		2015-16		2016-17		2017-18		2018-19	
	No. of .	Total amount Spent	No. of companies	Total Amount Spent	No. of companies	Total Amount Spent	No. of companies	Total Amount Spent	No. of companies	Total Amount Spent (inCrore)
PSUs	493	2816.82	532	4214.67	546	3295.98	527	2553.36	609	3835.50
NON PSUs	16055	7249.11	17758	10302.52	18993	11033.55	20870	11067.15	24293	14817.98
Total	16548	10065.93	18290	14517.19	19539	14329.53	21397	13620.51	24902	18653.48
		Average Spending		Average Spending		Average Spending		Average Spending		Average Spending
PSUs		5.714		7.922		6.037		4.845		6.298
Non PSUs		0.452		0.580		0.581		0.530		0.610
Total		0.608		0.794		0.733		0.637		0.749

Source:*Annual Report, 2019-20 & 2020-21, Ministry of Corporate Affairs, Government of India(GoO)*

Note: *Figures mentioned from 2014-15 to 2017-18 are till 30th June 2019 as per Annual Report, 2019-20 and figures mentioned for 2018-19 are till 31st March 2020 as per Annual Report, 2020-21.*

Table 1 reveals that total amount spent on CSR is Rs. 2816.82 Crores by 493numbers of PSUs in 2014-15 which has increased to Rs. 3835.50 Crores by 609 numbers of PSUs in year 2018-19. Moreover average spending of PSUs has also increased from Rs. 5.714 Crore (2014-15) to Rs. 7.922 Crore (2015-16), then after it declines to Rs. 4.845 crores (2017-18) and during 2018-19, it rises to Rs. 6.298 crores. Overall average CSR spending of PSUs shows a down trend from 2014-15 to 2018-19. On the other hand total spending on CSR by Non-PSUshas increased from Rs. 7249.11 Crores (2014-15) to Rs. 14817.98 Crores (2018-19) and also the average spending on CSR by non-PSUs have been increased from Rs. 0.452 (2014-15) to Rs. 0.610 Crores in year 2018-19. But the average spending on CSR by PSUs is much more than average spending of non-PSUs in each year ranging from 2014-15 to 2018-19. It is also examined that the average spending of total expenditure on CSR by all companies in India has increased from Rs. 0.608 Crores of 2014-15 to Rs. 0.749 crores of year 2018-19 except two consecutive years such as 2016-17 and 2017-18 (figure-1).

Figure 1: Average Spending on CSR Activities by PSUs and Non-PSUs in India



Source: Author's calculation as per table-1

A. Sector-Wise Allocation of CSR Expenditure in India

The average of five years CSR expenditure ranging from 2014-15 to 2018-19 reveals that the education sector draws the highest expenditure (Rs. 4292.02 Crore) and lowest expenditure (Rs. 14.50 Crore) is recorded with clean Ganga Fund. The range difference of five years average CSR expenditure ranging from 2014-15 to 2018-19 is Rs.4277.52 Crore. Most of the sectors lie below the combined average of sector wise CSR expenditure of five years (Rs. 474.57 Crore). These sectors include all those except Education, Environmental Sustainability, Health Care, Livelihood Enhancement Project, NEC/ Not Mentioned, Poverty, Eradicating Hunger, Malnutrition and Rural development Projects. So far as women empowerment is concerned the allocation of CSR expenditure is low in each year as compared to other important sectors. It is also obseved that there is presence of high degree of uneven distribution of CSR fund among different sector in India in between year 2014-15 to 2018-19.

Table 2: Sector-wise Corporate Social Responsibility expenditure for Financial Year from 2014-15 to 2018-19 in India (in Crore)

Sectors	2014-15	2015-16	2016-17	2017-18	2018-19	Average
Agro Forestry	18.12	57.85	43.45	12.18	64.59	39.23
Animal Welfare	17.29	66.67	78.65	59.48	96.26	63.67
Armed Forces, Veterans, War Widows	4.76	11.14	37.86	26.72	89.2	33.93
Art and Culture	117.37	119.17	305.57	283.81	189.89	203.16

Clean Ganga Fund	5.47	32.82	24.37	4.44	5.41	14.50
Conservation of Natural Resources	44.6	49.85	119.09	212.74	63.16	97.88
Education	2589.42	4057.45	4500.82	4594.64	5717.78	4292.02
Environmental Sustainability	773.99	796.69	1076.46	1076.42	1292.63	1003.23
Gender Equality	55.21	73.85	72.6	20.48	50.96	54.62
Health Care	1847.74	2569.43	2484.05	2192.16	3216.10	2461.89
Livelihood Enhancement Project	280.17	393.38	515.47	658.18	848.64	539.16
NEC/ Not Mentioned	1338.40	1051.16	388.96	0.76	87.54	573.36
Other Central Government Fund	277.10	334.35	419.99	255.40	710.59	399.48
Poverty, Eradicating Hunger, Malnutrition	274.70	1252.08	606.55	635.93	1090.08	771.86
Prime Ministers National Relief Fund	228.18	218.04	158.80	158.20	300.08	212.66
Rural development Projects	1059.35	1376.16	1554.78	1477.29	2308.83	1555.28
Safe drinking water	103.95	180.16	147.76	180.16	211.81	164.76
Sanitation	299.54	631.80	421.71	291.69	440.5	417.05
Senior Citizenship Welfare	8.94	21.87	26.91	32.94	38.4	25.82
Setting up Homes and Hostels	8.74	29.28	61.97	67.73	53.01	44.15
Setting up Orphanage	5.12	16.9	16.80	36.86	11.43	17.42
Slum Area Development	101.14	14.10	51.49	35.11	50.24	50.41
Socio- Economic Inequalities	39.04	77.97	148.01	134.70	164.27	112.79
Special Education	41.43	125.84	164.83	122.56	173.89	125.71
Swachh Bharat Kosh	113.86	325.52	184.06	213.79	93.81	186.20
Technology Incubators	4.74	26.34	23.09	15.54	30.51	20.04
Training to promote Sports	57.62	140.12	180.33	227.50	295.1	180.13
Vocational Skills	277.07	344.39	373.46	391.73	758.95	429.12
Women empowerment	72.87	122.79	141.62	200.37	199.81	147.49
Average	347.12	500.13	493.52	459.53	643.22	474.57
Grand Total	10065.93	14517.19	14329.53	13620.51	18653.48	

Source: *Annual Report, 2019-20 & 2020-21, Ministry of Corporate Affairs, Government of India*

Note: *Figures mentioned from 2014-15 to 2017-18 are till 30th June 2019 as per Annual Report, 2019-20 and* *figures mentioned for 2018-19 are till 31st March 2020 as per Annual Report, 2020-21.*

B. State-Wise CSR Expenditure in India

It is observed from table 3 that the state Maharashtra occupies highest average CSR expenditure of five years Rs. 2271.972 crores next to PAN India and Mizoram has experienced of lowest among all the states and UTs in India. All the states and UTs in India except Andhra Pradesh, Delhi, Gujarat, Karnataka, Maharashtra, Odisha, Rajasthan, Tamil Nadu and PAN India have less than the combined average CSR expenditure of Rs. 374.53 Crores of five years (2014-15 to 2018-19) in India.

Table 3: State-Wise CSR Expenditure in India from 2014-15 to 2018-19 (in crores)

Sl. No	State/UT(s)	2014-15	2015-16	2016-17	2017-18	2018-19	Average
1	Andaman and Nicobar Islands	0.29	0.55	0.83	0.76	0.43	0.57
2	Andhra Pradesh	414.28	1294.28	753.53	269.11	643.33	674.91
3	Arunachal Pradesh	11.05	1.48	24.05	11.94	24.5	14.604
4	Assam	134.78	164.6	269.92	86.23	205.61	172.23
5	Bihar	36.69	124.62	100.77	42.17	136.44	88.14
6	Chandigarh	1.77	5.34	21.99	20.51	11.72	12.266
7	Chhattisgarh	161.3	241.16	84.94	71.61	135.52	138.91
8	Dadra and Nagar Haveli	4.41	12.03	7.58	6.93	13.48	8.89
9	Daman and Diu	20.05	2.43	2.63	20.09	6.23	10.286
10	Delhi	237.44	493.34	520.66	540.79	662.04	490.85
11	Goa	27.11	30.15	37.89	53.34	46.74	39.05
12	Gujarat	313.45	551.43	870.84	768.96	1059.41	712.82
13	Haryana	187.41	375.62	389.6	262.02	334.73	309.88
14	Himachal Pradesh	10.95	52.29	24.03	60.53	79.97	45.554
15	Jammu and Kashmir	43.71	107.81	42.74	14.75	35.25	48.85
16	Jharkhand	79.56	117.04	95.69	45.88	70.27	81.688
17	Karnataka	403.47	784.66	886.36	950.92	1222.44	849.57
18	Kerala	68.23	148.12	135.47	158.06	385.98	179.17
19	Lakshadweep	0	0.3	0	2.7	0.39	0.68
20	Madhya Pradesh	141.88	185.51	286.6	147.43	245.69	201.42
21	Maharashtra	1445.92	2052.23	2487.94	2527.04	2846.73	2271.972
22	Manipur	2.44	6.28	12.35	4.03	7.64	6.55

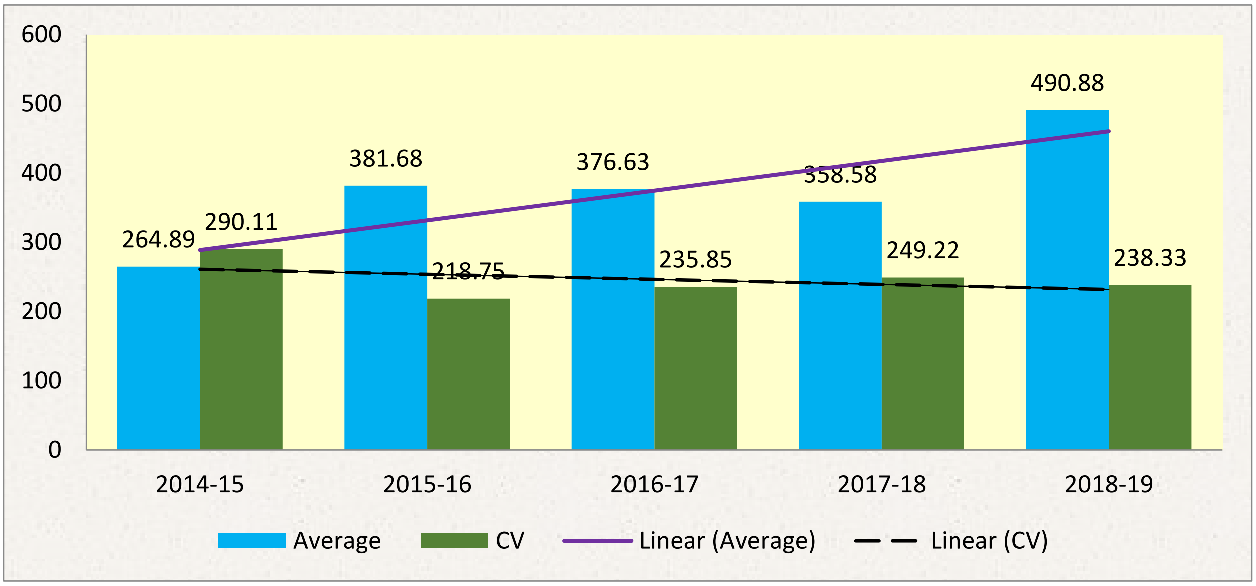
23	Meghalaya	3.53	5.59	10.97	5.49	16.68	8.45
24	Mizoram	1.03	1.07	0.08	0.23	0.11	0.50
25	Nagaland	1.11	0.96	0.92	0.36	2.11	1.09
26	Odisha	252.18	624.05	316.71	469.34	682.6	468.976
27	Puducherry	2.02	6.46	7.43	6.51	8.27	6.138
28	Punjab	55.61	69.93	75.83	88.51	164.53	90.88
29	Rajasthan	299.76	501.45	327.15	263.33	546.3	387.60
30	Sikkim	1.19	1.98	6.83	6.84	4.58	4.284
31	Tamil Nadu	539.64	633.24	550.94	619.42	823.33	633.31
32	Telangana	101.96	265.4	259.88	291.14	421.43	267.962
33	Tripura	1.33	1.47	1.25	1.83	23.06	5.788
34	Uttar Pradesh	148.9	423.79	327.48	298.4	476.95	335.10
35	Uttarakhand	74.79	73.17	101.52	87.51	173.32	102.06
36	West Bengal	194.86	415.42	290.34	280.25	366.6	309.494
37	NEC/ Not Mentioned*	26.94	0	7.63	132.04	3.59	34.04
38	PAN India*	4614.89	4741.95	4988.17	5009.16	6765.43	5223.92
	Grand Total	10065.93	14503.67	14312.05	13626.16	18653.43	
	AGR of Total Expenditure		44.09 %	-1.32%	-4.79%	36.89%	
	Average	264.89	381.68	376.63	358.58	490.88	374.53
	SD	768.47	834.92	888.27	893.67	1169.93	
	CV	290.11	218.75	235.85	249.22	238.33	

Source: *Annual Report, 2019-20 & 2020-21 Ministry of Corporate Affairs, Govt. of India*

Note: *Figures mentioned from 2014-15 to 2017-18 are till 30th June 2019 as per Annual Report, 2019-20 and figures mentioned for 2018-19 are till 31st March 2020 as per Annual Report, 2020-21.*

The average of yearly CSR expenditure of different states and UTs has been increased from Rs.264.89 Crore (2014-15) to Rs. 490.88 Crore in year 2018-19 but during year 2016-17 and 2017-18 it has decreased to Rs. 376.63 Crore and Rs. 358.58 Crore respectively. The annual growth rate of year wise total CSR expenditure shows negative value of -1.32% and -4.79% in year 2016-17 and 2017-18 respectively. On the other hand, coefficient of variation of yearly CSR expenditure of different states and UTs decreases from 2014-15 to 2015-16 and further it is increased from the year 2016-17 to 2018-19. This describes that the variation in allocation of CSR expenditures in different years concerning to different states and UTs still exist (figure 2).

Figure 2: Yearly Average and CV of State-Wise CSR Expenditure in India



Source: Author's calculation as per table 3

Table 4: One Way ANOVA: Year-wise CSR Expenditure in India from 2014-15 to 2018-19

ANOVA: Single Factor

Source of Variation	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Between Groups	983233.41	4	245808.35	0.29	0.88	2.42
Within Groups	157030185.7	185	848811.81			
Total	158013419.1	189				

Source: Author's calculation as per data mentioned in table 3

Note: *Column-wise Comparison is made between CSR Expenditure of 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19 in India. Each year is regarded as separate group and only expenditure is taken as single variable.*

It is observed from table 4 that the F-value is less than the F-critical value for the alpha level selected (0.05). Therefore, the null hypothesis is accepted. It describes that year-wise CSR expenditure with respect to different states and union territories in India have not significantly different means. To know the effect size measure for one-way ANOVA, Eta squared is calculated. It is used to know how much proportion of the variability exists between the two samples due to the between group difference. It is calculated as;

$$\text{(Eta squared) } \eta 2 = SS_{\text{Between}} / SS_{\text{Total}}$$

$$\eta 2 = 983233.41 / 158013419.1 = 0.00622247 = 0.622247 \text{ percent}$$

The value of 0.00622247 indicates that 0.622247 percent of the variance is accounted for between the year-wise CSR expenditure in between five sub periods (from 2014-15 to 2018-19) in India. It depicts that there is an extent of less variability in growth of CSR expenditure from 2014-15 to 2018-19 which includes five sub-periods of 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19. Therefore, considering the yearly average of total expenditure, annual growth rate, ANOVA results as well as coefficient of variation, it can be stated that the growth of yearly total CSR expenditure concerning to different states UTs is not satisfactory.

Table 5: One Way ANOVA: State-wise CSR Expenditure in India from 2014-15 to 2018-19

ANOVA: Single Factor

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	151761159.8	37	4101652.968	99.71615498	4.9367	1.489
Within Groups	6252259.239	152	41133.28446			
Total	158013419.1	189				

Source: Author's calculation as per data mentioned in table 3

Note: *Row-wise Comparison is made between CSR Expenditure of different states from 2014-15 to 2018-19 in India. Each state is regarded as separate group and only expenditure is taken as single variable.*

Moreover, it further examined from table 5 that the F-value is more than the F-critical value for the alpha level selected (0.05). Therefore, the alternative hypothesis is accepted. It describes that state-wise CSR Expenditure in India from 2014-15 to 2018-19 have significantly different means. To examine the effect size measure for one-way ANOVA, Eta squared is calculated. It is used to find the existence of the variability proportion between the samples due to the between group difference. It is calculated as;

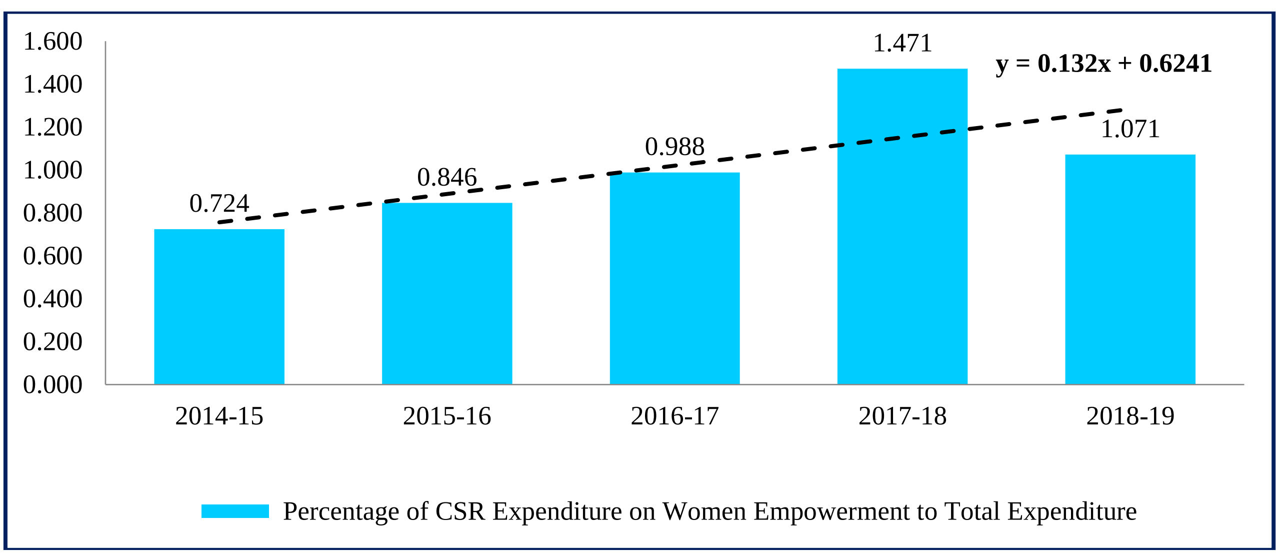
$$\text{(Eta squared) } \eta 2 = SS_{Between} / SS_{Total}$$

$$\eta 2 = 151761159.8 / 158013419.1 = 0.9604321 = 96.04321$$

The value of 0.9604321 indicates that 96.04321 percent of the variance is accounted for between the state-wise CSR Expenditure in India from 2014-15 to 2018-19. It is observed that there is high degree of variability in allocation of state-wise CSR Expenditure in India from 2014-15 to 2018-19 which includes 38nos. row-wise groups from serial number 1 to 38(as mentioned in table 3). Therefore, it is observed that state-wise CSR expenditure in different years is not evenly allocated.

C. State-wise and Year-wise CSR Expenditure on Women Empowerment in India

Figure 3: Percentage of CSR Expenditure on Women Empowerment to Total CSR Expenditure in India



Source: *Author's calculation as per data mentioned in table 2*

Note: *'Y' represents percentage of CSR expenditure on women empowerment and 'x' represents time periods.*

Women constitute a unique resource of a nation. It needs recognition that, women are the builders and moulders of a nation's destiny (Panigrahy & 2006). Bhuyan, Providing women and girls with equal access to education, health care, decent work, and representation in political and economic decision-making processes will fuel sustainable economies and benefit societies and humanity at large (United Nations:Gender equality and women's empowerment). But in India women are discriminated and marginalized at every level of the society whether it is social participation, political participation, economic participation, access to education, and also reproductive healthcare (Hazarika, 2011). There is a need to channelize more and more funds for capacity building among the women in every respect.

The contribution of CSR fund to women empowerment activities in India is 0.724 percent in year 2014-15 and it gradually increases to 1.471 percent in year 2017-18 but in year 2018-19, it declines to 1.071 percent. Though linear trend line shows slow upward movement it is observed that very low percent of total CSR expenditure in India is channelized for women empowerment purpose (figure 3).

As per the trend equation= 0.132x + 0.624, the estimated trend values are 0.756, 0.888, 1.02, 1.152 and 1.284 for the year 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19 respectively. It is observed that estimated trend values are more than the actual value except for the year 2017-18 concerning to percentage of CSR expenditure on women empowerment to total CSR expenditure in India. Hence required amount of CSR fund is not spent for women empowerment in India.

Table 6: State-wise and Year-wise CSR Expenditure on Women Empowerment in India from 2014-15 to 2018-19

Amount Spent(INR Lakh) & Figures within Parentheses are Percentages to Year-wise Total Expenditure						
State Abbrv.	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**CAGR**
AN	NA	NA	NA	NA	NA	
AP	**2005 (27.51)**	**2541(20.69)**	**1345(9.50)**	156(0.77)	310(1.55)	-0.31
AR	NA	NA	NA	NA	1312(6.57)	0.00
AS	64(0.88)	118(0.96)	342(2.41)	37(0.18)	134(0.67)	0.16
BR	3(0.04)	120(0.98)	214(1.51)	211(1.03)	211(1.06)	1.34
CH	**1(0.01)**	NA	NA	8(0.04)	31(0.16)	0.99
CT	32(0.44)	26(0.21)	71(0.50)	32(0.16)	82(0.41)	0.21
DN	NA	**1(0.01)**	10(0.07)	**1(0.005)**	NA	0.00
DD	NA	NA	NA	NA	11(0.06)	0.00
DL	789(10.83)	1462(11.91)	714(5.04)	788(3.86)	1978(9.90)	0.20
GA	NA	39(0.32)	29(0.20)	48(0.24)	25(0.13)	-1

GJ	165(2.26)	791(6.44)	918(6.48)	673(3.30)	1870(9.36)	0.63
HR	87(1.19)	201(1.64)	576(4.07)	1256(6.16)	419(2.10)	0.37
HP	NA	NA	19(0.13)	5(0.02)	43(0.22)	0.18
JK	62(0.85)	49(0.40)	5(0.04)	12(0.06)	2(0.01)	-0.50
JH	43(0.59)	108(0.88)	**1094(7.72)**	337(1.65)	20(0.10)	-0.14
KA	572(7.85)	552(4.50)	787(5.56)	1229(6.03)	1389(6.95)	0.19
KL	41(0.56)	103(0.84)	157(1.11)	132(0.65)	129(0.65)	0.26
MP	313(4.30)	759(6.18)	305(2.15)	181(0.89)	268(1.34)	-0.03
MH	558(7.66)	1283(10.45)	**1827(12.90)**	**2081(10.21)**	**2002(10.02)**	0.29
MN	NA	NA	NA	NA	NA	
ML	NA	NA	2(0.01)	NA	774(3.87)	2.29
MZ	NA	NA	2(0.01)	4(0.02)	**1(0.01)**	-0.13
NL	NA	NA	NA	NA	NA	
OR	261(3.58)	73(0.59)	95(0.67)	45(0.22)	183(0.92)	-0.07
PY	**1(0.01)**		NA	NA	NA	-1
PB	65(0.89)	33(0.27)	65(0.46)	77(0.38)	472(2.36)	0.49
RJ	298(4.09)	644(5.24)	514(3.63)	362(1.78)	825(4.13)	0.23
SK	5(0.07)	NA	NA	NA	NA	-1.00
TN	68(0.93)	531(4.32)	825(5.83)	531(2.60)	484(2.42)	0.48
TG	53(0.73)	496(4.04)	634(4.48)	197(0.97)	684(3.42)	0.67
UP	76(1.04)	397(3.23)	199(1.41)	270(1.32)	325(1.63)	0.34
UT	103(1.41)	5(0.04)	346(2.44)	53(0.26)	172(0.86)	0.11
WB	586(8.04)	367(2.99)	272(1.92)	272(1.33)	258(1.29)	-0.15
PAN India	1036(14.22)	1580(12.87)	**2795(19.74)**	**11160(54.73)**	**5565(27.85)**	0.40
NEC	NA	NA	NA	231(1.13)	NA	0
Grand Total	**7287**(100)	**12279**(100)	**14162**(100)	**20390**(100)	19981(100)	0.22

Source: https://www.csr.gov.in/developmentlist.php, Official Website of Ministry of Corporate Affairs, Government of India, Retrieved on 2nd May 2021

***Note**: **(1)** Data are not mentioned by the above cited source for those states and UTs remained blank cell in table 6, therefore it is taken as absence of CSR expenditure on women empowerment for respective states and UTs in concerned years.**(2)** Abbreviation Used: Andaman and Nicobar Islands (AN), Andhra Pradesh (AP), Arunachal Pradesh (AR), Assam (AS), Bihar (BR), Chandigarh (CH), Chhattisgarh (CT), Dadra and Nagar Haveli (DN), Daman and Diu (DD), Delhi (DL), Goa (GA), Gujarat (GJ), Haryana (HR), Himachal Pradesh (HP), Jammu and Kashmir (JK), Jharkhand (JH), Karnataka (KA), Kerala (KL), Lakshadweep (LD), Madhya Pradesh (MP), Maharashtra (MH), Manipur (MN), Meghalaya (ML), Mizoram (MZ), Nagaland (NL), Odisha (OR), Puducherry (PY), Punjab (PB), Rajasthan (RJ), Sikkim(SK), Tamil Nadu (TN), Telangana (TG), Tripura (TR), Uttar Pradesh (UP), Uttarakhand (UT), West Bengal(WB), Presence Across Nation(*PAN India), *Not Elsewhere Classified (NEC).*

It is observed from table 6 that Andhra Pradesh draws the highest CSR fund on women empowerment Rs. 2005 lakh (27.51percentage) whereas Chandigarh and Puducherry experience the lowest Rs. 1lakh (0.01 percentage) each among all Indian states and union territories (UTs) for the year 2014-15. During the year 2015-16, Andhra Pradesh also occupies the highest Rs. 2541 lakh (20.69 percentage) whereas Dadra and Nagar Haveli is placed on the lower ladder by getting Rs. 1 lakh (0.01 percentage) of CSR fund of women empowerment. In the year 2016-17, a lion's share of CSR fund Rs. 2795 lakhs (19.74 percentage) is utilised through PAN India followed by Maharashtra Rs. 1827 lakhs (12.90 percentage) but only Rs. 2 lakhs (0.01 percentage) is realised by Meghalaya and Mizoram each for women empowerment activities. On the other hand next to PAN India, Maharashtra continues to avail highest CSR fund Rs. 2081 lakhs (10.21percentage) and Rs. 2002 lakhs(10.02percentage) whereas Mizoram gets lowest fund Rs. 4 lakhs (0.02 percentage) and Rs. 1 lakh (0.01percentage) for women empowerment activities during year 2017-18 and 2018-19 respectively. It is further examined those Indian states and UTs like Andhra Pradesh, Goa, Jammu and Kashmir, Jharkhand, Madhya Pradesh, Mizoram, Puducherry, Sikkim and West Bengal have negative CAGR of CSR expenditure on women empowerment during 2014-15 to 2018-19. Hence the total CSR fund on women empowerment in India is unevenly distributed among Indian states and UTs.

Table 7: Important Women Empowerment Projects through CSR in India in the Financial Year 2018-19

CSR Project Name	Name of the Company	Location of the Project	Total Expenditure on the Project (INR Crores)	Prescribed CSR in the FY 2018-19 (INR Crores)
Targeting Hardcore Poor Programme	Bandhan Bank Limited	West Bengal, Bihar, Odisha, Jharkhand	12.95	27.83
Economic Empowerment of Women	ITC Limited	Andhra Pradesh, Karnataka, Telangana, Tamil Nadu, Bihar, Madhya Pradesh, Uttar Pradesh, Assam, Rajasthan, West Bengal, Maharashtra, Uttarakhand, Himachal Pradesh.	12.02	306.55
Project Salon-i	Godrej Consumer Products Limited	PAN-India	8.10	21.87
Main Kuch Bhi Kar Sakti Hoon' Season 3	REC Limited	PAN-India	5.41	157.29
Project SAKHI	Hindustan Zinc Limited	Rajasthan	5.40	203.93
Empowering Women through various media	Hero MotoCorp Limited	PAN-India	5.36	93.72

Project Swayam& Project Sanjeevani	CEAT Limited	Maharashtra, Tamil Nadu, Gujarat, Madhya Pradesh, Rajasthan, Delhi	2.39	10.509
JeewanJyoti Women Empowerment Programme	Sterlite Technologies Limited	Maharashtra	1.94	5.37
Cummins Powers Women Program	Cummins India Limited	PAN-India	1.74	16.16
Empowerment Via Education Program	Tata Technologies Limited	Maharashtra	1.25	5.13

Source: https://csrbox.org/India_CSR_news_Top-10-Women-Empowerment-Projects-through-CSR-in-India-in-the-Financial-Year-2018-19_540

Finding and Conclusion

Though the total CSR spending of the Non-PSUs is more than that of PSUs but average spending on CSR by Non-PSUs is much less than average spending of PSUs in each year ranging from 2014-15 to 2018-19. CSR spending in India is not evenly distributed among different activities or sectors. In most of the sectors, CSR spending is very low even it lies below the combined average of sector wise CSR expenditure of five years (Rs. 474.57 Crore). Looking towards state-wise allocation of CSR, there is existence of high degree variation in allocation of CSR expenditures among different states and UTs. Moreover, no spectacular progress is found in growth of total year-wise CSR expenditure concerning to different Indian states and UTs. So far as women empowerment is concerned the allocation of CSR expenditure is not handsome in each year as compared to other important sectors. It is observed that very low percent of total CSR expenditure in India is channelized for women empowerment purpose. More particularly Indian states and UTs like Andhra Pradesh, Goa, Jammu and Kashmir, Jharkhand, Madhya Pradesh, Mizoram, Puducherry, Sikkim and West Bengal have experienced a negative CAGR of CSR expenditure on women empowerment during 2014-15 to 2018-19. Hence the total CSR fund on women empowerment in India is unevenly distributed among Indian states and UTs.

The above analysis depicts that though the Indian companies are making efforts in the CSR areas but still there is a requirement of more emphasis and systematic approach on CSR activities. There are some corporations which are not even meeting the regulatory requirement of CSR Act. The progress of CSR spending concerning to different CSR activities is not uniform through the length and breadth of the country India. While get in CSR activities, corporate houses should give more attention for fostering the progress of women by improving employment opportunities and increasing their participation in economic activities. Businesses performing through micro enterprises in rural areas should also ensure that these enterprises are able to provide sustainable income and become self-sufficient in the long run, and then there would be sustainable employment and real economic empowerment.

Direction for Future Research

This paper discuses state-wise and sector-wise allocation of CSR fund putting concentration on women empowerment in India, as economic empowerment of women brings betterment of the family as well as the whole country; therefore, corporate houses should give more attention to fostering the progress of women by providing them opportunities to participate in economic activities. Research in CSR expenditure concerning women empowerment   is an important aspect for making an academic contribution as well as to provide a direction for change, not only for reducing socioeconomic disparity, but also for effective gender representation in the stream of economic development. This study extends this idea that equitable and need full allocation of CSR fund by business communities and suggests that more research should be conducted on CSR expenditure on women empowerment.

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IMPACTS OF COVID-19 PANDEMIC ON PERFORMANCE OF NATIONAL PENSION SYSTEM

Haladhara Sahu[1]

ABSTRACT

The Covid-19 pandemic has shaken the whole world, it has brought the business, education, industry, transport, communications, travel, hospitality almost all the economic activities to a standstill. Accordingly, it has adversely affected the financial markets and stock exchanges across the globe. Bombay Stock Exchange and National Stock Exchange experienced an unprecedented fall of 40 to 50% in a period of few weeks. Consequently, market also experienced an unprecedented recovery of 90 to 100% within a period of one year. This new dynamic of short-run volatility possesses serious questions about the market driven National Pension System (NPS) which tries to deliver smooth retirement life for Indian elderly. Covid-19 is one such incidence, there could be many more unforeseen future possibilities of war, bio-chemical attack, external aggression, economic crisis or any other unforeseen event which could bring surprising turn of event in a security market. What will happen to the retirement saving of people who are approaching retirement during such plunge without any contribution/protection insurance. Since the volatility in security market will significantly impact the fund manager's performance and accordingly the retirement benefit of the subscriber. We have selected four pension fund managers operating under NPS and investigated impacts of pandemic on their risk returns profile for three different phases of pandemic, that is risk-return profile before the pandemic, during the pandemic and the phase of normalisation. This study has explored the implication of such volatility on pension benefit. On the basis of finding, it has suggested some measures for the policy makers for future preparedness to tackle volatility.

Keywords: *Defined Benefit, Defined Contribution, National Pension System (NPS), Pension Fund Managers.*

JEL Code: E6, E62, E69

Introduction

The prime objective of retirement saving is to ensure income security at old age when all other sources of income stop. We have somehow established the notion that in the long run equity investment is going to provide higher positive returns compared to other investment avenues. Since investment under pension schemes are intended for longer horizon, no due impotence is paid to short-term volatility. However, the recent experience in stock market particularly after the spread of Corona Virus Disease (COVID-19), equity markets in India witnessed an unprecedented fall and rise, it dips around 50% in a month and jumped around 100% within a year. Given such short-term volatility, retirement benefit to the retiring subscriber could be significantly impacted.

PFRDA (Pension Fund Regulatory & Development Authority of India) present investment guidelines permit the fund managers of National Pension System (NPS) to invest in different categories of financial securities like government bonds, corporate debts, money market instruments, assets backed securities, equity and derivatives of companies listed in NSE and/or BSE to ensure better market-based returns to the subscribers of NPS. Since 2016, PFRDA's investment approach has been shifting towards equity from government securities & corporate debts. The new investment norms permit up to 75% investment in equity and equity related financial instruments for private sector employees.

The COVID-19 is one instance of such incidence, there could be many more unexpected future possibilities of war, bio-chemical attack, external aggression, economic crisis or any other unforeseen event which could bring surprising turn of event in a security market. As a consequence, the return may dip down well below the contribution. What will happen to the retirement saving of people who are approaching retirement during such crash without any contribution/protection insurance.

Figure: 1- Closing Index Value of S&P BSE 100

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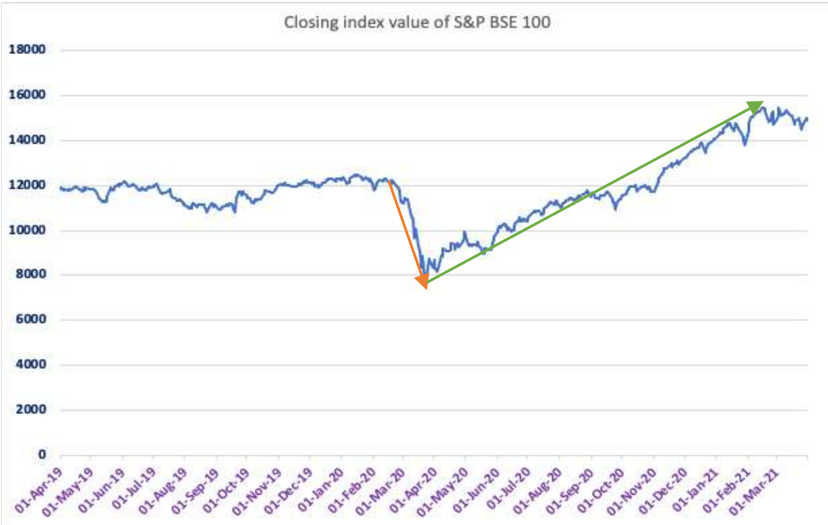


Source: https://www.bseindia.com/Indices/IndexArchiveData.html

We could see the sharp fall and rise because of pandemic effect. The index was trading above 12000 marks before the pandemic once the news hit the market it fell below 8000 marks in a span of one month. Recovery took around eight months to reach at 12000 marks. The detailed impacts of volatility have been explained later.

In this article we have tried to study the impacts of such volatility on retirement savings. We have also tried to explore the protection, options and flexibility to be incorporated in NPS to tackle such volatility and make it sustainable in the long-run.

Introducing the National Pension System (NPS)

Pressure on the fiscal front, increasing pension pay-outs obligated the government to change the pension system for government employees. In the year 2003, Government of India established Pension Fund Regulatory and Development Authority (PFRDA) as an interim regulator and assigned the duty of reforms, promotion, regulation and development of pension architecture of the country. In 2004, PFRDA introduced New Pension Scheme (NPS), which replaced the existing defined benefit pension model with the defined contribution pension model for government sector employee. Later in 2009, NPS was extended to private sector all citizen and renamed as National Pension System.

Under the defined benefit pension scheme employee is entitled to a fixed sum of pension benefit after retirement (Normally 50% of last drawn salary indexed to DA). On the other hand, under the new defined contribution scheme, the subscriber has to contribute a specific sum of money from monthly salary or income for future income security. The periodical specific sum of money so contributed would be managed by the professional Pension Fund Managers appointed by the PFRDA and the retirement benefit of the subscriber would depend upon the returns generated by the fund managers through investment in security markets.

NPS Schemes:

CG Scheme and SG Scheme: CG scheme is for Central Government employees and SG scheme for State Government Employees, who have joined the service after 1ST January 2004. In both CG and SG scheme the employer and employee contribute 10% of employee's salary. The amount so contributed is invested by the fund managers selected by the regulator (PFRDA). Presently there are three fund managers namely 1. SBI Pension Fund Private Limited, 2. UTI Retirement Solution Limited, and 3. LIC Pension Fund limited to manage the contribution of government sector employees. In CG&SG Scheme employee neither have the choice of fund manager nor have the option of assets allocation.

For Government sector employee presently the exposure in Government Securities is up to 50%, exposure in Corporate Debt securities is up to 45%, exposure in Equity and Equity related investment is up to 15%, exposure in Short Term Debt securities is up to 5%, and exposure in Assets Backed, Trust Structured and Miscellaneous investment is up to 5%.

Benefit under the CG&SG scheme depends upon the investment returns of the fund managers generated over the years till retirement. At the time of retirement subscriber will get the lumpsum 60% of accumulated corpus in the retirement account. The remaining 40% has to be used to purchase annuity from the insurance companies registered under the PFRDA. The annuity service provider would give monthly pension to the retiree according to the purchase price and terms of annuity chosen.

Private Sector (All Citizen): All Citizen Scheme is a defined contribution, covers all the subscribers enrolled under NPS through their corporate employer, individual registration or professional subscribers from unorganized sector. All citizen subscribers have both the option to choose the fund managers of their own and also have the option to choose the class of securities and portion of contribution to be invested in those securities. Investment exposure is capped at 100% for government securities, 100% for corporate debts and 75% for equity of companies.

There are two investment options in the all-citizen scheme first one is Active Choice second one is Auto Choice Life cycle funds. In active choice the subscriber would decide what would be the percentage investment in three different classes of securities such as G-Sec, Corporate Debts and Equity, subject to maximum ceiling of investment of 75% in equity. If a subscriber does not make active choice, then his contribution would be invested according to the life cycle fund (auto choice). Under life cycle fund the subscriber investment and risk exposure would be decided on the basis of his age, in the early stage of working more money would be in invested in Equity and Corporate debts and less would be invested in government securities and as the subscriber grow older, investment exposure to equity and corporate debt would be gradually reduced by fund managers.

Benefit to the subscriber would be similar to CG and SG scheme.

At present there are 7 pension fund managers operating under NPS to manage the contribution of All Citizen Scheme. Following are the seven Pension Fund managers.

1. SBI Pension Funds Pvt. Ltd., 2.UTI Retirement Solutions Ltd., 3. LIC Pension Fund Ltd., 4. Kotak Mahindra Pension Fund Ltd., 5. Birla Sun life Pension Management Ltd., 6. ICICI Prudential Pension Funds Management Co. Ltd. and 7. HDFC Pension Management Co. Ltd.

There are two types of account namely Tier-1 and Tier-2 for both the government and private sector employees. Tier-1 account which is a compulsory retirement account and no withdrawal could be made from this account before retirement (except limited 3 premature withdrawals permitted with a gap of 5 years for each subsequent withdrawal for specified purpose). Tier-2 account is optional, just like a saving account where deposit and withdrawal could be made anytime. The benefit of tier-2 account is that contribution in this account is managed by NPS fund managers at lower fund management fees.

There is also talk of harmonization of investment pattern of corporate sector employees and government sector employees and accordingly increasing the ceiling of equity exposure of government sector employees from 15% to 50%. Gradually equity ceiling would be increased to 75% in active choice. (G.N.Bajpai Committee Report, 2015)

Contribution in the hand fund managers is public retirement saving entrusted with the hope of decent retirement life in future. It is essential to note that, decent retirement life of elderly is conditional upon the performance of NPS fund managers. And performance of fund manager is subject to market risk.

In this article we have tried to assess intent and reality. The intent of PFRDA is to ensure a smooth retirement life through market-based returns to the subscribers. Does the intent and reality in the same direction? Are the NPS fund managers generating market-based return for subscriber of NPS without putting retirement saving at substantial risk? Or is it a case of otherwise.

Data & Methodology

Sources of Data:

For the purpose of study, we have collected secondary data from following sources:

- Historical NAV data and Port-folio information have been collected from respective pension fund manager's website.
- Historical Indices Value have been collected from BSE and NSE websites.
- Scheme and investment norms, fund managers information have been collected from PFRDA Website, Annual Reports, Master circular and Monthly bulletin of PFRDA.
- Period of study is from 1st April 2008 to 31st March 2021 (thirteen years). Though NPS was roll out in 2004 actual investment started taking place since 2008.
  In our study for the purpose of calculation Beta, (β), by observing the assets allocation and portfolio disclosure of pension fund managers following market indices have been selected for Beta, (β) calculation. Average risk free 364 days T-bill rate is 5.16% for 2019-20.

Table 1: Asset Class and Indices

Schemes	Assets class	Indices
Equity Tier-1	Equity	S&P BSE 100
Corporate Debt Tier-1	Corporate Debt	S&P BSE India Corporate Bond Index
Govt. Securities Tier-1	Government Securities	S&P BSE India Government Bond Index

Source: Authors' own compilation

We have selected total of 4 fund managers, managing contributions of government sector employees and private sector employees, professionals and self-employed. These four fund managers have been selected on the basis of their periods of operation as pension fund managers under NPS architecture. The following four fund managers have been managing NPS corpus since the inception of investment under NPS.

Two (PFs) for government sectors employees. (Government Sector Pension Fund Managers)

1 SBI Pension Funds Pvt. Ltd.
2 UTI Retirement Solutions Ltd.

Four (PFs) for private sectors employees and self-employed. (Private Sector Pension Fund Managers)

1 SBI Pension Funds Pvt. Ltd.
2 UTI Retirement Solutions Ltd.
3 ICICI Prudential Pension Funds Management Co. Ltd.
4 Kotak Mahindra Pension Funds Ltd.

We have analysed their performance for different schemes of NPS by using following of performance evaluation techniques.

In some of the earlier research works of performance evaluation it was found that sometime investors misguidedly assume that, the success of their portfolio depends on the returns alone but very few consider that the risk they undertook to achieve those returns. In the present day, we have three sets of popular performance measurement tools to assist the fund managers and individual investors in the evaluation of portfolio. The Treynor ratio, Sharpe ratio and Jensen ratios which combine risk and return performance into a single value, but they are different from each other in some aspects. All these measures derive their basic principle from the Capital Assets Pricing Model (CAPM). These measures are industry standard since nineteen-sixties. I have found that these measures have been used in several literatures to study the performance of institutional fund managers. (Treynor, 1965)**,** (Sharpe, 1966)**,** (Jensen, 1968)**,** (Panigrahi, 1996)**,** (Sias & W., 1996)**,** (P. A. Gompers, 2001) have used these ratio to compare the performance of mutual funds with the benchmark and the competitors. We have used these ratios to compare the performance of fund managers across the schemes under NPS.

Descriptive Statistics

Descriptive statistics quantitatively summarize the patterns and general trends of a data set in a single representative value. Following is some of the descriptive statistics which have been used in the study.

Mean return (Annual Average Return): has been used to calculate average annual return of pension fund managers.

Geometric Mean (GM): is used to calculate the (CAGR) Compound Annual Growth Rate or Compound Annual returns of fund managers.

Standard Deviation (SD): is used to capture the absolute volatility. In the study, standard deviation has been used to capture the volatility in the annual return.

Coefficient of Variation (CV): is used to measure the relative variation or volatility in return.

Risk, Returns & Performance of Fund Managers

The following tables & diagrams are self-compilation and calculation of author from the historical NAV data of fund managers and historical indices value.

Table 2: SBI Pension Funds Managers Returns

SBI FUND MANAGERS RETURNS UNDER DIFFERENT SCHEME OF NPS										
SCHEMES	CG SCHEME		SG SCHEME		EQUITY TIER-1		CORP.DEBT-TIER-1		GOV.SEC TIER-1	
ANNUAL RETURN	CAGR (%)	AR(%)	CAGR (%)	AR(%)	CAGR(%)	AR(%)	CAGR(%)	AR(%)	CAGR(%)	AR(%)
2008-09	9.5	9.5								
2009-10	13.04	16.7	6.33	6.33	7.95	7.95	9.94	9.94	10.02	10.02
2010-11	11.35	8.12	8.09	9.92	8	8.1	11.29	12.7	11.13	12.27
2011-12	9.94	5.89	7.67	6.86	2.73	-7.01	11.22	11.14	9.22	5.49
2012-13	10.5	12.76	8.98	13.03	4.08	8.27	11.97	14.27	10.27	13.54
2013-14	9.37	3.92	7.92	3.85	7.23	20.88	10.58	5.18	8.18	0.26
2014-15	10.74	19.38	9.81	19.79	10.48	28.33	11.41	15.74	10.17	20.74
2015-16	10.19	6.5	9.35	6.66	7.77	-7.14	11.03	8.73	9.74	7.17
2016-17	10.52	13.17	9.83	13.29	9.43	21.84	11.14	11.96	10.07	12.46
2017-18	10.06	6.1	9.39	5.96	9.53	10.36	10.6	6.4	9.52	5.22
2018-19	9.96	8.98	9.33	8.84	9.88	13.1	10.34	8.06	9.47	9.04
2019-20	9.82	8.33	9.27	8.63	6.13	-25.01	10.42	11.19	9.94	14.86
2020-21	10.1	13.57	9.59	13.31	10.17	66.28	10.39	10.18	9.75	7.71

Source: Authors' own compilation

Figure:2 SBI Pension Funds Managers Returns

Source: Authors' own compilation

All the schemes seem to have stable Annual Returns except Equity Scheme, volatility in equity return could be visualized in the diagram. One striking observation in the table as well as in the diagram, that CAGR of Equity Tier -1 as on 31st March 2020 is 6.13%. CAGR SBI PF has Come down to 6.13% because of negative 25.1% returns in financial year 2019-20, CAGR has becomes 10.17% because of 66.28% returns in 2020-21. This reduction and increase in CAGR indicate substantial variation in pension benefit between two subscribers provided significant portion is invested in equity. One who is retiring during March 2020 will get much less benefit compare to one who is retiring during 2019 or 2021. The fall in CAGR in March 2020 in Equity Scheme was because of nationwide lockdown to curb the spread of Covid-19. In the past one-decade equity scheme has generated negative returns across the fund managers for three financial years (2011-12, 2015-16 and 2019-20).

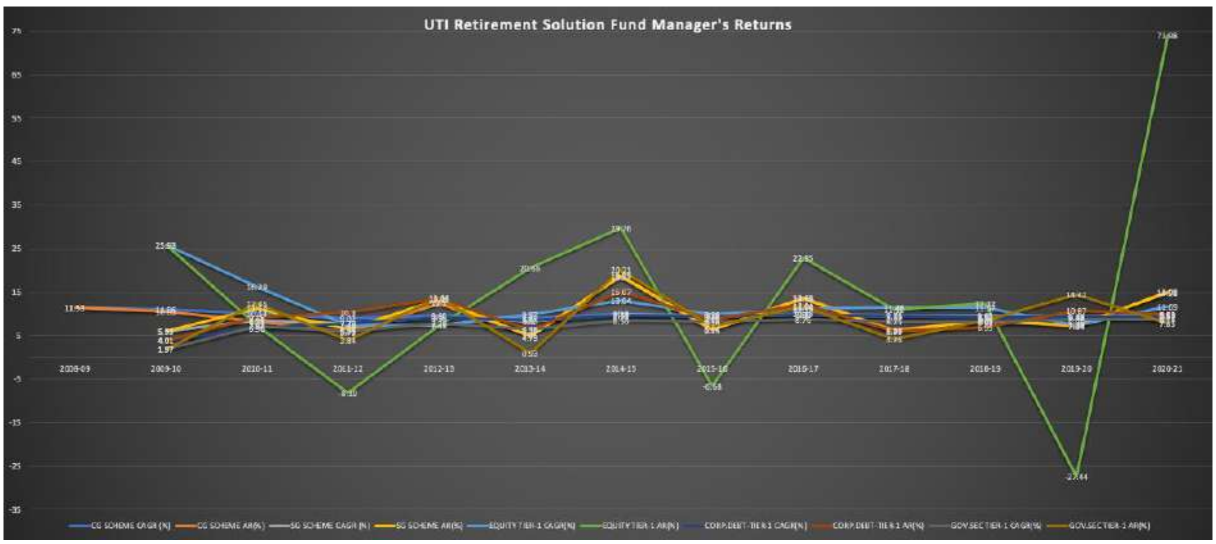
Table 3: UTI Retirement Solutions Returns

UTI RETIREMENT SOLUTIONS RETURNS UNDER DIFFERENT SCHEME OF NPS										
SCHEMES	CG SCHEME		SG SCHEME		EQUITY TIER-1		CORP.DEBT-TIER-1		GOV.SEC TIER-1	
ANNUAL RETURN	CAGR (%)	AR(%)	CAGR (%)	AR(%)	CAGR(%)	AR(%)	CAGR(%)	AR(%)	CAGR(%)	AR(%)
2008-09	11.53	11.53								
2009-10	11.06	10.63	5.93	5.93	25.93	25.93	4.01	4.01	1.97	1.97
2010-11	10.14	8.38	8.51	11.19	16.29	7.42	6.56	9.18	7.04	12.45
2011-12	9.02	5.75	7.76	6.34	7.46	-8.19	7.77	10.3	5.93	3.84
2012-13	9.65	12.3	9.1	13.25	7.45	7.43	9.15	13.46	7.79	13.64
2013-14	8.87	5.06	8.2	4.73	9.97	20.66	8.53	6.15	6.38	0.93
2014-15	10.2	18.57	9.89	18.79	13.04	29.76	9.59	15.07	8.56	20.21

2015-16	9.7	6.25	9.37	6.34	9.98	-6.68	9.48	8.83	8.36	7.17
2016-17	10.13	13.65	9.89	13.59	11.15	22.95	9.8	12.04	8.76	11.68
2017-18	9.73	6.26	9.45	6.07	11.48	11.12	9.36	5.95	8.25	4.26
2018-19	9.63	8.61	9.36	8.59	11.57	12.37	9.12	6.99	8.28	8.6
2019-20	9.43	7.24	9.18	7.37	7.29	- 27.44	9.28	10.87	8.82	14.42
2020-21	9.85	15.08	9.64	14.91	11.69	73.98	9.32	9.79	8.74	7.85

Source: Authors' own compilation

Figure:3 UTI Retirement Solutions Returns



Source: Authors' own compilation

Similar observation could be made for the returns of UTI retirement solutions. In the financial year 2019-2020 all the fund managers have provided negative returns in equity scheme in the range of 25 to 30%. Equity CAGR is in the similar range of 6 to 7%, which is lagging behind current wholesale price index. Annual returns under equity schemes for all the fund managers were in the range of 66% to 74% in 2020-21, it seems to be a higher annual return however, it was because of lower base of previous year and recovery from the fall. Equity, Corporate debt and G-Sec scheme have similar range of CAGR in previous years, however the volatility in equity returns is considerably high. Performance of the private fund managers, ICICI Prudential Pension Funds Management Co. Ltd. and Kotak Mahindra Pension Funds Ltd are also similar to the public sector fund managers that could be witnessed from similar diagrams depicting all the schemes.

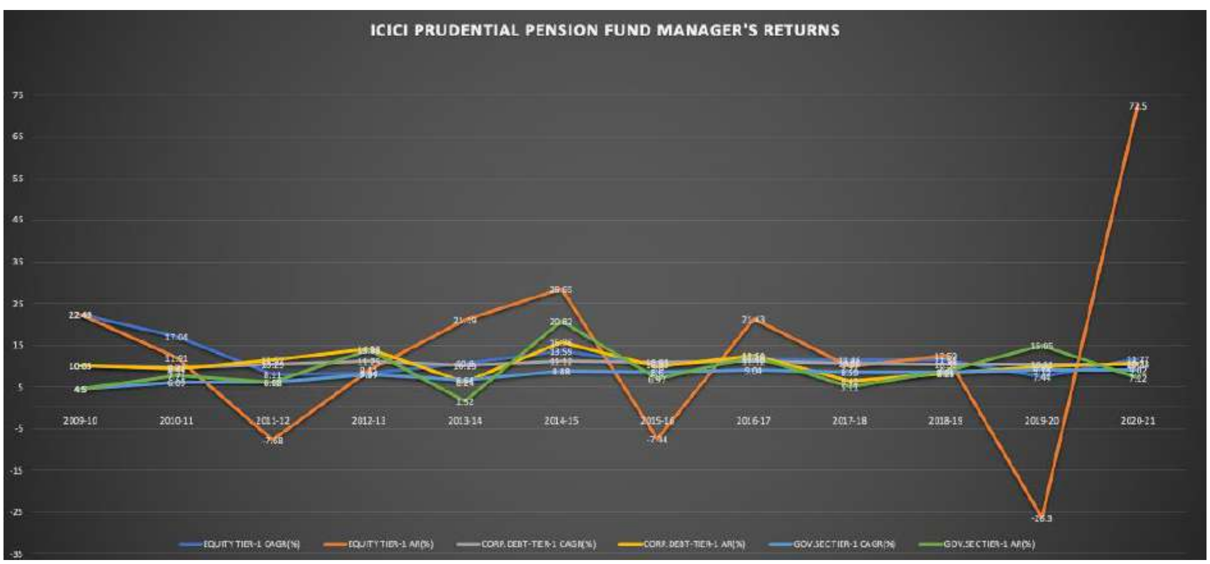
Returns of Corporate Debt and G-Sec schemes are subject to interest rate and credit default risk. Returns from the Corporate Debt and G-Sec schemes are inversely related to market interest rate. Rise in interest rate could reduce the value of such debt securities and vice versa. In 2013-14 RBI raised repo rates to 8 percentage points, accordingly market interest rates were high, as a consequence all the fund managers have reported returns less than 2% in G-Sec scheme, G-Sec returns of SBI was as low as 0.26% in 2013-14. Accordingly in 2020 RBI reduced policy repo rate to 4% to ease businesses, which resulted in lower interest rate in the market as a result all the fund managers have reported around 15% return in G-sec Schemes. Corporate debt seems to have relatively lesser impact of interest rate change compare to G-sec. corporate debt has provided relatively stable returns in comparison to other schemes in past 12 years with less volatility.

Table 4: ICICI Prudential Pension Funds Returns

RETURNS OF ICICI PRUDENTIAL PENSION FUND						
SCHEMES	EQUITY TIER-1		CORP.DEBT-TIER-1		GOV.SEC TIER-1	
ANNUAL RETURN	CAGR(%)	AR(%)	CAGR(%)	AR(%)	CAGR(%)	AR(%)
2009-10	22.49	22.49	10.03	10.03	4.5	4.5
2010-11	17.04	11.91	9.72	9.44	6.09	7.71
2011-12	8.11	-7.68	10.29	11.52	6.08	6.12
2012-13	8.34	9.11	11.25	14.26	7.97	13.92
2013-14	10.8	21.19	10.23	6.24	6.64	1.52
2014-15	13.59	28.65	11.12	15.76	8.88	20.82
2015-16	10.33	-7.34	10.93	9.8	8.6	6.97
2016-17	11.66	21.43	11.12	12.51	9.04	12.18
2017-18	11.46	9.97	10.59	6.42	8.59	5.11
2018-19	11.58	12.59	10.35	8.28	8.61	8.8
2019-20	7.44	-26.3	10.31	9.91	9.18	15.05
2020-21	11.77	72.5	10.34	10.73	9.02	7.22

Source: Authors' own compilation

Figure:4 ICICI Prudential Pension Funds Returns



Source: Authors' own compilation

All the schemes operating under NPS across fund managers have delivered a CAGR of 9 to 11% in the past 12 years of operations. All the fund managers seem to have similar range of Annual returns and CAGR across the schemes. Close study of portfolio of fund managers reveals that, fund managers are investing in almost similar portfolio with minor variation. Moreover, they have same investment guidelines from the pension fund regulator (PFRDA) investing only in domestic security market.

Kotak Mahindra Pension Funds Ltd.

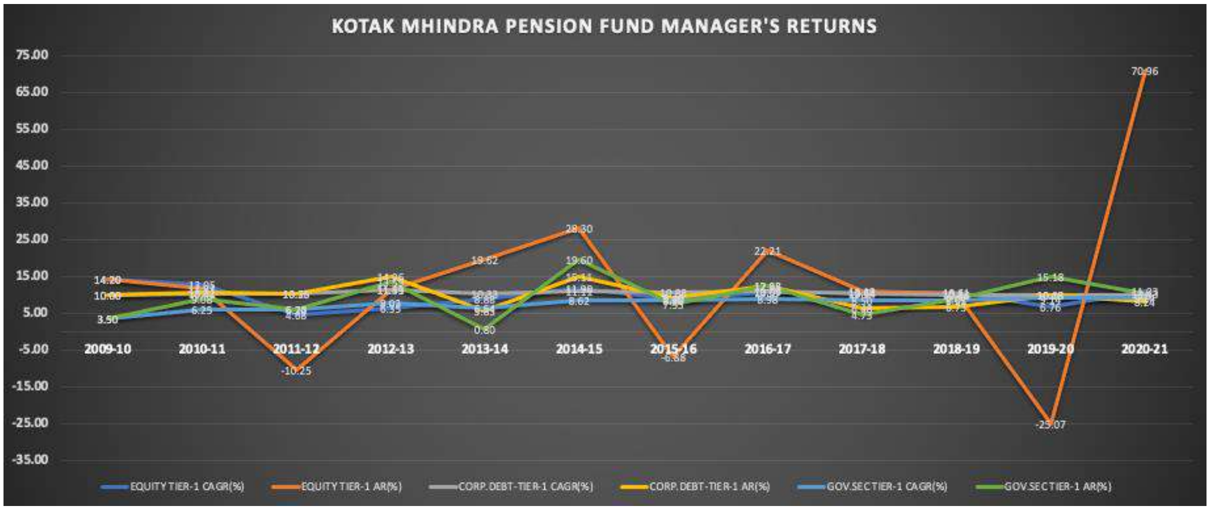
Like all other pension fund managers, we could observe volatility in equity schemes and stable returns for corporate debt scheme in the Kotak Mahindra PF. It is also visible in the diagram that G sec scheme returns are relatively more volatile compare to corporate debts and relatively less volatile compare to equity scheme across fund managers.

Table 5: Returns of Kotak Mahindra Pension Fund

RETURNS OF KOTAK MAHINDRA PENSION FUND						
SCHEMES	EQUITY TIER-1		CORP.DEBT-TIER-1		GOV.SEC TIER-1	
ANNUAL RETURN	CAGR(%)	AR(%)	CAGR(%)	AR(%)	CAGR(%)	AR(%)
2009-10	14.20	14.20	10.00	10.00	3.50	3.50
2010-11	13.05	11.91	10.41	10.82	6.25	9.08
2011-12	4.68	-10.25	10.36	10.25	6.24	6.20
2012-13	6.35	11.51	11.49	14.96	8.03	13.59
2013-14	8.88	19.62	10.33	5.83	6.54	0.80
2014-15	11.90	28.30	11.11	15.11	8.62	19.60
2015-16	9.00	-6.88	10.88	9.46	8.46	7.55
2016-17	10.57	22.21	11.06	12.38	8.98	12.63
2017-18	10.64	11.19	10.54	6.48	8.50	4.73
2018-19	10.61	10.31	10.16	6.73	8.55	9.07
2019-20	6.76	-25.07	10.15	10.03	9.14	15.18
2020-21	11.03	70.96	10	8.24	9.24	10.43

Source: Authors’ own compilation

Figure:5 Returns of Kotak Mahindra Pension Fund



Source: Authors' own compilation

- **Phase Before Pandemic**

In pre-pandemic phase there was stable and moderate CAGR under all the schemes in the range of 9 to 11% across all the schemes. Hence, there will not be much impact on retirement benefit of the subscriber retiring in such phase. Because return is growing at a steady rate like previous years.

- **Phase During Pandemic**

It seems that, if the allocation in equity is not substantially high, it will not impact much on retirement benefit if someone is exiting NPS during pandemic. As witnessed from the CAGR of CG and SG scheme in 2019-20. In CG and SG schemes actual allocation by the pension fund managers in equity instruments is around 10 to 12% of total corpus, whereas permitted equity limit is 15%. On the other hand, if allocation in equity is substantially high, for example if someone has exercised active choice option and allocated 75% in equity and coincidentally, he/she has died or retiring during the pandemic, retirement benefit could reduce substantially. Someone whose retirement account has grown at a CAGR of 11% in past 20 to 30 years, may reduce to 6 to 7% of CAGR in a year of pandemic. That means such equity return may not defeat inflation rate prevailing in the market.

- **Phase of normalization/ Recovery**

It is witnessed from the data; the recovery was quite quick. If someone retire after normalization, he/she may get a decent retirement corpus like the normal phase.

The following tables contains the CAGR, average returns, standard deviation, coefficient of variation, Sharpe Ratio (S.R), Treynor Ratio (T.R) and Jensen's Alpha (J.A) of four pension fund managers for different schemes under NPS.

The following tables are author's self-calculation and compilation, from the NAV data of fund managers and Indexes. The following tables are based on data up to 31 March 2020.

SBI PENSION FUND PVT LIMITED					
SCHEME	CG SCHEME	SG SCHEME	EQUITY TIER-1	CORP.DEBT-TIER-1	GOV.SEC TIER-1
CAGR	9.82	9.27	6.13	10.42	9.94

AM	9.95	9.38	7.24	10.48	10.10
SD	4.47	4.30	14.59	3.08	5.31
C.V	44.91	45.86	201.39	29.34	52.54
S.R	1.07	0.98	0.14	1.73	0.93
T.R			2.16	4.21	3.17
J.A			-6.02	-0.02	-1.39

Table 6: Descriptive of SBI Pension Fund

Source: Authors' own compilation

Table:7 Descriptive of ICICI Prudential Pension Fund

ICICI PRUDENTIAL PF LTD			
SCHEMES	EQUITY TIER-1	CORP.DEBT-TIER-1	GOV.SEC TIER-1
CAGR	7.44	10.31	9.18
AM	8.73	10.38	9.34
SD	15.62	2.84	5.35
C.V	178.95	27.35	57.30
S.R	0.23	1.84	0.78
TR	3.60	4.62	2.77
JA	-4.75	0.45	-1.94

Source: Authors' own compilation

Table 8: Descriptive of Kotak Mahindra Pension Fund

KOTAK MAHINDRA PENSION FUND			
SCHEMES	EQUIRTY TIER-1	CORP. DEBT TIER-1	GOV SEC. TIER-1
CAGR	6.76	10.15	9.14
AM	7.91	10.19	9.27
SD	15.74	3.12	5.57
C.V	198.96	30.64	60.06
S.R	0.17	1.61	0.74
TR	2.81	3.99	2.78
JA	-5.48	-0.30	-1.89

Source: Authors' own compilation

Table: 9 Descriptive of UTI Retirement Solutions

UTI RETIREMENT SOLUTIONS					
SCHEME	CG SCHEME	SG SCHEME	EQUITY TIER-1	CORP.DEBT-TIER-1	GOV.SEC TIER-1
CAGR	9.43	9.18	7.29	9.28	8.82
AM	9.52	9.29	8.67	9.35	9.02
SD	3.82	4.18	16.34	3.25	5.74
C.V	40.08	44.98	188.55	34.77	63.70
S.R	1.14	0.99	0.21	1.29	0.67
T.R			3.45	3.52	2.48
J.A			-5.04	-0.85	-2.46

Source: Authors' own compilation

Given above calculations and analysis we came to the following finding and implications that, during the pandemic CAGR returns from Equity Scheme were 6.13% for SBI Pension Funds, 7.2% for UTI Retirement Solutions,7.44 % for ICICI Prudential Pension Funds and 6.76% for Kotak Mahindra Pension Funds respectively, which are just above the RBI's inflation targeting upper range of 6%. And the average annual periodic returns of these four fund managers for Equity scheme were 7.24%, 8.67%, 8. 73 %, 7.91% along with coefficient of variation of 201.39%, 188.55%, 178.95%, 198.96 % respectively. These coefficients of variation indicate a very high degree of volatility for the given level of returns generated under equity scheme, across the fund managers. All the risk adjusted measures also indicate the underperformance of equity scheme. Sharpe Ratio for the Equity Scheme is the lowest in comparison to all other scheme of NPS across all fund managers selected for the study, which implicates equity portfolio are not generating the justified desired return for the given amount risk undertaken.

Here someone may argue that, it is quite immature to generalize the underperformance of equity scheme because of an unprecedented dip in the stock market in a given year. However, one counter argument to this could be, the return under equity scheme before the Covid-19, was not so impressive given the risk undertaken under equity scheme. Both the Corporate Debt and G-Sec schemes were generating similar range of 9% to 11% CAGR and Average Annual Returns with considerably less volatility. In the past one decade of experience in equity investment, we have seen in three different years, equity investment has generated negative returns. In spite of better positive return in many years average returns is not so high for equity because of the negative returns in some years are dragging the average down.

One may further argue that, are we protected from such kind risk in future? The answer is "NO", there may be many unforeseen events in future which may bring surprising turns of events and dive in the stock market, accordingly in the return of equity scheme. The COVID-19 crisis revealed one crucial fact that, the equity investment could plunge up to 25% to 40% in a span 10 to 15 days. From the above diagram it is visible that, from April 2019 to March 2020 the Equity scheme has generated a negative return of 25% to 28% with sufficient diversification by fund managers. All the major indices like NSE Nifty 50, S&P BSE SENSEX, NSE Nifty 100, S&P BSE 100 took a dive of almost 40% in March 2020. Alternatively, it means someone's retirement saving could very well reduce by 25 % to 40% in a given month. If I put it in a more simplified terms, someone's retirement account had a 2 crore rupees balance in equity segment two week ago which has become 1.2 crore two weeks after and he/ she could do nothing about it. Over reliance on equity could reduce the retirement benefit significantly.

Almost all the risk adjusted measures are indicating the performance of Corporate Debt is better than Government Securities and Equity Scheme.

One who is a firm believers of Equity investment will argue that, short term volatility is a persistent features of equity investment, equity investment gives better returns in the long run. Hence, one should not be worried about short term volatility. It is very much true, however the in the present pandemic maximum number of deaths happened during the pandemic phase. There would be compulsory termination of PRAN account because of death during this phase only. Accordingly, beneficiary/ spouse of such deceased are bound receive reduced benefit. Moreover, if someone is retiring in the month March of 2020 and he is an active choice investor with 75% allocation in Equity scheme. His retirement saving will reduce remarkably. And we do not decide our retirement date.

The CG & SG schemes applicable for government employees have also delivered relatively better return in comparison to exclusive investment in equity for the same fund managers with less volatility. The CG& SG schemes have less than 15% fund allocation to equity instruments.

We also know corporate debts and G-sec are not the safest investment they are also subject to credit and interest rate risk. However, in the past these securities seem to have generated moderate returns with less volatility.

Concluding Remarks

The fall of CAGR in March 2020 in Equity Scheme was because of nationwide lockdown to curb the spread of Covid-19. There could be many more surprising turns of event may it be war, bio chemical attack, banking crisis, financial crisis, financial scams or any other unprecedented adverse event which could bring very high volatility in the short run. Which could reduce the benefit to the subscriber retiring in the same period of crisis. Could we avoid such kind of plunge in security market altogether? The answer is, no? What could be possible solution. Firstly, excessive reliance on equity investment and generous equity investment guidelines needs to be reconsidered. Equity has the potential to reduce the benefit of the subscriber significantly as witnessed in March 2020. The CAGR of equity was around 6 to 7% in 12 years which is similar to the inflation rate in the economy. From the above analysis we have observed that equity is generating the CAGR in the similar range like corporate debts, in some cases less than CAGR of Corporate debt scheme. However, volatility is quite higher for the equity scheme as depicted by coefficient of variations for the given levels of returns generated. Equity investment ceiling needs to be brought down to around 30 to 35%, otherwise the concept of retirement security would be at risk. This 30 to 35% is a substantial allocation in one assets class, this portion of investment could give a desired push to the returns of subscriber. The return may not be significantly high but it will secure the purpose retirement security. Another solution, the policy maker could make the exit window flexible. The subscribers shall have the flexibility of 10 years of exit window from NPS system, i.e., from 55 to 65 years. So that impact of short-term volatility could be minimized. The subscriber will exercise his exit option when the retirement corpus and market returns suit him. For example, on 31 March 2020, equity scheme has negative 30% annual returns, if the subscriber is retiring in the same month and making the withdrawal in the same period, his/her benefit would be very low. If this flexibility of exit window be there, he/she may postpone or prepone his exit from NPS considering the optimum benefit for self. Subscriber will choose a time period when the benefits and corpus seem to be favourable, and accordingly apply for exit from NPS. For example, if he exercises the exit option in January 2021, the benefit would be substantially up with a jump of around 100% from the previous year. It means, benefit would be 20 million if exit from NPS in January 2021 and it would have been 10 million had the exit been exercised in March 2020. Third option could be protection through insurance purchase, but it will be expensive. In period of crisis or pandemic honouring insurance contract is also quite questionable and contingent.

All the schemes have generated CAGR in the range of 9 to 11%, why to put much emphasis on equity by inviting additional risk component. Thirteen years of experience in equity scheme under NPS architecture has indicated one thing, for similar range of returns the Corporate Debts and Government Securities have undertaken relatively lesser risk. Even average returns and CAGR of Corporate Debts and G-Sec are stable and higher in some years. In our study we have seen that, the equity scheme is not generating substantially higher returns for the substantially higher risk undertaken. Inviting additional risk to generate lower or similar range of average returns or CAGR does not brings lot of financial sense. Excessive dependence on equity has the potential to reduce the benefits to the subscriber substantially too. Are we ready to put our retirement saving to such risk or shall we settle for moderate returns? The policy makers need to reconsider the intention of aggressive expansion in the ceiling of equity investment, when there is no layer of protection for downward deviation under NPS architecture. Moreover, short term crisis or volatility are persistent to Equity Market which seems to have lots of impact on equity scheme.

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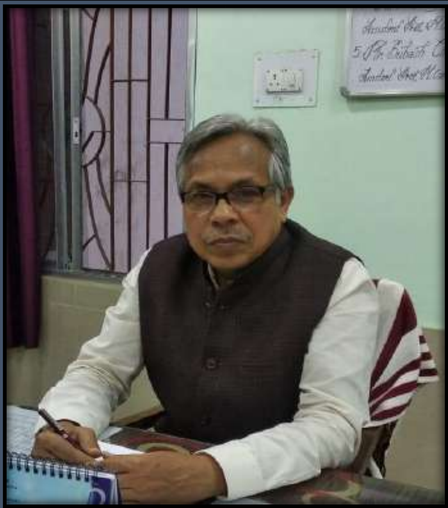
A FESTSCHRIFT VOLUME IN HONOUR OF

DR. SHYAMA CHARAN ACHARYA, HOD, COMMERCE

ON HIS SUPERANNUATION FROM GOVT. SERVICE



Dr. Shyama Charan Acharya has started his teaching career in Aeronautics College, Sunabeda in 1987. He qualified OPSC in the year 1989 by occupying the first position in Commerce. Then he served in Panchayat College, Bargarh from 1990 to 2000. He has received UGC Teacher Fellowship and worked as a UGC Teacher Fellow in the Department of Commerce, Berhampur University from 2000 to 2002 and then got posted to G. M. (Autonomous) College after completion of Ph. D. and served there till 2010. He was transferred to Rajendra (Autonomous) College, Bolangir in 2010 where he worked till 2013. He then was reposted to G. M. (Autonomous) College in 2013 and has been working as such since then. During his tenure of service, he has served at various administrative positions like Controller of Exams and Public Information Officer in Rajendra College and Comptroller of Finance, Registrar in charge, Member, Syndicate (Academic Council Nominee), Vice Chairman, Institutional Ethics Committee, Co-ordinator, IGNOU, OIC, All external exams, Chairperson, Malpractice Prevention Committee, Chairperson, Department Research Committee, Chairman and Members in the BoS in Commerce, G.M. University, Sambalpur University, Rajendra College. Total 7 PhD scholars have been working under his guidance out of which one has been conferred with PhD. He has also guided 23 MPhil Scholars so far. There are 21 publications to his credit published in various academic journals and two books on Rural Banking and Entrepreneurship. He has been a great teacher and above all an excellent personality. As an alumnus of this alma mater, he is retiring from govt. service on superannuation on 30th June, 2021.