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D.H.S.K. COMMERCE COLLEGE, DIBRUGARH

- Panchanan Barman & Sujit Sikidar Non-Legal Tender Episode : A Critical Analysis
- Mintu Kumar Das & Bipin Gogoi Identification of Outliers in Circular Data
- Jacob Konwar & Saurabh Chakraborty Corporate Social Responsibility Reporting Practices : A Case Study of Maharatna Companies
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Julika
(Julika Mallack)
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Addresses of the Contributors :

Panchanan Barman

Assistant Professor, Department of Management
Gauhati Commerce College, Guwahati, Assam
Email : pbarman.gcc@gmail.com

Dr. Sujit Sikidar

Retd. Professor, Department of Commerce
Gauhati University, Guwahati, Assam
Email : sujitsikidar@gmail.com

Dr. Mintu Kumar Das

Assistant Professor, Department of Statistics
DHSK Commerce College, Dibrugarh, Assam
Email : mintukrdas@gmail.com

Dr. Bipin Gogoi

Professor, Department of Statistics
Dibrugarh University, Dibrugarh, Assam
Email : bipin.gogoi@rediffmail.com

Dr. Jacob Konwar

Assistant Professor, Department of Accountancy
DHSK Commerce College, Dibrugarh, Assam
Email : kjecob39@gmail.com

Saurabh Chakraborty

Student, M.Com. Final Year
IDOL, Gauhati University, Guwahati, Assam
Email : saurabh.chakraborty09@gmail.com

Luku Morang

Assistant Professor, Department of English
DHSK Commerce College, Dibrugarh, Assam
Email : lukum98@gmail.com

Rubab Fatema Nomani

Assistant Professor, Department of Economics
DHSK College, Dibrugarh, Assam
Email : rubabnomani@yahoo.co.in

Dr. Ratul Dutta

Assistant Professor, Department of Commerce
Sibsagar Commerce College
Email : ratuldutta2009@rediffmail.com

Rohit Nayan Barua

Student, Department of Integrated M.Com
Gauhati University, Guwahati, Assam

NON-LEGAL TENDER EPISODE : A CRITICAL ANALYSIS

Panchanan Barman & Sujit Sikidar

ABSTRACT

Every independent nation must have its independent foreign policy, a defined territory, a defined population and an independent currency; combination of these elements make a sovereign state. The currency system again is not allowed within the domain of government of a nation. It has been deliberately kept under the authority of an independent central bank. In any prudent nation the government generally desist itself from interfering into the routine matter of currency management of the nation. Strict adherence to the rules makes the financial system vibrant and makes the economy stable, competitive and can match the currency system of other nations for settlement of international transactions with the help of a foreign currency. In this article a critical analysis has been done with regard to the method of demonetization announced by the Prime Minister relegating the Reserve Bank to the back bench, and the consequences of such measure compounded the complexity by the promulgation of sixty two numbers of cross circulars issued by both Reserve Bank of India and Central Government which themselves are self contradictory. The overstepping by the executive head into the feet of central banks independent feet will circumspect the financial systems with mistrust. Any currency system, banking system and its operational mechanism is based on mutual trust and faith. A good governance criteria desires the mutual respectability of each other's domain area and adhere to the '*taxman rekha*'.

Keywords : *Demonetisation, Reserve Bank, legal tender.*

Introduction

The means of settlement of business transactions in the primitive stage of a society is done through a system known as 'barter' i.e. exchange of goods from a party producing it and selling the same to another party against another goods produced by the other contracting party. As a result money as a medium of exchange does not come

into picture, there is no intervention from an agency like central banking authority, buyers and sellers used to settle their trades and exchanges by a mutual agreement in the shape of 'goods for goods'; the exchange of service did not trigger at that point of time,

With the passage of time and advancement of trade and commerce, the need for money currency emerged as a medium for settlement of transaction. Money as a matter of trust has to have a backing from an institution called the central banking authorities for every nation of the world. This central banking authority is again kept as an independent organization outside the government and the central banking authority is expected to act as a custodian of monetary resources, regulator of money market, financier to the government and collaborating with treasury functions of the government to make the financial system a vibrant sustainable market, so far as the system worked well notwithstanding some aberrations at sometime. Some dark faces often appear which dilutes the normalcy of operation of money market. This disturbance in money market has been a cause of concern for many elected governments and different parts of the world at different points of time. The degree of disturbance and eventual instability in money market causes concern for any elected government for any territory of the world.

Role of High Denomination Legal Tender

In this article the present researchers have established from the literature survey the following items as an attribute to monetary stability –

1. During the last ten to fifteen years different territories have witnessed an enormous financing activities supporting creation, promotion and sustaining terror related activities popularly known as 'terror financing' usually done by holding of high denomination currency notes.
2. In order to perpetuate terror financing some institutions are indulging in printing fraudulent and fake currency notes and supplying them to the target nation. The parallel operation of fake currency along with genuine currency and legal tender causes instability in the area of maintaining the price level, spiking the inflation level, disturbing the purchasing power parity of domestic currency in relation to a foreign currency, causing disequilibrium in currency exchange rate, triggering disequilibrium in velocity of currency in circulation at any given point of time.

3. Often high velocity of currency prevailing in the system encourages people to go for cash-based transactions which are often not recorded in the computation of GDP growth of a nation.
4. It ultimately leads to occurrence of a parallel unaccounted economy which is highly monetized or dependent on cash currency.
5. It is also attributed to be the cause of undervaluation of properties like land, housing, gold ornaments, under recording of the monetary worth of transactions paving the way for evasion of taxes, duties contributing less revenue for the government of a nation. All these attributes are not regarded as a healthy sign of good governance. Hence, it becomes sometimes necessary from a sensitive government to interfere through the corridor of central banking authority to check the menace and to bring the financial system of the country in the desired level of operation.

Objectives

The present research enquiry has been undertaken with the following objectives –

1. To trace the genesis of demonetization of high value currency at international level as well as at national level.
2. To analyze the consequences of declaring a currency as a non-legal tender at a given point of time.

General Reasons for Demonetization

The recent announcement of demonetization by the executive head has been assigned to the following reasons –

1. To check terror finance by the use of high denomination Rs. 500 and Rs. 1000 currency notes.
2. To check corruption in public life owing to high monetization.
3. To check accumulation of high currency in the hands of few individuals (Chanda, 2016).

Genesis of International Demonetization:

1. After Britain defeated France in the Napoleonic Wars, the British conquered various territories of the world and set up the colonies. The Britons working abroad needed an instrument to transfer money income from the long distant colonies to the London city. The instrument was the Bill of Exchange and London Banks amassed affluences from those colonies by trading and cashing Bill of Exchange; in this process the Pound Sterling became a dominant currency which lasted till World War I (1914 – 1918). After the First World War Britain's dominance was curtailed and it became to some extent dependent on the USA to finance their import and for credit (Desai, 2016).
2. The Spanish Kingdom long had a coin called 'Real' (Royal); when Spaniards discovered silver in Mexico and Peru in Sixteenth Century, they made a coin out of it worth eight Real (Peso de ocho); they started calling it 'Talero'.
3. The British Colonies in North America rebelled against Britain in 1775 (American War of Independence). They started printing their own currency naming it the 'Continental'.
4. Demonetization means exchanging old notes for new one; it does not breach a promise to pay. A currency note is generally printed with a definite time frame so that it can be withdrawn or demonetized or converted into non-legal tender when its use is about to terminate by the intervention of central banking authority. What was done at that time was the gold standard abolition, replacing gold by mere paper by many countries during and after World War I. Richard Nixon took the US off the Gold Exchange Standard in 1968.
5. The demonetization of the Deutsche mark in Germany after World War II and demonetization of Ruble after the collapse of the Soviet Union in 1990 took place under political turbulence. Cancellation of the currency notes took place in 1946 in view of the World War II; substantial money currency was spent in production of arms and ammunitions and to sustain war efforts in supplying the defence line and military establishments in different parts of the world. We

witnessed cash rationing system, liquidity restraint and restricting the use of legal tender to display resilience of the economy. British India demonetized its currency in 1946 obviously to hit war profiteers.

6. Kenya had adopted demonetization in 1970s which resulted in Great Recession and till 2016 the nation could not recover from the adverse convergence of the event. In 1957 over a conflict of money transactions with legal tender which was not in favour of political administration in New Delhi, the then RBI Governor Venegal Ramu Rau resigned after a difference of opinion with the then Finance Minister T.T. Krishnamachary.
7. Many countries including Russia, Britain, Nigeria, Kenya, North Korea, Myanmar had adopted demonetization. There was demonetization in small scale in India also. Rs. 10000 currency notes printed in 1938 by RBI were cancelled in 1946 following the adversity of Second World War. Again in 1954 the RBI remonetized high currency notes by issuing fresh notes, but these were cancelled in 1976. Issuing of Rs. 1000 notes started in the year 2000, Rs. 500 notes appeared in 1987. In November 2016, Rs. 2000 note was printed for the first time. Notes of Mahatma Gandhi series appeared in 1996 and 1997; those notes were demonetized in 2005-06 and reissued fresh Mahatma Gandhi series notes.
8. Only once currency crisis causing shortfall of currency in treasury surged in the mid of Fourteenth Century. The ruler of that period known as Muhammad Bin Tughluq suddenly cancelled the running currency and introduced 'Copper Coin' (currency) (Dasgupta, 2016).
9. On 7th December, 2012 Uganda declared 500, 1000, 5000, 10000, 20000 Shilling and 10000 CHOGM all notes of 1987 would no longer remain valid as legal tender after 30th March 2013. The public would get time to exchange those currency notes within 31st December 2013. Almost for a year the people got chance to exchange non-legal tender in their hands.
10. Myanmar changed their currency in two phases in between 1985 and 1987; for the purpose 25, 35, 75 Kyat notes were withdrawn from the market on

5th September 1987 without any prior intimation. In exchange it triggered 45 and 90 Miana Kyat note, no opportunity was offered to exchange the old notes. Huge quantity of 25 Kyat note surged non-legal tender which rendered the citizen jobless. Rangoon and Mandalay witnessed a student agitation on the issue.

11. Demonetization is usually associated with the decrepit economies with hyper inflation such as Zimbabwe recently and Argentina in the past. Fiji and the Philippines have demonetized their currency in the past. India demonetized its currency in 1978 of Janata Party Government under Morarji Desai. The High Denomination Bank Notes (Demonetization) Ordinance, 1978 was repealed and the Act remains in force. Much of black wealth sits in gold, real estate or in offshore. India collects just about 16 per cent GDP as tax and state expenditure on many essential public goods such as primary health care and public health engineering is abysmally small.

Consequences of Demonetization

We now turn our attention to the objective no. two and discuss hereunder the consequences of demonetization. India's cash to GDP Ratio is too high at around 11 percent as compared to that of China 9.5 per cent, Germany 8 per cent and the USA 7 percent.

1. Demonetization triggered withdrawing 86.4 per cent of the currency in circulation, mobilizing Rs. 14.5 lac crore in the banking sector from the economy, as against which the government could supply only up to Rs. 1.4 lac crore as fresh replacement currency in remonetization till November 25, 2016, as a result there has been a shortfall of currency supply of around 12 lac crore. There is no immediate sign of bringing fresh currency equivalent to non-legal tender declared by the Prime Minister from mid night of 8th November 2016.
2. The calibration capacity of the ATM machine which could accommodate Rs. 100, 500 and 1000 currency notes in earlier period, has been now dispensed with and is filled up by Rs. 2000 currency notes cabinet. The calibration capacity of the ATM machine has been now rendered useless and the sufferings of the people of the country would continue in periods to come till calibration capacity is improved upon.

We cannot lose sight of the fact that 106 persons died in ATM queue between 9th November 2016 till 2nd January 2017. Can any government come forward to compensate the loss of precious life of those persons?

3. As per common measure the value of high denomination currency should be 0.25 per cent of per capita income i. e. Rs. 250. In the USA the highest currency notes is 100 dollar, in China it is 100 Yen. Following a raid by Central Bureau of Investigation (CBI) in 2009-2010 in 70 banks in the Indo-Nepal border huge quantity of fake currency notes were recovered and surprisingly major part of it came out of the currency vault of the RBI. This was presented in 2010 before a Committee on Public Undertaking (COPU).
4. From the government contract of printing Rs. 1,00,000 crore currency notes was offered to three doubtful foreign entities.
5. The Ministry of Finance imposed a ban on other currency printing agency such as ARJO WIGGINS of France, AB of the USA and LOUISENTIAL of Germany. Roberto Giori of Switzerland is a king pin in getting Indian order for currency printing because 90 per cent of monopoly trade of printing currency note of 150 nations of the world is lying with Giori. Indian currency notes are printed at India Security Press in Nasik and Salboni in Midnapur District of West Bengal. Printing machinery of currency note was purchased from Day-La-Ru-Giori. The printing of new currency notes worth Rs. 4 crore 80 Lacs of Rs. 500 and Rs. 2000 currency notes were printed in August, September 2016 in Indian Reserve Bank Note Printing Pvt. Limited (BRBNMPT.) at Mysore, the paper for the note was brought in from Italy, Germany, and Great Britain. The printing of note is currently done by KBA Giori under the supervision of Switzerland. The whole matter is an episode cannot be covered here.
6. Generally printing of currency note with all security measures requires minimum five to six years for which even doubtful foreign entities are offered the assignment.
7. A study by National Investigation Agency (NIA) along with Indian Statistical

Institute (ISI) in February 2016 revealed that Rs. 400 crore of Fake Indian Currency Notes (FICN) were in circulation, the study noted this has remained about the same over the last 4 years 2011–12 to 2014–15.

8. Demonetization accompanied by excess money flow into banking sector has paved the way for –
 - a) Interest rate to be determined by inflation expectation and
 - b) Threats to financial stability
 - c) Extra ordinary liquidity spike, warranting excess money must be sterilized
 - d) RBI may impound the gushing liquidity using the Cash Reserve Ratio (CRR) mandate rather than the Reverse Repo mechanism, under which the RBI accept money from banks by selling bonds that banks agree to sell back to the RBI at a pre-determined price.
 - e) The CRR hike essentially impounds around Rs. 3.5 lac crore of the cash with banks, turns them into compulsory reserves that earn no money for banks and cannot be lent.
 - f) Before the RBI intervention surplus liquidity had pushed banks to park funds with the RBI, the rush to buy bonds lowering yields below the repo rate. This inverted the yield curve and narrowed the gap between Indian and US interest rates, adding to the downward pressure on the rupee. The mopping up of extra ordinary liquidity by way of a cash reserve will thwart one of the benefits of the demonetization scheme, Ultra Cheap Loans.
9. Even as the bank gets no return on this CRR deposits, they are obliged to pay at least 4 per cent return on their deposits. This could cripple banks given the volume involved. To overcome the situation RBI must start paying banks interest on CRR and speed up the pace of remonetization (The Economic Times, 2016).
10. Buying of real estate property by some political parties at the pre announcement stage i. e. before 8th November 2016 purveying some monetary benefit to select

individuals is contrary to Article 14 of the Constitution distorting the tenet of equality of all before law.

11. A customer makes a deposit in a bank under a contract between a banker and a customer, the contractual relation that arises is known as banker-customer relationship. As per the Negotiable Instruments Act, 1881, a customer is entitled to withdraw that money 'on demand', and a banker is under legal obligation to refund the money to the depositor. There is no such provision either in the Negotiable Instruments Act, 1881, the Reserve Bank of India Act, 1934, the Banking Regulation Act, 1949 or in the constitution which can deny a depositor to withdraw his own legitimate money. The eventual death of the citizen in ATM counters amounts to confiscating a citizen's right to live and the right to earn livelihood under Article 21 of the Constitution. It is a violation of human right (Sur, 2016).

Conclusion

The Article 300A of the constitution ensures Right to Property for the citizens, money deposited in a bank is a part of property. The banking system is a credit institution based on mutual trust, the action of the government amounts to breach of the trust and warrants closure of the trust institutions based on the faith and mutual trust of the citizens. The government has mandated the citizens to make payment through Paytm and not in cash. Paytm is a Chinese company in which only 20 per cent shares are held by Indian interest and rest is with China. Imposing the executives' unilateral decision imposed on citizens on what kind of asset the people should hold, whether it is in cash or not, whether they should settle their transactions with cash or with Paytm triggers the question of Freedom of Choice which ought to have been decided by the buyer and seller mutually.

The curtailment of an individual's right to choose asset preference and any interference by an elected government with the enjoyment of right of the citizens should only be permissible under law enacted by the legislature and that too for specific valid reasons of national interest. Any arbitrary interference by the executive head in the governance on directing the asset preference of the people without parliamentary sanction is an assault on democracy and on

political electoral system of the country based on sound principle of just, reasonable, fair, equitable distribution of justice for all and equality for all without any discretion and such executive action must withstand the canons of electoral governance, failing which often the action is termed as despotism. In a civil society with electoral promise and adult franchise with a written constitution the citizens expect responsible behaviour from an elected government to decide upon a vital issue like upholding the acceptability and value of legal tender or otherwise be left with the legislature to lay the rules of governance. The task be handed down to the concerned independent institution created by law to take up the decision by the competent authority like the Central Bank of the nation. Adherence to the high value system in financial decision is not only essential but a sufficient condition to allow free flow of smooth working of the monetary system of any country in the world.

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IDENTIFICATION OF OUTLIERS IN CIRCULAR DATA

Mintu Kumar Das & Bipin Gogoi

ABSTRACT

Circular data may contain outlying observations due to some recording errors, sudden short external shocks, sampling under abnormal conditions etc. Unlike in the linear case, the circular outlier need not be too large or too small, but could lie in the middle of the data mass. In this paper, an attempt has been made to compare the empirical power of some statistics to identify circular outliers in von Mises distribution. The statistics considered here, are based on the change of mean resultant length, summation of circular distances, likelihood ratio estimate of the concentration parameter. Based on simulation results, conclusions have been drawn accordingly. (In addition to von Mises distribution, we have studied the behaviors of the test of discordance under dispersion slippage for wrapped Cauchy and wrapped normal distribution)

Keywords : outlier, test of discordance, von Mises distribution, wrapped Cauchy distribution, wrapped normal distribution, concentration parameter, mean direction.

Introduction

In many field surveys or laboratory experiments, observations are recorded as directions, which are covered under the broad term "Directional Data". Further, directional data are subdivided into Circular Data, when observation are represented as points on the circle (i.e., two-dimensional point) and Spherical Data, when the representation are made as points on the sphere (i.e., three-dimensional point). Applications of such data arise in the study of animal navigation, wind direction, etc. Some probability distributions on the circle are Uniform distribution U_c , Cardiod distribution $C(\mu, \rho)$, Wrapped distributions-general, Wrapped Cauchy distribution $WC(\mu, \rho)$, Wrapped Normal distribution $WN(\mu, \rho)$, von Mises distribution $VM(\mu, k)$, etc. (Fisher, 1993). For a comprehensive reading of such data analysis, see Mardia (1972), Fisher (1993), Jammalamadaka and SenGupta (2001).

As in the linear data, circular data may also be contaminated by outlier(s) owing to various causes, such as, recording errors, sudden short external shocks, sampling under abnormal conditions, etc. However, unlike in the linear case, circular outliers need not be too large or too small, but could lie in the middle of the data mass. Collett (1980) illustrated this dissimilarity with the following data set (in degrees): 10, 18, 33, 48, 67, 349. If we assume the linear case, then the observation 360 apparently comes out as an isolated point in the real line, R^1 . But treating the data set as points on the circle, the same observation is basically consistent with the rest of the data and is no longer an outlier. Thus to deal with circular outlier(s), specific methodologies need to be developed. Researchers have been working in this area to get rid of the irritation faced by data analyst due to outlier(s). Some name of the researchers includes, Collett (1980), Barnett and Lewis (1984), Beckman and Cook (1983), Tovar and Rivas (1986), Bagchi and Guttman (1990), Box and Tiao (1968), Length (1981), Sen Gupta and Laha (2000), Abuzaid et al. (2009), Abuzaid et al. (2012), Rambli, et al. (2012), Upton (1993), Mardia (1978), etc. Collett (1980) developed four test statistics L , C , D and M to detect possible outliers in circular data. Tovar and Rivas (1986) studied the problem of circular outlier detection using predictive measure with a Bayesian approach. Bagchi and Guttman (1990) suggested a procedure based on Bayesian approach. Upton (1993) studied the Bagchi and Guttman approach along with Collett's findings and concludes that Mardia's M -statistics is the best. Fisher (1993) summarized the sources of occurrence of outliers. Abuzaid et al. (2009) proposed a test of discordance A based on summation of circular distances. Rambli et al. (2012) applied four test of discordance based on C , M , D and A statistic to $WN(\mu, \rho)$ and obtained the cut-off points via simulation. Abuzaid et al. (2012) derived the distribution of a new statistic to detect possible outliers in circular data. They proposed this test using the circular distances between sample points and the approximation given by Fisher and Lee (1992). Abuzaid et al. (2015) extended these discordance tests to $WC(\mu, \rho)$. Rambli et al. (2015) discussed a discordancy test based on spacing theory to detect outlier in a half-circular data. In this paper, an attempt has been made to compare the empirical power of some test of discordance based on C , M , and A statistics to identify outliers in the circular data due to slippage in the concentration. The rest of the paper is organized as follows: Brief description of the three distributions and slippage

alternative has been given. The test statistics to be compared are also briefly described. In the same section, a brief description is appended on the performance of the tests for location slippage.

Brief description of three circular distribution and slippage alternative

Here our discussion will be confined to circular outlier in $VM(\mu, k)$, $WN(\mu, \rho)$, and $WC(\mu, \rho)$. All of these are unimodal and symmetric about mean direction.

Von Mises distribution : In many aspects, the von Mises distribution is the natural analogue on the circle of the normal distribution on R^1 . The von Mises distribution is defined with the probability density function :

$$f(\theta) = [2\pi I_0(k)]^{-1} \exp[k \cos(\theta - \mu)] \quad \dots (1)$$

where, $0 \leq \theta < 2\pi$, $0 \leq k < \infty$ and $I_0(k) = (2\pi)^{-1} \int_0^{2\pi} \exp[k \cos(\varphi - \mu)] d\varphi$ is the modified Bessel function of order zero. The parameters μ and k are called the mean direction and concentration parameter respectively. The value of k is such that as $k \rightarrow 0$, the distribution converges to U_c and as $k \rightarrow \infty$, it tends to the point distribution concentrated in the direction μ .

Wrapped Normal distribution : A wrapped normal distribution is obtained by wrapping a normal distribution $N(\mu, \sigma^2)$ around a unit circle. The pdf of $WN(\mu, \rho)$ with mean direction μ and measure of concentration ρ is given by :

$$f(\theta) = \frac{1}{\sigma\sqrt{2\pi}} \sum_{m=-\infty}^{\infty} \exp\left[\frac{-(\theta - \mu - 2\pi m)^2}{2\sigma^2}\right] \quad \dots (2)$$

The wrapped normal distribution possesses the additive property i.e., the convolution of two WN variables is also WN , unlike the von Mises distributions. There are some similarities between WN and VM distributions and these have been documented by Collett and Lewis (1981), Pewsey and Jones (2005), Goldstein and Collett (1982).

Wrapped Cauchy distribution : The Wrapped Cauchy distribution is defined with the probability density function :

$$f(\theta) = \frac{1}{2\pi} \frac{1-\rho^2}{1+\rho^2-2\rho \cos(\theta-\mu)}, \quad 0 \leq \theta, \mu < 2\pi, 0 \leq \rho < 1 \quad \dots (3)$$

where μ is the mean direction and $\rho = e^{-\sigma}$ is the concentration parameter that is called the mean resultant length. Here σ is the standard deviation of the original Cauchy distribution on R^1 . The WC distribution can be obtained by mapping Cauchy distribution on to the circle by the transformation $x \rightarrow 2 \tan^{-1} \theta$, where X is a Cauchy variable on R^1 (McCullagh, 1996). Fisher (1993) quantified the dispersion measure δ for the WC distribution by a concentration parameter ρ , as $\delta = \frac{(1-\rho^2)}{2\rho^2}$, where the WC distribution converges to U_c as $\rho \rightarrow 0$ and the WC distribution converges to the point distribution concentrated in the direction the μ as $\rho \rightarrow 1$. Thus outliers due to dispersion slippage could be incorporated into the WC sample by shifting the value of ρ towards zero. A noticeable feature of WC distribution is that it has a heavy tail even for large concentration, which can make trouble in detecting outlier (Abuzaid, et al., 2015).

Slippage alternative : Many of the discordancy tests are designed against the location slippage alternative. The objective in the slippage problem is to discover any vague observation in a given random sample from a distribution. Let us consider the distribution to be $VM(\mu, k)$ and the outlier problem in terms of a possible slip in the mean direction μ . Given the i.i.d. observations $\theta_1, \theta_2, \dots, \theta_n$; the slippage problem is to test the hypothesis

H_0 : $\theta_i, i = 1, 2, \dots, n$ are distributed as $VM(\mu_0, k)$, against

H_1 (location slippage) : for some $i, \theta_i \sim VM(\mu + \lambda\pi, k), 0 \leq \lambda \leq 1$ and rest of the observations $\sim VM(\mu_0, k)$

H_1 (dispersion slippage) : for some $i, \theta_i \sim VM(\mu, k^*)$, where $k^* = k * w \neq k$ and rest of the observations $\sim VM(\mu_0, k)$

Test Statistics to be compared

Consider a random sample $\theta_1, \theta_2, \dots, \theta_n$ from $VM(\mu_0, k)$. Let $\bar{\theta}$ be the sample mean direction and R be the mean resultant length and these are defined by

$$\bar{\theta} = \begin{cases} \tan^{-1} \left(\frac{S}{C} \right) & \text{if } S > 0, C > 0 \\ \tan^{-1} \left(\frac{S}{C} \right) + \pi & \text{if } C < 0 \\ \tan^{-1} \left(\frac{S}{C} \right) + 2\pi & \text{if } S < 0, C > 0 \end{cases} \dots (4)$$

$$R = (C^2 + S^2)^{1/2} (R \geq 0) \quad \dots (5)$$

where, $C = \sum_{i=1}^n \cos \theta_i$, $S = \sum_{i=1}^n \sin \theta_i$.

The circular distance is also a worthwhile measure to determine the outlyingness. Considering the random sample $\theta_1, \theta_2, \dots, \theta_n$ with mean direction $\bar{\theta}$, Rao(1969) defined the circular distance between any two points as :

$$d_{ij} = 1 - \cos(\theta_i - \theta_j) \quad \dots (6)$$

Alternatively, Jammalamadaka and SenGupta (2001) defined the distance between $\bar{\theta}$ and each point θ_i as :

$$d(\theta_i, \bar{\theta}) = \min(\theta_i - \bar{\theta}, 2\pi - (\theta_i - \bar{\theta})) = \pi - |\pi - |\theta_i - \bar{\theta}|| \dots (7)$$

Following test statistics are considered for power comparison. For the convenience, let us term the different test statistics as Statistics I, Statistics II, etc.

C- statistic : Collett(1980) proposed this statistic based on the relative increase in the sample mean resultant length caused by the omission of the outlying point, say θ_i . From (3), after deletion of θ_i , the sample mean resultant length from the remaining points is defined as :

$$R_{(-i)}^2 = R^2 + 1 - 2R \cos(\theta_i - \bar{\theta}) \quad \dots (8)$$

Thus by intuitive consideration Collett (1980) proposed the C- statistic defined as

$$C = \max_i \left\{ \frac{\bar{R}_{(-i)} - \bar{R}}{\bar{R}} \right\} \quad \dots (9)$$

where $\bar{R} = R/n$ and $\bar{R}_{(-i)} = R_{(-i)}/(n-1)$ Comparing the calculated value with the critical percentile values, the H_0 is rejected if the calculated value is large enough (Abuzaid et al. 2009).

M-statistic : Mardia (1975) suggested a discordance statistic as

$$M' = \min_i \left\{ \frac{n-1-R_{(-i)}}{n-R} \right\}, \text{ which was reformulated by Collett (1980) as}$$

$$M = 1 - M' = \max_i \left\{ \frac{R_{(-i)} - R + 1}{n - R} \right\} = \frac{R_q - R + 1}{n - R} \quad \dots (10)$$

where $R_q = \max_i \{R_{(-i)}\}$. The asymptotic distribution of M is such that, as the value of k increases the von Mises distribution can be approximated by a simple normal distribution.

A-statistic : Abuzaid et al. (2009) developed a new test of discordancy, using the summation of circular distances of the point of interest to all other points. Considering the j^{th} observation as our point of interest, the summation from it to all other observations using (4),

$$D_j = \sum_i^n (1 - \cos(\theta_i - \theta_j)), \quad i = 1, 2, \dots, n \quad \dots (11)$$

the value of D_j will increase if the j^{th} observation is outlying. Standardizing the average by division with 2, the statistic becomes :

$$A = \max_i \left\{ \frac{D_j}{2(n-1)} \right\}, \quad j = 1, 2, \dots, n \quad \dots (12)$$

where $A \in [0, 1]$ is a linear measure.

Measure of Performance and Simulation Study

To study the performance of different tests of discordance we have to compare the tests at the same level of significance depending on the alternative hypothesis. David (1970) and Barnett and Lewis (1984) stated that a good test of discordance should have (i) a high power function, (ii) a high probability to detect a discordant observation as an outlier and (iii) a low probability of wrongly identifying a good observation as discordant (Abuzaid et al., 2015). Thus we evaluate the powers in terms of the proportion of rejection. For this we are using Monte Carlo Simulation Techniques and samples were generated from VM , WN and WC distributions. For each generated sample the value of the statistics are calculated and these are compared with the cut-off points to accept or reject the hypothesis. If it is rejected (i.e., outlier detected), it is counted and the process get repeated. We have repeated 10,000 times for different sample size and concentration parameters. For VM distribution, the samples were generated in such a way that $(n - 1)$ observations in a sample come from $VM(\mu, k)$ and

one observation from $VM(\mu, k^*)$. For WN distribution, the samples were generated in such a way that $(n-1)$ observations in a sample come from $WN(\mu, \rho)$ and one observation from $WN(\mu, \rho^*)$. Similarly, for WC distribution, the samples were generated in such a way that $(n-1)$ observations in a sample come from $WN(\mu, \rho)$ and one observation from $WC(\mu, \rho^*)$. Here the values of the contamination level is such that as the value of 'w' decreases the samples are contaminated with prominent outliers and $w = 1$ indicates that the sample is outlier free. The simulation study was carried out on R (version 3.2.2) and the proportions of rejection are displayed in the tables and graphs in the next section.

Results and Discussion

For higher concentrated samples as the concentration is shifted towards zero, the detection power is supposed to be increased more rapidly than for lower concentrated samples. Form the Tables 1-6 and Figures 1-6, we observe the following points :

In case of small samples from von Mises distribution, the C -statisic has the maximum power to detect single outlier. Particularly the power is almost equal for C and A -statisics for higher concentration $k = 10$. The detection rate is negligible for M -statisic in less concentrated samples but in highly concentrated samples M -statisic shows significant proficiency. When sample size from von Mises distribution is large, then the performance is negligible for $k = 2$, while C , M and A -statisics performs almost equally for higher concentration $k = 10$.

In case of samples from wrapped normal distribution, for $\rho = 0.2$ and $\rho = 0.4$, all the three test of discordance fails to track down outliers. Irrespective of sample size and for higher concentration $\rho = 0.9$ the tests based on C and A -statisics have the maximum power to detect single outlier, but M -statisic shows negligible power. As shown in tables 3-4 also the C and A -statisic performs equally and at most these can identify outliers in 60 percent contaminated samples.

For wrapped Cauchy distribution the power of detection is somewhat different from the other two distributions. As a reason we can mention that the wrapped Cauchy distribution has a heavy tail even for large concentration and as a consequence the detection of outliers becomes difficult for this heavy tail (Abuzaid et al., 2015).

Table 1 : Empirical power under dispersion slippage for VM distribution at $\alpha = 0.05$ and $n = 10$

w	C			M			A		
	$k = 2$	$k = 3$	$k = 10$	$k = 2$	$k = 3$	$k = 10$	$k = 2$	$k = 3$	$k = 10$
1.00	0.049	0.052	0.047	0.044	0.052	0.051	0.048	0.048	0.046
0.50	0.076	0.100	0.093	0.047	0.056	0.063	0.057	0.093	0.088
0.10	0.126	0.261	0.451	0.050	0.105	0.324	0.084	0.243	0.447
0.09	0.127	0.264	0.480	0.050	0.105	0.343	0.093	0.250	0.475
0.07	0.127	0.281	0.525	0.053	0.105	0.383	0.086	0.263	0.523
0.05	0.132	0.299	0.574	0.047	0.108	0.449	0.082	0.270	0.569
0.03	0.134	0.301	0.625	0.050	0.116	0.493	0.091	0.289	0.626
0.02	0.138	0.327	0.657	0.052	0.113	0.524	0.088	0.291	0.648
0.01	0.138	0.328	0.682	0.053	0.120	0.548	0.093	0.302	0.673
0.001	0.145	0.338	0.701	0.055	0.120	0.577	0.089	0.312	0.697
0.0001	0.144	0.332	0.709	0.053	0.114	0.575	0.089	0.315	0.701

Table 2 : Empirical power under dispersion slippage for VM distribution at $\alpha = 0.05$ and $n = 30$

w	C			M			A		
	$k = 2$	$k = 3$	$k = 10$	$k = 2$	$k = 3$	$k = 10$	$k = 2$	$k = 3$	$k = 10$
1.00	0.044	0.064	0.071	0.049	0.047	0.050	0.044	0.055	0.061
0.50	0.058	0.095	0.103	0.050	0.055	0.062	0.047	0.074	0.085
0.10	0.076	0.190	0.442	0.043	0.084	0.356	0.049	0.160	0.427
0.09	0.076	0.192	0.465	0.048	0.086	0.371	0.049	0.166	0.455
0.07	0.078	0.203	0.511	0.041	0.095	0.432	0.050	0.174	0.498
0.05	0.079	0.215	0.564	0.046	0.097	0.486	0.045	0.175	0.550
0.03	0.084	0.224	0.610	0.040	0.099	0.544	0.047	0.189	0.607
0.02	0.085	0.225	0.649	0.044	0.100	0.581	0.046	0.189	0.631
0.01	0.083	0.234	0.672	0.046	0.101	0.603	0.054	0.198	0.663
0.001	0.080	0.229	0.695	0.044	0.101	0.629	0.049	0.205	0.689
0.0001	0.082	0.235	0.700	0.046	0.102	0.638	0.052	0.197	0.690

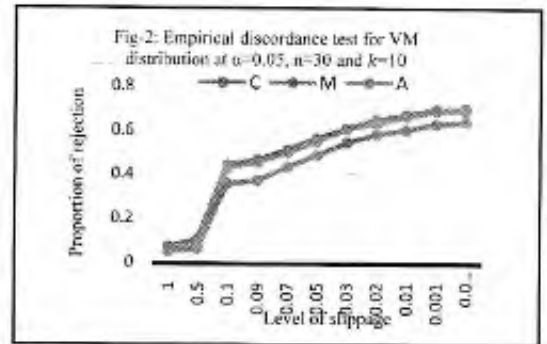
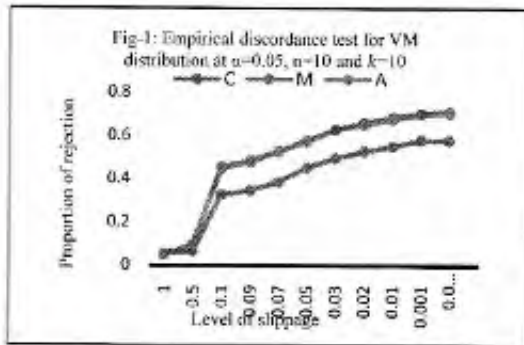


Table 3 : Empirical power under dispersion slippage for WN distribution at $\alpha = 0.05$ and $n = 10$

w	C			M			A		
	$\rho = 0.2$	$\rho = 0.4$	$\rho = 0.9$	$\rho = 0.2$	$\rho = 0.4$	$\rho = 0.9$	$\rho = 0.2$	$\rho = 0.4$	$\rho = 0.9$
1.00	0.046	0.056	0.051	0.050	0.042	0.040	0.043	0.054	0.046
0.50	0.047	0.072	0.313	0.049	0.042	0.038	0.044	0.052	0.317
0.10	0.047	0.073	0.538	0.052	0.044	0.042	0.040	0.054	0.535
0.09	0.058	0.073	0.547	0.046	0.041	0.043	0.037	0.055	0.545
0.07	0.053	0.081	0.545	0.049	0.048	0.045	0.037	0.053	0.553
0.05	0.051	0.080	0.569	0.049	0.043	0.044	0.038	0.053	0.555
0.03	0.052	0.078	0.570	0.051	0.046	0.043	0.038	0.051	0.577
0.02	0.050	0.084	0.585	0.049	0.043	0.040	0.042	0.054	0.573
0.01	0.048	0.081	0.589	0.047	0.043	0.044	0.042	0.051	0.578
0.001	0.052	0.081	0.594	0.051	0.041	0.044	0.038	0.055	0.587
0.0001	0.052	0.079	0.589	0.047	0.045	0.040	0.037	0.052	0.584

Table 4 : Empirical power under dispersion slippage for WN distribution at $\alpha = 0.05$ and $n = 30$

w	C			M			A		
	$\rho = 0.2$	$\rho = 0.4$	$\rho = 0.9$	$\rho = 0.2$	$\rho = 0.4$	$\rho = 0.9$	$\rho = 0.2$	$\rho = 0.4$	$\rho = 0.9$
1.00	0.047	0.045	0.044	0.046	0.039	0.046	0.059	0.054	0.047
0.50	0.044	0.050	0.280	0.047	0.037	0.049	0.058	0.050	0.291
0.10	0.050	0.054	0.494	0.048	0.039	0.044	0.051	0.046	0.491
0.09	0.052	0.058	0.507	0.047	0.038	0.048	0.053	0.048	0.505

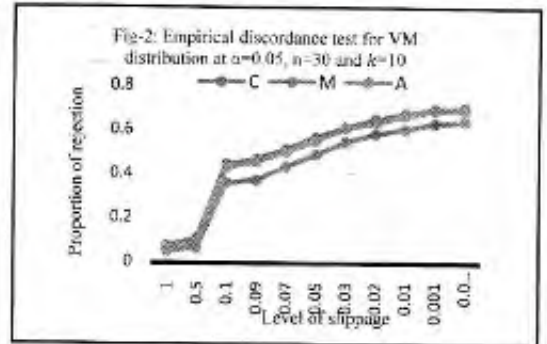
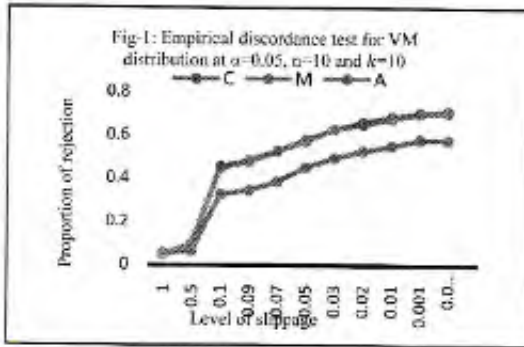


Table 3 : Empirical power under dispersion slippage for WN distribution at $\alpha = 0.05$ and $n = 10$

w	C			M			A		
	$\rho = 0.2$	$\rho = 0.4$	$\rho = 0.9$	$\rho = 0.2$	$\rho = 0.4$	$\rho = 0.9$	$\rho = 0.2$	$\rho = 0.4$	$\rho = 0.9$
1.00	0.046	0.056	0.051	0.050	0.042	0.040	0.043	0.054	0.046
0.50	0.047	0.072	0.313	0.049	0.042	0.038	0.044	0.052	0.317
0.10	0.047	0.073	0.538	0.052	0.044	0.042	0.040	0.054	0.535
0.09	0.058	0.073	0.547	0.046	0.041	0.043	0.037	0.055	0.545
0.07	0.053	0.081	0.545	0.049	0.048	0.045	0.037	0.053	0.553
0.05	0.051	0.080	0.569	0.049	0.043	0.044	0.038	0.053	0.555
0.03	0.052	0.078	0.570	0.051	0.046	0.043	0.038	0.051	0.577
0.02	0.050	0.084	0.585	0.049	0.043	0.040	0.042	0.054	0.573
0.01	0.048	0.081	0.589	0.047	0.043	0.044	0.042	0.051	0.578
0.001	0.052	0.081	0.594	0.051	0.041	0.044	0.038	0.055	0.587
0.0001	0.052	0.079	0.589	0.047	0.045	0.040	0.037	0.052	0.584

Table 4 : Empirical power under dispersion slippage for WN distribution at $\alpha = 0.05$ and $n = 30$

w	C			M			A		
	$\rho = 0.2$	$\rho = 0.4$	$\rho = 0.9$	$\rho = 0.2$	$\rho = 0.4$	$\rho = 0.9$	$\rho = 0.2$	$\rho = 0.4$	$\rho = 0.9$
1.00	0.047	0.045	0.044	0.046	0.039	0.046	0.059	0.054	0.047
0.50	0.044	0.050	0.280	0.047	0.037	0.049	0.058	0.050	0.291
0.10	0.050	0.054	0.494	0.048	0.039	0.044	0.051	0.046	0.491
0.09	0.052	0.058	0.507	0.047	0.038	0.048	0.053	0.048	0.505

0.07	0.049	0.055	0.525	0.050	0.038	0.044	0.052	0.048	0.512
0.05	0.045	0.056	0.526	0.051	0.041	0.042	0.053	0.046	0.527
0.03	0.051	0.056	0.547	0.048	0.039	0.042	0.052	0.047	0.532
0.02	0.045	0.052	0.537	0.047	0.038	0.046	0.052	0.042	0.533
0.01	0.052	0.058	0.537	0.050	0.039	0.046	0.058	0.045	0.552
0.001	0.050	0.056	0.550	0.051	0.037	0.049	0.055	0.045	0.556
0.0001	0.050	0.055	0.551	0.048	0.039	0.046	0.053	0.048	0.559

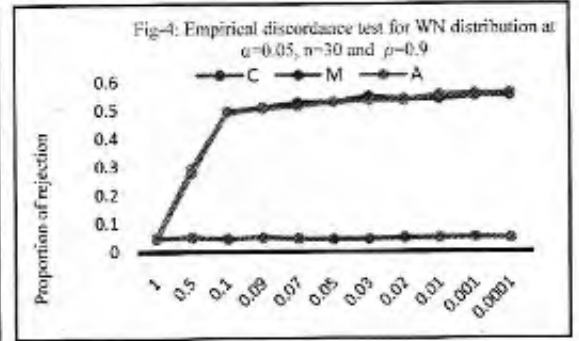
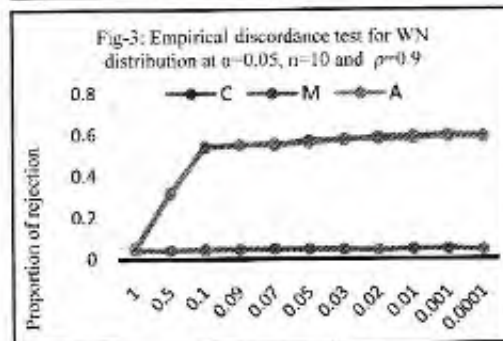
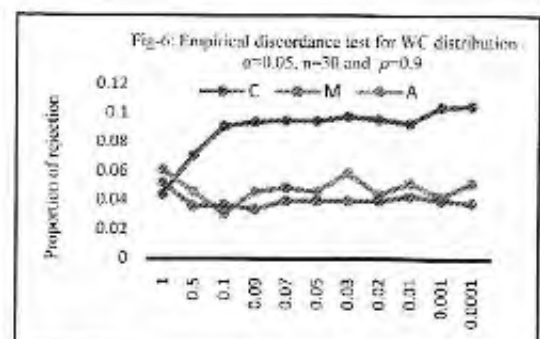
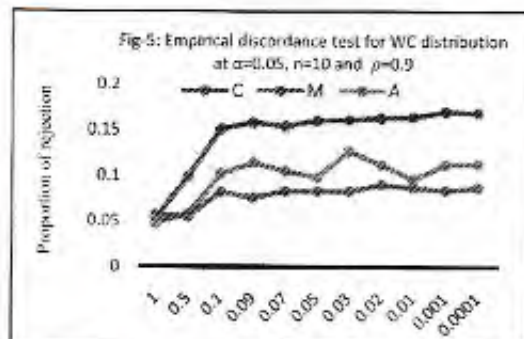


Table 5: Empirical power under dispersion slippage for WC distribution at $\alpha = 0.05$ and $n = 10$

w	C			M			A		
	$\rho = 0.2$	$\rho = 0.4$	$\rho = 0.9$	$\rho = 0.2$	$\rho = 0.4$	$\rho = 0.9$	$\rho = 0.2$	$\rho = 0.4$	$\rho = 0.9$
1.00	0.048	0.058	0.053	0.042	0.049	0.057	0.045	0.055	0.048
0.50	0.053	0.067	0.099	0.041	0.037	0.055	0.049	0.040	0.058
0.10	0.056	0.075	0.151	0.038	0.039	0.082	0.049	0.036	0.102
0.09	0.054	0.074	0.158	0.035	0.033	0.076	0.050	0.058	0.114
0.07	0.051	0.075	0.154	0.034	0.033	0.083	0.038	0.044	0.105
0.05	0.055	0.077	0.160	0.038	0.038	0.083	0.047	0.053	0.098
0.03	0.055	0.078	0.161	0.038	0.036	0.083	0.045	0.061	0.127
0.02	0.055	0.077	0.163	0.034	0.035	0.090	0.048	0.043	0.112
0.01	0.054	0.079	0.164	0.035	0.034	0.087	0.048	0.043	0.096
0.001	0.051	0.077	0.170	0.036	0.036	0.084	0.056	0.039	0.112
0.0001	0.053	0.075	0.169	0.041	0.036	0.087	0.049	0.049	0.113

Table 6: Empirical power under dispersion slippage for WC distribution at $\alpha = 0.05$ and $n = 30$

w	C			M			A		
	$\rho = 0.2$	$\rho = 0.4$	$\rho = 0.9$	$\rho = 0.2$	$\rho = 0.4$	$\rho = 0.9$	$\rho = 0.2$	$\rho = 0.4$	$\rho = 0.9$
1.00	0.042	0.042	0.044	0.048	0.042	0.052	0.045	0.048	0.061
0.50	0.046	0.042	0.071	0.047	0.039	0.036	0.047	0.052	0.046
0.10	0.044	0.051	0.091	0.041	0.035	0.037	0.042	0.053	0.031
0.09	0.046	0.056	0.094	0.042	0.038	0.034	0.039	0.050	0.046
0.07	0.044	0.056	0.095	0.042	0.037	0.040	0.050	0.043	0.049
0.05	0.044	0.053	0.095	0.045	0.037	0.040	0.033	0.042	0.046
0.03	0.046	0.056	0.098	0.048	0.035	0.040	0.033	0.049	0.059
0.02	0.046	0.054	0.096	0.043	0.032	0.040	0.031	0.038	0.044
0.01	0.044	0.057	0.093	0.041	0.034	0.043	0.045	0.042	0.052
0.001	0.045	0.055	0.104	0.043	0.034	0.040	0.034	0.048	0.042
0.0001	0.048	0.056	0.105	0.039	0.033	0.038	0.039	0.044	0.052



From the tables 5-6 it is observed that for $\rho = 0.2$ all the three test fails to detect outlier both for $n = 10$ and $n = 30$. Although for $\rho = 0.4$ and $\rho = 0.9$ the test based on C -statistic possesses higher power, but this is also negligible in the sense that it can hardly detect upto 15 percent contaminated samples. Here one more evident result is that the test based on M statistic is a very weak one in comparison to the other two, which is in contradiction with the findings by Upton (1993).

Conclusion

In this paper, the power of performance of three test of discordance based on C , M and A -statistics were investigated through extensive simulation study. For von Mises distribution with higher concentration it can be concluded that as the shift in dispersion increases, the power of detection also increases, regardless of sample size. And especially the discordance test based on C -statisic is more preferable. For wrapped normal distribution the detection is meaningful when the concentration of the parent population is higher and particularly the discordance test based on C and A -statisic are useful. In case of wrapped Cauchy distribution with higher concentration the test based on C -statisic can be used but the detection rate is very low. The simulation study shows that due to the heavy tailed characteristics of wrapped Cauchy distribution, the power of performance is very low regardless of the level of slippage in concentration. Also, one noticeable point is that the performance of the three tests is similar for von Mises and wrapped normal distribution because of the similarities between these two distributions.

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CORPORATE SOCIAL RESPONSIBILITY REPORTING PRACTICES : A CASE STUDY OF MAHARATNA COMPANIES

Jacob Konwar & Saurabh Chakraborty

ABSTRACT

Maharatna Scheme was introduced for Central Public Sector Enterprises (CPSEs), with effect from 19th May, 2010, in order to empower mega CPSEs to expand their operations and emerge as global giants. In the year 2009, the government decided to establish the Maharatna status on companies so that they could raise their investment ceilings from Rs.1000 Crores to Rs.5,000 Crores and this can be done without approval of the government. The Seven major Maharatna Companies are primarily engaged in extraction and exploration sector, which considerably affect the balance of the environment and the society at large.

This paper attempts to look into different Corporate Social Responsibility practices (CSR) adopted by these companies over a period of five years (2008-09 to 2012-13). Findings of the results show that there is a considerable difference of reporting practices adopted by the companies over the five year study period.

Keywords : *Corporate Social Responsibility, Maharatna Companies, Sustainability.*

Introduction

Corporate Social Responsibility (CSR) is the responsibility of the business to take up activities for social and sustainable development of the society. CSR is a process with the aim to embrace responsibility for the company's actions and encourage a positive impact through its activities on the environment, consumers, employees, communities, stakeholders and all other members of the public sphere who may also be considered as stakeholders. CSR can be understood as a management concept and a process that integrates social and environmental concerns in business operations and a company's interaction with the full range of its stakeholders. The essence of CSR comprises philanthropic, corporate, ethical,

environmental and legal as well as economic responsibility. An alternative, synonymous to CSR is PEOPLE, PLANET and PROFIT also known as 'Triple Bottom Line' (Wikipedia).

The World Business Council for Sustainable Development stresses, "CSR is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families, as well as of the local community and society at large...". (This definition was developed in 1998 for the first WBCSD CSR dialogue in The Netherlands) (Mazurkiewicz, ...).

The United Nations Global Compact (UNGC) asks companies to embrace support and enact, within their sphere of influence, a set of core values in the areas of human rights, labour standards, the environment and anticorruption. The European Commission defines it as "a concept whereby companies decide voluntarily to contribute to a better society and a cleaner environment." (European Commission, 2001)

CSR ensures positive contribution to society and managing the organization's environmental impact. CSR as a contribution to sustainable development, implying the way a company balances its economic, environmental and social objectives while addressing stakeholder expectations and enhancing shareholder value (Global CSR Summit, 2013).

CSR not only includes the activities that a company undertakes in order to utilize their profit to enable social and environmental development, but also includes the methods that a company employs in order to earn these profits including socially responsible investments and transparency to various stakeholders among others. The basic objective of CSR is to maximize the company's overall impact on the society and stakeholders while considering environment and overall sustainability (Nagotia, 2014).

Public sector enterprises or public sector undertakings have been the backbone of Indian Economy since the time of independence. With support from the Government of India, these companies have been involved in various industrial activities, manufacturing and producing various products, raw materials and offering numerous other services for the benefit of the citizens of India. These industries have been related to core sectors like Mining,

Oil and Natural Gas, Electrical Power Generation and Distribution, Telecommunication, Iron and Steel, Heavy Water Resources, as well as industries in other verticals like fertilizers and Petro-Chemicals.

The objective of the scheme is to delegate enhanced powers to the Boards of identified large-sized Navratna CPSEs so as to facilitate expansion of their operations, both in domestic as well as global markets.

Maharatna Scheme was introduced for Central Public Sector Enterprises (CPSEs), with effect from 19th May, 2010, in order to empower mega CPSEs to expand their operations and emerge as global giants. In the year 2009, the government decided to establish the Maharatna status on companies so that they could raise their investment ceilings from Rs.1000 Crores to Rs.5,000 Crores and this can be done without approval of the government. At that time, only 6 companies with sufficient turnover and net worth were granted the Maharatna status. That helped them with a greater power of autonomy in the functioning of those particular companies.

Presence of three different levels of recognition for the companies suggests that there must be some reasons for which a few select companies have been chosen to be granted such status of Maharatna, Navratna and Miniratna. Presently to be eligible for the MAHARATNA status, there are certain criteria to be fulfilled by a specific company :

- The company should already have a Navratna status
- It should have an Indian Stock Exchange listing with the requisite public shareholding as laid down by regulations of SEBI.
- Annual turnover should be on an average more than Rs 20,000 Crores if the last 3 years are taken into account.
- Net worth of the company should be more than Rs 10,000 Crores for 3 previous years.
- Average profit annually should be more than Rs 2,500 Crores after Tax since the last 3 years.

- International operations and global presence should be of significant value and worth.

Following CPSEs have been identified as Maharatnas :

1. Bharat Heavy Electricals Limited (BHEL)
2. Coal India Limited (CIL)
3. Gas Authority Of India Limited (GAIL)
4. Indian Oil Corporation Limited (IOCL)
5. National Thermal Power Corporation Limited (NTPCL)
6. Oil & Natural Gas Corporation Limited (ONGCL)
7. Steel Authority of India Limited (SAIL)

Under the Maharatna status, companies can incur an expenditure on purchasing new products or go for replacement without any monetary ceiling. Procedure of granting Maharatna status is to be initiated by concerned administrative ministries or departments and the final decision is taken by inter-ministerial committee with initiative of the Department of Public Enterprises. Powers that would be delegated to the boards of the companies, which are being granted the Maharatna status, would be its management by a restructured board and for the purpose, the Department of Public Enterprises, lays down certain rules and directions.

The performance of Maharatna CPSEs would be reviewed annually by the Inter-Ministerial Committee, and thereafter by the Apex Committee headed by the Cabinet Secretary which will recommend continuation/divestment of Maharatna status. The review will focus on the eligibility of Maharatna CPSEs vis-à-vis the criteria laid down for grant of Maharatna status, and their performance during the previous year(s).

CSR Activities and the Companies Accountability

With CSR spending becoming mandatory for prescribed class of companies, there is bound to increased engagement of companies with social and development projects. So

far, there were only voluntary guidelines for companies to follow. The rationale for CSR activity is that corporate earns their profit by exploiting different resources of the society and so a portion of a benefit derived by them should be channeled for the betterment of society. The basic idea of such stipulations is to report business community's contribution for fulfillment of social, environmental and economic responsibilities. While contribution to the local community is a good objective, business should choose social, environmental and economic activities that contribute to society at large. Moreover, an extensive CSR commitment of companies helps to boost their image and goodwill within the society, creating alternate value for the firm. Significantly, there is no hefty penalty for defaulting CSR norms. Only an explanation and minor penalty charges is to be given and paid by the board in its report for such non-compliance. So, it seems there is no real coercive factor. The Government has adopted a peaceful strategy with the provision- either contribute to society or inform the society as to why they (corporate sector) are not contributing.

A study carried out by Singla and Arora (2015) involves analysis of social disclosure practices of large manufacturing companies. The study intended to check the CSR disclosure practices based on 18 items of corporate social disclosure index. In a SFA1A paper 'An introduction to CSR', a primary classification of the areas addressed by CSR, reflecting CSR goal and principles are classified into three categories namely Environment, Social and Economic (Katsoulakos, Sapouna and Zevgolis, 2004). Srivastava (2015), in her paper 'Corporate Social Responsibility reporting in India' examines the social responsibility reporting practices adopted by two large size Indian companies - Hindustan Lever Ltd. And Infosys Ltd. The findings of her paper reveals that the companies are reporting many CSR practices in their annual reports, but there is a need to establish relationship between social responsibility discourses and value of a firm and also validating relevance of different modes of disclosures for the internal and external users. In a study conducted by Robert, Adams and Hill (1998), on 150 annual reports from six European countries examined social reporting practices using content analysis. The results of the paper indicate that large companies are significantly more likely to disclose all types of corporate social information. Drawing on existing (Pre-Companies Act, 2013 scenario) theoretical and empirical literature on the rationale behind Corporate Social Responsibility (CSR), Sarkar and Sarkar, (2015) in their working paper

analyses the potential implications of mandated CSR under the recently enacted Companies Act, 2013 in India on firm incentives. By empirically examining the voluntary CSR behavior of a sample of 500 large companies listed on the Bombay Stock Exchange for the period 2003-2011 that predates the new regulation, they looked into the responses of corporates that come under the ambit of the law, implications for resource availability and delivery of social goods, and the prospects and challenges of implementing mandated CSR. Kumar, (2014) in his paper attempted to analyze the CSR status in India. His paper reported that there is a need for creation of awareness about CSR amongst the general public to make CSR initiatives more effective. Such efforts will also motivate other corporate houses to play an effective role in addressing issues such as access to education, health care and livelihood opportunities for a large number of people in India through their innovative CSR practices.

Objectives of the Study

In order to study the CSR activities performed by the Maharatna companies, the following objectives have been drafted:

- To study the types of CSR activities carried out by the Maharatna Companies in India.
- To determine the pattern of CSR activities followed by the Maharatna Companies over the period of time.

Scope of the Study

The present study is undertaken to determine the Corporate Social Responsibility (CSR) initiatives adopted by Companies operational in India. For this objective, few selected Companies were taken as case study on the basis of their status of Maharatna Companies conferred to them by the Department of Public Enterprises, Government of India.

In Indian Vedic verses "*Ratna*" is denominated as treasured gems and precious stones. Symbolically, the terms Maharatna, Navratna and Miniratnas are supposed to stand for such combination of gems and precious stones in the hierarchical order. The *Maharatna* (*Maha*=Vast and *Ratna*=Gemstone), the *Navratna* (*Nav*=Nine and *Ratna*=Gemstone) and the *Miniratna* (*Mini*=Small and *Ratna*=Gemstone) are symbolically are segregation of companies on the basis of their expansion and market value. It is of great importance for the

companies to be inducted into the list of Ratnas in the country, because it gave them a different status and level in the society and among the other private and public undertakings (<http://www.employment-news.in/>).

Research Methodology and Hypotheses of the Study

The present study is taken to know about CSR initiatives undertaken by the Companies. The study is based on secondary sources of information. As per Department of Public Enterprises (DPE), Seven (7) Maharatna Companies (BHEL, CIL, GAIL, NTPCL, IOCL, ONGCL and SAIL) were undertaken for the study. The analysis of the results and discussions thereon is made on the basis of Content Analysis technique. Information were also collected from other relevant websites, apart from the Annual Reports of the Maharatna Companies.

Considering wide variations of activities conducted by the Maharatna companies this paper has grouped the CSR activities into eight categories. They are :

- Environment Management & Sustainable Development
- Community Development
- Healthcare & Medical
- Education
- Donations & Charities
- Conservation of National Heritage Sites
- Sports
- Women Empowerment.

On the basis of the objectives of the study, the work also intends to investigate whether the CSR reporting practices have been followed uniformly across the items under consideration over the period of time by the Seven Maharatna Companies or not. For the purpose of testing the null hypotheses the variables are determined on the basis of '1' and '0'. If an item has been disclosed '1' has been assigned and if not then '0' has been assigned. Thus, the Null hypotheses are :

Null Hypothesis (Ho1): There is no significant difference in mean values of the item-wise disclosure of CSR activities performed by the Maharatna Companies over the period

of time. (Ho: μ Environment Mgt. & Sustainable development₁ = μ Community Development₂ = μ Healthcare & Medical₃ = μ Education₄ = μ Donations & Charities₅ = μ Conservation of National Heritage Sites₆ = μ Sports₇ = μ Women Empowerment₈).

Alternative Hypothesis (H₁): μ Environment Mgt. & Sustainable development₁ \neq μ Community Development₂ \neq μ Healthcare & Medical₃ \neq μ Education₄ \neq μ Donations & Charities₅ \neq μ Conservation of National Heritage Sites₆ \neq μ Sports₇ \neq μ Women Empowerment₈.

Null Hypothesis (Ho2): There is no significant difference in mean values of the Year-wise disclosure of CSR activities by the Maharatna Companies. (Ho: μ BHEL₁ = μ ONGCL₂ = μ SAIL₃ = μ CIL₄ = μ GAIL₅ = μ IOCL₆ = μ NTPCL₇).

Alternative Hypothesis (H₁2): μ BHEL₁ \neq μ ONGCL₂ \neq μ SAIL₃ \neq μ CIL₄ \neq μ GAIL₅ \neq μ IOCL₆ \neq μ NTPCL₇.

To test the Null Hypotheses of the study, Analysis of Variance (ANOVA) test has been applied. It is a procedure that tests for significant differences between three or more means. It determines significance via the calculation of the F Statistic. As the study intends to test the significant mean difference in reporting CSR activities by the Maharatna companies and as such the nos. of parameters considered is more than three, the ANOVA test has been applied.

Period of the Study

To achieve the objectives of the study, five (5) year's Annual Reports of the selected Companies are into consideration i.e. Annual Reports for the years 2008-09, 2009-10, 2010-11, 2011-12 and 2012-13. The secondary sources of information were collected from Annual reports, relevant books, journals, websites, other reports and so on.

Result and Discussion on CSR Practices of Maharatna Companies

From the analysis of the Annual reports of the Maharatna companies over the five year study period, it has been noticed that all the companies have given thrust to different forms of Corporate Social Responsibilities. Table no. 1 reflects the different thrust areas of Maharatna Companies over 2008-13 study periods.

**Table 1 : Thrust areas given by Maharatna Companies
during the study period**

Sl. No.	Name of the Maharatna Company	Thrust Area(s)
1.	BHARAT HEAVY ELECTRICALS LIMITED (BHEL)	Self-employment generation
		Environment Protection
		Community development
		Education
		Health management & medical aids
		Orphanages & Old-age Homes
		Infrastructural Development and Disaster/ Calamity Management
2.	COAL INDIA LIMITED (CIL)	Environment Management & Sustainable Development
		Community Development
		Healthcare & Medical
		Education
3.	GAS AUTHORITY OF INDIA LIMITED (GAIL)	Community Development
		Infrastructure, Drinking Water, Sanitation
		Literacy Enhancement and Empowerment
		Educational Aids
		Healthcare and Medical
4.	INDIAN OIL CORPORATION LIMITED (IOCL)	Clean Drinking Water
		Health & Medical Care
		Expansion of Education
5.	NATIONAL THERMAL POWER CORPORATION LIMITED (NTPCL)	Education and capacity building facilities
		Healthcare support
		Sanitation and public health
		Promotion of sports and games
		Community centers

		Vocational training and capacity building
		Skill development centers
		Access to water, road & electricity
		Support for agricultural activities
		Other initiatives considered beneficial for the neighbourhood population around the business units
6.	OIL AND NATURAL GAS CORPORATION LIMITED (ONGC)	Education including vocational training
		Health Care
		Entrepreneurship Schemes (self help and livelihood generation)
		Infrastructure support near ONGC's operational areas (roads, bridges, schools, hospitals in & around its operational units)
		Environment Protection, Ecological conservation and promotion
		Protection of heritage sites, UNESCO heritage monuments, etc.
		Promotion of artisans, craftsman, musicians, artists, etc
		Women Empowerment, Girl Child Development and Gender Sensitive projects
		Promoting sports and sportspersons
		Water management
		Initiatives for physically and mentally challenged persons
		Sponsorship of seminars, conferences, workshops, etc
7.	STEEL AUTHORITY OF INDIA LIMITED (SAIL)	Development of Model Steel Villages (MSVs)
		Providing Medical & Healthcare
		Immunization
		Ante and post natal care
		Education

	Access to Water facilities
	Construction of roads, Road Side Drains & Streetlights
	Environment
	Women Empowerment
	Assistance to people with disabilities
	Sustainable Income Generation through Self Help Groups
	Promotion of Sports, Arts, Culture and
	Recreational Activities, etc.

Source : Compiled from Annual Reports of the Companies for the Year 2008-09, 2009-10, 2010-11, 2011-12 and 2012-13.

Table 2 : Nos. of companies disclosing the item-wise parameter in the relevant financial year

Criteria	2008-09	2009-10	2010-11	2011-12	2012-13
Environment management and sustainable development	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)
Community development	6 (85.71)	7 (100)	7 (100)	6 (85.71)	7 (100)
Health Care and Medical	5 (71.43)	6 (85.71)	7 (100)	6 (85.71)	7 (100)
Education	3 (42.86)	6 (85.71)	6 (85.71)	6 (85.71)	7 (100)
Donations and Charities	2 (28.57)	0	1 (14.29)	3 (42.86)	2 (28.57)
Conservation of National Heritage sites	1 (14.29)	2 (28.57)	1 (14.29)	1 (14.29)	2 (28.57)
Sports	1 (14.29)	1 (14.29)	1 (14.29)	0	1 (14.29)
Women empowerment	0	2 (28.57)	0	0	0

Source : Computed from the Annual Reports of BHEL, ONGCL, SAIL, CIL, GAIL, IOCL and NTPCL.

Note : Figures in parenthesis shows percentage of disclosure scores.

The CSR initiatives are taken up by the companies in different parts of the country depending upon their business interest and need and requirements of the society. The study intends to determine the frequency of incurring CSR related costs by the Maharatna Companies over the period of time and by performing content analysis the Table 2 and Table 3 are derived. Almost all the companies are giving special thrust on Environmental management and sustainable development initiatives (Table 2).

Table 3 : ANOVA: Item-wise disclosure by MAHARATNA Companies

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	290.800	7	41.543	56.329	.000
Within Groups	23.600	32	.737		
Total	314.400	39			

Source : Computed.

Table 4 : POST HOC ANALYSIS MATRIX (Scheffe test) :

Item-wise disclosure by MAHARATNA Companies

Multiple Comparisons (Mean Difference)

Dependent Variable: Numbers of items disclosed

CSR activities	EM&SD	CD	H&MC	Edu	D&C	NHS	Sprts	WE
EM&SD		0.400 (0.999)	0.800 (0.944)	1.400 (0.484)	5.400* (0.000)	5.600* (0.000)	6.200* (0.000)	6.600* (0.000)
CD			0.400 (0.999)	1.000 (0.839)	5.000* (0.000)	5.200* (0.000)	5.800* (0.000)	6.200* (0.000)
H&MC				0.600 (0.989)	4.600* (0.000)	4.800* (0.000)	5.400* (0.000)	5.800* (0.000)
Edu					4.000* (0.000)	4.200* (0.000)	4.800* (0.000)	5.200* (0.000)
D&C						0.200 (1.000)	0.800 (0.000)	1.200 (0.674)
NHS							0.600 (0.989)	1.000 (0.839)
Sprts								0.400 (0.999)
WE								

Source : Computed.

Note : EM&SD = Environmental Mgt and Sustainable development.

CD= Community development.

H&MC= Health and medical care.

Edu= Education.

D&C= Donations and Charity.

NHS= Conservation of National Heritage sites.

SPRTS= Sports.

WE= Women empowerment.

*. The mean difference is significant at the 0.05 level.

Figures in parenthesis show significance value.

Analysis of the ANOVA estimates (Table 3), shows that the Null Hypothesis No. 1 is statistically significant at 5 percent level of significance, which means that the null hypothesis of no significant mean difference in the item wise disclosure of CSR activities by Maharatna Companies is rejected. Thus, the alternative hypothesis is accepted justifying that there is a significant mean difference in the item-wise disclosure of CSR reporting practices followed by Maharatna companies during the study period.

To determine the variables amongst which there is a significant mean difference, a Post Hoc analysis has been performed by using Scheffe test of significance (Table 4). Examination of the Scheffe test of significance reveals that there are four mean comparisons that are significantly different. The results of Post Hoc analysis reported that there is a considerable mean difference between Environmental management and sustainable development; Community development; Healthcare and medical & Education with the mean values of Donations and Charity; Conservation of National Heritage sites; Sports & Women empowerment.

Table 5 : Nos. of criteria disclosed by the Maharatna Companies in the relevant financial year

Company	2008-09	2009-10	2010-11	2011-12	2012-13
BHEL	4 (.50)	4 (.50)	4 (.50)	6 (.75)	6 (.75)
ONGCL	3 (.375)	6 (.75)	6 (.75)	1 (.125)	6 (.75)

SAIL	5 (62.50)	5 (62.50)	4 (50)	4 (50)	5 (62.50)
CIL	4 (50)	4 (50)	4 (50)	4 (50)	4 (50)
GAIL	3 (37.50)	4 (50)	4 (50)	5 (62.50)	4 (50)
IOCL	2 (25)	3 (37.50)	5 (62.50)	5 (62.50)	5 (62.50)
NTPCL	5 (62.50)	5 (62.50)	4 (50)	5 (62.50)	4 (50)

Source : Computed from Annual Reports of BIHEL, ONGCL, SAIL, CIL, GAIL, IOCL and NTPCL.

Note : Figures in parenthesis shows percentage of disclosure scores.

Analysis of annual reports and as reported in table no. 5 it has been found that all the Maharatna companies are continuously engaged in different types of CSR based activities over the five year study period. All companies have consistently improved their number of CSR activities undertaken during the study period.

With respect to the second hypotheses of the study, the ANOVA test result depicts that there is no significant difference in the mean values of year-wise disclosure of eight parameters of CSR activities by the Maharatna Companies (Table no 6). In simple terms it means that the null hypothesis is accepted and there is no chance of accepting the alternative hypothesis. Consequently as there is no significant difference in the mean values, the need for estimating Post - Hoc Scheffé test of significance is less relevant. Accordingly, the result of Post Hoc analysis depicts the same as expected

Table 6 : ANOVA: Year-wise disclosure of eight parameters by MAHARATNA Companies

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.486	6	.581	.424	.857
Within Groups	38.400	28	1.371		
Total	41.886	34			

Source : Computed.

Thus, as a matter of testing the hypotheses of the study, it has been estimated that the first Null hypothesis got rejected at 5 percent level of significance and the second hypothesis cannot be rejected.

An extensive review and content analysis of the Annual reports of the companies helps to indentify some of the major findings of the study towards CSR activities of the companies during the study period.

- 1) The Companies do not follow a uniform pattern of providing information about their CSR initiatives undertaken. For example, in case of COAL INDIA LIMITED, it provided information about the CSR Fund allocation in aggregate manner, i.e. it includes CSR Fund allocation made by its subsidiary companies. But on the other hand, the other six (6) Companies provide the same information in a segregated manner.
- 2) Each of the Companies have tried to improve their CSR Reporting System in their Annual Reports over the period 2008-09 to 2012-13, which is a positive sign indicating that the future Annual Reports would provide much clear view about the allocation of fund for CSR activities and information about the avenues in which such expenditures are incurred are expected to be provided.
- 3) All the Maharatnas have complied with the guidelines framed by the DPE (Department of Public Enterprises), Government of India and the Presidential Directives issued for upliftment of SC/ST population by providing them employment opportunities.
- 4) In case of some Companies among the Seven (7) under our consideration, a separate report is prepared containing detailed information about CSR initiatives undertaken by them. But, such reports relating to periods prior to last one/two years are hardly available in the Companies' websites.
- 5) All companies are giving special thrust to environmental issues and role of their organization towards sustainable development. Apart from this, observation of annual reports shows that they are also primarily focusing on community development, healthcare and medical facilities and education related activities.

- 6) In order to help women to become self-reliant, during the year 2009-10, NTPCL has provided assistance to 500 tribal girls/women in 15 tribal villages of Udaipur District of Rajasthan. A Girls' Hostel was constructed at Guntur District of AP and financial support was also provided for organizing educational and developmental workshop for Kashmiri migrants. 50 Solar Lanterns were provided to Girls' Hostel attached to one of the Kasturba Gandhi Balika Vidyalaya in the vicinity of NTPC Korba Station through TERI under the LaBL campaign.
- 7) ONGCL is the only Maharatna Company which has reported that they are providing assistance to sports and related sections of the country through their CSR platform.
- 8) In terms of donations, reliefs and charities, SAIL and BHEL contributed towards Uttarakhand food in 2012-13; IOCL and GAIL donated funds to the relief operations after cloud burst in Leh in 2010-11; SAIL, ONGCL, BHEL, IOCL and others also significantly contributed towards post flood and earthquake relief operation across the country.
- 9) Each of the Maharatna Companies has their own well-structured areas in which they carry out their activities towards the welfare of the environment and mankind. Among these areas, some are common among all the 7 Companies whereas some are heterogenous in nature.

Recommendations for Improving CSR Reporting Practices

After analyzing the Annual Reports of the Maharatna Companies, a number of facts have come to light and on the basis of the findings of the study some areas of improvements are highlighted in succeeding points for better CSR reporting practices of the Maharatna Companies. They are:-

- 1) Information about CSR activities of the companies should be disclosed and reflected within the Annual Reports.
- 2) Monetary facts and figures such as amount allocated towards CSR, fund spent towards various welfare activities, etc. must be provided in the Annual Reports of the respective Companies for the users of such report in future.

- 3) Sustainability Reports, if prepared by the Companies, relating to a period of at least past two years must be made available in the Companies' websites.
- 4) GAIL in its Annual Report 2012-13 had provided its CSR Fund allocation, which as per our findings can be considered the best presentation, as it showed sector wise allocation of funds.
- 5) There must be a specific format to be followed by the Companies for the purpose of recording the CSR initiatives and expenditures in a uniform pattern.

The present study is considerably limited in one sense as it was intended to understand the CSR reporting practices followed by Maharatna companies during 2008-09 to 2012-13, the study does not consider the Annual reports prepared by the companies after Companies Act, 2013. Clause 135 of the Indian Companies Act, 2013 along with Companies (Corporate Social Responsibility Policy) Rules, 2014 and other notifications related thereto makes it mandatory (with effect from 1st April, 2014) for a firm with a net worth of at least Rs. 500 crore with minimum turnover of Rs. 1000 crore or a net profit of Rs. 5 crore or more to spend at least 2 percent of the average net profits of the preceding three years on CSR (<http://www.grantthornton.in/companiesact2013>). This limitation of the paper gives an ample scope for future work to be carried on in similar line.

Conclusion

After making careful observation of the data sets, the Maharatna Companies in India are continuously striving for efficient CSR activities for the overall development of the environment and the entire mankind living within a specified radius of its various work centres. These initiatives not only help to improve the quality of life and standard of living of the people living around the work centres, but also help to a great extent to build a positive image of the Company. It has been also found that the CSR initiatives of the Maharatnas not only includes Social and Environmental welfare activities, but also includes a number of projects which helps to promote the generation and usage of renewable or alternative sources of energy which is a effort to make the world self-sufficient of energy in future when, the non-renewable sources of energy may become exhausted. A Company with a very well structured and organized set of CSR goals and activities is a Company to be adored by all and its future

prospects to prosper is always more as because it will receive support from large number of beneficiaries of its CSR initiatives.

Thus, with the continuous expansion of business giants like Maharatna Companies, role of such giants is becoming pivotal to social change. It is expected that different developmental activities under the respective CSR initiatives of the companies shall be carried out on a continuous basis in future and helps the overall development of the society, country and the whole world at large.

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BOLLYWOOD'S REPRESENTATION OF NORTH EASTERN STEREOTYPES IN MAINLAND INDIA

Luku Morang

ABSTRACT

The Bollywood industry has become a global mass media instrument with a remarkably rich and diverse production of movies on different issues of Indian life. While Bollywood has explored different socio-cultural themes it has never featured North East India in its real life situations. It is always seen to be misrepresented through distorted images and the people from North East are portrayed as outsider to an alien land and culture who are constantly in search of identity in a global world. Often the characters have to face exclusion as if they are from an underdeveloped and unaccustomed region with eccentric and peculiar lifestyle and habits. They are often treated as foreigners in mainland India because of their distinct tribal physique. This cultural stereotyping further raises the issue of racial discrimination and subordination that the people of northeastern states face in mainland India. North Eastern people in mainland India becomes outsider with stereotypical characterization as backward, underdeveloped, and tribal people. Based on this observation this study intends to do a content analysis of few Bollywood movies like Chak De India (2007), Mary Kom, Shudh Desi Romance (2013), Aisa Yeh Jahan (2015), Nasha (2013), Margarita with a Straw (2015), Joy Ho Democracy (2015) etc. and try to explore the politics of marginalization in twenty-first century India. For that the study intends to take recourse to different film study approaches and other theoretical perspectives to underscore the ideology and hegemonic exercises of mainland Indians in such representation of the North Eastern ethnicity in mainland India.

Keywords : *Bollywood, North East India, identity, eccentric, stereotyping, marginalization, outsider, representation.*

Introduction

The 'Bollywood' commercial Hindi film industry as an 'entertainment industry' has become a global mass media instrument with a remarkably rich and diverse production of movies on different issues of Indian life. While Bollywood has explored different socio-cultural issues it has never featured northeast India in its real to life situations. Although the North East is a rich repository of multifarious tribes and ethnic cultures, there is only a token representation of this vast indigenous culture in Bollywood commercial cinema. In some movies the region has indeed been projected as a volatile place of unrest with insurgency operations, bomb blasts, kidnappings and hijackings of different militant groups. In certain other attempts the region is seen to be misrepresented through distorted images and the people from northeast are portrayed as outsider to an alien land and culture who are constantly in search of identity in a global world. Bollywood movies perpetuate certain stereotypical categorization of people from northeast as backward, violent, and underdeveloped tribal people with certain eccentric and peculiar habits and identical lifestyle. Bollywood movies as a dominant ideology of mainstream Indians try to present a make believe version of life and the tribal culture without having any extensive research on the different issues.

Objectives

This study is based on the hypothesis that Bollywood cinema is not successful in contextualizing the socio-cultural interaction between mainland Indians and northeastern tribes. So, the study intends to analyze a few Bollywood movies which try to represent the experience of northeastern people as outsiders in mainland India. This study will look at that representation in Bollywood as an intellectual silencing and will take recourse to different film study approaches and theories in interpreting the cultural stereotyping of the northeastern ethnic culture.

The study intends to consider Bollywood films as text and as complex object for investigation and inquiry through which the production and dissemination of meanings take place. The main objectives of the study are to identify the multi-layered politics of representation of northeastern life and culture in the films and how it culminates in cultural stereotyping. For

that purpose the study will do a content analysis of Bollywood films by adopting qualitative research technique of describing, explaining, and interpreting the contents of Bollywood films. For the purpose of the present study seven Bollywood movies have been selected.

Methodology

This study attempts to establish that the region and the people from North East India are often stereotyped, exoticised and eroticized in the cinematic space of Bollywood. This study will be a critique on the ideological considerations of the mainland Bollywood filmmakers which result in further marginalization of the supposed mysterious culture in the northeastern region. This study will be analytical and descriptive in nature. This study will consider films as texts and interpret films as object of inquiry with the methodological openness and adopt qualitative research methods in the form of content and textual analysis of Bollywood films. Based on the premises of inductive reasoning the study will identify patterns and themes through interpretation of films as text.

The textual analysis of Bollywood films intends to assert that the Bollywood films promote certain agendas of mainstream filmmakers. The films are chosen from different periods. In all of these films northeast India and its people are represented through a homogenized narrative. All these films represent and portray northeastern people as marginalized sections of greater Indian society and addresses only the dominant ideology of the elite mass in mainland India to continue to marginalize and supplement the process of 'othering' of the supposed mysterious culture.

Apart from looking at films as text the study intends to look into reviews of critics and audiences in websites, newspaper and magazine articles to understand a film's reception. The theoretical considerations of this study will draw a broad perspective resulted from considerations of Lacanian psychoanalysis, Althusser's theory of ideology, Postcolonial theory, Cultural materialism, Feminist film theory etc.

Stereotypes in Bollywood

Stereotypes are some generalized images and fixed repeated characterization of a person or a given social group. Basically stereotyping is understood as negative attitudes

with some easily identifiable character traits about the person, social group and their members that have been represented. It is generally perpetuated through certain racial remarks, sexual remarks, and gender remarks and it finally results in racial prejudice and discrimination against them.

Edward Said, in *Orientalism* (1978), laid out a theory which argued that the differentiation that the West has made between the Orient (East) and the Occident (West) is a fabrication which serves to meet the needs of the West to exert its political and hegemonic power. The northeastern part is often viewed as 'Other' and outsider to mainland India for being in geographically separate location with different historical origin and culture. The people from northeast India are categorized and homogenized into one identical group in Bollywood ignoring the vast diversity of cultures and identities.

Bollywood film industry, as a product of mainland India and also located at the centre, has put northeastern culture and ways of life into the margin in terms of cinematic representation. Bollywood, governed by the idea of profit and commitment to entertain, represents the northeastern people with some readily available images as irrational stereotypes. It results in further discrimination and alienation of the marginal tribes from the region. Bollywood presents a make believe version of the region in its cinematic space and all the people from northeast are labeled as 'Chinese', 'chinky', 'tribal' people.

Woman as object of Desire in *Shudh Desi Romance*

Rana Kabbani in her book *Imperial Fictions: Europe's Myths of Orient* (Pandora, 1994) looks at the production of the Eastern female as a figure of licentiousness and objectification of them as exotic creatures. Feminist film theory has adopted film critic *Laura Mulvey's* observation that the female figure is always constructed as an object to be looked at and hence construct a 'masculine' subject position for the viewer. Being in centre there is a common misconception in mainland India that North Eastern girls are shameless and dress to excite men. Bollywood films as part of the mainstream culture essentially works to eroticize and sexualize the tribal women by setting her up as the 'other' with certain negative eccentric attributes as distinct from the mainstream collective self. Northeastern women are presented

to the audience as spectacle for male desire, as decorative objects that dance, pose and seduce men with provocative clothes.

Bollywood portrays women from northeast India with certain feminine attributes and assassinates the character of women by homogenizing as if all women in this region are affectionate, cheerful, childlike, compassionate and tender. This image and identity of the northeastern women gets a representation in the form of the lady protagonist of the movie *Shudh Desi Romance* (2013). It is a romantic comedy directed by *Muneesh Sharma* where *Parinneta Chopra* and *Sushant Singh Rajput* play the lead roles. The film is set in Jaipur, Rajasthan and tells us a triangular love story and explores the views of the mindset of young generation on live-in-relationships and arranged marriages. In this movie a girl from Assam, who is studying at Jaipur, is seen to have in live-in-relationship with a boy from mainland India. The tender lady protagonist from Assam who is all alone in mainland India is an object of curiosity and male desire and has been eroticized in the cinematic space. The lady protagonist is portrayed as a figure of licentiousness that has lots of boyfriends which is nothing other than a racial prejudice and sexist subjugation by the male gaze in mainland India. One character of the movie also remarks that Guwahati, the capital city of Assam is very far from mainland India. This movie thus portrays a girl from Assam who is constantly in search of her identity in mainland India.

North Eastern outsiders in *Mary Kom* and *Chak De India*

Homi Bhabha in *Nation and Narration* (1990) argues against the tendency to denote the Third World Countries into a homogenous identity. The dominant class has a practice to hold conflicting ideas about the marginalized class to exercise their hegemonic designs. The ideology of the mainland India exercises their neo colonialist agenda for further interrogation of the marginal culture of the periphery to lead them to feel a sense of double marginalization. Although the 30 percent of the total population is 'tribal' all the northeasterners are believed to be tribals due to some similarities in the Mongolian origin population of the northeast. The distinct and peculiar lifestyle with ethnic, cultural, religious and linguistic diversity is never recognized and all the northeasterners are racially labeled as 'Chapta' (flat nosed), 'Oriental' or 'Chinky'. Just because of their physical appearance, they are not accepted in

mainland India and often treated as foreigners on the soil of their own country. Khasi commentator *Patricia Mukhim* comments: '*the region is treated as 'enemy territory' which needs to be subdued by force.*'

Shimit Amin's Chak De India (2007) is simply known to be a patriotic movie where India's national game hockey is being taken up as the backdrop of the narrative. This movie glorifies Indian national women's hockey team and shows the team becoming world champion after overcoming many hurdles. Two woman hockey players from Manipur and Mizoram are treated as foreigners in mainland India and subjected to repeated sexual harassment. These two female athletes from the northeast India are asked by the coordinator:

"Welcome! We are glad our guests from the farthest corners of India could join us". The girls stare in silence and the man asks "What's wrong? Aren't you happy?" And the girls reply, "How can we be happy if we are regarded as guests within our own country?"

A play back song is used as background to these two female characters from northeast India: "*North-east ki taazgi inki aan baan aur shaan hai*" (the freshness of the north-east is their honour and their pride). It symbolizes the mainland conception of northeast India as a pristine land separate from theirs and in distance from them.

Despite a patriotic movie it fails miserably in uniting and uplifting the feelings of nationalism. It rather signifies the filmmaker's lack of imperative to narrate the nation and integrate plural entities into the national consciousness.

Mary Kom (2014) is based on Indian Boxing maestro *M.C Mary Kom's* life. In this movie director *Omung Kumar* tries to portray the life of five-time World Boxing champion and Olympic medalist *M.C Mary Kom* from Manipur. The movie has also received positive response from the reviewers for its treatment of the ongoing armed violence in Manipur. The film opens with scenes of violence, curfew and destruction that *Mary Kom* and many Manipuris have witnessed right from their childhood.

The movie *Mary Kom* is also about the exclusion the region has to face in mainland India. Indian woman boxing maestro *Mary Kom* for being a player from the northeastern

part of India has to face identity loss due to the deep set racism against the 'chinki-looking' people. The movie briefly highlights on activities of the boxing federation in India and how they are biased towards northeastern players.

The film is set in the Imphal and the protagonist is intimately tied and framed against a background of harsh mountains, tall trees, and clean streams. The place where *Mary Kom* is shown to have her practice session is in the hilly terrains. Though it was supposed to be in Manipur actually the shoot was done in Manali, Himachal Pradesh. Apart from that the movie has only two ritual sequences which exactly portray the culture in Manipur though it is supposed to be a genuine cinematic work. One is *Kom's* Christian wedding, and the other is a tribal celebration held when *Kom* returns after victory from a tournament.

The movie also raises the issues of the politics of appropriation and representation of Bollywood Hindi industry. The movie has been given a harsh criticism for *Priyanka Chopra's* portrayal of a North Eastern boxing maestro. The Bollywood actor representing *Mary Kom* is a North Indian Punjabi whose identity, culture and race are different from the tribal community from which *Mary Kom* hails has been regarded as a kind of racism against the northeastern people. The Bollywood filmmaker only caters to the masses for entertainment. Educating people about the story of *Mary Kom* and the conditions of her hometown and her real life has little to do with the concerns of the movie maker. The filmmaker did not bother to cast a Manipuri actor to play the lead role of *Kom* who could have done justice to the role because of similarities in accent to physical features. According to *Richard Kamei* in www.saddahaq.com,

"The hegemony of Bollywood tilts towards upper caste, class and the hindi speaking culture. The manner in which Priyanka Chopra appropriates and represents Mary Kom and her tribal identity is identifiable with lowest form of racism."

The movie received success and acclaim from audiences, critics and others but all at the cost of misrepresenting and misappropriating *Mary Kom* and the tribal community she belongs to.

The North Eastern 'tribal' from margin in *Nasha*, *Software Hardware Kya Hai Yaroo* and *Margarita With a Straw*

Language can be used as a medium through which a hierarchal structure of power is perpetuated, and the medium through which conceptions of truth, order and reality is established. *Michel Foucault* argues, "Those who hold language hold power. Language not only constructs and colours our experience of the world, it can also be used to marginalize, to constrain, or to enable". Hindi language film industry as the language of the elite class in mainland India use cinematic representation to subjugate the ethnic culture from the margin.

The global media Bollywood portrays the tribal identity of the region by a standard set of attributes like goodness, spontaneity, and innate simplicity. To them cuteness and shyness are the inborn qualities of the tribal people of northeast. The northeastern tribal people like dancing and singing with their drums and erotic costumes. In Bollywood's portrayal the youths are music lovers and prefer smoking and drinking than study. They are introduced as stereotypes with a guitar in hand, branded shoes and apparels, and basically English songs on their lips. This type of representation is far away from reality as such.

Nasha is 2013 Indian teen coming-of-age film directed by *Amit Saxena*. The story is set in Panchgani, a hill station in the state of Maharashtra. Saahil and his gang of cool, happy-go-lucky and jolly fellows belong to the best gang of the school who has their share of fun and pranks. In their group there is a student from northeast India who goes to study in an international school in Panchgani. The teen students including the boy are portrayed as loud, shameless and boisterous who share cheap jokes, adult comments and sing semi erotic songs. Here the boy from the region becomes an outsider to the mainstream culture and life and a silent observer to all the happenings around. There are also assaultive and objectionable comments on food habits and diet of northeast people. There is a racist joke on Mizo community of the Mizoram in a song of the movie.

Margarita with a Straw (2015) directed by *Shonali Bose* talks about a girl with cerebral palsy and her struggle with the normal activities in her life. A student of Delhi University

and an aspiring writer who writes lyrics and creates electronic sounds for an indie band falls for the lead singer. Being rejected by the boy this rebellious young woman leaves her home in India to study in New York University and again unexpectedly falls in love and the rest is about her journey of emotional, sexual exploration and self discovery. The movie also deals with the issue of lesbianism and the treatment of both Indian and American society to the differently-abled persons. This girl with cerebral palsy falls to a boy from Assam who sings Assamese songs. This boy from Assam is portrayed again as a stereotype with his eccentric tribal physique, unusual and distinctive accents and 'chinki' look.

Software Hardware Kya Yaroon (2012) is an indie venture directed by *Rahi Kisku* that makes an attempt to understand the lives of IT and Software Engineers in Bangalore during recession. The plot revolves round four close friends cum roommates working in the same IT Company (Srinivas Naidu from Hyderabad, Girish Reddy from Telangana, Narrain from Chennai and Nongem from Mizoram). They are part of a programming team for a project in the same company and get a chance to go on site duty to Japan along with other five members. The movie can be categorized as a slapstick comedy where comedy of errors begins due to difference in accents, culture and social etiquette between the Japanese instructor and them. The character from Mizoram is portrayed with his unusual and identifiable accents and with his eccentric habits and practices which becomes a fun factor. His friends consider him as Japanese rather than an Indian. Here the boy from Mizoram becomes an outsider and a silent observer among mainland Indians with his individual quirks distinct from others.

North Eastern eccentrics in *Joy Ho Democracy* and *Aisa Yeh Jahan*

According to *Homi Bhabha* the colonizer circulates Stereotypes about the laziness or stupidity of the colonized population through racist jokes, cinematic images etc. In *The Location of Culture* (1994), he explores the ways stereotyping and discrimination work in terms of a theory of discourse. The mainland Indians believe all the northeastern part of India as a hilly and remote terrain with inaccessible deep jungles. Their distinct language, dress, and identical accent make them the marginal other in mainland India. Their distinct language and accent make them to be gibberish in trying to be Hindi speakers. There is also a general

feeling among North Indians that North-East Indians are unapproachable due to this language difference.

Joy Ho Democracy (2015) is an Indian comedy film written and directed by *Ranjit Kapoor* and stands as a dark satire on Indian politics. In the plot a hen becomes the subject of cross border dispute after it wanders into the no man's land area between India and Pakistan, triggering panic among the army posts of the two nations. The home minister sets up a committee meeting to discuss the situation, and decide whether India should go for war or not. This discussion between members follow a series of hilarious events and chaos in the committee meeting for the rules and etiquette, regional and ethnic differences and aimless arguments of members. The film thus takes a comic look and criticizes the politicians, loopholes of the nation's administration and the sensationalism of media. A character from northeastern state of Assam has been portrayed as loud ex-army Mr. Baruah. This character is presented as a farcical character with identical accents and parochial notions. The character Major Baruah speaks accented Hindi which appears totally different from others and becomes the pivot of comedy. Despite a star studded movie it fails in integrating the diverse cultural heritage of the nation.

Aisa Yeh Jahan (2015) is a socio-environmental film directed by *Biswajeet Bora* from Assam that focuses on life and survival of human being. The film has the credit to be India's first carbon neutral film. Set majorly in Mumbai, and partly in Assam and Meghalaya, it is the story of immigrants from a small town in Assam to the city of dreams Mumbai and their detachment with nature. An Assamese family settled in Mumbai gets trapped in the concrete jungle of metropolis and has to face hardships and had to return to their native place of birth for peace and solace. Director *Biswajeet Bora* first brings out the problems of urbanization and brings stark comparison between the life in mainland India and in the village life of Assam amidst natural environment. The movie also raises the issue of racial discrimination and the issue of child labour in urban life.

The characters in the movie are shown to face racial remarks. They have to keep on informing the mainlanders that Assam is a part of India and they are not outsiders. The young Assamese child maid from Assam has to constantly face derogatory and racist remarks and

who is forced to live in a city and try to be happy with whatever she has been. She has to search for her identity in the urban world as no one in the mainland India recognizes her real identity and believes her as Nepali. The director of the movie being from Assam, he has been able to portray the Assamese culture and aesthetics in realistic terms. The scenic beauty of the filmic locations and the endearing folk songs at the backdrop of the movie brings certain north eastern flavour to it. But still the filmmaker could have done more justice to the film with more realistic images of life in rural Assam being a filmmaker from the region by overlooking only the entertainment quotient and the imperative to sell the movie among mainstream audience.

Conclusion

The biggest reason for discrimination and biased representation of the northeastern identity and culture in hollywood is the lack of exposure of the land and lack of geographical knowledge. Film philosopher and critic *Andre Bazin* believed that cinema should be artistically committed to realism. Such biased representation of mainstream media like hollywood is based on complete misunderstanding and lack of empathy for the culturally-different. But for this the film-makers cannot alone be held responsible. There is a larger cultural and political subtext to such stereotyping and misrepresentation of North-eastern people in the pan-Indian mindset of the filmmakers. It is time to erase those complex perceptions and bridge the communication gap between mainland India and northeast through academic intervention.

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COMPARISON BETWEEN MANUFACTURING AND SERVICES ENTERPRISES : A DISTRICT LEVEL ANALYSIS

Rubab Fatema Nomani

ABSTRACT

The importance of the small scale sector is well established worldwide. This sector occupies a dominant position in the Indian economy. In this paper an attempt is made to undertake a comparative study of the two major categories of Micro, Small and Medium Enterprises (MSMEs), namely, manufacturing and services enterprises, in Dibrugarh district of Assam using statistical tools and techniques. It is found that the differences between the two category of enterprises is statistically significant with respect to almost all the selected parameters.

Keywords : Manufacturing enterprises, services enterprises, χ^2 -test.

Introduction

The MSME sector is an important engine of economic growth in both developed and developing countries. Studies have affirmed that small industries not only provide immediate employment on a large scale (due to their high employment elasticity), raise income and living standards of people in lower income brackets, but also promote local entrepreneurship and indigenous capabilities, widen the industrial base, promote geographical dispersal of industrial activity based on local resources, and thereby reduce regional imbalances and promote equitable distribution of income and wealth. [Tandon and Kaur, 1981; Prasad, 1983; Verma, 1996; Vinita Kumar, 1997; Rangarajan, 1999]. This sector constitutes the back bone of the Indian economy, with a significant contribution to Gross Domestic Product (GDP), industrial production, employment generation and exports. It is estimated that the /MSMEs/ SSIs (Small scale industries) in the Indian economy account for about 37% of total manufactured output and 33% of total exports of the country. As the second largest employer, this sector employs

about 110 million people in over 48 million units spread across the country, the labour intensity in this sector being about 5 times higher than that of the large industries. Also these enterprises offer a wide spectrum (over 6000) of products for mass consumption (MSME Annual Report, 2014-15).

In India the concept/definition of small scale industries has been in the process of evolution since the middle of the twentieth century. On October 2, 2006, the Govt. of India enacted the MSMED Act, 2006 which is path breaking in many respects. It not only gave clear and decisive definitions of units in different categories, but also considerably simplified registration procedures. The Act widened the earlier, rather limited concept of 'industries' to that of 'enterprises'. It integrated the three tiers of enterprises viz. micro, small and medium, based on their investment. The three categories of enterprises were classified into two classes - (a) Manufacturing enterprises- the enterprises engaged in the manufacture or production of goods pertaining to any industry specified in the First Schedule of Industries (Development and Regulation) Act, 1951. They are defined in terms of investment in plant and machinery. (b) Services enterprises- the enterprises engaged in producing or rendering of services, and defined in terms of investment in equipment. The investment limits are stated in Table 1.

Table 1 : Definition of Micro, Small and Medium Enterprises

	Investment in plant and machinery/equipment(excluding land and building)	
	Manufacturing Enterprises	Service Enterprises
Micro	Upto Rs. 25 lakh	Upto Rs. 10 lakh
Small	More than Rs. 25 lakh and upto Rs. 5 crore	More than Rs. 10 lakh and upto Rs. 2 crore
Medium	More than Rs. 5 crore and upto Rs. 10 crore	More than Rs. 2 crore and upto to 5 crore

Source: MSME Annual Report 2014-15.

Thus a major and distinct categorization of MSMEs in India is by the two types of activities- manufacturing and services. According to the Fourth Census of MSMEs, 2006, out of the total registered units in India, 67% were engaged in manufacturing activities and 33% in services activities. The growth rates are presented in Table 2.

Table 2 : Average annual growth rates(%) in number of enterprises and employment during 2001-02 to 2006-07

	Manufacturing	Services
No. of Enterprises	3.76	0.47
Employment	9.84	2.06

Source : MSME Annual Report 2014-15.

A significant change took place in 2006-07, when the coverage of the services sector was extensively broadened, by including activities pertaining to wholesale/retail trade, legal, educational and social services, hotels and restaurants, transport and storage, warehousing (except cold storage). Thus the role of the services sector has become more important now. At this critical juncture, it is important to have a detailed understanding of these two major categories from different perspectives. This study is an attempt in this direction.

We have selected Dibrugarh district in upper Assam because industrially, it is one of the most developed districts of the state and also, it has the highest number of MSMEs and generates highest employment in this sector in upper Assam. It in fact occupies third place (after Kamrup and Nagaon district) among the twenty seven districts of Assam (Statistical handbook of Assam 2014-15).

Objectives of the study

- (i) To present a comparative picture of manufacturing and services enterprises of Dibrugarh district during the study period, April 2007 to March 2011 with respect to different parameters.
- (ii) To examine statistically, the significance of the differences between manufacturing and services enterprises with respect to different parameters.

Hypothesis

To achieve objective (ii), the following hypotheses will be tested :

- (a) H_0 : There is no significant difference between manufacturing and services enterprises by investment limit.

- (b) H_0 : There is no significant difference between manufacturing and services enterprises by age.
- (c) H_0 : There is no significant difference between manufacturing and services enterprises by ownership type.
- (d) H_0 : There is no significant difference between manufacturing and services enterprises by gender of owner.
- (e) H_0 : There is no significant difference between manufacturing and services enterprises by category of activities
- (f) H_0 : There is no significant difference between manufacturing and services enterprises by caste of enterprises
- (g) H_0 : There is no significant difference between manufacturing and services enterprises by gender of workers.

Methodology

Data for the study is collected from secondary source, that is Entrepreneur's Memorandum Part-II (EM -II) DICCC, Dibrugarh. Subsequent to the MSMED Act 2006 and with effect from October 2006, filling of EM- II came into practice. EM-II gives more accurate information about the actual working enterprises. Available information on the total units(our Universe) thus found, is classified using manifold tabulation method, that is, two way and higher order tables, by the various parameters relevant to the objectives of our study. Statistically testable hypotheses are framed and the χ^2 -test is used to examine the validity of the hypotheses. χ^2 test is one of the most widely used non-parametric tests of significance. χ^2 test test enables us to determine whether or not two or more attributes are significantly associated/related. However it is not a measure of the degree or form of the relationship between the two attributes (Gupta, 2002).

Analysis of Findings

There are a total of 499 enterprises that have filed EM -II during the study period,of which 47% are in the manufacturing sector and 53% are in the services sector.

In table 3, the manufacturing and services enterprises are classified by the first parameter, the investment limit, namely micro, small and medium enterprises.

Table 3 : Classification of enterprises by investment limit

Category by investment limit	Manufacturing	Services	Total
Micro	209	256	465
Small & Medium	25	09	34
Total	234	265	499

Source : Field Study

χ^2 test is used to examine the following hypothesis.

H_0 : There is no significant difference between manufacturing and services enterprises by investment limit.

The calculated value of χ^2 is 10.2589, which is more than the table value of 3.84 at 5% level of significance and 1 degree of freedom. Therefore the hypothesis is rejected. The difference between manufacturing and services enterprises by investment limit is statistically significant.

In table 4, the manufacturing and services enterprises are classified by the second parameter, the age of enterprises.

Table 4 : Classification of enterprises by age

Age in Years	Manufacturing	Services	Total
5 -10	174	196	370
10- 15	51	60	111
15 - 20	04	04	08
20 +	05	05	10
Total	234	265	499

Source : Field Study

The difference in age between manufacturing and services enterprises is tested by the following null hypothesis

H₀ : There is no significant difference between manufacturing and services enterprises by age.

The calculated value of χ^2 is 0.04695, which is less than the table value of 7.81 at 5% level of significance and 3 degrees of freedom. Therefore the hypothesis is accepted. It means the difference in age between manufacturing and services enterprises is not statistically significant.

In table 5, the manufacturing and services enterprises are classified by ownership type.

Table 5 : Classification of enterprises by ownership type

Ownership Type	Manufacturing	Services	Total
Sole-Proprietor	202	257	459
Partnership	16	06	22
Pvt. Company & Others	16	02	18
Total	234	265	499

Source : Field Study

The difference between manufacturing and services enterprises by ownership type is tested by the following null hypothesis.

H₀ : There is no significant difference between manufacturing and services enterprises by ownership type.

The calculated value of χ^2 is 19.994, which is more than the table value of 5.99 at 5% level of significance and 2 degrees of freedom. Therefore the hypothesis is rejected. The difference between manufacturing and services enterprises by ownership type is statistically significant.

In table 6, the manufacturing and services enterprises are classified by gender of owners.

Table 6 : Classification of enterprises by gender of owners

Gender of owners	Manufacturing	Services	Total
Male	176	152	328
Female	58	113	171
Total	234	265	499

Source : Field Study

The difference between manufacturing and services enterprises by gender of their owners is tested by the following null hypothesis.

H₀ : There is no significant difference between manufacturing and services enterprises by gender of owners.

The calculated value of χ^2 is 17.6061, which is more than the table value of 3.84 at 5% level of significance and 1 degree of freedom. Therefore the hypothesis is rejected. It means that the difference between manufacturing and services enterprises by gender of their owners is statistically significant.

In table 7, the manufacturing and services enterprises are classified by category of activities.

Table 7 : Classification of enterprises by category of activities

Category of activities	Manufacturing	Services	Total
Weaving	46	72	118
Construction & Engineering	79	60	139
Forest based, Food based & Agro based	76	20	96
Others	33	113	146
Total	234	265	499

Source : Field Study

The difference between manufacturing and services enterprises by category of activities is tested by the following null hypothesis

H₀ : There is no significant difference between manufacturing and services enterprises by category of activities.

The calculated value of χ^2 is 83.2199, which is more than the table value of 7.81 at 5% level of significance and 3 degrees of freedom. Therefore the hypothesis is rejected. The difference between manufacturing and services enterprises by category of activities is statistically significant.

In table 8, the manufacturing and services enterprises are classified by caste of workers employed in the enterprises.

Table 8 : Classification of enterprises by caste of workers employed in the enterprises

Caste of workers	Manufacturing	Services	Total
General	1497	541	2038
OBC	318	148	466
SC	134	85	219
ST	187	60	247
Total	2136	834	2970

Source : Field Study

The difference between manufacturing and services enterprises by caste of workers is tested by the following null hypothesis

H_0 : There is no significant difference between manufacturing and services enterprises by caste of workers employed.

The calculated value of χ^2 is 19.74, which is more than the tabled value of 7.81 at 5% level of significance and 3 degrees of freedom. Therefore the hypothesis is rejected. The difference between manufacturing and services enterprises by caste of their workers is statistically significant.

In table 9, the manufacturing and services enterprises are classified by gender of workers.

Table 9 : Classification of enterprises by gender of workers

Gender of workers	Manufacturing	Services	Total
Male	1889	515	2404
Female	247	302	549
Total	2136	817	2953

Source : Field Study

The difference between manufacturing and services enterprises by gender of workers is tested by the following null hypothesis.

H₀ ; There is no significant difference between manufacturing and services enterprises by gender of workers.

The calculated value of χ^2 is 251.88, which is more than the table value of 3.84 at 5% level of significance and 1 degree of freedom. Therefore the hypothesis is rejected. It means that the difference between manufacturing and services enterprises by gender of workers is statistically significant.

Limitations of the study

A limitation of the study is that only those parameters on which information is available in the EM-II, DICC, Dibrugarh could be taken for analysis. Also some categories had to be merged together to obtain the minimum sample size for performing χ^2 test.

Conclusion

We observe that during the study period 47% of the units registered are in the manufacturing sector and 53% are in the services sector. There is statistically significant difference between the manufacturing and services enterprises in Dibrugarh District with respect to all the parameters, viz., investment limit, ownership type, gender of owner, category of activities, caste of workers and gender of workers. However there is no statistically significant difference between manufacturing and services enterprises by age of the enterprises. This is in tandem with a priori expectations.

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THE ROLE OF BRAMHAPUTRA CRACKER AND POLYMER LIMITED, LEPATKATA, DIBRUGARH IN THE RURAL DEVELOPMENT OF THE LOCALITY

Ratul Dutta

ABSTRACT

"Industrialisation is the process of establishing, nurturing and growth of industries in any economy and this may helpful in generation of income and means for livelihood in any region or locality. The present work is an analytical as well as descriptive one in the field of role of industries in development of the rural locality. It is a micro level evaluation study which is focused on the impact of commission of the Bramhaputra Cracker and Polymer Limited (BCPL) in the rural development of the Borbaruah locality. The reason behind the study is that in the context of Assam as well as Northeast one felt notion is that the region is lagging behind in case of industrialisation. But recently the government of India due to several eco-political reasons have tried to promote and establish industries in the different locations of Assam. This process has further gained momentum due to some specific policies of government of India such as 'Look East Policy' and 'Act East Policy' etc. Here in this case the mega and big industries which investing thousands of crore of rupees can play a very active role in case of Rural Development. It may be possible because, they have ample source of resources with them in the form of human resource, technical knowhow and infrastructure.

Keywords : Industrialisation, Rural Development, Corporate Social Responsibility.

Introduction

Industrialisation is the process of establishing, nurturing and growth of industries in any economy and this may helpful in generation of income and means for livelihood in any region or locality. However, till date industries are not playing the desired role in development of rural locality. If we consider specific case wise reference in this scenario, suppose for Dibrugarh district of the country India. The presence of large

numbers of industries as Oil India Limited, Brahmaputra Valley and Fertilisers Corporation of India, Brahmaputra Cracker and Polymer Limited and Tea Industries are visible in the district; inspite of this human development index, the financial inclusion index and socioeconomic status of the rural areas of the Dibrugarh district was not impressive as reported and computed by the various research studies. Here the researcher tries to explain the impact of commissioning of the Brahmaputra Cracker and Polymer Limited (BCPL) in the development of the rural locality of Barbaruah Development Block.

Brahmaputra Cracker and Polymer Limited (BCPL)

Brahmaputra Cracker and Polymer Limited is a joint venture of GAIL, NRI, OIL and Government of Assam. The total project cost estimated at time of establishment was in the tune of Rs.5460 crore. The project profile indicates a total polymer production of 280 thousand tonnes per annum. Government of Assam will provide exemption for entry tax on capital goods, works contract tax and sales tax on feed and products for 15 years. The Central Government will provide excise duty and income tax relief for 10 years. The schedule time of completion of the project is 60 months. The project will offer direct employment to 800 persons and indirect employment to 1 lakh persons. The project will open up avenues of opportunities in multifaceted directions. Besides opening of various socio-economic linkages, scope for setting up of chain of downstream industries is expected to open on completion of the project.¹ Finally on Feb, 2016 the BCPL project comes in to reality after a huge cost escalation to the tune of Rs.9833.52 crores.

To facilitate the growth of downstream industries of the Gas Cracker Project the Government Assam has started implementation of a Plastic Park at Gelapukhuri at Tinsukia district. An area of 500 acre has been identified and around 400 acres of which is in the final process of acquisition. The proposed site for the Plastic Park is located 3-4 kms from the Tinsukia town and about 45 kms from the Gas Cracker project site.

The project Tinsukia Plastic Park will have a world class infrastructure and business environment to attract large units in the country. All the common facilities

like training, designing, tool room, recycling units etc will be integrated into the project to make itself sufficient in all respect. The approved project cost of the Tinsukia Plastic Park covering a physical area of 500 acres is Rs.9031 lakh of which Central share is Rs.4000 lakh and state share is Rs.5031 lakh. A sum of Rs.2587 lakh has so far been released by the Govt of Assam for the land acquisition of the project. AIDC Limited has been designated as the nodal agency for acquisition of land for the Plastic Park by the Govt. of Assam.

Objectives

The present work is an empirical as well as a descriptive study on impact of commission of BCPL in the rural development of the locality. The study is conducted with the following objectives :

- (1) To study the impact of commission of BCPL in the infrastructural development of the locality.
- (2) To study the impact of commission of BCPL socio economic development of the locality.

Methodology

The study is an analytical as well as descriptive one in the field of role of industries in development of the rural locality. It is a micro level evaluation study which is focused on the impact of commission of BCPL in the rural development of the locality. The data required for this study are collected from both the primary as well as secondary sources. The primary data are collected from the sample household respondents through survey questionnaires. The secondary sources consist of various research journals, books various statistical reports of Govt. Departments & World Bank, newspapers, and annual audited reports of BCPL and websites of related search.

Sample Design

Population of the study -

The BCPL project Dibrugarh is commissioned at the Lepatkata area of the Borbaruah Development Block. The Borbaruah Development Block consists of 13

Gaon Panchayat namely Barbaruah, Garudharia, Lezai, Kalakhowa, Kotoha, Borpathar, Rajabheta, Bogibil, Niz Mancotta, Chiring Dainizan, Dulia Kakoti, Khanikar and Zakai gaon Panchayat. Hence the universe of the study is the households of the 13 Gaon Panchayat of the Borbaruah Development Block.

Sampling Technique -

The vastness of coverage and operation of the areas of the Borbaruah Development Block compels the researcher to take multistage random sampling method (Triple stage) in order to determine the sampling units.

In the first stage the researcher purposively selects the Gaon Panchayats which is in three kilometre radius area of the BCPL project as BCPL recognised the villages and Gaon Panchayat situated in three kilometre radius areas of the project as affected areas. These Gaon Panchayats are Borbaruah Gaon Panchayat, Dulia Kakoti Gaon Panchayat, Kotoha Gaon Panchayat, and Chiring Dainizan Gaon Panchayat.

The second stage random sampling selected the Barbaruah Gaon Panchayat and Dulia Kakoti Gaon Panchayat for the particular study through lottery method from the four Gaon Panchayat of the locality.

In the third stage individual respondent households are selected through stratified random sampling basis from the sample villages of the two Gaon Panchayat.

Sample Size -

Considering, the fact of large size of the respondent households in the said two Gaon Panchayat areas. A representative sample of 5 percent of the total population have been selected on stratified random sampling basis from the survey are

**Table 1 : Sampling Frame under Study Area
(Borbaruah Gaon Panchayat & Dulia Kakoti Gaon Panchayat)**

Sl. No.	Village Name	Number of Households in the village	Sampling Unit
1	Changmai Gorla Gaon	407	20
2	Lepetkata Kachari Gaon	244	12
3	Dulia Gaon	189	09

4	Dulia Mahoroni Gaon	80	04
5	Kuhiarbari Gaon	94	05
6	Kakoti Gaon	475	24
7	Bolai Tea Estate	256	13
8	Bengoli Gaon	226	11
9	Ghoronia Tea Estate	101	05
10	Changmai Gohain Gaon	298	15
11	Na Hazar Konwar Gaon	120	06
12	Patra Gaon	176	09
13	Burahazar Konwar Gaon	466	229
14	Dibrual Dehingia Gaon	615	31
15	Mattack Gaon	591	30
16	Borbaruah T.E.	455	23
Total		4793	240

Source : Field Survey

Hence the sample size of the study was 240 numbers of households. Questionnaire was served both in vernacular as well as English language to facilitate the respondent households in understanding the real objective of the study.

Results and Discussion

A brief detail of the survey areas -

The researcher undertakes two Gaon Panchayat under the Borbaruah Development Block for conducting the sample survey of the study. These two Gaon Panchayat are namely Dulia-Kakoti Gaon Panchayat and Borbaruah Gaon Panchayat. Following are some of the brief details.

Table 2 : Name of the village and number of the households under Dulia-Kakoti Gaon Panchayat

Sl. No.	Name of the Village	Area of Village (in hectares)	Number of Households	Total Population	Total Male	Total Female	SC	ST
01	Lepetkatta Kachari Gaon	327.88	244	1,219	629	590	17	1028
02	Dulia Gaon	187.45	189	872	438	434	02	840

Sl. No.	Name of the Village	Area of Village (in hectares)	Number of Households	Total Population	Total Male	Total Female	SC	ST
03	Dulia Mahorani Gaon	108.63	80	352	184	168	-	130
04	Kuhiarbari Gaon	285.21	94	450	229	221	-	-
05	Kakoti Gaon	260.36	475	2320	1127	1197	7	595
06	Bolai Tea Estate	275.39	256	1,334	659	675	-	-
07	Bengoli Gaon	267.54	226	1040	540	500	22	52
08	Ghoronia Tea Estate	146.53	101	497	255	242	-	-
09	Changmai Goria Gaon	245.01	407	1,882	989	893	46	518
Total		-	2,072	9,966	5,050	4,916	94	3,163

Source : Compiled from District Census Handbook, Dibrugarh, Census of India 2011, Series - 19Part XLI-B Village and Town wise Primary Census Abstract (PCA) Directorate of Census Operations Assam.

Table 2 shows that there are altogether 2072 numbers of households under the Dulia-Kakoti Gaon Panchayat and its total population is 9,966 numbers consisting of 5,050 males and 4,916 females. Apart from this in the Dulia-Kakoti Gaon Panchayat, there are presences of sizeable numbers of ST population counting as 3,163 numbers.

Table 3 shows that there are altogether 2,771 numbers of households under the Barbaruah Gaon Panchayat and its total population is 12,896 numbers consisting of 6,472 males and 6,424 females.

Table 3 : Name of the village and number of the households under Borbaruah Gaon Panchayat

Sl. No.	Name of the Village	Area of Village (in hectares)	Number of Households	Total Population	Total Male	Total Female	SC	ST
01	Changmai Gohain Gaon	204.54	298	1,374	698	676	1	10
02	Na hazar Konwar Gaon	185.61	120	538	263	275	-	-
03	Patra Gaon	191.18	176	818	410	408	-	-
04	Bura hazar Konwar Gaon	184.23	466	2,098	1056	1,042	10	83
05	Dibruwal Dehingia Gaon	226.54	615	2,906	1,466	1,440	-	17

06	Mattack Gaon	179.00	591	2,838	1,434	1,404	135	210
07	Borbaruah T.E.	119.11	455	2324	1,145	1,179	1	18
Total		-	2,771	12,896	6,472	6,424	147	338

Source : Compiled from District Census Handbook, Dibrugarh, Census of India 2011, Series - 19 Part XLI-B Village and Town wise Primary Census Abstract (PCA) Directorate of Census Operations Assam.

Table 4 : Details of Acquisition of Land and Compensation paid by BCPL at the time of commissioning of the project

Total acquisitioned land handed Over to BCPL	3463 B - 1K - 02 Ls
Total Govt. land Handed Over to BCPL	143 B - 1K - 04 Ls
Total land Mutated in the name of BCPL	3393 B - 1K - 19 Ls
Total acquisitioned land yet to be mutated	69 B - 4K - 03 Ls
Land Acquired for Rehabilitation	52 B - 0K - 00 Ls
Total land Rehabilitated	52 B - 0K - 00 Ls
Fund for Relief & Rehabilitation Package from, AIDC	Rs.1,54,00,000.00
Total compensation paid for Acquisition of land by AIDC	Rs.58,16,21,455.00
Total Premium paid for Govt. land by BCPL	Rs.2,83,000.00(By Challan)
Total compensation paid for acquisition by BCPL	Rs.21,84,04,213.00
Total land handed over to BCPL	3606 B - 2K - 06 Ls

Source : District Land Acquisition Branch, Office of the Deputy Commissioner, Dibrugarh Assam

Table 4, shows that the total land acquired for the BCPL project was 3,606 bighas out of which only 143 bighas were of government land and rest were acquired from the different private land owners by paying a compensation to the tune of Rs.80,03,08,668.00/-

Table 5 : Status of Land Acquisition of BCPL Project (L.A. case-wise)

Sl. No.	Case No.	Village	Area (B - K - Ls)	Status of land
1	DRA. 7/2006	Lepatkata Kachari Gaon (Beheating T.E.) Mancotta Khanikar Mouza	228-2-18	Land handed over & records mutated
2	DRA. 8/2006	45 No. Bolai F.S. Grant (B), Mancotta Khanikar Mouza	869-1-17	Land handed over & records mutated
3	DRA. 9/2006	Lepatkata Bongali Gaon (Ghuronina T.E.) Mancotta Khanikar Mouza	593-0-2	Land handed over & records mutated
4	DRA. 10/2006	45 No. Bolai F.S. Grant (B), Mancotta Khanikar Mouza	450-0-0	Land handed over & records mutated
5	DRA. 11/2006	Borpathar Kakoti Gaon (M/s Ubruind Co. Ltd.) Mancotta Khanikar Mouza	4-2-7	Land handed over & records mutated
6	DRA. 12/2006	Borpathar Kakoti Gaon (Beheating T.E.) Mancotta Khanikar Mouza	152-4-4	Land handed over & records mutated
7	DRA. 13/2006	Lepatkata Bongali Gaon, (Individual), Mancotta Khanikar Mouza	95-0-0	Land handed over & records mutated
8	DRA. 14/2006	Borpathar Kakoti Gaon (Individual) Mancotta Khanikar Mouza	188-2-18	Land handed over & records mutated
9	DRA. 15/2006	Borpathar Kakoti Gaon Lepatkata T.E., Mancotta Khanikar Mouza	122-3-11	Land handed over & records mutated
10	DRA. 8/2007	Borpathar Kakoti Gaon, Mancotta Khanikar Mouza	13-3-15	Land handed over & records mutated
11	DRA. 9/2007	Lepatkata Bongali Gaon, Mancotta Khanikar Mouza	131-1-19	Land handed over & records mutated
12	DRA. 10/2007	Lepatkata Kachari Gaon, Durgapur Tea Estate, Mancotta Khanikar Mouza	70-0-0	Land handed over & records mutated
13	DRA. 11/2007	Dulia gaon (Upper Assam Tea Company), Mancotta Khanikar Mouza	400-0-0	Land handed over & records mutated

14	DRA. 23/2008	Jalani Grant No. 263/282 (Borbheta Estate Pvt. Ltd.) Tipling Mouza	45-0-0	Land handed over & records mutated
15	DRA. 29/2008	Lepetkata Bongali Gaon, Mancotta Khanikar Mouza	27-0-4	Land handed over & records mutated
16	DRA. 23/2009	Binoigutia Gaon, Laruah Mouza	3-1-8	Land handed over & records mutation is under process
17	DRA. 25/2009	53 No. F.S. Grant, Laruah Mouza	2-3-3	Land handed over & records mutation is under process
18	DRA. 27/2009	Bhimpora Village, Modarkhat Mouza	2-1-7	Land handed over & records mutation is under process
19	DRA. 28/2009	Saru Abhyapura, Tengakhat Mouza	1-3-4	Land handed over & records mutation is under process
20	DRA. 29/2009	Dehing Thekerani, Mancotta Khanikar Mouza	2-2-12	Land handed over & records mutation is under process
21	DRA. 29/2010	Tinsukia Gaon, Larua Mouza	59-0-13	Land handed over & records mutation is under process
22	DRA. 6/2006	45 No. Bolai F.S. Grant (A), Mancotta Khanikar Mouza	52-0-00	Land acquired for Rehabilitation is not included in the total land acquired for BCPL Project
GRAND TOTAL			3463-1-02	

Source : District Land Acquisition Branch, Office of the Deputy Commissioner, Dibrugarh, Assam.

Table 5 shows that the total acquired land can be categorised as private individual owners land, private institutional owners land and government land. Here the majority of land acquired for the commissioning of the BCPL project was of the villages under the Dulia kakoti Gaon Panchayat of Borbaruah Development Block.

Self Declared Policies of BCPL on Corporate Social Responsibilities -

The Company sees itself as an essential part of the society and is well aware of its responsibilities beyond financial considerations towards improving quality of life

of the communities at large. Company has undertaken various CSR initiatives for 2014-15 taking into consideration the requirement of the local populace. An internal cross functional committee, after review and examination, recommends proposals for implementation. An amount to the tune of 1 Crore has been committed during the year under review towards the discharge of corporate social responsibility. Some of the important projects taken up during the year 2015-16 are development of drainage system & installation of street lights in the Barbaruah area, Construction of Girls' toilet in four Government schools in the vicinity of BCPL Project. Apart from this the most important one is the vocational and skill development training for 100 rural women of nearby areas.

The Company has undertaken and completed development of a Green Belt by planting additional 2000 trees around the plant during the year and with these a total of 7200 trees have been planted so far with a cumulative expenditure of 14.5 Lakhs. There is a plan for planting an additional 3500 trees during the year 2015-16. Company is committed to proper disposal of construction and other wastes in line with various statutory requirements, in an environment friendly manner.³

Role of BCPL in the infrastructural development of the locality -

Table 6, shows that most of the CSR activities done in the two Gaon Panchayat areas are of community development in nature and quantum is very negligible.

Table 6 : Total number of CSR activity undertaken ob BCPL on the Borbaruah & Dulia Kakoti Gaon Panchayat

Year 2014-15	Particulars	Amount	Year 2015-16	Particulars
Dulia Kakoti	Construction of 2 no. of Road	1 Crore	Development of community sashan	10 Lakhs
			Infrastructure of Electricity Development	19 Lakhs
Borbaruah Gaon Panchayat	Nil	-	Development of drainage system & installation of street lights	53 Lakhs
Total	-	1 crores	-	82 Lakhs

Source : Field Survey

Role of BCPL in the Socio economic development of the locality -

This part of the study analysed the overall impact of commissioning of BCPL in the socio economic development of the locality on the basis of the primary survey conducted in the Dulia Kakoti Gaon Panchayat and Borbaruah Gaon Panchayat.

Table 7 : Commission of BCPL vs. increasing the Employment Opportunity in service sector

Factors	No. of Respondents	Percentage
Highly	24	10 %
Moderately	120	50 %
Low	96	40 %

Source : Field Survey

The above table shows that more than 60% of respondents view that commissioning of BCPL positively links with increasing the scope of employment opportunity in service sector in the locality. However 40% of respondents offer their views that the commissioning of BCPL has little effect or low effects in increasing the job opportunities in the locality. This may be due to the reasons that after completion of the commission phase no huge requirement of unskilled, semi-skilled and skilled workers are there in the work site of BCPL. The amount of workforce required for the core plant and industry is very much technical in nature. Hence, the local workers, mostly of unskilled and semi-skilled in nature find difficulty for engagement. It means BCPL till now not able to provide sustainable employment to large numbers of workers of these two Panchayats.

Table 8 : Commission of BCPL vs increasing the Business Opportunities in the locality

Factors	No. of Respondents	Percentage
Highly	120	50 %
Moderately	80	33.33 %
Low	40	16.07 %

Source : Field Survey

Here more than 50% of the respondents are of the view that commission of BCPL in Lapatkata increases the business opportunity in the locality. The direct increase of business opportunity may be noticed in the form of scope of supplying materials and goods to the work-site, contract and vendorisation of logistical and other means. The indirect scope of business may include the expansion of the consumer market in Borbaruah and Lapatkata locality. This also helps in increasing the scope of rental and lease agreements in the locality. However to sustain the scope of increasing business opportunity the efficient and viable performance of BCPL in longer term is most essential. Apart from this, there should be the establishment of downstream industries of BCPL in the locality in the longer run.

Table 9 : Commission of BCPL vs increasing the employment opportunities in agriculture, horticulture, craftsmanship etc.

Factors	No. of Respondents	Percentage
Highly	-	-
Moderately	24	10 %
Low	216	90 %

Source : Field survey

The Table 9 clearly show that majority of respondent i.e. 90% posses the views that the commission of BCPL in Lapatkata is not helpful in increasing the scope of agriculture, horticulture and craftsmanship etc. Rather in the survey it came to known that the two Panchayats earlier recognized as hot bed for agriculture and horticulture production are showing decreasing agriculture production due to the vast amount of fertile land was acquired by BCPL. Apart from this the remaining part of agriculture land was pressured by other sectors such as increasing the habitant area, infrastructural and business acquisition by parties other than BCPL etc.

Table 10 : Commission of BCPL vs Income level

Factors	No. of Respondents	Percentage
Highly	-	-
Moderately	180	75 %
Low	60	25 %

Source : Field survey

Majority of respondents i.e. 75% are of the view that commission of BCPL Lapatkata helps in raising the income level of the locality. Though the increase in the income level is not robust but it definitely boost up the incomes of different segment of economy directly or indirectly. However, one pertinent observation comes out at the time of survey that the income level of various respondents directly or indirectly related with BCPL projects lowering down gradually after the commission phase was completed.

Table 11 : Commission of BCPL vs increasing savings

Factors	No. of Respondents	Percentage
Highly	20	8.33 %
Moderately	86	33.33 %
Low	140	58.34 %

Source : Field Survey

The Table 11 reveals that inspite of the raising of income level (from earlier reference) the savings of the respondent family are not increasing so much after the commission of BCPL Lapatkata. This may be due to rising of the cost of living and rising of standard of living in the locality. However from the field survey it is revealed that improper financial planning and saving habit along with lack of awareness about different banking products of the respondent is one of the other reasons among them. Raising the level and volume of savings is essential for sustainable financial inclusion of the locality.

Conclusion

The BCPL authority should initiate a program of developing alternative means of employment/ income generation of the families directly affected by the commission of BCPL i.e. land effected, as their feeling is that they are not sufficiently compensated in return of their land and property. Perhaps it will benefit both the parties in making a cordial environment around the work place.

The programmes of generating alternative means of employment may be extending technical and financial help in establishing poultry firms, piggery firms,

and Milk production. This has a vast demand in the locality as well as in the market. The CSR activities of BCPL should focus on boosting up of the infrastructure and facilities for generating of alternative means of employment rather than construction of roads and drains etc.

The company should strictly adhere to the environmental norms and practices and utmost care should be taken so that no negative impact is visible in case of health, economy of the people of the locality. There are instances of the livelihood of the fishermen community in the nearby areas being hampered due to discharged of unscientific waste disposal by BCPL in the Sessa river.

The company should be more careful in environmental protection of the locality; otherwise the occupational group such as fishermen, poultry firms, milk producer, and agriculture will suffer a jolt soon due to the pollution causes by the waste disposal and industrial by-products of the BCPL project. It may certainly lower down the income level of the occupational groups.

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GROWTH OF CULTURAL ENTREPRENEURSHIP IN ASSAM WITH SPECIAL REFERENCE TO MOBILE THEATRE ESTABLISHMENTS

Rohit Nayan Barua

ABSTRACT

Mobile theatre establishment which constitutes a major component of performing arts has been a popular media in Assam for several decades in the past. The touch of this reality show has in fact had an indelible impact upon the minds of a majority of the viewers. The industry has been undergoing difficult days for lack of funds from investors as well absence of any governmental support. Nevertheless, this cultural heritage of Assamese society needs to be supported from all sections of people including the government.

Keywords : Theatre, Entrepreneurship, Assam.

Introduction

Mobile theatre is a distinguishing cultural pride of Assam. From time immemorial, 'bhaonas', 'dramas' and action-packed demonstration have been adding holistic and spiritual values to the life of people since ancient time in India. It is admitted by all that 'Theatre' is a very powerful medium of performing art which can play catalytic role for bringing social changes. Theatre plays an important role in the society both socially and economically. Technically, a modern theatre can be termed as a fusion of a range of other activities such as dancing, drama, music, painting and sculpturing as a performing art activity. The origin of theatre can be traced around 5000 years ago, where legends imply that the first play was performed in heaven as Gods were enacting their triumph after the defeat of demons.

In this 21st century, theatres are no more limited to be a simple cultural activity. In this age of rapid globalisation where everything is based on commercialised ideas, very few quanta of social activities are of non-commercial nature. Entrepreneurship is an economic

activity. Entrepreneurial activities have existed since the beginning of human civilisation. Entrepreneurship not only contributes towards the society at large but also has a significant contribution towards economic development of the nation's economy. These entrepreneurial activities act as crucial machinery to accelerate the growth rate of a nation's economy. Entrepreneurial activities are generally newly established, innovative mechanisms of conducting businesses in an economy; they may exist in any one or all of the following forms :

- 1) Introduction of a new product or service.
- 2) Introduction of a new mechanism of production or providing service.
- 3) Opening of a new market opportunity in manufacturing or service.
- 4) Exploitation of a new source of input.
- 5) Establishment of an innovative business management processes.

According to Richard Cantillon, entrepreneurship is a process of buying at a certain price in the present and sell at uncertain price in the future. According to P. F. Drucker, entrepreneurship is an act of innovation involving endowing existing resources with new wealth producing capacity.

Objective

The objective of the paper is to examine the growth of cultural entrepreneurship in Assam with special reference to mobile theatre units. The study also covers the location, period and duration of existence of such theatres till date.

Methodology

The study is based on both primary and secondary data collected from leaflets, brochures and notifications published by the units which are operationally successful till date. The study covers only the surviving units of mobile theatre. The secondary data is collected from books, journals, unpublished thesis and the websites of various theatre units. The data have been analysed and processed and inferences drawn from the same.

Observations

Theatre in India emerged between 2nd century BC to 1st century AD and got flourished between 1st century AD to 10th century AD just after development of Greek and

Roman theatre which in fact occurred before the establishment of theatre in other parts of Asia. In Assam, the mobile theatre units encompasses within its peripheral objective, the valued cultural traditions of the people, contemporary practices of social and political life and the historical values of the land besides commercial ones. Mobile theatre groups include different crews such as casts, singers, musicians, dancers, electricians, event organisers and other crew members who travel to different places and conduct the theatrical activity. As per some western researchers puppetry was the earliest phase from which theatre evolved. Puppetry was further followed by 'Natya Shastra' with its modifications and regulations. The Indian theatre was based on the *Natya Shastra* of Bharot Muni written during 1st century. The present theatrical scenario has evolved from folk and traditional form of performing art. The forms of performing art practiced in various parts of Assam during various occasions are: singing and dancing, *dhulias* or the drummers, *putala nach* or the puppetry show, *ojapali* (where the humans replace the puppets in a puppetry show concept), *kushangan* (a type of folk dramatic form of art) and *khuliya* or *bayan* (a form of non-formal performing art). The mobile theatre or Bhramyaman theatre in Assam came to existence from *jatra* parties of West Bengal. The concept of *jatra* parties evolved in Lower Assam in 1860-80's which gradually became very popular in parts of Lower Assam. The increasing popularity of such activities has led to translation of Bengali *yatra's* into Assamese languages and was performed to suit the requirements of Assamese people. Natraj theatre during the first half 1960's, made significant innovations in their performances and also equally focused on commercial aspects. The Lahkar brothers during their visit to various places summarised that there exist high demands for sophisticated new generation theatre models replacing the existing old fashioned ones. Probably, Achyut Lahkar can be tagged as the first generation cultural entrepreneur of Assam.

Although the organisational pattern of *jatra* parties of West Bengal and *gana natyas* of Oddisa has some resemblance with Mobile Theatre of Assam, yet they vary in many aspects visible in its performing style. The urban theatres or amateur groups of West Bengal and Oddisa are a formal form of art which are performed for 3-7 days at a place upon different subjects each day. With a capacity for around 4000 spectators at a time, the '*pendal*' is built with tarpaulin, logs and bamboos. Depending on the size of the *Jatra Dal* or *Nata*

Dal, at least a margin of 200-300 people are directly employed in each group or *Dal*. The range of payment for reputed artist is Rs. 15000-20000 as salary per month, for normal artist Rs. 5000-7000, for singers/musicians Rs. 3000-5000 and for child artist Rs. 500 which varies depending on the quantum and level of performance (internet sources). Mobile theatre has become one of the popular means of entertainment both in urban and rural areas of Assam. The theatre units are representing rich culture and societal norms and values of Assamese society, quality plays with technical innovation.

Table 1 : Life span of Existing Theatres established 1963-2015

Range of Years of Operation	Name of Theatre	Place of Existence
0-10	Raj Mukut Theatre	Pathsala
	Nayantara Theatre	Jalah
	Surjya Theatre	Guwahati
	Brindawan Theatre	Bonda, Guwahati
	Ramdhenu Theatre	Barihat, Guwahati
	Itihas Theatre	Mirza, Guwahati
	Raj Tilak Theatre	Mirza, Guwahati
10-20	Natasurjya Theatre	Sibsagarh
	Sutradhar Theatre	Naharkatia, Dibrugarh
	Srimanta Theatre	Naharkatia, Dibrugarh
	Rajashree Theatre	Mukalmua, Nalbari
	Rupraj Theatre	Mirza, Guwahati
20-30	Bordoisila Theatre	Nalbari
	Saraighat Theatre	Sasoni, Nagaon
	Prithwiraj Theatre (panchajanya theatre)	Jamuguri
30-40	Srimanta Sankardev Theatre	Hahsora, Sibsagarh
	Hengul Theatre	Mariani, Golaghat

	Parihareswar Theatre (Indrani Theatre)	Patacharkuchi
	Suruj Theatre	Tingkhong, Dibrugarh
	Aawahan Theatre	Pathsala
40-50	Kohinoor Theatre	Pathsala
	Theatre Bhagyadevi	Moroowa, Nalbari
	Binapani Theatre	Baniakuchi, Nalbari

Source : Mousumi Devi, Economic and Managerial aspects of mobile theatre establishments in Assam, 2016 (unpublished thesis, GU.)

The first theatre unit came to existence in Assam in 1963 and successively many units came to existence in different parts of the state. Initially different proprietors of theatre units started operating either by establishing permanent ownership of land or by hiring land on rent to conduct their operations. Observations from the above Table 1, we can summarise that quite minimum number of mobile theatre enterprises survived for margin of more than 40 years including Kohinoor Theatre, Theatre Bhagyadevi and Binapani Theatre. Moreover, among long term established enterprises majority of the theatre enterprises have their source of origin and existence from Lower Assam Zone except certain exceptions such as Srimanta Sankardev Theatre, Hengul Theatre and Suruj Theatre which join the club 30-40 years of existence. The government also supported such activities based on cooperative interest of the society and the entrepreneurs or proprietors of the concerned theatres. The theatrical operations got boost initially in the period 1963-97.

Table 2 : Zone Wise Location of Mobile Theatre

Zones	1963-97	1997-2015	Total (1963-2015)
Lower Assam	53	35	88
Middle Assam	12	3	15
Upper Assam	23	18	41
Total	88	56	144

Source : Mousumi Devi, Economic and Managerial aspects of mobile theatre establishments in Assam, 2016 (unpublished thesis, GU.)

In 1963-97, 60% of theatre units were established in Lower Assam, 14% of theatre units in Middle Assam and 26% of theatre units in Upper Assam. Similarly, in 1997-2015, 63% of theatre units were established in Lower Assam, 5% of the theatre units in Middle Assam and 32% of theatre units in Upper Assam. The table depicts that entrepreneurial activities are getting boosted in the Lower Assam districts substantially followed by Upper and Middle Assam districts. Although, Tezpur is always considered to be the cultural hub of the state yet it has not shown high priority in mobile theatre enterprises. Table 2 implies the growth of mobile theatre enterprises in different parts of the state with significant increase in parts of Lower Assam Zone. This implies the fact that the Jatra movement got impetus in Lower Assam and many Jatra parties subsequently converted their parties to professional theatre units such as Nataraj theatre, Bhagyadevi theatre, Aaradhana theatre and Makunda theatre. Thus, Lower Assam Region avails better margin of spectators in theatrical enterprises.

Table 3 : Number of Mobile Theatre units with their district origin 1963-97

District	0-10	10-20	20-30
Barpeta		✓	
Kamrup M & U	✓		
Goalpara	✓		
Bongaigaon	✓		
Darang	✓		
Nagaon	✓		
Golaghat	✓		
Jorhat	✓		
Sibsagarh	✓		
Dibrugarh	✓		
Sonitpur	✓		
N. Lakhimpur	✓		
Nalbari			✓

Source : Mousumi Devi, Economic and Managerial aspects of mobile theatre establishments in Assam, 2016 (unpublished thesis, GU.)

From the above Table 3, it appears that the Nalbari district has the highest number of concentration of theatre units with an average of 28% followed by Kamrup (M & U) district with an average of 19% and Barpeta district with 15%. Whereas in the Upper Assam zone, Dibrugarh district avails the highest concentration of theatre units with an average of 9.7% which is followed by Sibsagarh district with an average of 6% and Golaghat district with an average of 6%. The table-1.3 depicts highest incidence of origin of theatres for Nalbari district followed by Barpeta. The people of Barpeta possess entrepreneurial skill not only in this cultural field alone but it is also famous for small industries namely fire cracker, ivory articles and the glories bell metal industry. Both Barpeta and Nalbari were originally a part of undivided Kamrup district of Assam. The people of Barpeta were associated with cultural performance like *bhaonas* and *satria nitra* ever since the establishment of Barpeta *kirtan ghar* in 1505 which is the focal point of attention of 'Neo Vaishnavism'. The present district of Nalbari earns the distinction of performing 'Rasmahotsav' every year in the most colourful way which attracts lakhs of people during the period of fortnight. Nalbari is also famous for handloom and handicraft products. The zeal of entrepreneurship is deeply imbued in the character of indigenous people of the district who possess admirably high skill of workmanship and craftsmanship.

Table 4 : District wise base location and number of Mobile Theatre 1997-2015

District	0-10	10-20	20-30
Barpeta	✓		
Kamrup M & U		✓	
Goalpara	✓		
Bongaigaon	✓		
Darang	✓		
Nagaon	✓		
Golaghat	✓		
Jorhat	✓		
Sibsagarh	✓		
Dibrugarh	✓		

Sonitpur	✓		
N. Lakhimpur	✓		
Nalbari			✓

Source : Mousumi Devi, Economic and Managerial aspects of mobile theatre establishments in Assam, 2016 (unpublished thesis, GU.)

We observe a significant decrease in the number of mobile units in the state during the period 1997-2015. Around 32 units of mobile theatre units got shut in areas such as Barpeta, Nalbari, Golaghat, Nagaon, Jorhat, Sibsagarh and Darang, which left the total number of units in the state fall from 88 mobile theatre units during 1963-97 to 56 mobile theatre units during 1997-2015. Thus approximately, around 36.36% fall in mobile theatre units is observed as per Table 4 in the period 1997-2015. Nalbari and Barpeta lead the way to fall of highest number of mobile theatre units.

Conclusion

The mobile theatre units in Assam have contributed both socially and economically towards the development of the society. It is evident that even during most stressed periods in Assam such as the Assam movement (*Asom Andolan*), periods while banned outfits such as ULFA, NDFB etc., were functioning at their threshold level of military activities, community clashes, etc. the theatres were operating fully without any hindrances. These theatre activities helped to overcome and guide the people towards a peaceful and a prosperous society. The mobile theatre activities were a greater source for employment generation. These activities acted as a catalyst to transform many lives of the cultural workers. These mobile theatre units were also beneficial for people whose businesses were indirectly associated to these theatre units. Although the government has not declared this sector of business as an industry, it expands and grows slowly throughout the state without any assistance from the state government except for the relaxation of the entertainment tax. In present times, this industry has many players and thus has a greater competitive environment. In this competitive environment, some players target for short-term profits whereas some for long-term profits. Sometimes, players conduct certain irresponsible and unprofessional practices, thus causing a threat towards healthy competitive environment in the industry.

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